



Government of Kerala

Annual Survey of Industries
2017-18
Volume I

Department of Economics and Statistics
Kerala



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Message

I am glad to learn that Department of Economics and Statistics is bringing out the publication 'Annual Survey of Industries 2017-18'. Industries play a pivotal role in accelerating the rate of economic growth. The reliable and substantial information collected through this survey helps in evaluating, assessing and monitoring the progress of industries. It also facilitate the policy makers in designing effective policies capable of achieving the goals of development.

Annual Survey of Industries is one of the major surveys conducted annually by Department of Economics and Statistics on the organized/registered manufacturing sector with the assistance of National Statistics Office, Industrial Statistics Wing, Kolkata.

The publication 'Annual Survey of Industries 2017-18' provides information on major characteristics viz., no.of factories, capital, income, profit, Gross Value Added, employment details etc. of organized manufacturing sector of the state during the financial year 2017-18. It gives a vivid picture of the statewide, districts, rural-urban wise statistics of significant characteristics of the manufacturing sector of the state.

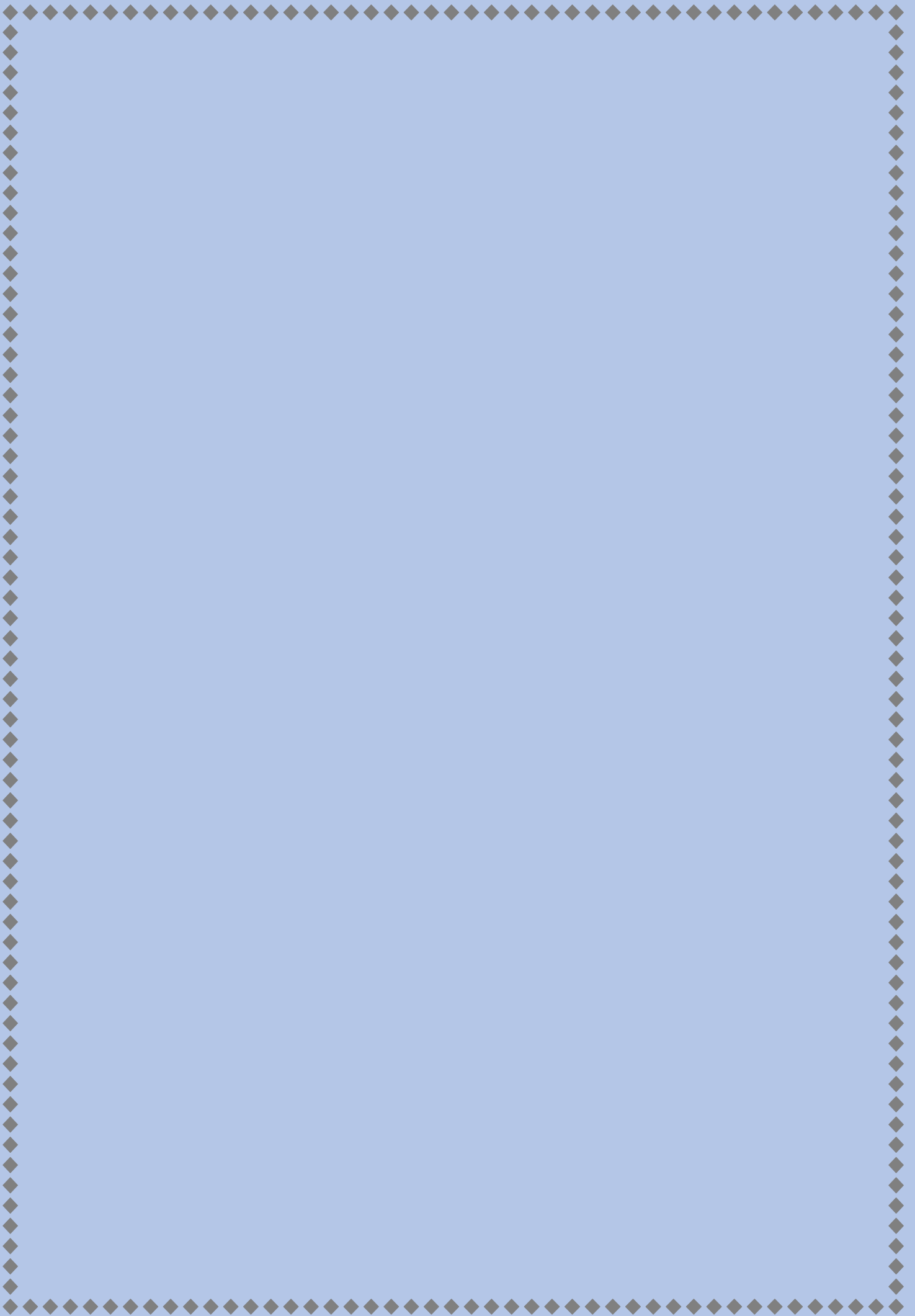
I hope this publication will serve as a valuable resource of Industrial statistics for the research scholars, academicians and policy makers.

I appreciate and laud the commendable work done by the team of Department of Economics and Statistics and extend my best wishes.

Sd/-

Date: 19/08/2020
Thiruvananthapuram

Dr. V. Venu IAS
Additional Chief Secretary
Planning and Economic Affairs Department





Preface

Annual Survey of Industries is one of the major surveys focused on the organized/registered manufacturing sector of Kerala. Department of Economics and Statistics conducts this survey with the assistance and guidance of Central Statistics Office (IS Wing), Kolkata. The industrial development, especially in the manufacturing sector can make a huge impact or thrust on the economy of the state. Annual survey of Industries 2017 - 18 provides information on major characteristics of the industries viz., fixed capital, working capital, invested capital, employment details, Gross Value Added, Input, Output, Profit, Income etc. in the organized manufacturing sector of the state for the financial year 2017-18.

The publication of the survey comprises of two volumes. This is the first volume, which gives a broad perspective of the industrial scenario of the state. The second volume presents detailed tables of estimates of the survey.

The survey is conducted under the provisions of Collection of Statistics Act 2008 and Collection of Statistics Rules 2011. The Deputy Directors of the District offices are designated as Statistics officers for conducting the survey in their respective jurisdiction. The field work and data entry work are deputed to Statistical Investigators which is further scrutinized by the Research officers. The data entry is done using the MS-Access based e-schedule package provided by Central Statistics Office (IS Wing). Further, processing and tabulation of data is done at the Directorate as per the guidelines of Central Statistics Office (IS Wing), Kolkata. The present report is prepared by combining 829 state sample units (surveyed by DES), 829 Central Sample units and 1249 Census sector units (attended by NSSO, FOD).

We are profoundly grateful to Smt. Sunitha Bhaskar, Deputy Director General, NSO, and Shri. Rajiv Kumar, SSO (FOD), Kollam and Shri. N Uthaman, SSO (FOD), Kollam for their valuable guidance and assistance. The survey team consisting of District level officers, statistical investigators and officers of the Directorate have made valuable contributions in making this survey a great success. I hereby extend my wholehearted gratitude to all the members of the team for their incredible effort and dedication.

The co-operation extended by the selected industrial units of the survey, technical assistance provided by Central Statistics Office (IS Wing), Kolkata and NSSO (FOD), Thiruvananthapuram are highly commendable.

I hope this publication will serve as a reference book and research material in Industrial Statistics.

Suggestions for improvement in the scope and content of this report are always welcome.

Sd/-
P V BABU
DIRECTOR (I/C)

Thiruvananthapuram
Date : 10.8.2020

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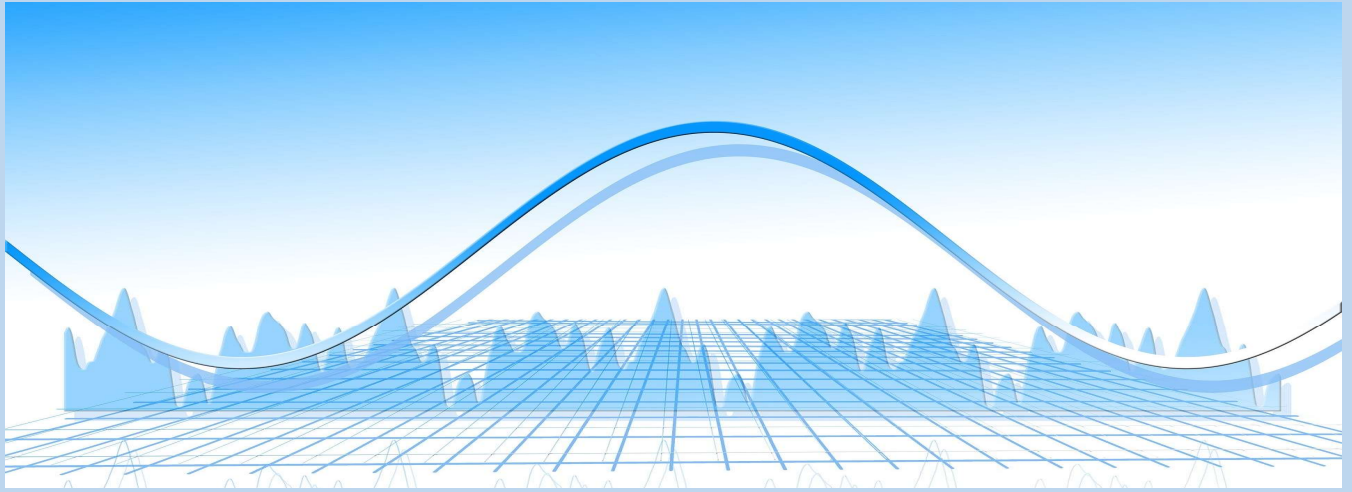
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TECHNICAL ASSISTANCE AND SURVEY PROCESS

Technical Guidance and Support

Central Statistics Office
Industrial Statistics Wing
Kolkata

ASI Survey Notification

Survey is notified in Kerala Government Gazette

Training Programmes

Training programmes are conducted for improving the skills of officials engaged in the survey so as to enhance the reliability of survey

Field work, data entry and scrutiny

Collection of data, data entry works and scrutiny are done in District Offices under the supervision of Deputy Director designated as Statistics Officer

Analysis and Report generation

Data analysis and report generation are done at the Directorate and report is published in department website.



Highlights

The survey estimated 7596 factories in the organized manufacturing sector of Kerala.

The estimated invested capital of the factories is ₹61,94,820 lakhs. Out of the total invested capital, Fixed capital and Physical working capital accounts to about 70.5% and 29.5% respectively.

The estimated output and input from the factories' production is ₹ 1,65,56,578 lakhs and ₹1,42,56,475 lakhs.

The estimated profit earned by the factories is ₹ 8,84,010 lakhs.

Across the state the factories provide employment to an estimate of 3,24,773 people. Out of which 78.85 % are workers, 20.64% employees other than workers and 0.50% unpaid family member.

Out of 2,19,973 directly employed workers 1,18,816 are men and 1,01,157 are women which accounts to about 54% and 46% respectively.

The Gross Value Added of production of the factories is ₹ 22,79,897 lakhs which is 15.9% of total input.

Top Industries

Characteristics

| Rank | Total No .of Factories | Fixed Capital | Total Persons Engaged | Output | Gross Value Added (GVA) |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------------------|--------------------------------------------|---------------------------------------------|
| 1 | Food Products (21.38%) | Coke & Refined Petroleum products (54.43%) | Food Products (30.35%) | Coke & Refined Petroleum products (32.17%) | Coke & Refined Petroleum products (20.29%) |
| 2 | Other Non-metallic mineral products (12.88%) | Food Products (10.49%) | Rubber & plastic products (7.97%) | Food Products (21.29%) | Food Products (16.37%) |
| 3 | Wood & products of wood & cork, except furniture; manufacture of articles of straw & plating materials (11.28%) | Rubber & plastic products (5.79%) | Textiles (7.92%) | Other manufacturing (12.10%) | Chemicals & Chemical products (10.92%) |
| 4 | Rubber & plastic products (8.28%) | Other Non-metallic mineral products (3.97%) | Other Non-metallic mineral products (6.35%) | Rubber & plastic products (6.37%) | Rubber & plastic products (9.15%) |
| 5 | Tobacco products (6.58%) | Textiles (3.13%) | Tobacco products (4.43%) | Chemicals & Chemical products (4.57%) | Other Non-metallic mineral products (6.26%) |
| Aggregate Total (All industries)* | 7596 | 4369284 | 324773 | 16556578 | 2279897 |

*Estimates of Fixed Capital, Output and GVA are in ₹ lakhs

Top Districts

Characteristics

Rank

| Rank | Total No. of Factories | Fixed Capital | Total Persons Engaged | Output | Gross Value Added (GVA) |
|------------------------------------|------------------------------|--------------------|----------------------------|--------------------|----------------------------|
| 1 | Ernakulam (19.31%) | Ernakulam (68.26%) | Ernakulam (24.85%) | Ernakulam (62.71%) | Ernakulam (51.33%) |
| 2 | Kollam (14.53%) | Palakkad (5.23%) | Kollam (15.36%) | Alappuzha (6.10%) | Kottayam (7.08%) |
| 3 | Thirissur Kannur (11.22%) | Alappuzha (4.10%) | Alappuzha (9.60%) | Thirissur (5.20%) | Thirissur (6.48%) |
| 4 | Kannur (9.31%) | Kollam (4.04%) | Thirissur (7.50%) | Kottayam (4.81%) | Thiruvananthapuram (5.94%) |
| 5 | Alappuzha (8.07%) | Kottayam (3.99%) | Thiruvananthapuram (7.07%) | Kollam (4.72%) | Alappuzha (5.61%) |
| Aggregate Total (All industries) * | 7596 | 4369284 | 324773 | 16556578 | 2279897 |

*Estimates of Fixed Capital, Output and GVA are in ₹ lakhs

Rates & Ratios

Estimates of some important rates and ratios as per ASI 2017-18 are given below:-

| | |
|---------------------------------------------------|--------------|
| ➤ Fixed capital per factory in operation | ₹ 668 lakhs |
| ➤ No. of persons engaged per factory in operation | 50 |
| ➤ No. of workers per factory in operation | 39 |
| ➤ Output per factory in operation | ₹ 2532 lakhs |
| ➤ Gross Value Added(GVA) per factory in operation | ₹ 348 lakhs |
| ➤ Net Value Added(NVA) per factory in operation | ₹ 304 lakhs |
| ➤ Output per person engaged | ₹ 50,97,892 |
| ➤ Gross Value Added (GVA) per person engaged | ₹ 7,01,997 |
| ➤ Net Value Added (NVA) per person engaged | ₹ 6,11,989 |
| ➤ Wages per worker | ₹1,70,420 |
| ➤ Fixed Capital to Net Value Added(NVA) | 2.19 |
| ➤ Fixed Capital to Output | 0.26 |
| ➤ Net Value Added(NVA) to Output | 0.12 |
| ➤ Gross Value Added (GVA) to Fixed Capital | 0.52 |
| ➤ Output to Input | 1.16 |
| ➤ Profit to Output | 0.05 |



INTRODUCTION

CHAPTER 1

Methodology of Annual Survey of Industries



*“Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write”
- H.G.Wells*

1.1 Scope and Coverage

1.1.1 The Annual Survey of Industries is the main source of industrial statistics in Kerala. From ASI 2010-11 onwards, the survey is being conducted under the Collection of Statistics Act, 2008 and Rules framed there under in 2011. The Survey is designed to obtain comprehensive and detailed industrial data with the objective of estimating the contribution of registered manufacturing industries as a whole to the state income. It gives a broad view of the structure of the industry in economy, various factors influencing industries in the state etc. which form the bases for formulation of industrial policies.

1.1.2 Coverage of the Annual Survey of Industries extends to the entire Factory Sector comprising industrial units (called factories) registered under the Sections 2(m)(i) and 2(m)(ii) of the Factories Act, 1948, wherein a ‘Factory’, which is the primary statistical unit of enumeration for the ASI, is defined as:

‘Any premises’ including the precincts thereof: -

(i) Wherein ten or more workers are working or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on with the aid of power or is ordinarily so carried on, or,

(ii) Wherein twenty or more workers are working or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on without the aid of power or is ordinarily so carried on, but does not include a mine subject to the operation of the Mines Act, 1952, or a railway running shed.

The 'manufacturing process' referred to above has been defined [vide Section 2(k)]

in the Factories Act, 1948 as:

'Any process' for:

- (i) making, altering, ornamenting, finishing, packing, oiling, washing, cleaning, breaking up, demolishing or otherwise treating or adapting any article or substance with a view to its use, sale, transport, delivery or disposal; or,*
- (ii) pumping oil, water or sewage ; or,*
- (iii) generating , transforming or transmitting power; or,*
- (iv) composing types for printing by letter press, lithography, photogravure or other similar process or book binding; or,*
- (v) constructing, reconstructing, repairing, refitting, finishing or breaking up ships or vessels; or,*
- (vi) preserving or storing any article in cold storage.*

1.1.3 In addition to Sections 2(m)(i) & 2(m)(ii) of the Factories Act, 1948, bidi & cigar units, employing 10 or more workers with the aid of power and 20 or more workers without the aid of power and registered under the Bidi & Cigar Workers (Conditions of Employment) Act, 1966, all the electricity undertakings engaged in generation, transmission and distribution of electricity, not registered with the Central Electricity Authority (CEA), are also covered under ASI.

1.1.4 Starting from ASI 2014-15, the coverage of ASI has been extended beyond the Section 2m(i) and 2m(ii) of the Factories Act, 1948. To start with, the units with 100 or

more employees, not registered under Section 2m(i) and 2m(ii) of the Factories Act, 1948 but registered under any of the seven Acts/Board/Authority viz., Companies Act 1956, Factories Act, 1948, Shops and Commercial Establishment Act, Societies Registration Act, Cooperative Societies Act, Khadi and Village Industries Board, Directorate of Industries (District Industries Centre) in the Business Register of Establishments (BRE) as prepared by the State Government and available with National Accounts Division, Central Statistics Office and verified by Field Operations Division (FOD), NSSO are also considered for selection.

1.1.5 Although the scope of the ASI was extended to all registered manufacturing establishments in the country, defence establishments, oil storage and distribution depots, restaurants, hotels, cafe and computer services, departmental units such as railway workshops, RTC workshops, Govt. Mints, sanitary, water supply, gas storage units etc. are excluded from the purview of the Survey.

1.2. Unit of Enumeration

1.2.1 The primary unit of enumeration in the survey is a factory in the case of manufacturing industries, a workshop in the case of repair services, an undertaking or a licensee in the case of electricity, gas and water supply undertakings and an establishment in the case of Bidi and Cigar industries. The owner of two or more establishments located in the same state and pertaining to the same industry group, is permitted to furnish a single consolidated return, termed as 'Joint Return'. Such consolidated returns are a common feature in case of some of the factories in ASI.

1.3 ASI Frame

1.3.1 The ASI frame is based on the lists of registered factories / units maintained by the Chief Inspector of Factories (CIF) in the State and those maintained by registration authorities in respect of Bidi and Cigar establishments and electricity undertakings. The frame is being revised and updated periodically by the Regional Offices of the Field Operations Division (FOD) of NSSO in consultation with the Chief Inspector of Factories in

each State. At the time of revision, the names of the de-registered factories are removed from the ASI frame and those of the newly registered factories are added. While updating the frame, only newly registered units are added to the existing frame. In spite of regular updating of the frame, quite a number of factories selected for the survey are getting deleted during the survey owing to various reasons like non-existence, de-registration, out of coverage etc.

1.3.2 It is to be noted that apart from the factories in operation, the ASI frame comprises factories which are categorised as ‘Existing with fixed assets and maintaining staff but not having production’ and ‘Existing with fixed assets but not maintaining staff and not having production’.

1.4. Reference Period

1.4.1 Reference period for ASI 2017-2018 was the accounting year of the factory, ending on any day during the financial year 2017-2018. Thus in ASI 2017-2018, data collected from establishments relate to their respective accounting years that ended on any day between 1st April 2017 and 31st March 2018. Survey was conducted in the state in the time period 1st January 2019 to 31st May 2019.

1.5 Methodology of the survey

1.5.1 In the state the survey is conducted as per the guidelines of Industrial Statistics Wing (IS wing) of Central Statistics Office. The following methodology is adopted by the IS wing for the survey.

1.6 Sample Design and Sample Allocation

1.6.1 As per sampling design adopted in ASI 2017-18, ASI sample comprises two parts - Central Sample and State Sample. The Central Sample consists of two schemes: Census and Sample. Under Census scheme, all the units are surveyed.

1.6.2 Census scheme:

- a) All industrial units belonging to the seven less industrially developed states/ UT's viz. Arunachal Pradesh, Manipur, Meghalaya, Nagaland, Sikkim, Tripura and Andaman & Nicobar Islands.
- b) For the States/ UTs other than those mentioned in (a)
 - (i) Units having 75 or more employees from Kerala, and
 - (ii) All units covered under 'Joint Return' (JR), where JR is allowed when the two or more units located in the same State/UT belonging to the same industry (3-digit level of NIC) under the same management.
- c) After excluding the Census Sector units, as defined in paragraphs a) and b) above, the strata are formed at **State x District x Sector x 3digit NIC-2008 level**. Here, 'sector' is very broad economic activity group consisting of manufacturing, electricity generation activity and bidi producing activity. Thus, in short, sectors are (i) Bidi, (ii) Manufacturing and (iii) Electricity. All units belonging to the strata (i.e., formed on the basis of units in State by District by Sector by 3-digit of NIC-08) having less than or equal to 4 units are completely enumerated and are thus considered as 'census sector' units
- d) **Sample Scheme:**
All the remaining units in the frame are considered under **Sample Scheme**. For all the states, **strata are formed for each State x District x Sector x 3-digit NIC-2008 factories**. The units in each stratum are arranged in descending order of their number of employees. Samples are drawn as per Circular Systematic Sampling technique. An even number of units with a minimum of 4 units are selected and distributed in four sub-samples. It may be noted that all the 4 sub-samples from a particular stratum may not have equal number of units.
- e) Out of these 4 sub-samples, two pre-assigned sub-samples are given to NSSO (FOD) and the other two-sub samples are given to State/UT for data collection.
- f) The entire census units *plus* all the units belonging to the two sub-samples given to NSSO (FOD) are treated as the **Central Sample**.
- g) The units belonging to the two sub-samples allocated to State/UTs are to be canvassed by the respective States/UTs. Hence, State/UT has to use the data

collected by NSSO (FOD) and processed by IS Wing, DPD, and NSSO along with the state sample data while deriving the district level estimates for their respective State/UT.

- h) The entire census scheme units plus all the units belonging to the two sub-samples given to NSSO (FOD) plus all the units belonging to the two sub-samples given to State / UT are required for pooling of Central and State Samples.

1.7. Estimation Procedure

1.7.1 The procedures for estimation of the characteristics are shown in Annexure-2.

1.7.2 The results presented in the publication are based on the unit level data of central and state samples. The estimated value figures given in this publication are reported in current prices. The value figures are generally rounded off to lakhs of rupees. All Kerala figures are rounded off separately and may not tally with the sum of district figures. Similarly, all-Industry figures may not tally with the sum of individual industry figures. Also the industry-wise totals at lower level may not tally with the next higher level due to merging of industries carried out at different levels.

1.8. Schedule of Enquiry

1.8.1 The schedule for ASI 2017-18 aims to collect data on assets and liabilities, employment and labour cost, receipts, expenses, input items - indigenous and imported, products and by-products, distributive expenses etc.

A copy of the ASI 2017-18 schedule is given as Annexure-3. The different concepts and definitions used in ASI survey are given in Annexure-4.

1.9. Classification of Industries

1.9.1 From ASI 2008-09, NIC- 2008 has been the base of industry classification. It classifies all the factories in the ASI frame in their appropriate industry groups on the basis of

the principal product manufactured. This way a unit gets classified in one and only one industry group even though it might be manufacturing products belonging to different industries. The estimates for different aggregates presented in this report at two or three digit level of industry correspond to the NIC-2008 classification.

1.10. Publications and Limitations

1.10.1 The results of ASI 2017-18 are released at 2-digit/3-digit level of NIC-2008 for the State. The list of 2/3-digit level of NIC-2008 codes along with descriptions is given in Annexure 5. This report contains tables related to capitals and value added, employment and labour cost, fuels consumed etc.

1.10.2 The Collection of Statistics Act prohibits disclosure of data relating to individual factories. Therefore, if the number of factories under any industry (2-digit/3-digit level of NIC-2008) in the state is less than three, the data have been combined to a similar industry in order to conceal the identity of all such units belonging to the concerned stratum.

1.10.3 All the estimates, especially for quantity and value figures for any particular item consumed and produced, are subject to Statistical Error as these are estimated on the basis of a selected Sample. The consumptions and productions are not estimated separately for those items for which the number of observations is insufficient. They have been reported under 'others' as the estimates for those items may not be efficient..

1.10.4 As per tabulation policy it has been decided to report the detailed information corresponding to industry codes 10 to 33 and 58 following NIC-2008. For all other industry codes, the units have been clubbed and shown under a common industry '**Other**' in different tables.



Organized Manufacturing Sector-State Estimates

CHAPTER 2

State wide outlook of the industrial statistics.



Annual Survey of Industries is one of the major source of industrial statistics in Kerala. Framing of industrial policies for resolving the challenges faced by the sector and thereby aiming a balanced economy is of paramount importance. It is at this juncture that surveys play a significant role. A pertinent and accurate data put into analysis can come up with most efficient results which serve the policy makers to devise new strategies that are capable of achieving the objective.

Attempts have been made in this section to bring forth the status of manufacturing industries in the state. The principle characteristics of organised manufacturing sector for the financial year 2017-18 was

estimated by combining Central sample and State sample.

Factories in organised/ registered manufacturing sector of Kerala

Registered industries involved in the production of goods define the organised manufacturing sector of the state. Annual survey of industries 2017-18 estimated 7596 factories in the manufacturing sector of Kerala. Out of the total, 6538 factories are in operation and 1058 are not in operation. The factories not in operation accounts to about 13.9% of the total figure. Estimated figures show a slight decline of about 4.8% in the number of factories compared to previous financial year.

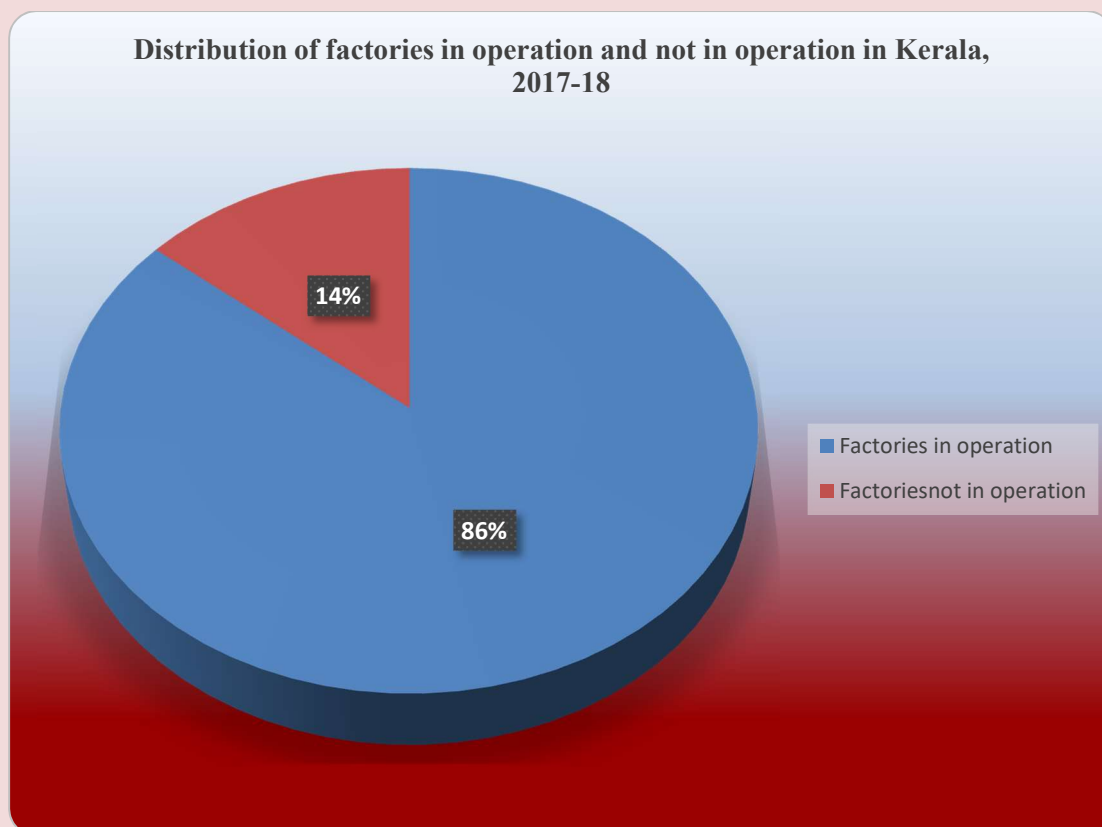


Figure 1

Significant characteristics of organised manufacturing sector of Kerala

Analysis of financial statements is an essential aid in the formulation of effective industrial policies. Annual survey of Industries serve this purpose to a great extent. The organised manufacturing sector depicts one facet of the industrial sector. The financial statements of the factories in this sector viz., Profit and loss account, balance sheet and employment details provide a framework within which

economic status of the sector can be analysed and further planning can be done for better development. These statements form the source of data of the survey. The survey estimates 27 major characteristics of the industrial sector.

The major characteristics comprises number of factories, capital of the industries, total input, total output, Gross Value Added (GVA), Gross Fixed Capital Formation (GFCF), net income, profit etc... The survey also estimates the employment details of the worker engaged in the factories of the manufacturing sector.

Table 1: Estimate of selected characteristics of factories of Kerala for the year 2017-18

| Sl. No. | Characteristics(All Industries) | Values in ₹lakh unless otherwise mentioned |
|---------|-------------------------------------------|--------------------------------------------|
| 1 | Number of factories | 7596 |
| 2 | Factories in operation | 6538 |
| 3 | Fixed Capital | 4369284 |
| 4 | Physical Working Capital | 1825536 |
| 5 | Working Capital | 1861449 |
| 6 | Invested Capital | 6194820 |
| 7 | Gross Value of Additions to Fixed Capital | 1463668 |
| 8 | Rent Paid | 29067 |
| 9 | Outstanding Loan | 1138275 |
| 10 | Interest paid | 200342 |
| 11 | Rent received | 3872 |
| 12 | Interest received | 36957 |
| 13 | Gross Value of P & M | 2913979 |
| 14 | Value of Products & By-products' | 14258309 |
| 15 | Total Output | 16556578 |
| 16 | Fuel Consumed | 716454 |
| 17 | Materials Consumed for Manufacturing | 11341440 |
| 18 | Total Input | 14256475 |
| 19 | Gross Value Added(GVA) | 2279897 |
| 20 | Depreciation | 292690 |
| 21 | Net Value Added(NVA) | 1987576 |
| 22 | Net Fixed Capital Formation(NFCF) | 192892 |
| 23 | Gross Fixed Capital Formation (GFCF) | 485582 |
| 24 | Addition in stock of: | 153960 |
| | (a) Materials, Fuels etc. | 126108 |
| | (b) Semi-Finished Goods | 36380 |
| | (c) Finished Goods | -8529 |
| 25 | Gross Capital Formation | 639542 |
| 26 | Net Income | 1799319 |
| 27 | Profit | 884010 |

Employment and emoluments paid in the manufacturing industries

The amount of labour utilized by the manufacturing industries is a significant factor in the process of production. The man-days employed or number of hours worked is

imperative in assessing the change in productivity.

The survey estimates some significant figures related to employment such as number of persons engaged, wages or salaries paid etc. The figures show that 3, 24,773 persons are engaged in the factories of organised manufacturing

sector in the state. Out of these employees, 78.9% are workers, 20.6% are employees other than workers and 0.5% unpaid family members/ proprietor. The estimated total man-days employed in the factories is 92,496 (in thousands). The estimated

wages and salaries including bonus of the employees is ₹ 7,71,302 lakhs whereas employer's contribution is ₹ 1, 44,144 lakhs.

Table 2: Distribution of employment, man-days worked and emoluments paid to employees manufacturing sector of Kerala

| | |
|--------------------------------------------------------------------------|---------------|
| A. No. of Persons Engaged (no.) | 324773 |
| 1. Workers | 256090 |
| 1.1 Directly employed | 219973 |
| 1.1.1 Men | 118816 |
| 1.1.2 Women | 101157 |
| 1.2 Employed Through Contractors | 36117 |
| 2. Employees Other Than Workers | 67045 |
| 2.1 Supervisory and Managerial Staff | 31220 |
| 2.2 Other Employees | 35825 |
| 3. Unpaid family members/proprietor etc. | 1638 |
| B. Total Man-days employed (in '000) | 92496 |
| C. Wages and Salaries Including Employer's Contribution (₹ lakhs) | 915447 |
| 1 Wages and Salaries Including Bonus | 771302 |
| 1.1 Wages and Salaries | 730404 |
| 1.1.1 Workers | 436431 |
| 1.1.2 Supervisory & Managerial Staff | 198298 |
| 1.1.3 Other Employees | 95676 |
| 1.2 Bonus to all Staff | 40898 |
| 2. Employer's Contribution | 144144 |

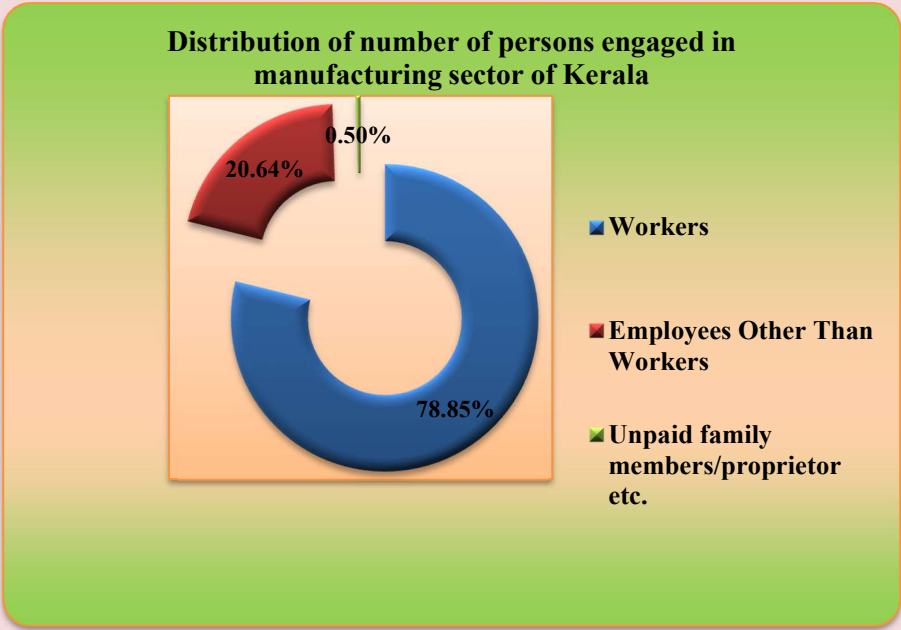


Figure 2

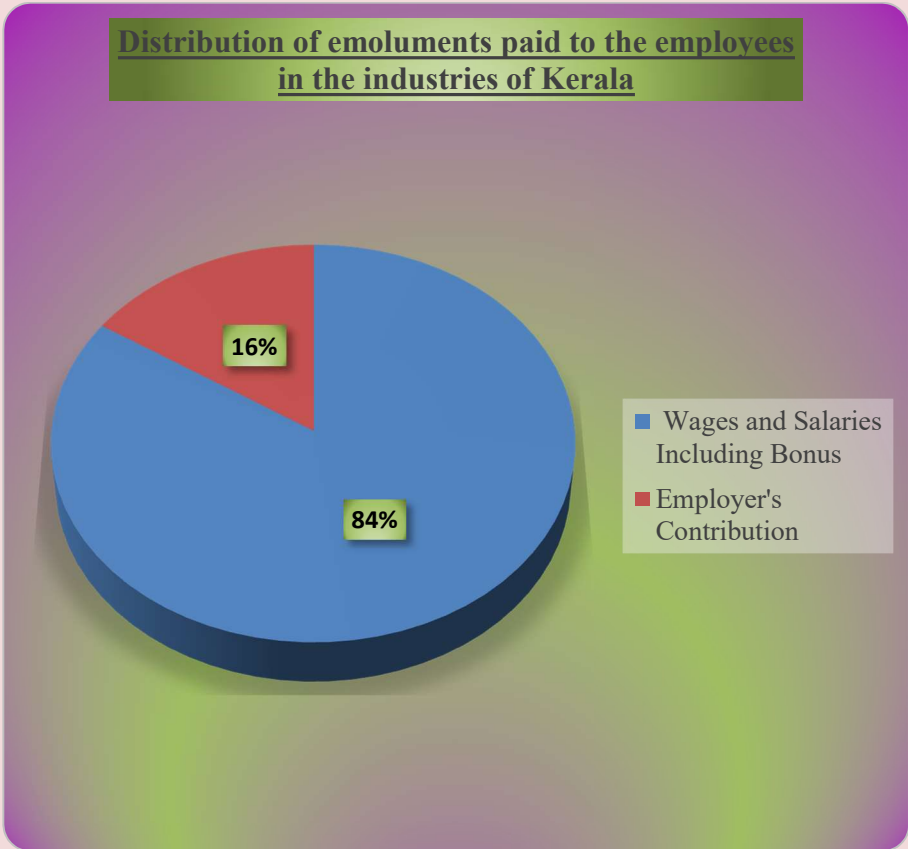


Figure 3

Gender based distribution of directly employed workers

The survey estimates the gender based distribution of directly employed workers in the factories. Among the 2, 19,973

directly employed workers in manufacturing sector of the state about 1,18,816 are male and 1,01,157 are female. The male and female representation is 54% and 46% respectively.

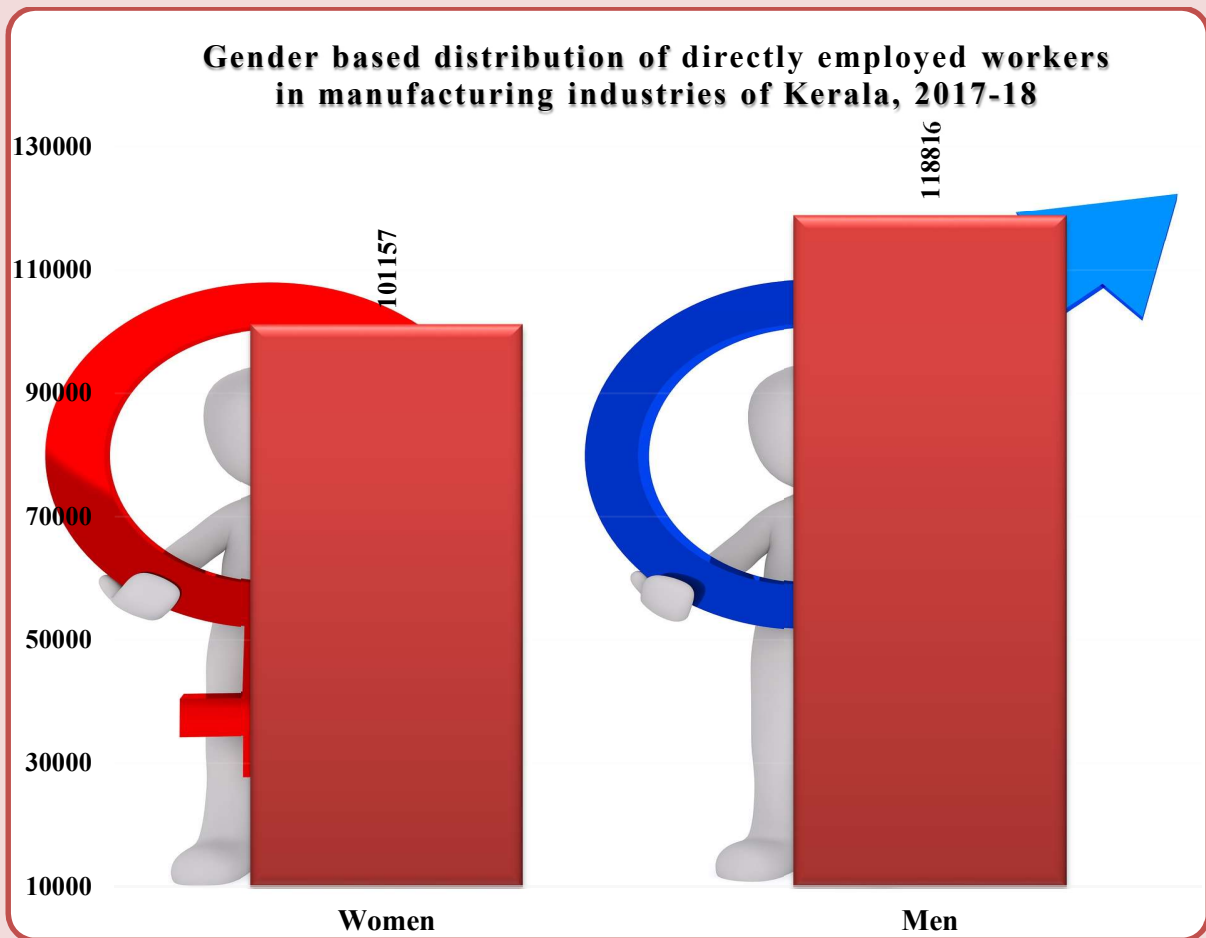


Figure 4



CHAPTER 3

District wise view of principal characteristics of organized manufacturing sector

DISTRICT WISE ESTIMATES



Regional and geographical disparities of various districts of the state may reflect in their industrial statistics. Sustainable developmental strategies conducive for progress in this sector with due consideration of the geographical features demands a grass root level planning. Surveys and studies in this level make way for decentralised planning which is imperative for industrial development. This section presents a vivid picture of the manufacturing sector in the 14 districts of Kerala. The findings of the survey play a significant role in identifying the areas that needs to be prioritized for better development.

Ernakulam district tops with 1467 factories which accounts to about 19% of the total number of estimated factories in Kerala. The least is

recorded by Wyanad district with an estimate of 63 factories (approx 0.1% of state value) (see Figure 5).

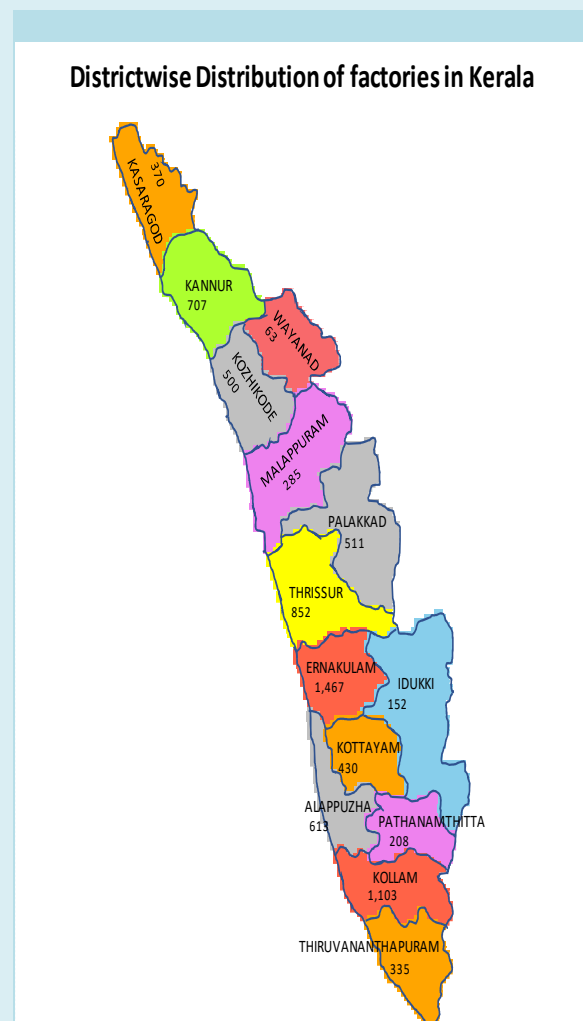


Figure 5

Out of the 14 districts in Kerala Ernakulam district tops with an estimate of 1467 factories (19.31% of state value). The second highest is recorded by Kollam district with an estimate of 1103 factories. Ernakulam district continues to record highest percentage of factories

over a period of at least 7 years. Wayanad district has the least number of factories with an estimate of 63 (approximately 1% of state value). Thrissur district with 852 factories stands in the third position (11.22 % of state value) (*see Table3*).

Table 3: District wise distribution of Factories of Kerala, 2017-18

| Districts | Number of factories | Percentage of factories |
|---------------------------|----------------------------|--------------------------------|
| Kasaragod | 370 | 4.87 |
| Kannur | 707 | 9.31 |
| Wayanad | 63 | 0.83 |
| Kozhikode | 500 | 6.58 |
| Malappuram | 285 | 3.75 |
| Palakkad | 511 | 6.73 |
| Thrissur | 852 | 11.22 |
| Ernakulam | 1467 | 19.31 |
| Idukki | 152 | 2.00 |
| Kottayam | 430 | 5.66 |
| Alappuzha | 613 | 8.07 |
| Pathanamthitta | 208 | 2.74 |
| Kollam | 1103 | 14.53 |
| Thiruvananthapuram | 335 | 4.40 |
| Total | 7596 | 100.00 |

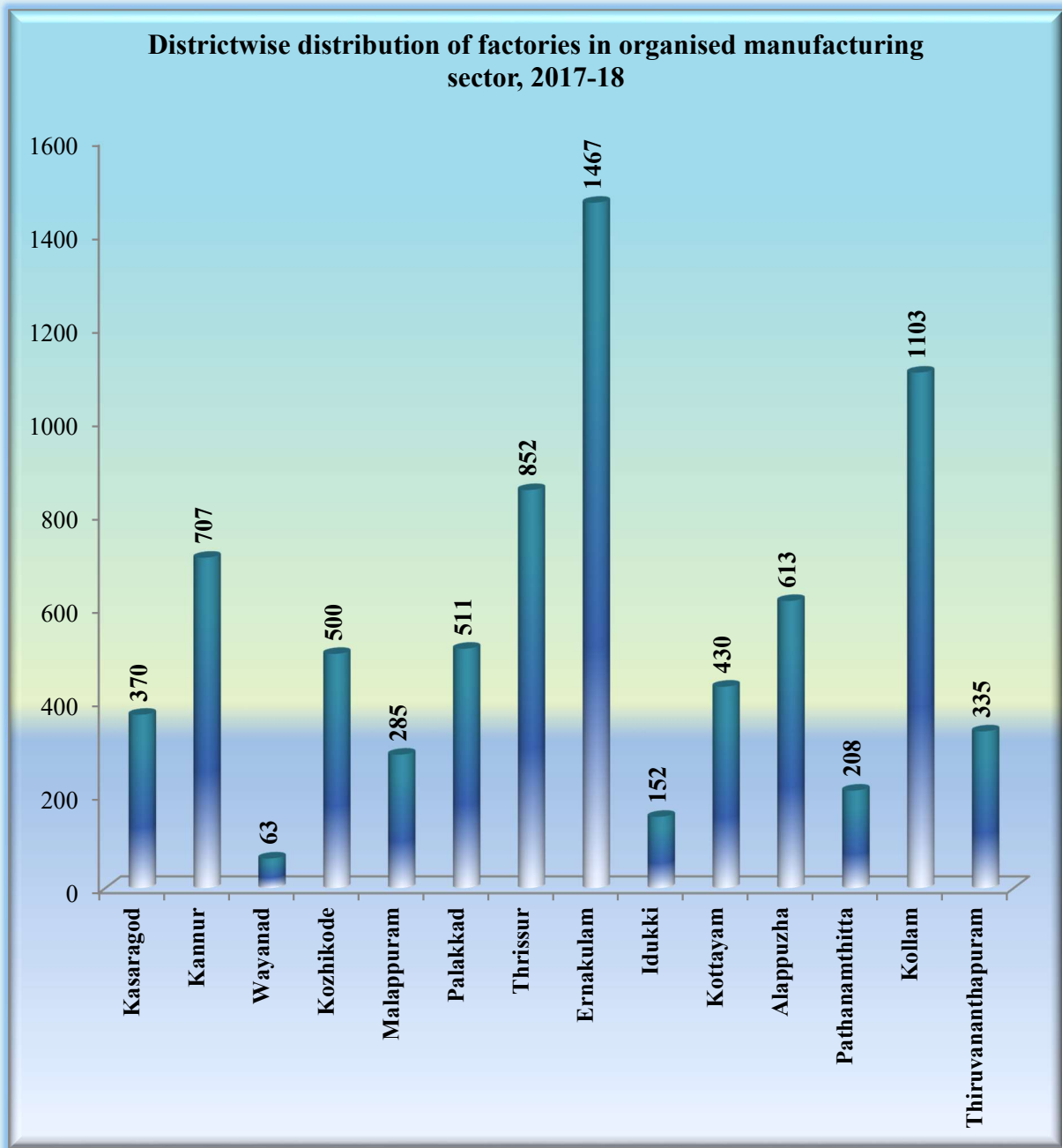


Figure 6

It's noteworthy that estimated number of factories not in operation in the state has decreased to 13.9 % in 2017-18 from 18.5% in 2016-17. Estimated figures show that 27% of factories not in operation in the state falls in Ernakulam

district whereas Kannur and Kollam districts accounts to about 17 % and 14% of the same respectively. The detailed picture of the same is given in *Table 4* and *Figure 7*.

Table 4: District wise distribution of Factories not in operation in Kerala, 2017-18

| Districts | Factories not in operation | Percentage of factories not in operation |
|--------------------|----------------------------|------------------------------------------|
| Kasaragod | 88 | 8 |
| Kannur | 184 | 17 |
| Wayanad | 1 | 0 |
| Kozhikode | 75 | 7 |
| Malappuram | 19 | 2 |
| Palakkad | 6 | 1 |
| Thrissur | 62 | 6 |
| Ernakulam | 289 | 27 |
| Idukki | 17 | 2 |
| Kottayam | 18 | 2 |
| Alappuzha | 101 | 10 |
| Pathanamthitta | 7 | 1 |
| Kollam | 144 | 14 |
| Thiruvananthapuram | 47 | 4 |
| Total | 1058 | 100 |

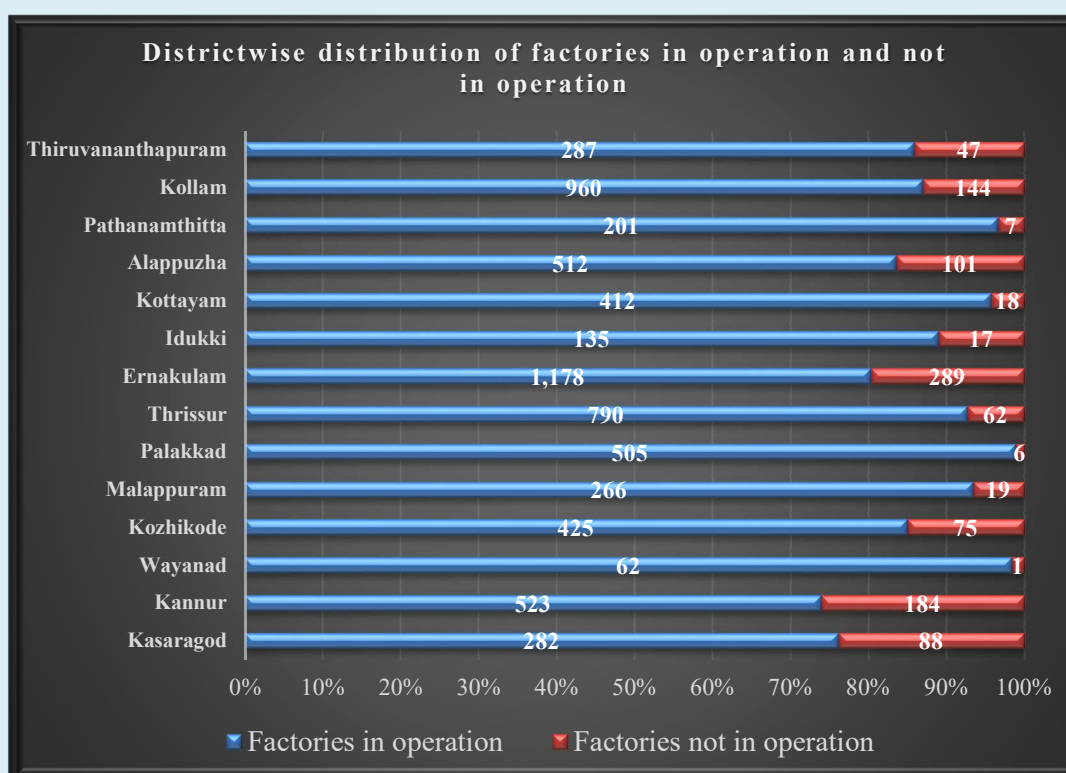


Figure 7

Capital of manufacturing sector

The capital invested in a manufacturing firm is one of the factors that create value addition in the product. Fixed capital represents the fixed assets owned by the factory such as land, building, plant & machinery, transport equipment and other equipments whereas working capital is the capital which forms the part of the day- to-day activities of production. The fixed capital and physical working capital sum up to form the invested capital of the industry.

As per survey results, manufacturing industries of Ernakulam district has the highest invested capital, fixed capital and physical working with an estimate of ₹ 40, 20,422 lakhs (64.89%), ₹ 29, 82,597 lakhs (68.26%) and ₹ 10, 37,825 lakhs (56.85%) respectively. Whereas Wayanad district has the least invested and physical working capital of ₹17,745 lakhs and ₹ 5,457 lakhs respectively (0.28% and 0.29% of state value) and Kasargod district has the least fixed capital of ₹ 9866 lakhs (0.22% of state value).

Table 5: District wise estimate of Fixed Capital, Physical working Capital and Invested Capital

| Districts | Fixed Capital (Value in ₹ lakhs) | Physical Working Capital (Value in ₹ lakhs) | Invested Capital (Value in ₹ lakhs) |
|--------------------|-------------------------------------|---------------------------------------------------|----------------------------------------------|
| Kasaragod | 9866 | 10468 | 20333 |
| Kannur | 52353 | 30125 | 82478 |
| Wayanad | 12288 | 5457 | 17745 |
| Kozhikode | 114024 | 54495 | 168519 |
| Malappuram | 43149 | 39273 | 82422 |
| Palakkad | 228332 | 137357 | 365689 |
| Thrissur | 148907 | 77626 | 226533 |
| Ernakulam | 2982597 | 1037825 | 4020422 |
| Idukki | 67869 | 23810 | 91678 |
| Kottayam | 174385 | 71556 | 245941 |
| Alappuzha | 178991 | 137130 | 316121 |
| Pathanamthitta | 64780 | 16533 | 81314 |
| Kollam | 176704 | 118569 | 295274 |
| Thiruvananthapuram | 115038 | 65312 | 180350 |
| Total | 4369284 | 1825536 | 6194820 |

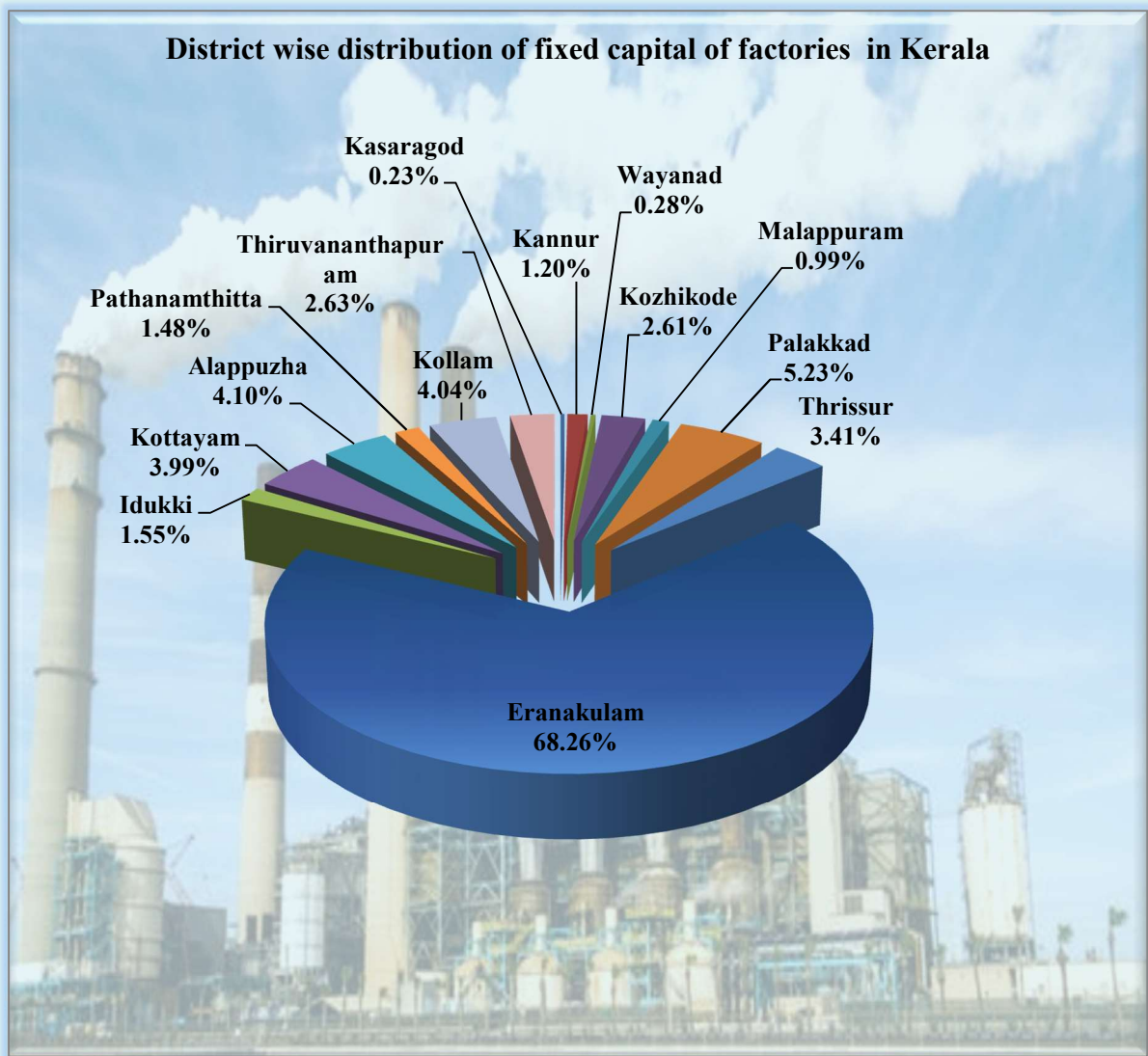


Figure 8

Input and Output

Any policy which aims for a potential use of available resources leading to increased output is expected to achieve the desired goal. Attempts have been made to estimate the input and output of the manufacturing sector.

The input of the production process includes value of fuels consumed, materials consumed for manufacturing and other expenses. Gross output is defined to include the ex-factory value of products and by-products manufactured during the accounting year, and the net value of semi-finished goods or work-in-progress and also the

receipts for industrial and non-industrial services rendered to others, value of semi-finished goods of previous year sold in the current year, sale value of goods sold in the same condition as purchased and value of electricity generated and sold.

The highest input and output is recorded by Ernakulam district with an estimate of ₹ 91, 92,936 lakhs and ₹ 1, 03, 83,427 lakhs respectively (64.48% and 62.71% of the state value). District wise estimate of the same is illustrated in the *Table 6, Figure 9 and Figure 10.*

Table 6: District wise estimate of Input and output of the factories of Kerala, 2017-18

| Districts | Total Input (in ₹ lakhs) | Percentage of input | Total Output (in ₹ lakhs) | Percentage of output |
|---------------------------|--------------------------------------|--------------------------------|--------------------------------------|---------------------------------|
| Kasaragod | 41173 | 0.28 | 55576 | 0.4 |
| Kannur | 132044 | 0.93 | 173387 | 1.05 |
| Wayanad | 52227 | 0.37 | 77065 | 0.47 |
| Kozhikode | 400813 | 2.81 | 486613 | 2.94 |
| Malappuram | 267154 | 1.87 | 306775 | 1.85 |
| Palakkad | 661741 | 4.64 | 779810 | 4.71 |
| Thrissur | 712316 | 5 | 860167 | 5.2 |
| Ernakulam | 9192936 | 64.48 | 10383427 | 62.71 |
| Idukki | 161769 | 1.13 | 208955 | 1.26 |
| Kottayam | 635001 | 4.45 | 796505 | 4.81 |
| Alappuzha | 882752 | 6.19 | 1010743 | 6.10 |
| Pathanamthitta | 136701 | 0.96 | 191194 | 1.15 |
| Kollam | 669478 | 4.7 | 780668 | 4.72 |
| Thiruvananthapuram | 310372 | 2.18 | 445693 | 2.69 |
| Total | 14256475 | 100 | 16556578 | 100 |

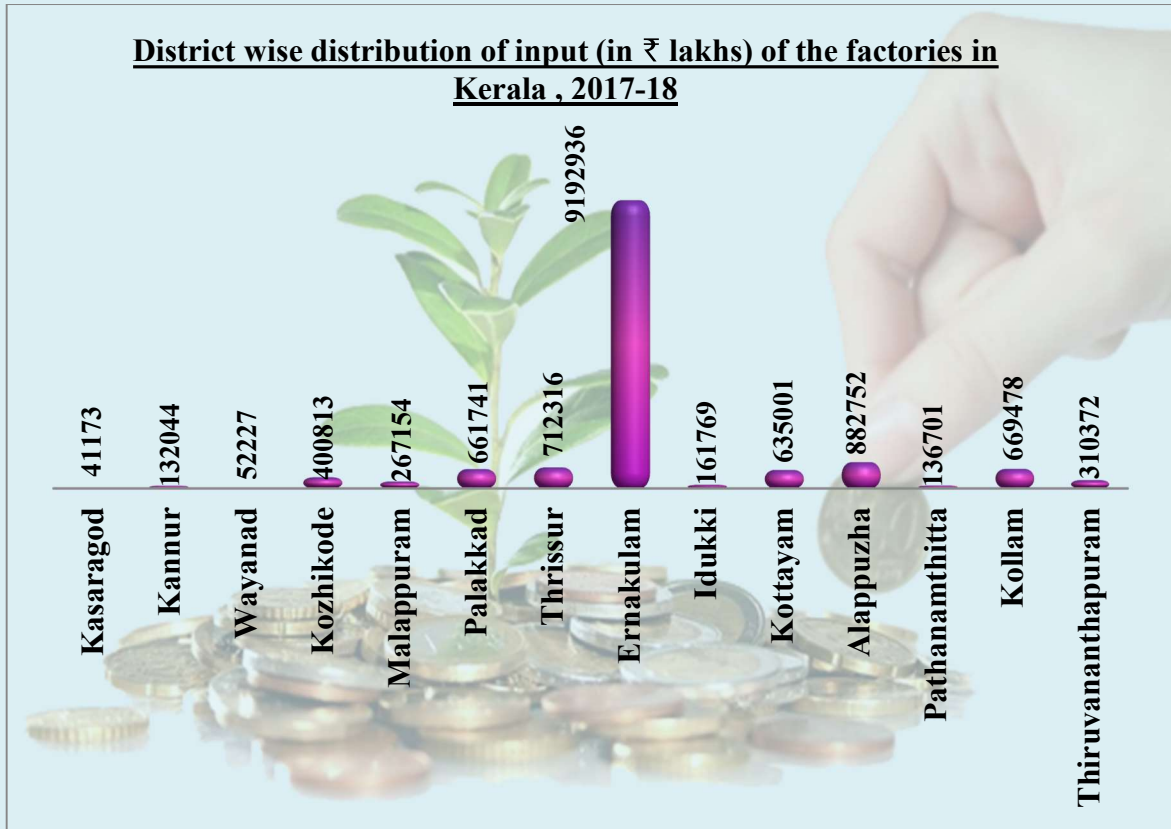


Figure 9

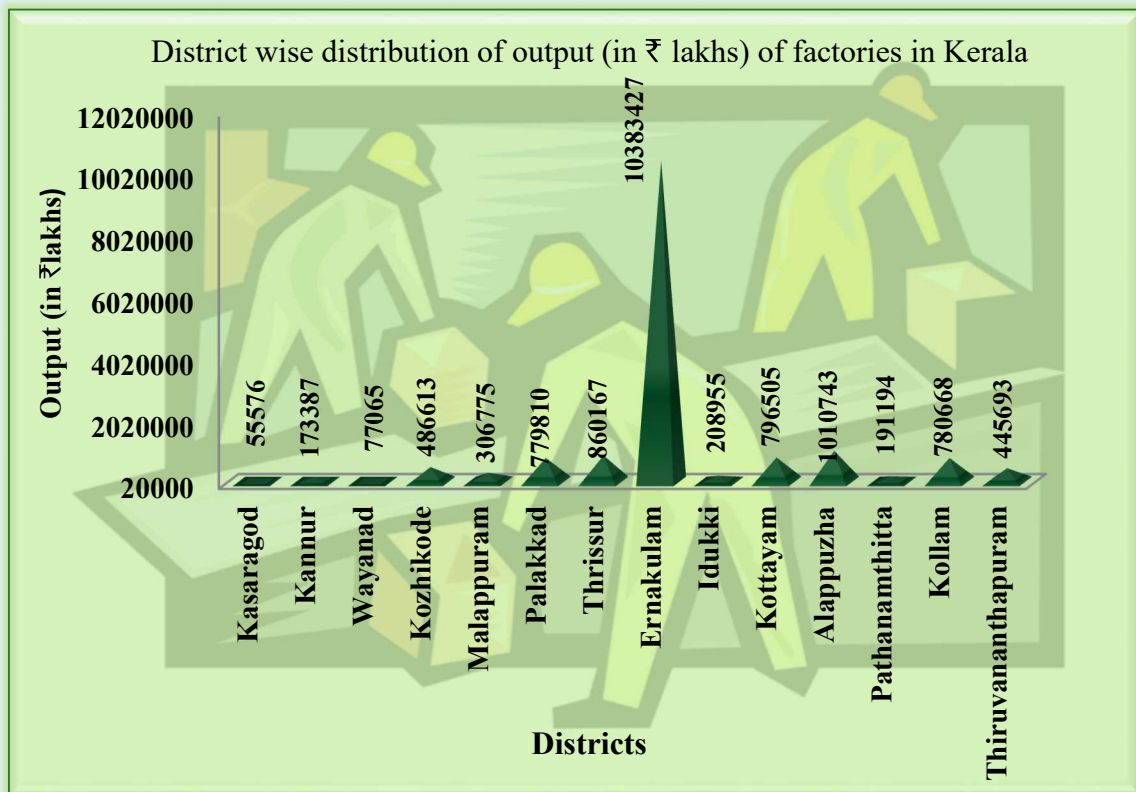


Figure 10

Profit

The profit is obtained by deducting total emoluments and supplement to emoluments from net income. Ernakulam district has earned highest

profit of about ₹ 5, 88,357 lakhs (66.6 % of state value). Industries in Kasargod district has earned the least profit of about ₹ 1,478 lakhs (0.2% of state value). The profit earned by organised manufacturing sector in 14 districts of state is illustrated in *Table 7*.

Table 7: District wise distribution of Profit earned by organised manufacturing sector of Kerala, 2017-18

| Districts | Profit (in ₹ lakhs) | Percentage of profit |
|--------------------|-------------------------|----------------------|
| Kasaragod | 1478 | 0.2 |
| Kannur | 1808 | 0.2 |
| Wayanad | 18909 | 2.1 |
| Kozhikode | 17459 | 2.0 |
| Malappuram | 8457 | 1.0 |
| Palakkad | 31975 | 3.6 |
| Thrissur | 55359 | 6.3 |
| Ernakulam | 588357 | 66.6 |
| Idukki | 10404 | 1.2 |
| Kottayam | 46010 | 5.2 |
| Alappuzha | 38354 | 4.3 |
| Pathanamthitta | 14480 | 1.6 |
| Kollam | 13341 | 1.5 |
| Thiruvananthapuram | 37621 | 4.3 |
| Total | 884010 | 100.00 |

Gross Value Added (GVA)

The value added by each industry is a significant measure of contribution in the GDP of the state. Gross value added is the increment to the value of goods and services contributed by the factory

which is obtained by deducting the value of total input from total output. As per the survey estimates the highest contribution of 51.3 % of state GVA is made by manufacturing sector of Ernakulam district. The percentage contribution of remaining districts lies in the range 0 to 10. (*See Table 8*).

Table 8: District wise distribution of Gross Value Added (GVA) of organised manufacturing sector of Kerala, 2017-18

| Districts | Gross Value Added (GVA) (Value in ₹ Lakhs) | Percentage of GVA |
|--------------------|------------------------------------------------|-------------------|
| Kasaragod | 14403 | 0.6 |
| Kannur | 41342 | 1.8 |
| Wayanad | 24839 | 1.1 |
| Kozhikode | 85800 | 3.8 |
| Malappuram | 39621 | 1.7 |
| Palakkad | 118069 | 5.2 |
| Thrissur | 147851 | 6.5 |
| Ernakulam | 1170286 | 51.3 |
| Idukki | 47186 | 2.1 |
| Kottayam | 161505 | 7.1 |
| Alappuzha | 127991 | 5.6 |
| Pathanamthitta | 54493 | 2.4 |
| Kollam | 111190 | 4.9 |
| Thiruvananthapuram | 135321 | 5.9 |
| Total | 2279897 | 100 |

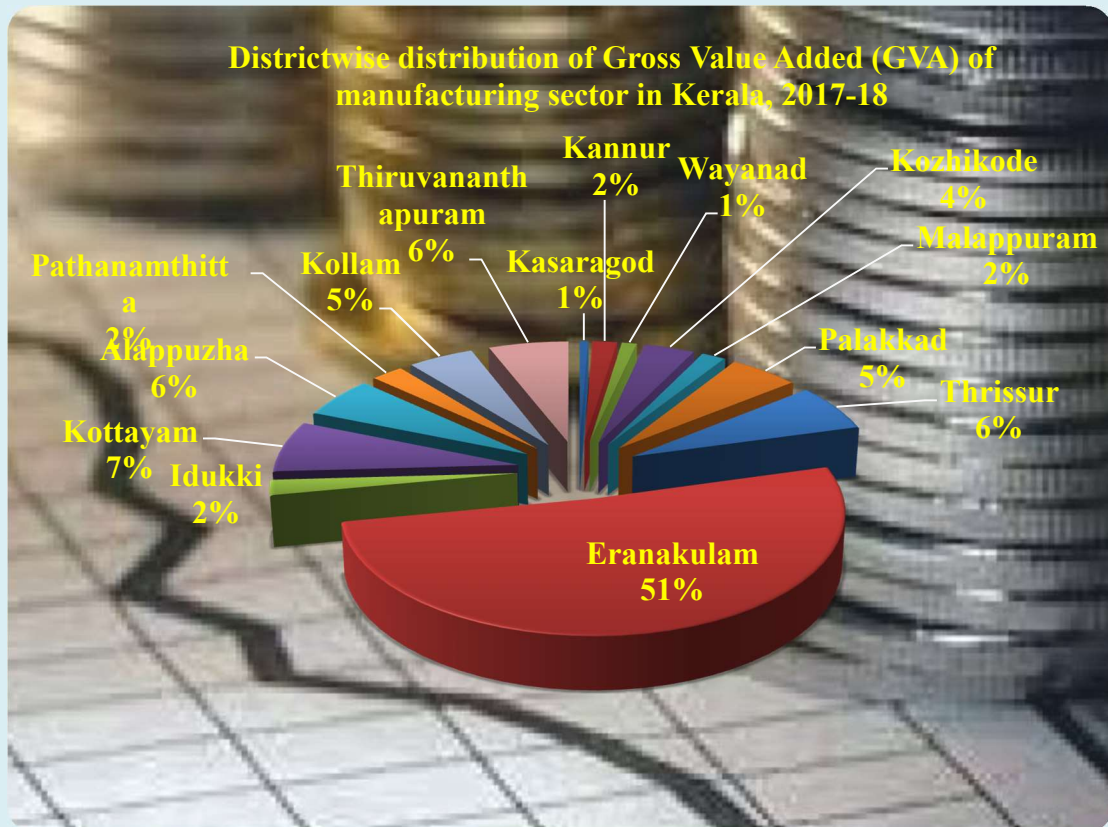


Figure 11

Employment and Emoluments paid

The labor force available, the number of hours utilized in the productive activity, the women representation, emoluments paid etc. are some of the significant factors that stimulate the economic progress of this sector. Out of the total number of persons engaged in the

manufacturing sector of state Ernakulam district has the highest estimate of about 80,710 persons (24.9% of state value). Kollam district stands in the second position with an estimate of about 49,876 workers contributing 15.4% of state value. The percentage contribution of other districts lies in the range 0 to 10 (see Table 9 and Figure 12).

Table 9: District wise distribution of number of persons engaged in manufacturing sector of Kerala, 2017-18

| Districts | Number of persons Engaged | Percentage of persons engaged |
|--------------------|---------------------------|-------------------------------|
| Kasargod | 13828 | 4.3 |
| Kannur | 14690 | 4.5 |
| Wayanad | 1826 | 0.6 |
| Kozhikode | 18491 | 5.7 |
| Malappuram | 8124 | 2.5 |
| Palakkad | 17061 | 5.3 |
| Thrissur | 24362 | 7.5 |
| Ernakulam | 80710 | 24.9 |
| Idukki | 9642 | 3.0 |
| Kottayam | 18719 | 5.8 |
| Alappuzha | 31177 | 9.6 |
| Pathanamthitta | 13294 | 4.1 |
| Kollam | 49876 | 15.4 |
| Thiruvananthapuram | 22974 | 7.1 |
| Total | 324773 | 100.0 |

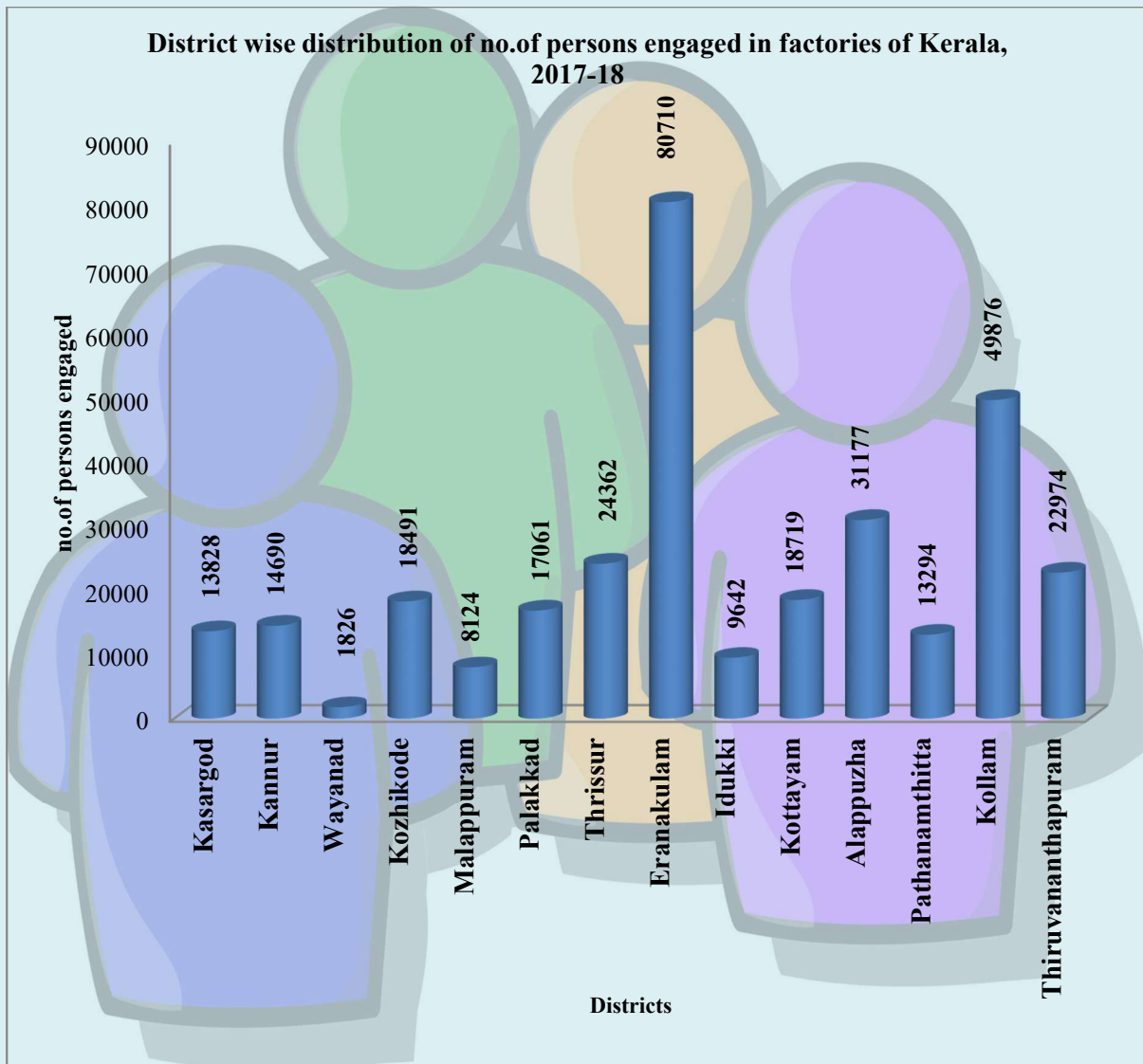


Figure 12

The survey categorises the employees as workers, employees other than workers and unpaid family members/proprietor etc. Further, workers are categorised as directly employed and employed through contractors.

Manufacturing sector in Ernakulam district equips with the highest number

of directly employed workers (21.8 % of state value). Out of these 69.2% are men and 30.8% women. The second highest is recorded by Kollam district with a proportion of 20.5% of state value with 83.6% women and 16.4% men (see Table 10 and Figure 13).

Table 10: District wise gender based distribution of directly employed workers in manufacturing sector of Kerala, 2017-18

| Districts | Men | Women | Total |
|--------------------|---------------|---------------|---------------|
| Kasargod | 739 | 3620 | 4360 |
| Kannur | 4880 | 6650 | 11530 |
| Wayanad | 991 | 263 | 1254 |
| Kozhikode | 8846 | 2383 | 11229 |
| Malappuram | 3849 | 1169 | 5018 |
| Palakkad | 7177 | 2429 | 9606 |
| Thrissur | 12812 | 4544 | 17356 |
| Ernakulam | 33196 | 14770 | 47966 |
| Idukki | 4138 | 2557 | 6696 |
| Kottayam | 8635 | 2385 | 11020 |
| Alappuzha | 11360 | 11568 | 22928 |
| Pathanamthitta | 5378 | 5278 | 10656 |
| Kollam | 7370 | 37667 | 45036 |
| Thiruvananthapuram | 9443 | 5874 | 15317 |
| Total | 118816 | 101157 | 219973 |

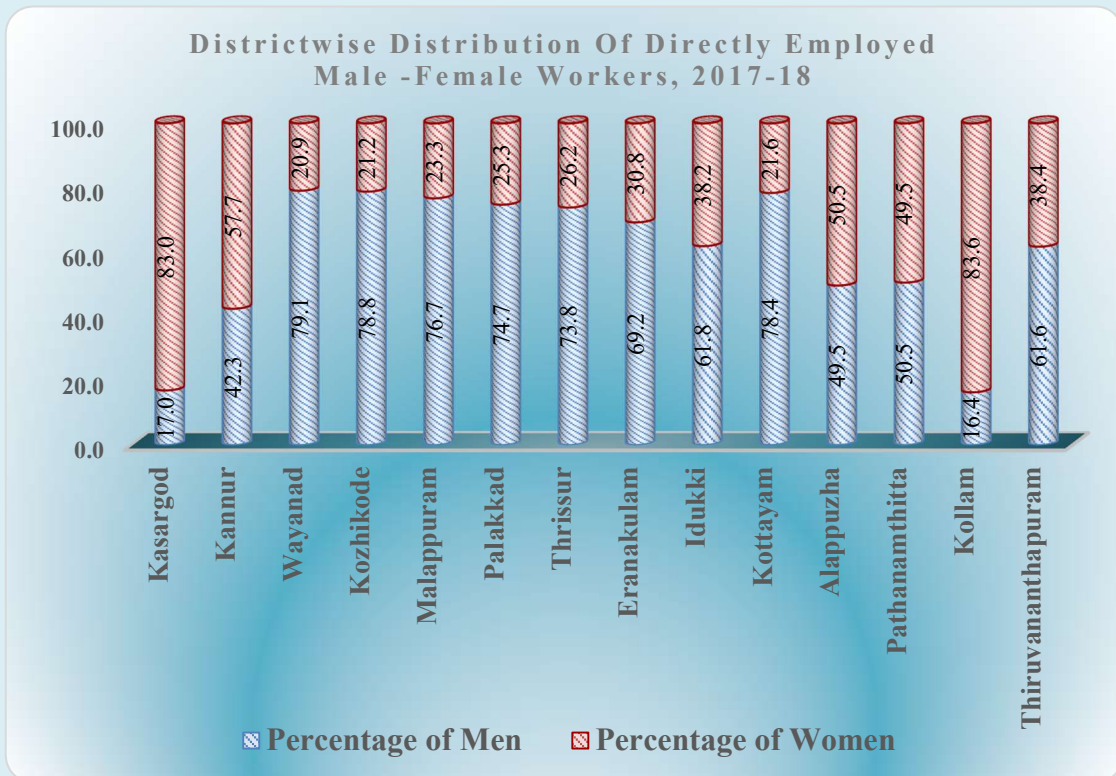


Figure 13

The categorical distribution of employees working in manufacturing sector of 14 districts of the state is illustrated in the *Table 11*.

Table 11: Categorical distribution of persons engaged in manufacturing sector of districts of Kerala, 2017-18

| Districts | Workers | Employees Other Than Workers | Unpaid family members/proprietor etc. |
|--------------------|---------|------------------------------|---------------------------------------|
| Kasargod | 13250 | 477 | 100 |
| Kannur | 12449 | 2103 | 137 |
| Wayanad | 1383 | 424 | 19 |
| Kozhikode | 12303 | 6126 | 62 |
| Malappuram | 5935 | 2122 | 67 |
| Palakkad | 13074 | 3847 | 140 |
| Thrissur | 18969 | 5248 | 145 |
| Eranakulam | 58831 | 21655 | 223 |
| Idukki | 7192 | 2437 | 14 |
| Kottayam | 12424 | 6203 | 91 |
| Alappuzha | 25351 | 5670 | 156 |
| Pathanamthitta | 11220 | 2023 | 51 |
| Kollam | 45183 | 4299 | 393 |
| Thiruvananthapuram | 18524 | 4410 | 39 |
| Total | 256090 | 67045 | 1638 |

Apart from this, the survey estimates the emoluments paid to the employees in the manufacturing sector. Figures show that in Ernakulam district the wages and salaries including bonus of the

employees accounts to about ₹ 2, 77,096 lakhs whereas employers' contribution accounts to about ₹ 61,001. The detailed picture of the same is shown in the *Table 12* and *Figure 14*.

Table 12: District wise Distribution of emoluments paid to employees in manufacturing sector of Kerala, 2017-18

| Districts | Wages & Salary Including Bonus (value in ₹ lakhs) | Employers' Contribution (value in ₹ lakhs) |
|--------------------|---------------------------------------------------|--------------------------------------------|
| Kasargod | 10092 | 1127 |
| Kannur | 24541 | 4098 |
| Wayanad | 3321 | 429 |
| Kozhikode | 42548 | 6739 |
| Malappuram | 18435 | 3021 |
| Palakkad | 43141 | 7493 |
| Thrissur | 57694 | 11715 |
| Eranakulam | 277096 | 61001 |
| Idukki | 24142 | 3963 |
| Kottayam | 70465 | 12076 |
| Alappuzha | 50036 | 8935 |
| Pathanamthitta | 25613 | 2995 |
| Kollam | 60495 | 9141 |
| Thiruvananthapuram | 63684 | 11411 |
| Total | 771302 | 144144 |

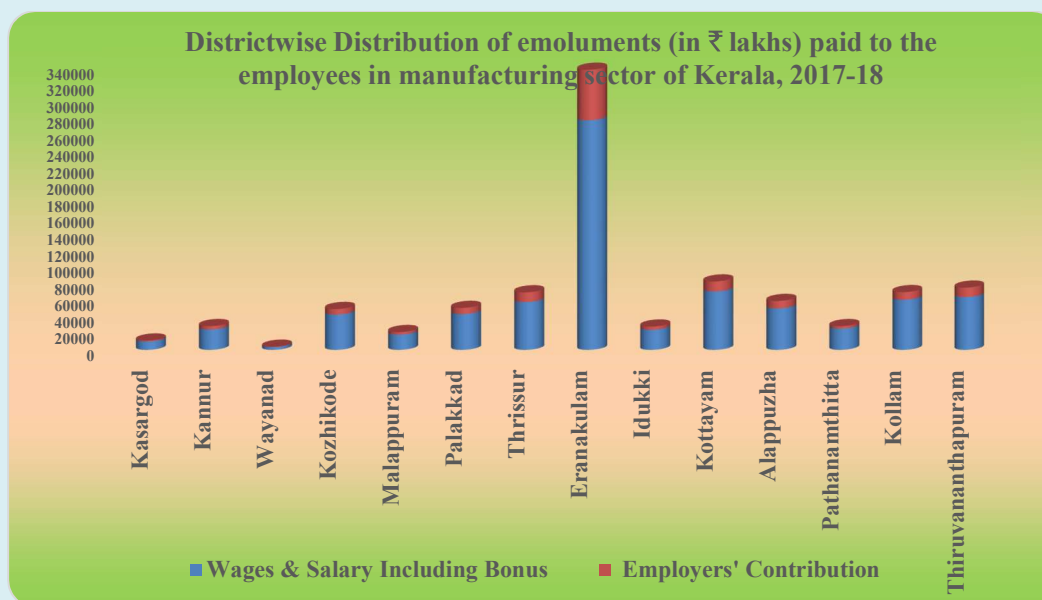


Figure 14



**Industrial Statistics Based On National
Industrial Classification (NIC 2008)**

CHAPTER 4

**Estimation of principle
characteristics of factory sector
by economic activity of the
industries.**



National Industrial Classification (NIC), 2008 is a Statistical Standard used to categorize the industries based on the economic activity involved and to facilitate comparison. NIC code is given as per maximum ex-factory value of major product out of the multiple products and the by-products manufactured by the units. It's a standard industrial classification system developed to facilitate a basis for analysing myriad industries based on economic activity involved and for comparability with International Standards. An attempt has been made in this survey to bring forth the industrial statistics based on NIC categorization. It's an aid for the policy makers for assessing the contribution of each economic activity towards the state's

economy and to formulate policies for the progress of the sector.

Manufacturing industries by 2-digit NIC, 2008

In the organised manufacturing sector of Kerala, the highest of about 21.4% factories are involved in the manufacture of food products and the least of 0.1% in motor vehicles, trailers and semi-trailers. The second and third highest are non-metallic mineral products manufacturing industries (12.9%) and wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (11.3%) respectively.

Table 12: Distribution of factories by major factory group at 2-digit NIC 2008

| NIC Code | Description | Number of factories | Percentage of Factories |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------|
| 10 | Manufacture of food products | 1624 | 21.4 |
| 11 | Manufacture of beverages | 63 | 0.8 |
| 12 | Manufacture of tobacco products | 500 | 6.6 |
| 13 | Manufacture of textiles | 423 | 5.6 |
| 14 | Manufacture of wearing apparel | 51 | 0.7 |
| 15 | Manufacture of leather and related products | 203 | 2.7 |
| 16 | Manufacture of wood and products of wood and cork,except furniture ;manufacture of articles of straw and plaiting materials | 857 | 11.3 |
| 17 | Manufacture of paper and paper products | 134 | 1.8 |
| 18 | Printing and reproduction of recorded media | 156 | 2.1 |
| 19 | Manufacture of coke and refined petroleum products | 27 | 0.4 |
| 20 | Manufacture of chemicals and chemical products | 146 | 1.9 |
| 21 | Manufacture of pharmaceuticals, medicinal chemical and botanical products | 159 | 2.1 |
| 22 | Manufacture of rubber and plastic products | 629 | 8.3 |
| 23 | Manufacture of other non-metallic mineral products | 978 | 12.9 |
| 24 | Manufacture of basic metals | 122 | 1.6 |
| 25 | Manufacture of fabricated metal products, except machinery and equipment | 200 | 2.6 |
| 26 | Manufacture of computer, electronic and optical products | 54 | 0.7 |
| 27 | Manufacture of electrical equipment | 92 | 1.2 |
| 28 | Manufacture of machinery and equipment n.e.c | 78 | 1.0 |
| 29 | Manufacture of motor vehicles, trailers and semitrailers | 9 | 0.1 |
| 30 | Manufacture of other transport equipment | 23 | 0.3 |
| 31 | Manufacture of furniture | 130 | 1.7 |
| 32 | Other manufacturing | 74 | 1.0 |
| 33 | Repair and installation of machinery and equipment | 44 | 0.6 |
| 58 | Publishing activities | 22 | 0.3 |
| | Others | 798 | 10.5 |
| | Total | 7596 | 100 |

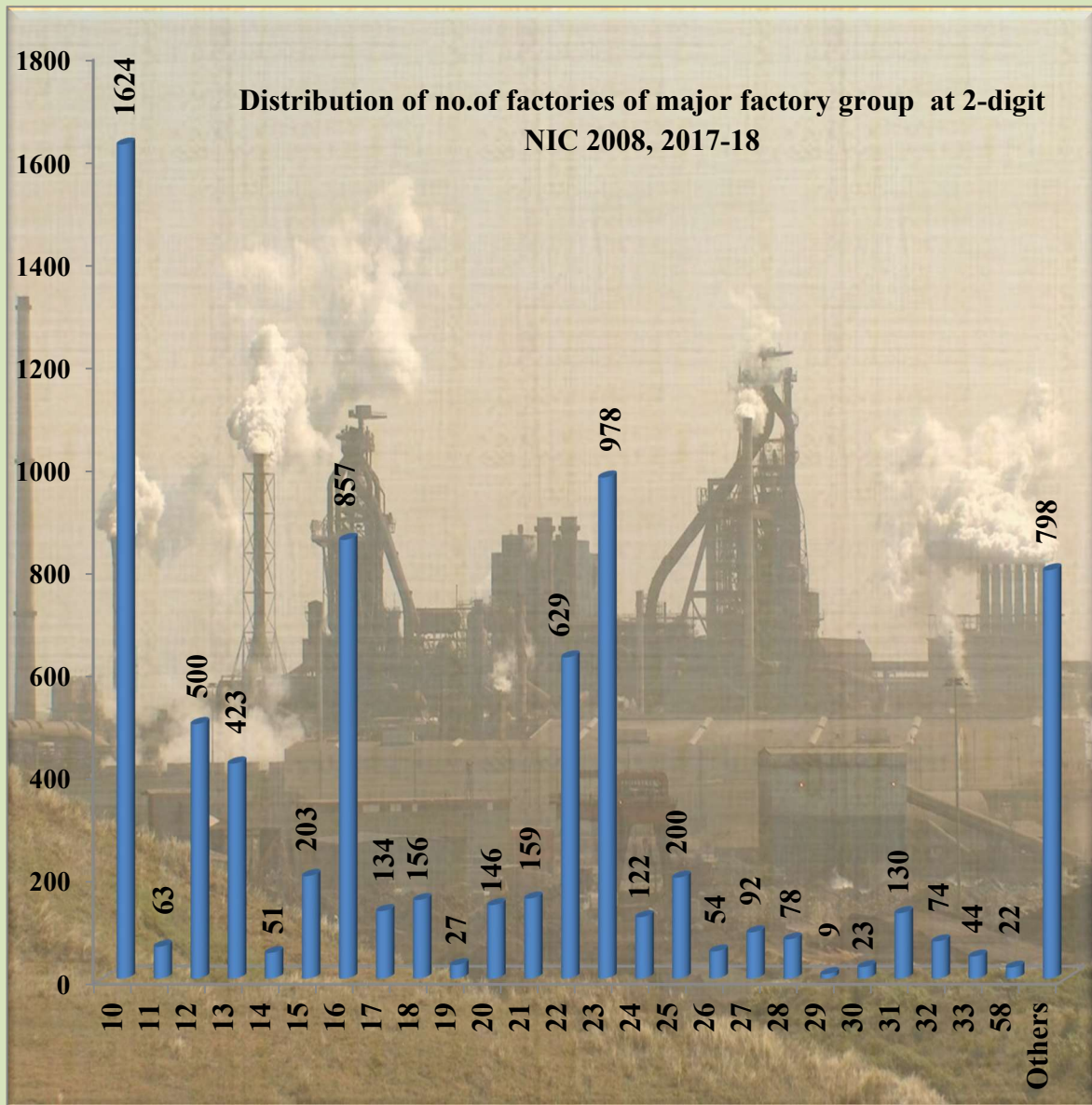


Figure 15

Capital of industries by 2-digit NIC, 2008

The industries manufacturing coke and refined petroleum products have made highest investment on fixed assets in the year 2017-18. The estimated value of fixed capital is ₹ 23, 78,086 lakhs which

accounts to about 54.4 % of state value followed by food manufacturing industries with an estimate of ₹ 4, 58,368 lakhs (10.5 % of state value). The fixed capital of remaining industries lies .in the range 0 to 10 percentage of state value (see Table 13 and Figure 16).

Table 13: Distribution of fixed capital by major factory group at 2-digit NIC 2008

| NIC 2 digit Code | Description | Fixed Capital (Value in ₹ Lakhs) | Percentage of Fixed Capital |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------|
| 10 | Manufacture of food products | 458368 | 10.49 |
| 11 | Manufacture of beverages | 30153 | 0.69 |
| 12 | Manufacture of tobacco products | 1632 | 0.04 |
| 13 | Manufacture of textiles | 136895 | 3.13 |
| 14 | Manufacture of wearing apparel | 24425 | 0.56 |
| 15 | Manufacture of leather and related products | 30223 | 0.69 |
| 16 | Manufacture of wood and products of wood and cork, except furniture ;manufacture of articles of straw and plaiting materials | 28639 | 0.66 |
| 17 | Manufacture of paper and paper products | 27378 | 0.63 |
| 18 | Printing and reproduction of recorded media | 100613 | 2.30 |
| 19 | Manufacture of coke and refined petroleum products | 2378086 | 54.43 |
| 20 | Manufacture of chemicals and chemical products | 124343 | 2.85 |
| 21 | Manufacture of pharmaceuticals, medicinal chemical and botanical products | 54280 | 1.24 |
| 22 | Manufacture of rubber and plastic products | 252851 | 5.79 |
| 23 | Manufacture of other non-metallic mineral products | 173473 | 3.97 |
| 24 | Manufacture of basic metals | 92445 | 2.12 |
| 25 | Manufacture of fabricated metal products, except machinery and equipment | 32328 | 0.74 |
| 26 | Manufacture of computer, electronic and optical products | 48328 | 1.11 |
| 27 | Manufacture of electrical equipment | 20048 | 0.46 |
| 28 | Manufacture of machinery and equipment n.e.c | 11359 | 0.26 |
| 29 | Manufacture of motor vehicles, trailers and semitrailers | 956 | 0.02 |
| 30 | Manufacture of other transport equipment | 64661 | 1.48 |
| 31 | Manufacture of furniture | 11809 | 0.27 |
| 32 | Other manufacturing | 16048 | 0.37 |
| 33 | Repair and installation of machinery and equipment | 5233 | 0.12 |
| 58 | Publishing activities | 30596 | 0.70 |
| | Others | 214115 | 4.90 |
| | Total | 4369284 | 100 |

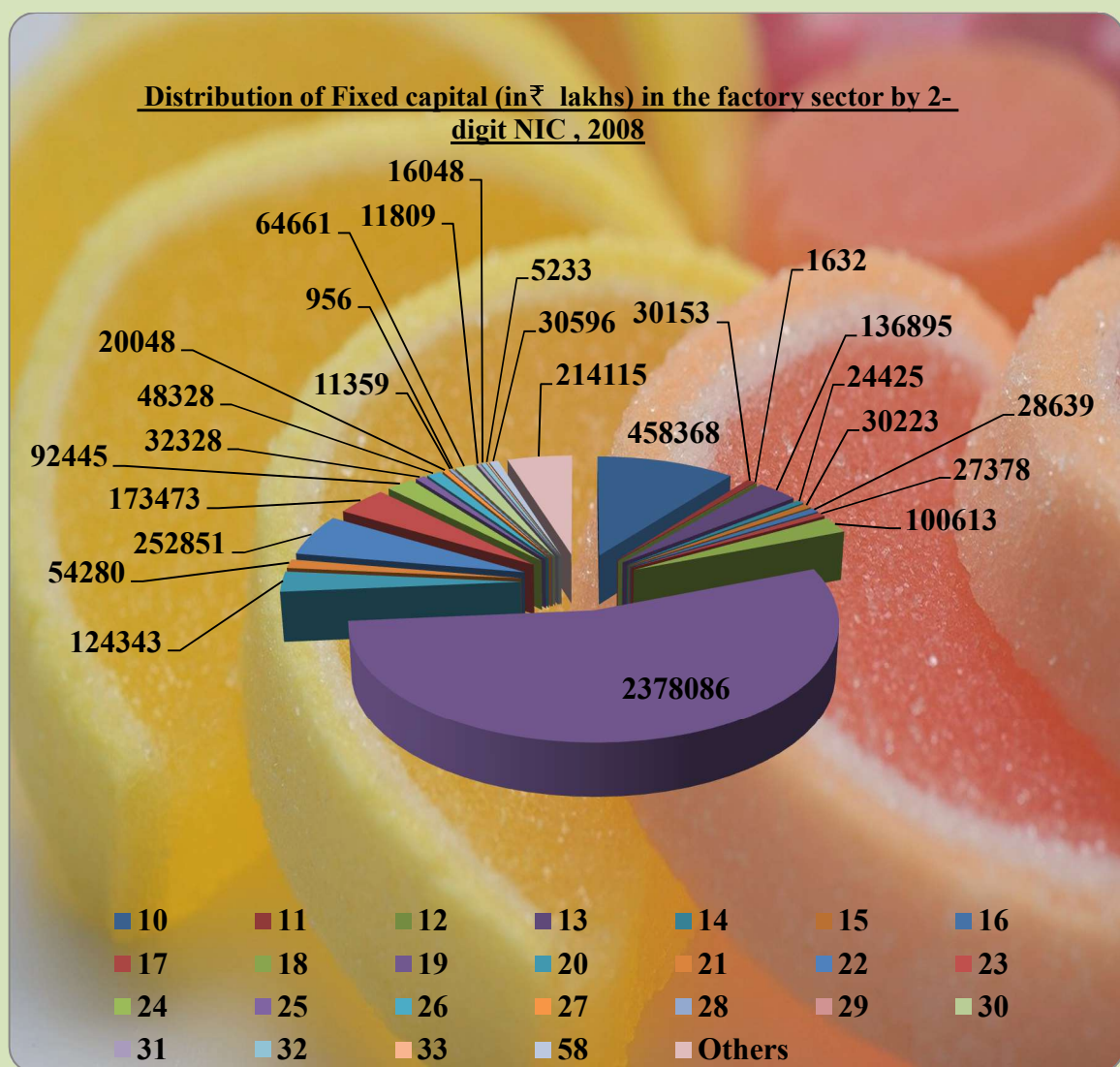


Figure 16

The figures of the survey results show that coke and refined petroleum products manufacturing industries has the highest invested capital of ₹ 28,55,260 lakhs (46.1% of state value). Food manufacturing industries stands

in the second position with an estimate of ₹ 8,27,490 lakhs which accounts to about 13.4% of state value. The contribution of remaining industries is illustrated in *Table 14* and *Figure 17*.

Table 14: Distribution of invested capital by major factory group at 2-digit NIC 2008

| NIC 2 digit Code | Description | Invested Capital (Value In ₹ Lakhs) | Percentage of Invested Capital |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------|
| 10 | Manufacture of food products | 827490 | 13.4 |
| 11 | Manufacture of beverages | 39223 | 0.6 |
| 12 | Manufacture of tobacco products | 3108 | 0.1 |
| 13 | Manufacture of textiles | 226652 | 3.7 |
| 14 | Manufacture of wearing apparel | 36818 | 0.6 |
| 15 | Manufacture of leather and related products | 60599 | 1.0 |
| 16 | Manufacture of wood and products of wood and cork, except furniture ; manufacture of articles of straw and plaiting materials | 58155 | 0.9 |
| 17 | Manufacture of paper and paper products | 36764 | 0.6 |
| 18 | Printing and reproduction of recorded media | 119051 | 1.9 |
| 19 | Manufacture of coke and refined petroleum products | 2855260 | 46.1 |
| 20 | Manufacture of chemicals and chemical products | 266812 | 4.3 |
| 21 | Manufacture of pharmaceuticals, medicinal chemical and botanical products | 98501 | 1.6 |
| 22 | Manufacture of rubber and plastic products | 365374 | 5.9 |
| 23 | Manufacture of other non-metallic mineral products | 222007 | 3.6 |
| 24 | Manufacture of basic metals | 179785 | 2.9 |
| 25 | Manufacture of fabricated metal products, except machinery and equipment | 54930 | 0.9 |
| 26 | Manufacture of computer, electronic and optical products | 102009 | 1.6 |
| 27 | Manufacture of electrical equipment | 45449 | 0.7 |
| 28 | Manufacture of machinery and equipment n.e.c | 24801 | 0.4 |
| 29 | Manufacture of motor vehicles, trailers and semitrailers | 1818 | 0.0 |
| 30 | Manufacture of other transport equipment | 106958 | 1.7 |
| 31 | Manufacture of furniture | 22506 | 0.4 |
| 32 | Other manufacturing | 101950 | 1.6 |
| 33 | Repair and installation of machinery and equipment | 6659 | 0.1 |
| 58 | Publishing activities | 35533 | 0.6 |
| | Others | 296609 | 4.8 |
| | Total | 6194820 | 100 |

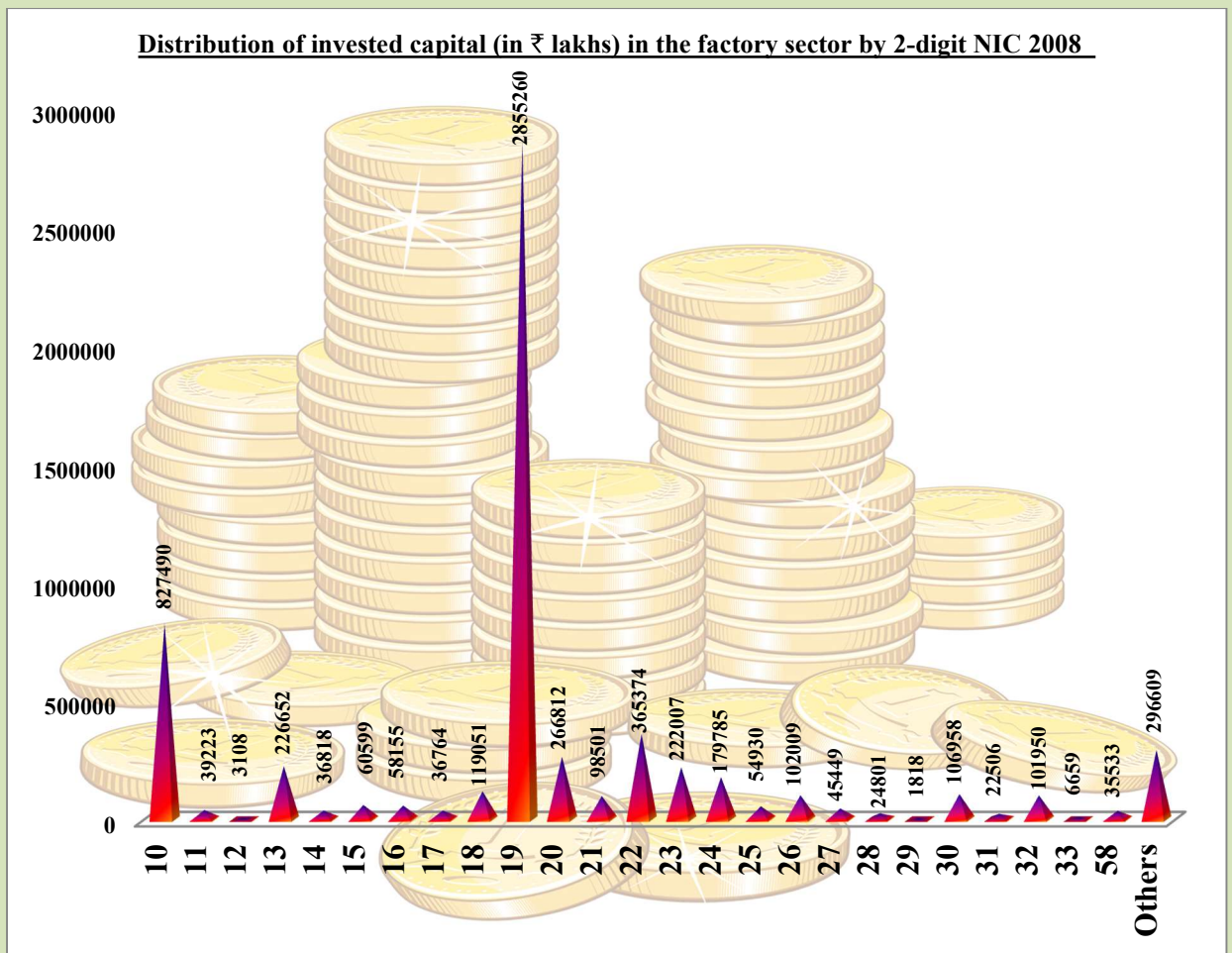


Figure 17

*Output of factory sector by 2-digit NIC
2008*

The coke and refined petroleum products manufacturing sector has made the highest output with an estimate of ₹ 53, 26,990 lakhs (32.2 % of state value) followed by industries

manufacturing food products with an estimate of ₹ 35, 25,679 lakhs (21.3 % of state value). The least output is recorded by factory sector manufacturing motor vehicles, trailers and semitrailers (₹ 4,126 lakhs). The *Table 15* and *Figure 18* demonstrate the detail picture of the same.

Table 15: Distribution of output of factories by major factory group at 2-digit NIC 2008

| NIC 2 digit Code | Description | Total Output (Value in ₹ Lakhs) | Percentage of Output |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------|
| 10 | Manufacture of food products | 3525679 | 21.29 |
| 11 | Manufacture of beverages | 122299 | 0.74 |
| 12 | Manufacture of tobacco products | 16083 | 0.10 |
| 13 | Manufacture of textiles | 426914 | 2.58 |
| 14 | Manufacture of wearing apparel | 81119 | 0.49 |
| 15 | Manufacture of leather and related products | 238421 | 1.44 |
| 16 | Manufacture of wood and products of wood and cork ,except furniture ;manufacture of articles of straw and plaiting materials | 153492 | 0.93 |
| 17 | Manufacture of paper and paper products | 77942 | 0.47 |
| 18 | Printing and reproduction of recorded media | 210485 | 1.27 |
| 19 | Manufacture of coke and refined petroleum products | 5326990 | 32.17 |
| 20 | Manufacture of chemicals and chemical products | 756314 | 4.57 |
| 21 | Manufacture of pharmaceuticals, medicinal chemical and botanical products | 252213 | 1.52 |
| 22 | Manufacture of rubber and plastic products | 1054281 | 6.37 |
| 23 | Manufacture of other non-metallic mineral products | 375698 | 2.27 |
| 24 | Manufacture of basic metals | 392213 | 2.37 |
| 25 | Manufacture of fabricated metal products, except machinery and equipment | 121911 | 0.74 |
| 26 | Manufacture of computer, electronic and optical products | 263177 | 1.59 |
| 27 | Manufacture of electrical equipment | 152757 | 0.92 |
| 28 | Manufacture of machinery and equipment n.e.c | 48327 | 0.29 |
| 29 | Manufacture of motor vehicles, trailers and semitrailers | 4126 | 0.02 |
| 30 | Manufacture of other transport equipment | 257826 | 1.56 |
| 31 | Manufacture of furniture | 48090 | 0.29 |
| 32 | Other manufacturing | 2003717 | 12.10 |
| 33 | Repair and installation of machinery and equipment | 8660 | 0.05 |
| 58 | Publishing activities | 80588 | 0.49 |
| | Others | 557259 | 3.37 |
| | Total | 16556578 | 100.00 |

Distribution of output of factory sector by 2-digit NIC 2008

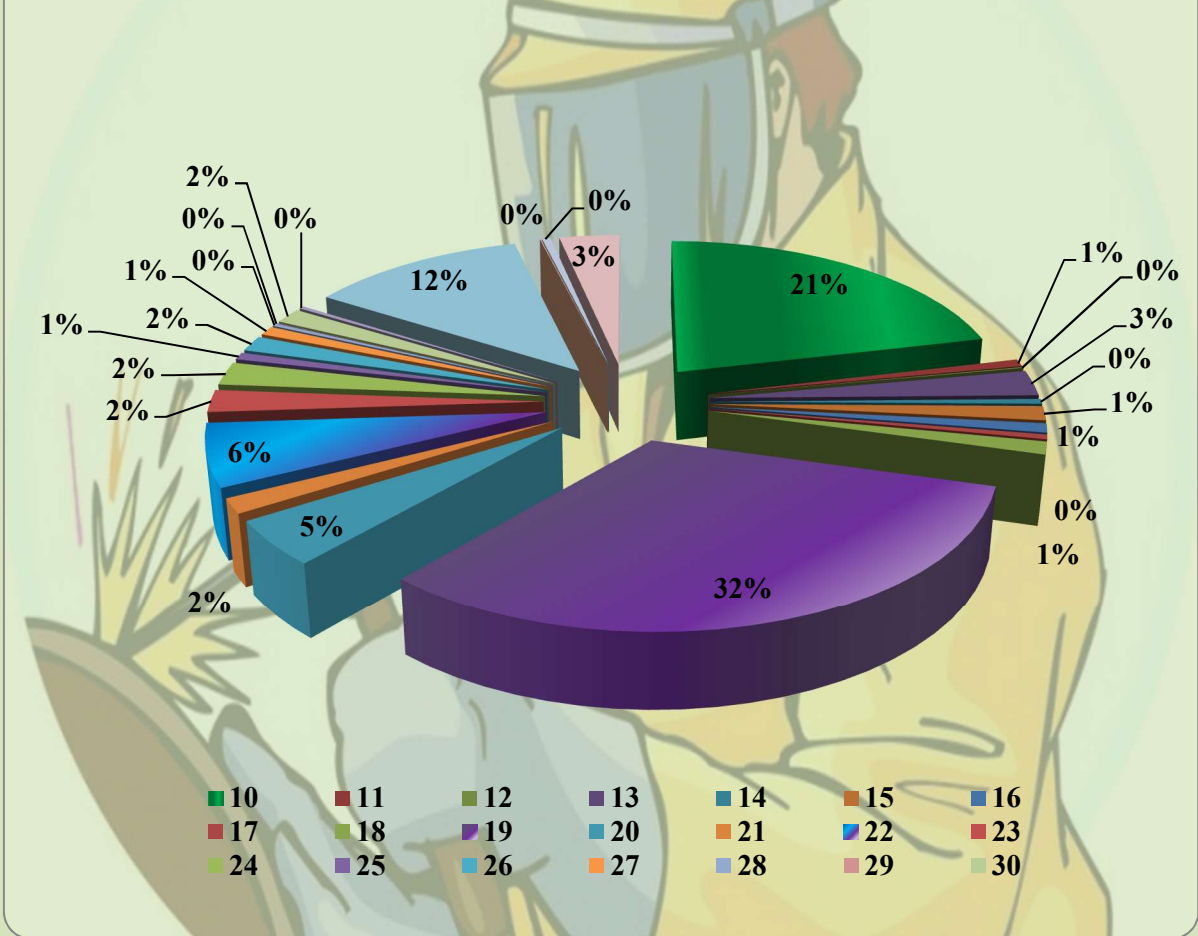


Figure 18

Gross Value Added (GVA)

The industries manufacturing coke & refined petroleum products made the highest contribution of Gross Value Added of the state's manufacturing sector. The survey estimated that about 20.3 % of total

GVA is contributed by this industry. The second and third highest GVA is recorded by industries manufacturing food products (16.4%) and chemicals & chemical products (10.9%) respectively. The detailed picture of the remaining industries is illustrated in *Table 16* and *Figure 19*.

Table 16: Distribution of Gross Value Added (GVA) of factories by major factory group at 2-digit NIC 2008

| NIC 2 digit Code | Description | GVA (Value in ₹ Lakhs) | Percentage of GVA |
|------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------|
| 10 | Manufacture of food products | 373307 | 16.4 |
| 11 | Manufacture of beverages | 29885 | 1.3 |
| 12 | Manufacture of tobacco products | 10321 | 0.5 |
| 13 | Manufacture of textiles | 77679 | 3.4 |
| 14 | Manufacture of wearing apparel | 31592 | 1.4 |
| 15 | Manufacture of leather and related products | 40681 | 1.8 |
| 16 | Manufacture of wood and products of wood and cork, except furniture ; manufacture of articles of straw and plaiting materials | 24310 | 1.1 |
| 17 | Manufacture of paper and paper products | 10850 | 0.5 |
| 18 | Printing and reproduction of recorded media | 90585 | 4.0 |
| 19 | Manufacture of coke and refined petroleum products | 462662 | 20.3 |
| 20 | Manufacture of chemicals and chemical products | 249027 | 10.9 |
| 21 | Manufacture of pharmaceuticals, medicinal chemical and botanical products | 75166 | 3.3 |
| 22 | Manufacture of rubber and plastic products | 208685 | 9.2 |
| 23 | Manufacture of other non-metallic mineral products | 142797 | 6.3 |
| 24 | Manufacture of basic metals | 20101 | 0.9 |
| 25 | Manufacture of fabricated metal products, except machinery and equipments | 21654 | 0.9 |
| 26 | Manufacture of computer, electronic and optical products | 67591 | 3.0 |
| 27 | Manufacture of electrical equipment | 38902 | 1.7 |
| 28 | Manufacture of machinery and equipment n.e.c | 13062 | 0.6 |
| 29 | Manufacture of motor vehicles, trailers and semitrailers | 1070 | 0.0 |
| 30 | Manufacture of other transport equipment | 87425 | 3.8 |
| 31 | Manufacture of furniture | 12552 | 0.6 |
| 32 | Other manufacturing | 80853 | 3.5 |
| 33 | Repair and installation of machinery and equipment | 1277 | 0.1 |
| 58 | Publishing activities | 31506 | 1.4 |
| | Others | 76354 | 3.3 |
| | Total | 2279897 | 100 |

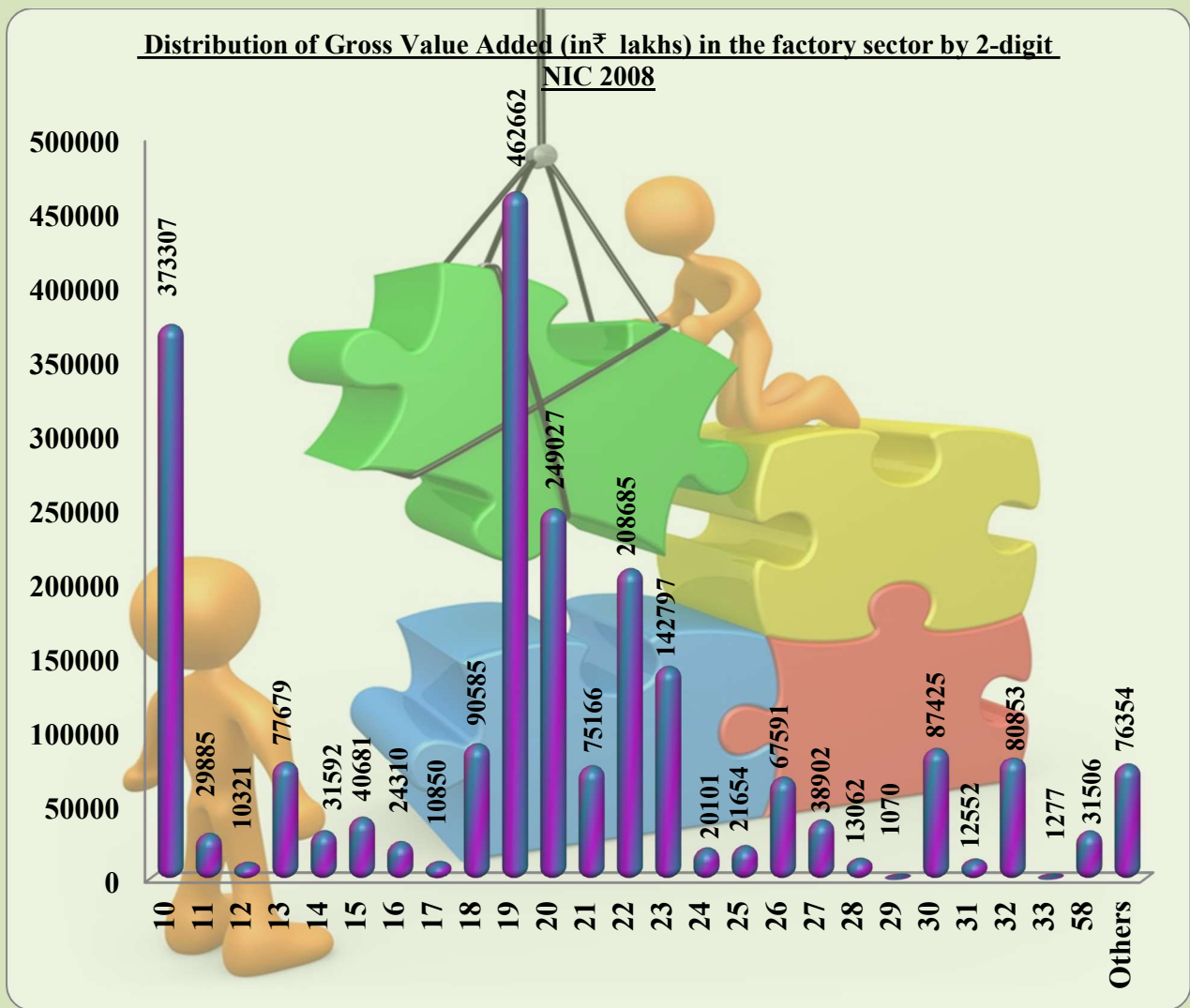


Figure 19

Income generated by the industries

As per the survey figures income generated by coke and refined petroleum products is the highest which accounts to about 19.5% of state value. The food manufacturing industry stands in the

second position whereas chemical and chemical products industry in the third position which contributes approximately 15.9% and 12.1% respectively. All the other industries' contribution lies in the range 0 to 10. Refer *Table 17* and *Figure 20*.

Table 17: Distribution of Net Income of factories by major factory group at 2-digit NIC 2008

| NIC 2 digit Code | Description | Net Income (Value In ₹ Lakhs) | Percentage of Income |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------------------|
| 10 | Manufacture of food products | 286086 | 15.9 |
| 11 | Manufacture of beverages | 25926 | 1.4 |
| 12 | Manufacture of tobacco products | 10231 | 0.6 |
| 13 | Manufacture of textiles | 54292 | 3.0 |
| 14 | Manufacture of wearing apparel | 27756 | 1.5 |
| 15 | Manufacture of leather and related products | 32965 | 1.8 |
| 16 | Manufacture of wood and products of wood and cork,except furniture ;manufacture of articles of straw and plaiting materials | 16996 | 0.9 |
| 17 | Manufacture of paper and paper products | 5510 | 0.3 |
| 18 | Printing and reproduction of recorded media | 71163 | 4.0 |
| 19 | Manufacture of coke and refined petroleum products | 350002 | 19.5 |
| 20 | Manufacture of chemicals and chemical products | 217918 | 12.1 |
| 21 | Manufacture of pharmaceuticals, medicinal chemical and botanical products | 66143 | 3.7 |
| 22 | Manufacture of rubber and plastic products | 178881 | 9.9 |
| 23 | Manufacture of other non-metallic mineral products | 111854 | 6.2 |
| 24 | Manufacture of basic metals | 1967 | 0.1 |
| 25 | Manufacture of fabricated metal products, except machinery and equipment | 16279 | 0.9 |
| 26 | Manufacture of computer, electronic and optical products | 57032 | 3.2 |
| 27 | Manufacture of electrical equipment | 31264 | 1.7 |
| 28 | Manufacture of machinery and equipment n.e.c | 10883 | 0.6 |
| 29 | Manufacture of motor vehicles, trailers and semitrailers | 901 | 0.1 |
| 30 | Manufacture of other transport equipment | 96970 | 5.4 |
| 31 | Manufacture of furniture | 9384 | 0.5 |
| 32 | Other manufacturing | 52902 | 2.9 |
| 33 | Repair and installation of machinery and equipment | 504 | 0.0 |
| 58 | Publishing activities | 25311 | 1.4 |
| | Others | 40198 | 2.2 |
| | Total | 1799319 | 100 |

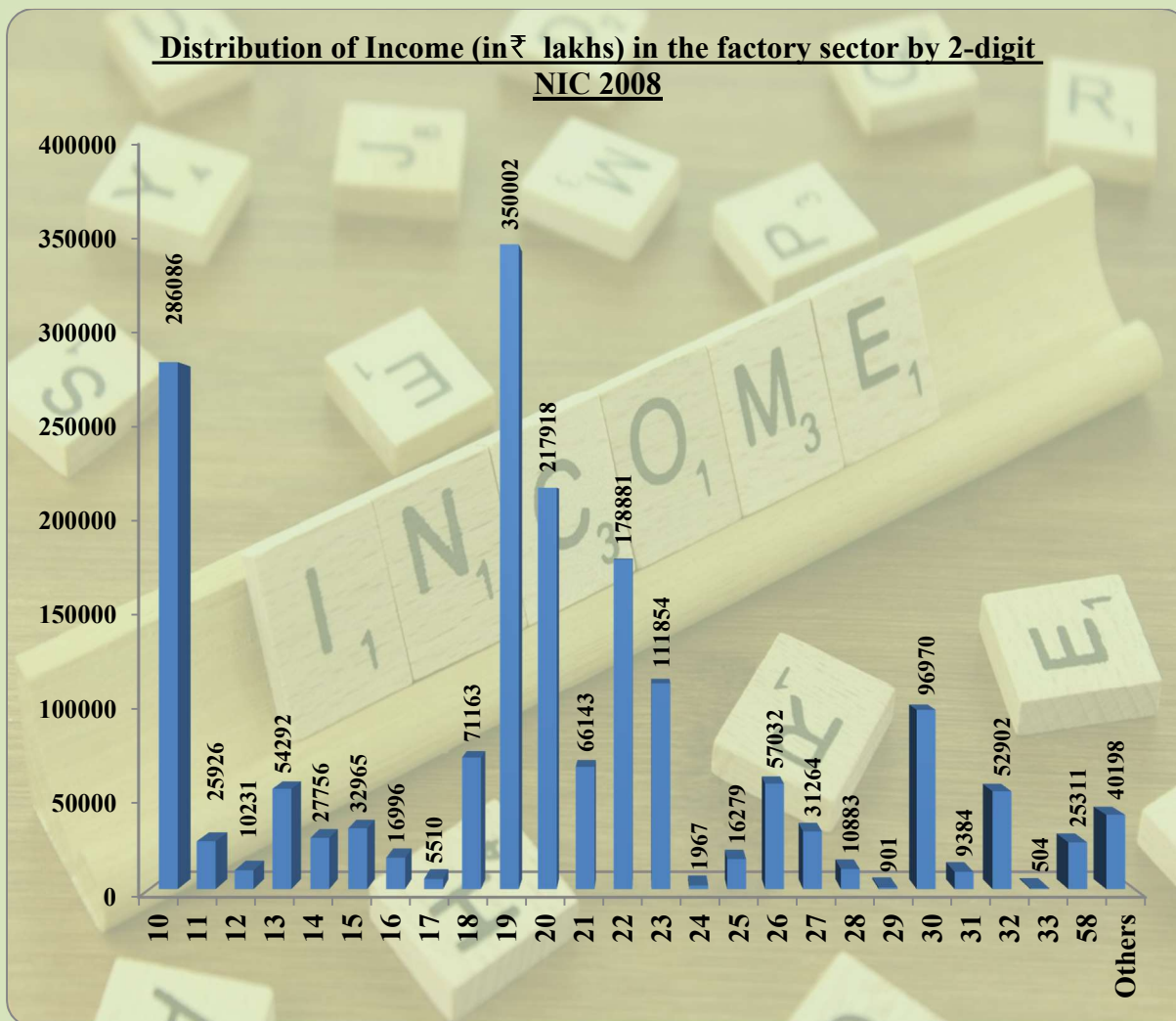


Figure 20

Gross Fixed Capital Formation (GFCF)

Gross Fixed Capital Formation is measured by the total value of a producer's acquisitions, less disposals, of fixed assets during the accounting period plus certain specified expenditure on services that adds to

the value of non-produced assets. The highest GFCF is recorded by coke and refined petroleum products manufacturing industries (39.1 % of state value) followed by food manufacturing industry with 13.34%. The *Table 18* and *Figure 21* illustrates the same.

Table 18: Distribution of Gross Fixed Capital Formation of factories by major factory group at 2-digit NIC 2008

| NIC 2 digit Code | Description | GFCF (Value in ₹ Lakhs) | Percentage of GFCF |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------|
| 10 | Manufacture of food products | 64793 | 13.34 |
| 11 | Manufacture of beverages | 2642 | 0.54 |
| 12 | Manufacture of tobacco products | 15 | 0.00 |
| 13 | Manufacture of textiles | 28173 | 5.80 |
| 14 | Manufacture of wearing apparel | 5661 | 1.17 |
| 15 | Manufacture of leather and related products | 7720 | 1.59 |
| 16 | Manufacture of wood and products of wood and cork ,except furniture ;manufacture of articles of straw and plaiting materials | 3543 | 0.73 |
| 17 | Manufacture of paper and paper products | 3547 | 0.73 |
| 18 | Printing and reproduction of recorded media | 14940 | 3.08 |
| 19 | Manufacture of coke and refined petroleum products | 189724 | 39.07 |
| 20 | Manufacture of chemicals and chemical products | 14675 | 3.02 |
| 21 | Manufacture of pharmaceuticals, medicinal chemical and botanical products | 8042 | 1.66 |
| 22 | Manufacture of rubber and plastic products | 33625 | 6.92 |
| 23 | Manufacture of other non-metallic mineral products | 37966 | 7.82 |
| 24 | Manufacture of basic metals | 14595 | 3.01 |
| 25 | Manufacture of fabricated metal products, except machinery and equipment | 4950 | 1.02 |
| 26 | Manufacture of computer, electronic and optical products | 9288 | 1.91 |
| 27 | Manufacture of electrical equipment | 4002 | 0.82 |
| 28 | Manufacture of machinery and equipment n.e.c | 688 | 0.14 |
| 29 | Manufacture of motor vehicles, trailers and semitrailers | 86 | 0.02 |
| 30 | Manufacture of other transport equipment | 8526 | 1.76 |
| 31 | Manufacture of furniture | 1019 | 0.21 |
| 32 | Other manufacturing | 2760 | 0.57 |
| 33 | Repair and installation of machinery and equipment | 122 | 0.03 |
| 58 | Publishing activities | 13631 | 2.81 |
| | Others | 10848 | 2.23 |
| | Total | 485582 | 100.00 |

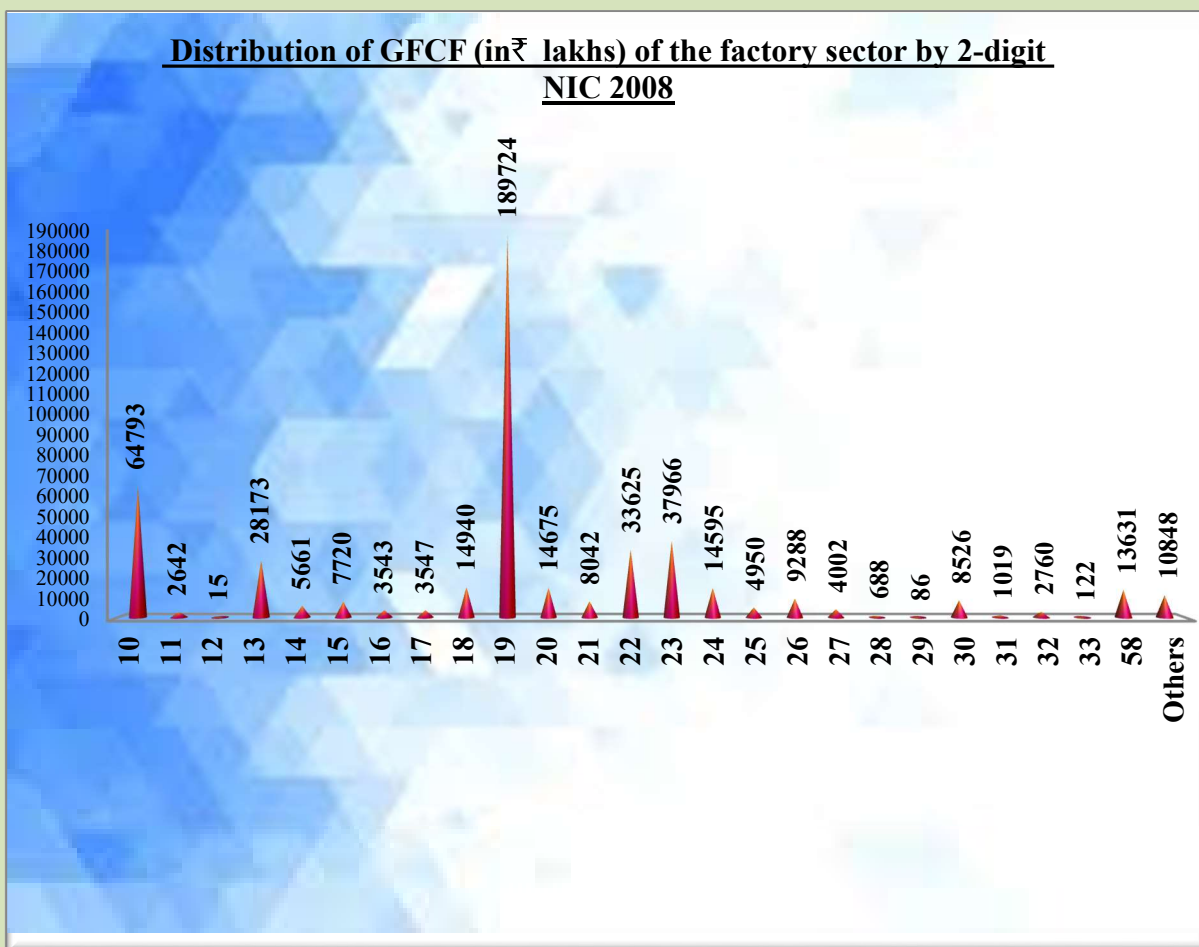


Figure 21

Number of persons engaged

The number of persons engaged means all persons engaged by the factory whether for wages or not connected directly or indirectly with the manufacturing process and includes all administrative, technical and clerical staffs and labour in production of capital assets for factory's own use.

The factories manufacturing food products employs highest number of employees of about 98,598 (30.4% of state value) and the least by repair and installation of machinery and equipment industry with a count of 296. *Table 19* and *Figure 22* depicts the number of persons engaged in different categories of manufacturing sector in the state.

Table 19: Distribution of number of persons engaged in factories by major factory group by 2-digit NIC 2008

| NIC 2 digit Code | Description | No.of persons engaged | percentage of persons engaged |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------|
| 10 | Manufacture of food products | 98598 | 30.4 |
| 11 | Manufacture of beverages | 3396 | 1.0 |
| 12 | Manufacture of tobacco products | 14375 | 4.4 |
| 13 | Manufacture of textiles | 25724 | 7.9 |
| 14 | Manufacture of wearing apparel | 9546 | 2.9 |
| 15 | Manufacture of leather and related products | 11436 | 3.5 |
| 16 | Manufacture of wood and products of wood and cork, except furniture ;manufacture of articles of straw and plaiting materials | 8346 | 2.6 |
| 17 | Manufacture of paper and paper products | 3866 | 1.2 |
| 18 | Printing and reproduction of recorded media | 6185 | 1.9 |
| 19 | Manufacture of coke and refined petroleum products | 7880 | 2.4 |
| 20 | Manufacture of chemicals and chemical products | 11385 | 3.5 |
| 21 | Manufacture of pharmaceuticals, medicinal chemical and botanical products | 9950 | 3.1 |
| 22 | Manufacture of rubber and plastic products | 25890 | 8.0 |
| 23 | Manufacture of other non-metallic mineral products | 20616 | 6.3 |
| 24 | Manufacture of basic metals | 4405 | 1.4 |
| 25 | Manufacture of fabricated metal products, except machinery and equipment | 5096 | 1.6 |
| 26 | Manufacture of computer, electronic and optical products | 6565 | 2.0 |
| 27 | Manufacture of electrical equipment | 6097 | 1.9 |
| 28 | Manufacture of machinery and equipment n.e.c | 2633 | 0.8 |
| 29 | Manufacture of motor vehicles, trailers and semitrailers | 374 | 0.1 |
| 30 | Manufacture of other transport equipment | 5879 | 1.8 |
| 31 | Manufacture of furniture | 3123 | 1.0 |
| 32 | Other manufacturing | 3996 | 1.2 |
| 33 | Repair and installation of machinery and equipment | 296 | 0.1 |
| 58 | Publishing activities | 2361 | 0.7 |
| | Others | 26754 | 8.2 |
| | Total | 324773 | 100 |

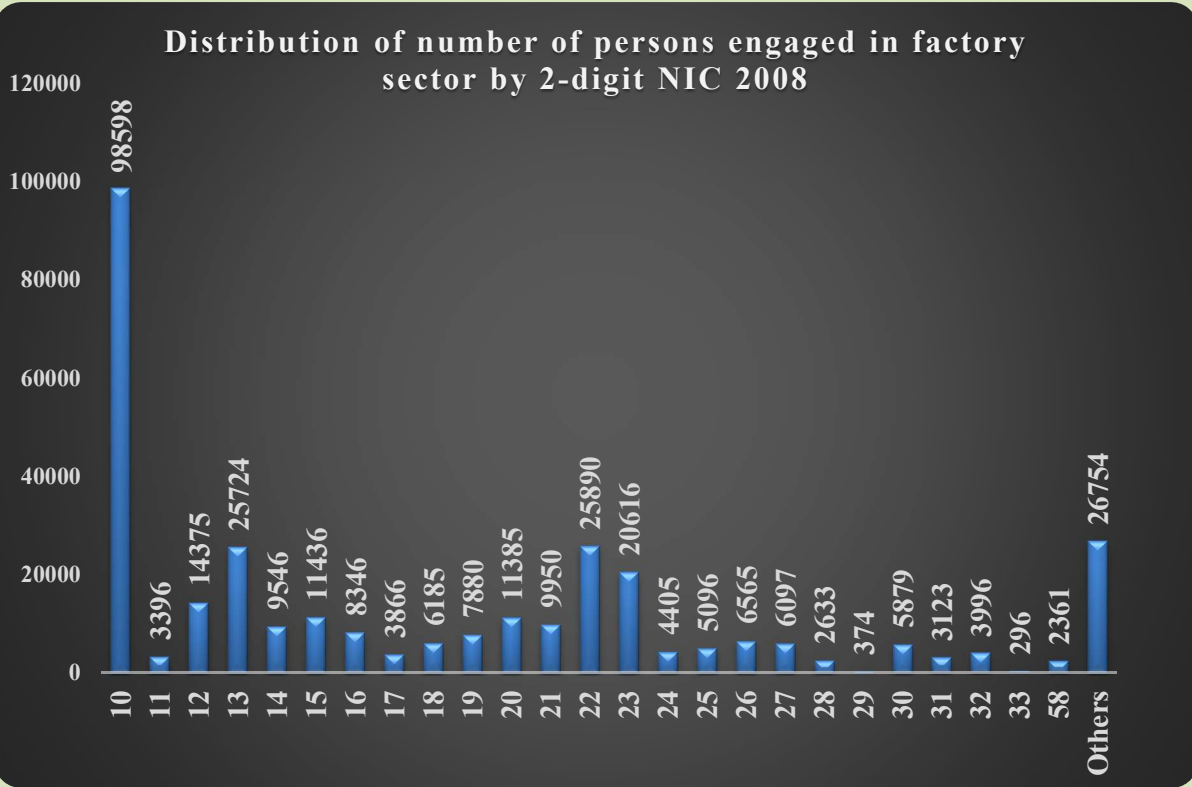


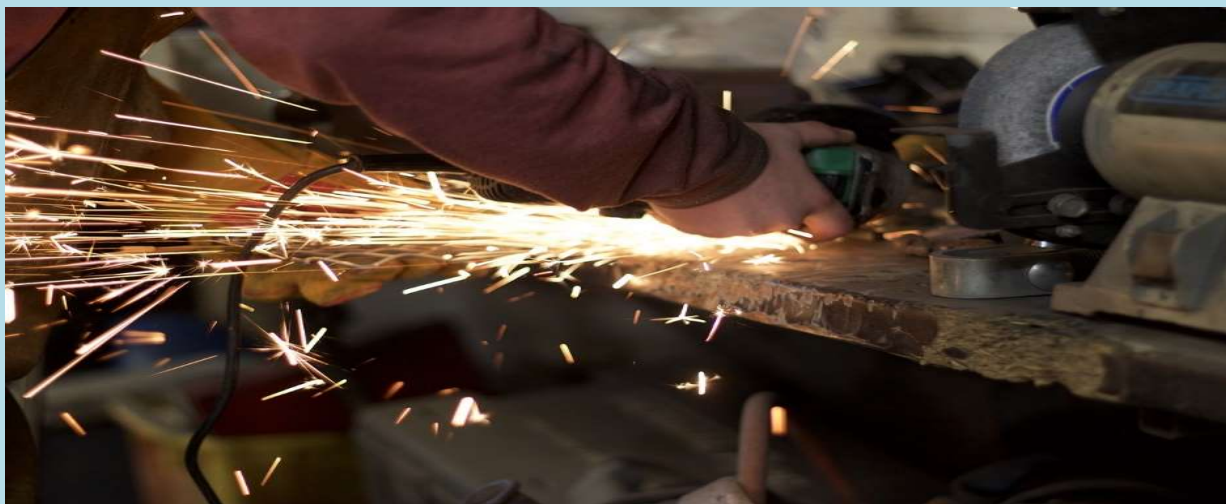
Figure 22



ANNUAL TRENDS IN INDUSTRIAL STATISTICS

CHAPTER 5

A Comparative Study Of Principal Characteristics Of Survey Estimates over a period of 7 years.



Analysing and tracking the annual trend in the industrial statistics over a period of time is essential for the promotion of manufacturing sector. Surveys play a significant role in unravelling the rationale behind the fluctuations in the statistics and serve as an

aid for prediction and setting developmental strategy for further progress. Attempts have been made in this section to bring forth the annual trends in some significant characteristics of manufacturing sector from 2011-12 to 2017-18.

Table 20: Distribution of significant characteristics of organised manufacturing sector of state from 2011-12 to 2017-18

| Sl. No. | Characteristics | Financial Year (Values in ₹ lakhs unless otherwise mentioned) | | | | | | |
|---------|--------------------------------------|---------------------------------------------------------------|----------|----------|----------|----------|----------|----------|
| | | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| 1 | Number of Factories | 7021 | 7129 | 7132 | 7295 | 7584 | 7982 | 7596 |
| 2 | Fixed Capital | 1559998 | 1793601 | 2454515 | 3312566 | 4069375 | 4784549 | 4369284 |
| 3 | Invested Capital | 2955044 | 3254204 | 4042414 | 4804167 | 5717150 | 6547340 | 6194820 |
| 4 | Total Output | 10986032 | 12064788 | 13573186 | 14237493 | 12052212 | 13942718 | 16556578 |
| 5 | Total Input | 9803836 | 10774729 | 12014395 | 12680764 | 10237768 | 11643987 | 14256475 |
| 6 | Gross Value Added (GVA) | 1182196 | 1290059 | 1558791 | 1556729 | 1814445 | 2298731 | 2279897 |
| 7 | Gross Fixed Capital Formation (GFCF) | 214086 | 294297 | 802434 | 662239 | 947818 | 1154951 | 485582 |
| 8 | Net Value Added (NVA) | 1024346 | 1128481 | 1370155 | 1315095 | 1568912 | 2047964 | 1987576 |
| 9 | Net Income | 919956 | 1009353 | 1235082 | 1092333 | 1377101 | 1863677 | 1799319 |
| 10 | Profit | 313490 | 381847 | 573135 | 319992 | 509639 | 1043683 | 884010 |

The survey results show increase in the estimated number of factories over the period 2011-12 to 2016-17 while the number decreased by 386 in 2017-18 when compared to the previous year (see

Figure 23). The fixed capital and invested capital shows an increasing trend from 2011-12 to 2016-17 but the year 2017-18 records a drop in these capitals (refer Figure 24).

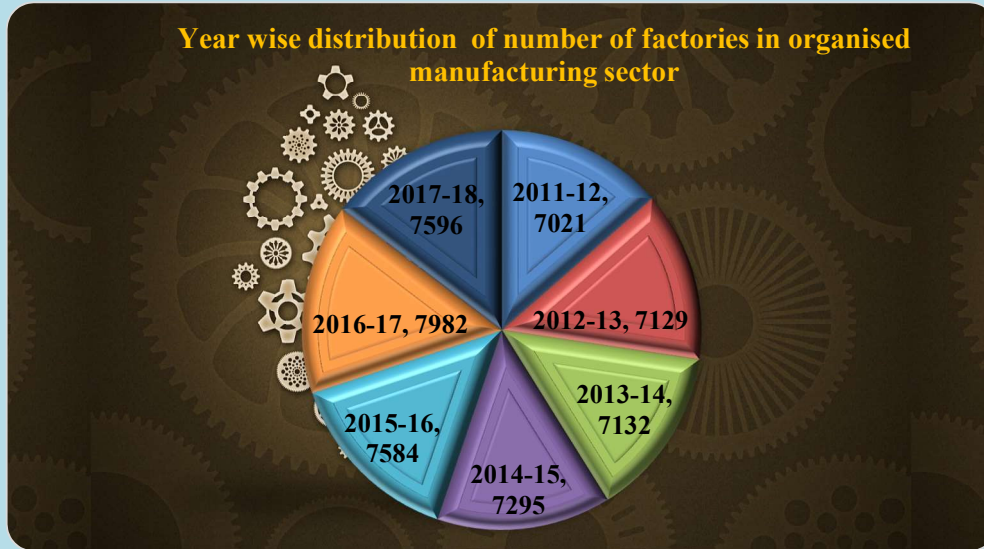


Figure 23

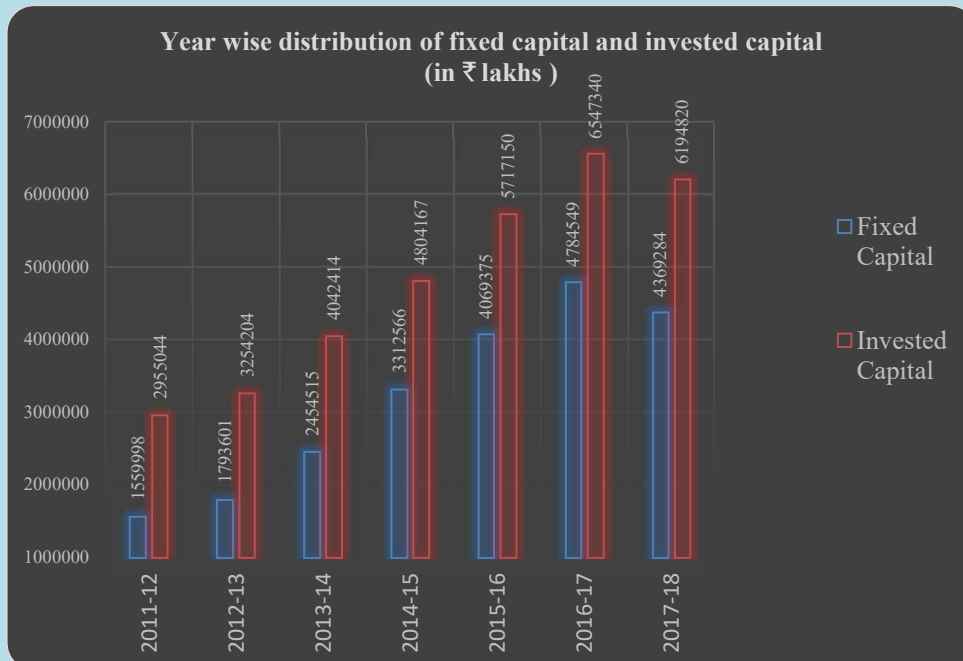


Figure 24

Apart from this, data reveals an increasing trend in the input and output of manufacturing sector from 2011-12

to 2014-15 which declines in 2015-16 and regain the increasing trend for next two financial years.

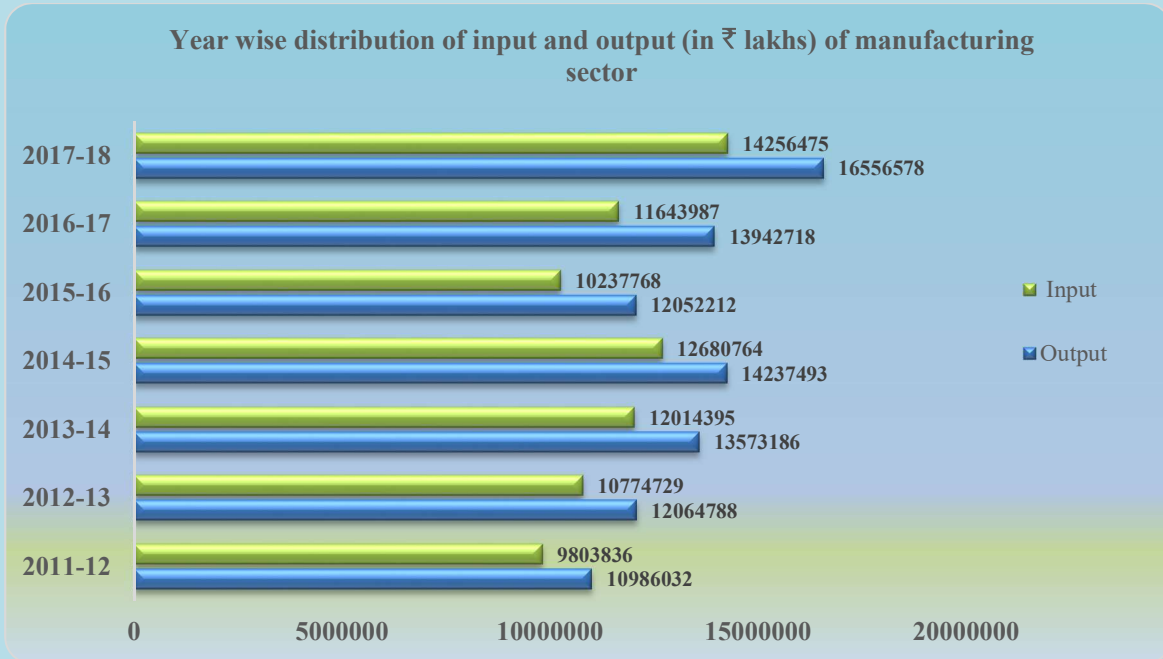


Figure 25

The net income and profit shows an increasing trend during 2011-2012 to 2013-14 which dropped in 2014-15 and again an increasing trend is noticed

during 2015-16 to 2016-2017. Figure 26 shows the fluctuations of the same over the years.

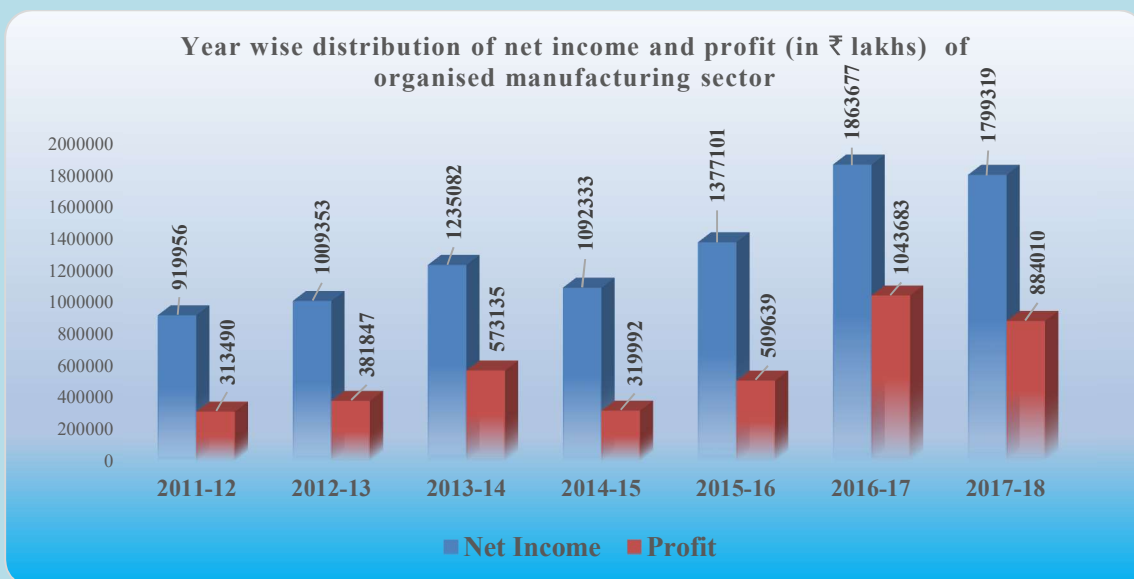


Figure 26

A noticeable spike in Gross Fixed Capital Formation (GFCF) is seen during 2013-14 and 2016-17 while a

sharp decline is seen in 2017-18. The trend of GFCF is illustrated in Figure 27.

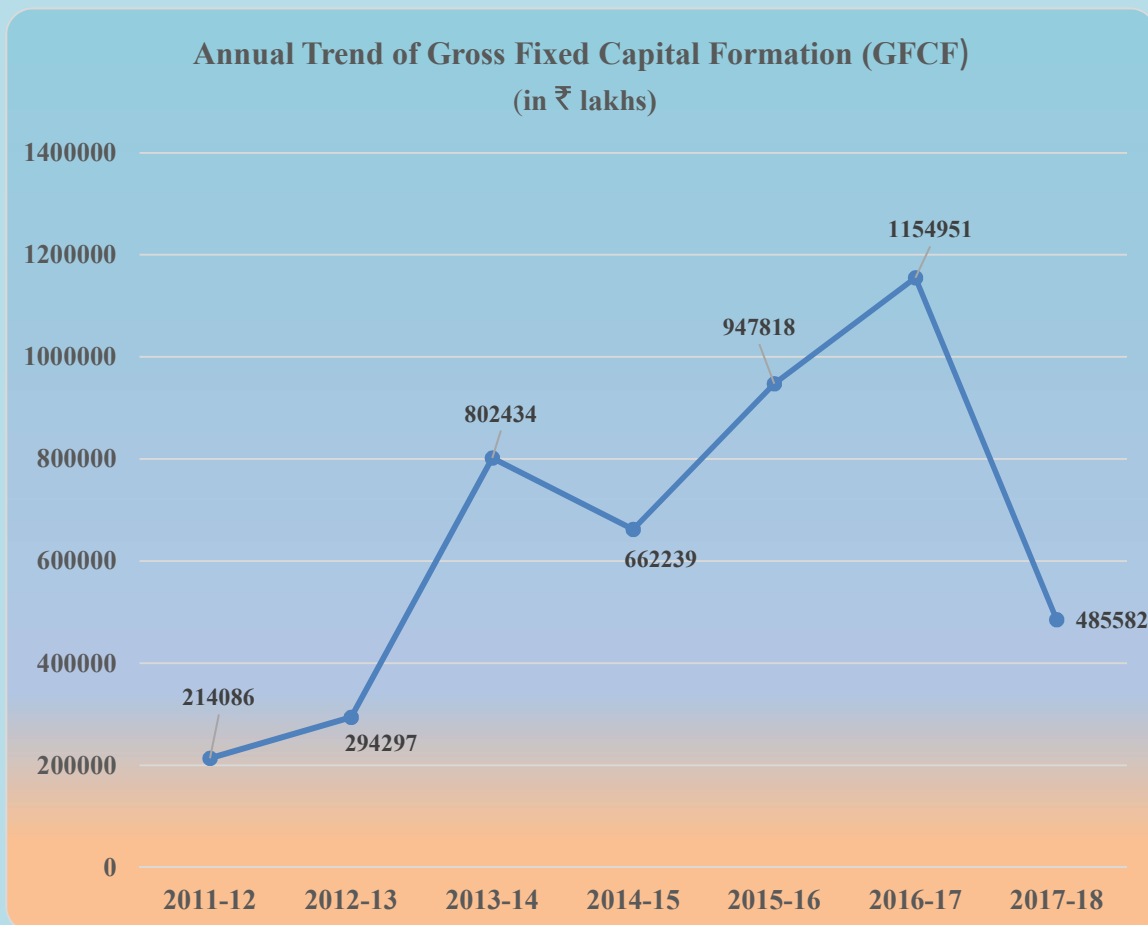


Figure 27

A slight decline of Gross Value Added (GVA) in production is observed in 2014-15 and 2017-18. The GVA has dropped from ₹ 22, 98,731 lakhs to

₹ 22, 79,897 lakhs in 2017-18. Figure 28 depicts a vivid picture of the trend in GVA over a period of 7 years.

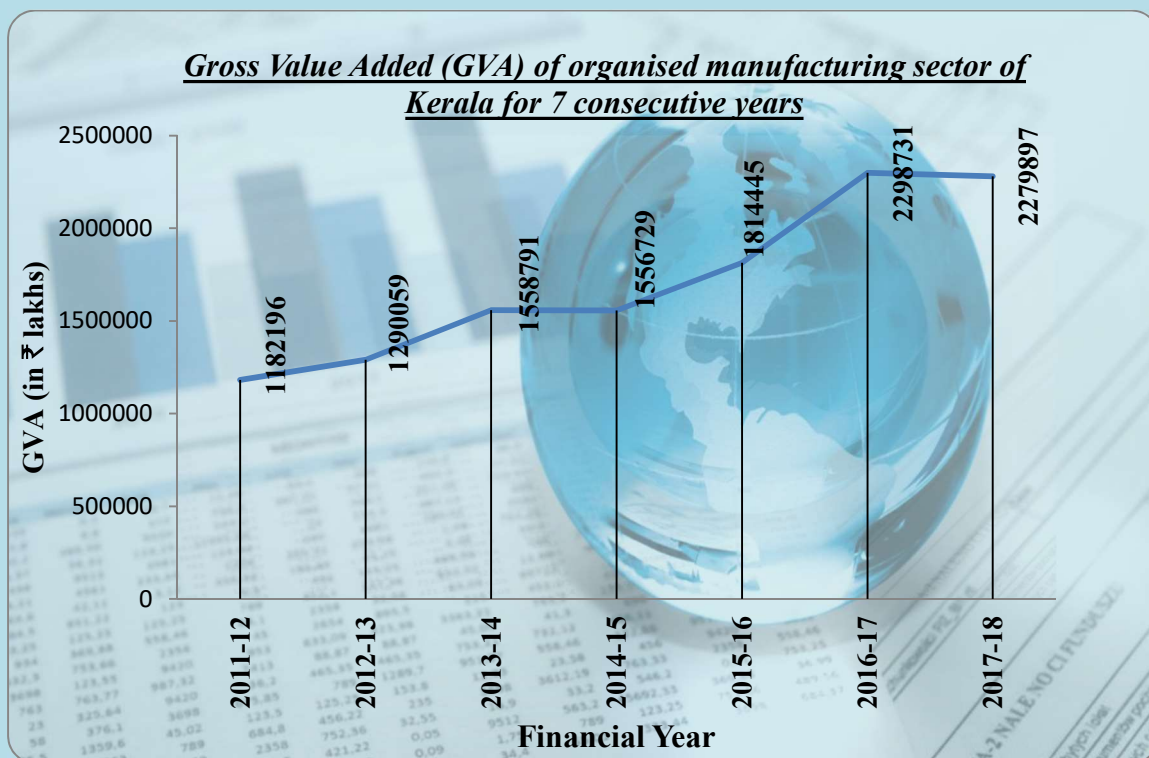


Figure 28

The growth rate of some characteristics were analysed during two successive financial years 2016-17 and 2017-18. The figures show negative growth rates in number of factories, fixed capital, invested capital, GVA, GFCF, net income and profit. The number of factories decline by 4.84%. The fixed capital and invested capital shows a negative growth rate of -8.68 % and -5.38 %

respectively. The Gross Value Added (GVA) of production declined by 0.82% in 2017-18. Figures reveal a huge negative growth rate of 57.96% of GFCF in 2017-18. Apart from this estimates show a growth rate of 18.87% in output and 22.44% in output of the manufacturing sector. The net income and profit dropped by 3.45% and 15.39 % respectively.

**Table 21: Growth rate of significant characteristics of organised manufacturing sector
in two successive years**

| Sl. No. | Characteristics | Values in ₹ lakhs unless otherwise mentioned | | percentage growth rate over 2016-17 |
|---------|--------------------------------------|----------------------------------------------|----------|-------------------------------------|
| | | 2016-17 | 2017-18 | |
| 1 | Number of Factories | 7982 | 7596 | -4.84 |
| 2 | Fixed Capital | 4784549 | 4369284 | -8.68 |
| 3 | Invested Capital | 6547340 | 6194820 | -5.38 |
| 4 | Total Output | 13942718 | 16556578 | 18.75 |
| 5 | Total Input | 11643987 | 14256475 | 22.44 |
| 6 | Gross Value Added (GVA) | 2298731 | 2279897 | -0.82 |
| 7 | Gross Fixed Capital Formation (GFCF) | 1154951 | 485582 | -57.96 |
| 8 | Net Value Added (NVA) | 2047964 | 1987576 | -2.95 |
| 9 | Net Income | 1863677 | 1799319 | -3.45 |
| 10 | Profit | 1043683 | 884010 | -15.30 |

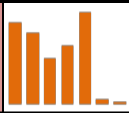
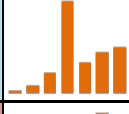
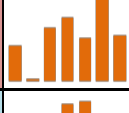

Analysing the magnitude of employment, wage trends and gender based participation of the workers is imperative for renewing the employment structure, evolving new wage policies and ensuring gender equality in manufacturing sector. In seven consecutive years the least

no. of workers is recorded in the year 2017-18. While a narrow increase in employees other than workers is observed in 2017-18 compared to previous year. The number of employees from unpaid family member/proprietor category shows a hike in the year 2016-17 in 7

years. The total number of persons engaged in factories plummeted in 2016-17 (380901 in 2015-16 to

326644 in 2016-17) which again declined in 2017-18 (324773) (see Table 22).

Table 22: Distribution of workers engaged in factories in the state.

| Persons engaged | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | |
|---------------------------------------|---------|---------|---------|---------|---------|---------|---------|--------------------------------------------------------------------------------------|
| Workers | 310398 | 302971 | 287071 | 294750 | 317472 | 259160 | 256090 |  |
| Employees other than workers | 51440 | 54175 | 58514 | 82641 | 61857 | 65021 | 67045 |  |
| Unpaid family members/proprietor etc. | 1407 | 786 | 1774 | 1943 | 1573 | 2463 | 1638 |  |
| Total | 363245 | 357932 | 347359 | 379334 | 380901 | 326644 | 324773 |  |

The workers engaged in the factories are categorized as directly employed and employed through contractors. Among the directly employed, female participation decreased from 66.2% in 2011-12 to 46.0 % in 2017-18 whereas the male participation has increased from 33.8% to 54.0% (see Table 23). Compared to 6 consecutive years the year 2017-18 recorded

the least female-male ratio in directly employed workers. The emoluments paid to the employees shows an increasing trend over the years 2011-12 to 2015-16 while the total emoluments has decreased from ₹ 8,67,462 lakhs in 2015-16 to ₹ 8,19,994 lakhs in 2016-17 but in 2017-18 it increased to ₹ 9,15,447 (see Table 24).

Table 23: Gender based distribution of directly employed workers

| Directly employed workers | percentage of workers in 7 consecutive years | | | | | | |
|---------------------------|----------------------------------------------|---------|---------|---------|---------|---------|---------|
| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| Men | 33.8 | 37.7 | 39.5 | 40.9 | 50 | 52.1 | 54.0 |
| Women | 66.2 | 62.3 | 60.5 | 59.1 | 50 | 47.9 | 46.0 |

Table 24: Emoluments paid to the employees in organised manufacturing sector

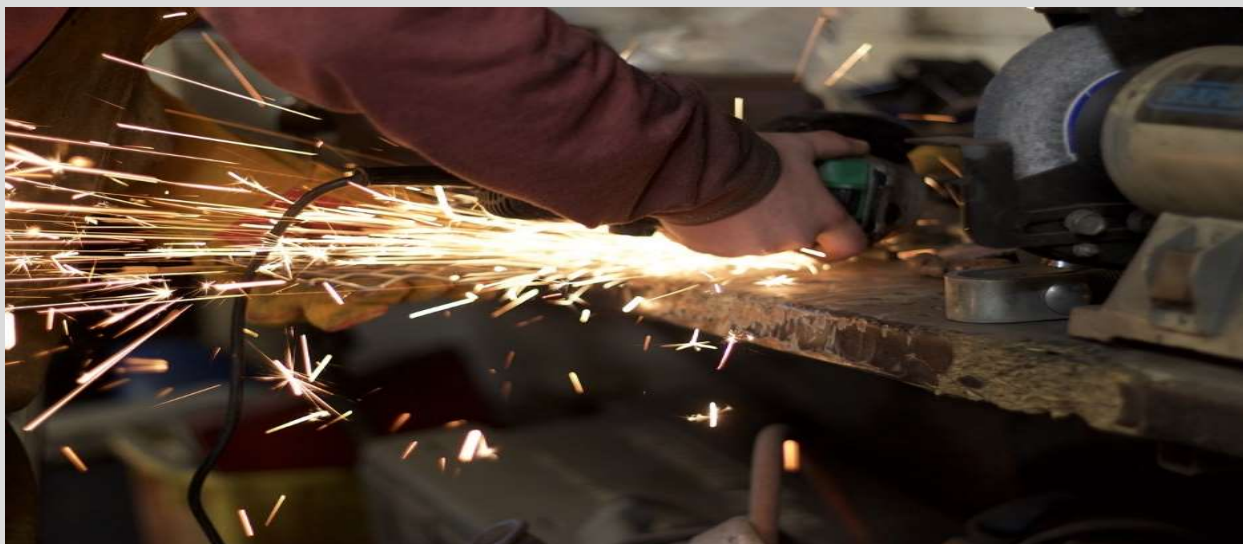
| Financial year | Wages and salaries including employees contribution (value in ₹ lakhs) |
|----------------|---------------------------------------------------------------------------|
| 2011-12 | 562506 |
| 2012-13 | 627506 |
| 2013-14 | 661948 |
| 2014-15 | 781658 |
| 2015-16 | 867462 |
| 2016-17 | 819994 |
| 2017-18 | 915447 |



RURAL AND URBAN STATISTICS OF MANUFACTURING SECTOR

CHAPTER 6

Overview of principal characteristics of manufacturing sector in the rural and urban areas



Location of industries is one of the significant factors which may have favorable and adverse impact on the industrial sector. Field surveys covering different types of industries in rural and urban areas may shed light on the need for an industrial policy that enhance the development of the sector in the backward areas. Attempts have been made to bring forth the principal

characteristics of the manufacturing sector in rural and urban areas of the state.

As per Annual Survey of industries about 47% of industries are in urban area and 53% in rural areas. District wise estimates show that Ernakulam with highest number of factories has 58% in rural area and 42% in urban area. The district wise estimates of factories is illustrated in *Table 25*.

Table 25: District wise Distribution of factories in rural and urban areas

| Districts | Number of factories | |
|--------------------|---------------------|-------|
| | Rural | Urban |
| Kasargod | 249 | 121 |
| Kannur | 124 | 584 |
| Wayanad | 41 | 22 |
| Kozhikode | 80 | 420 |
| Malappuram | 144 | 140 |
| Palakkad | 314 | 197 |
| Thrissur | 294 | 558 |
| Ernakulam | 848 | 619 |
| Idukki | 139 | 14 |
| Kottayam | 221 | 209 |
| Alappuzha | 307 | 306 |
| Pathanamthitta | 154 | 54 |
| Kollam | 970 | 134 |
| Thiruvananthapuram | 140 | 194 |

Districtwise distribution of number of factories in rural and urban areas, 2017-18

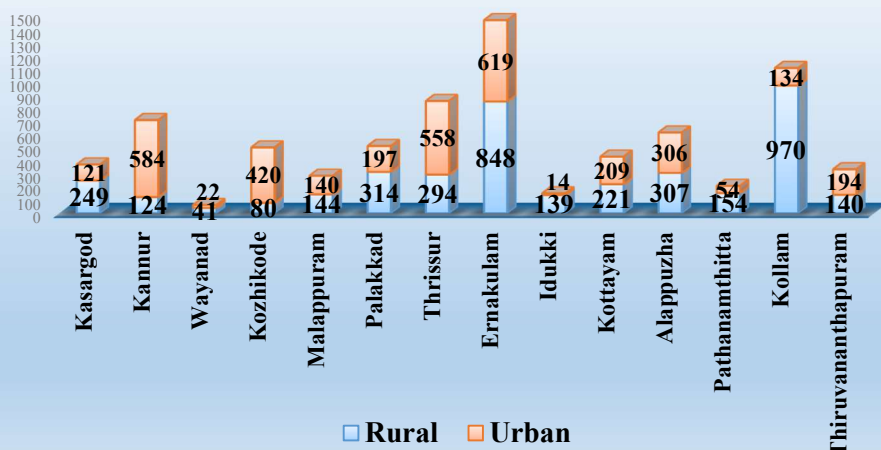


Figure 29

Apart from this considering the principal characteristics, fixed capital of factory sector in rural and urban areas are ₹8, 83,092 lakhs and ₹ 34, 86,193 lakhs respectively whereas invested capital figures out to be ₹ 14, 51,297 lakhs and

₹ 47, 43,523 lakhs. The input of factory sector in rural and urban areas are ₹ 34,81,685 lakhs and ₹ 1,07,74,790 lakhs whereas output is estimated at ₹ 42,00,294 lakhs and ₹ 1,23,56,285 lakhs respectively.

Distribution of fixed and invested capital of manufacturing sector in rural and urban areas

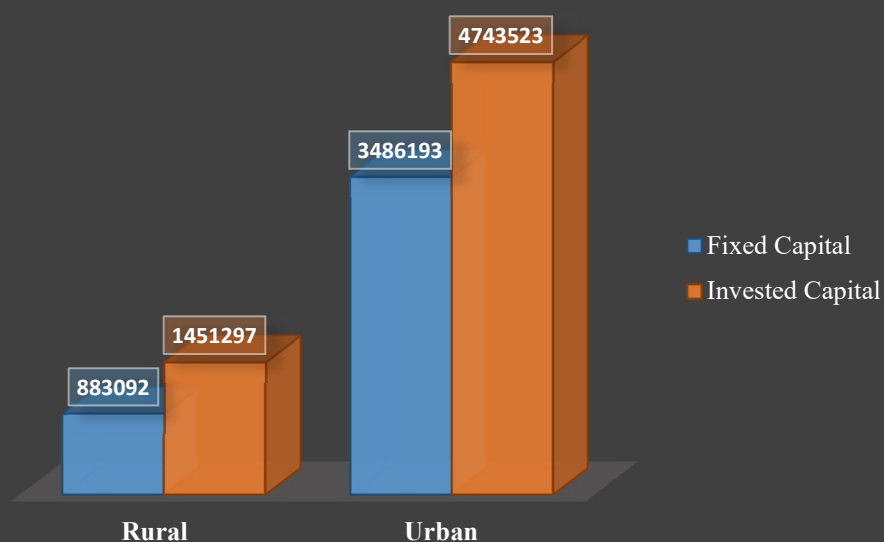


Figure 30

The Gross Fixed Capital Formation (GFCF) in rural and urban factories is estimated at ₹1,41,371 lakhs and ₹3,44,211 lakhs respectively. As per survey results the out

of the total Gross Value Added of the production of manufacturing sector 32% is contributed by industries in rural area and 68% by urban industries.

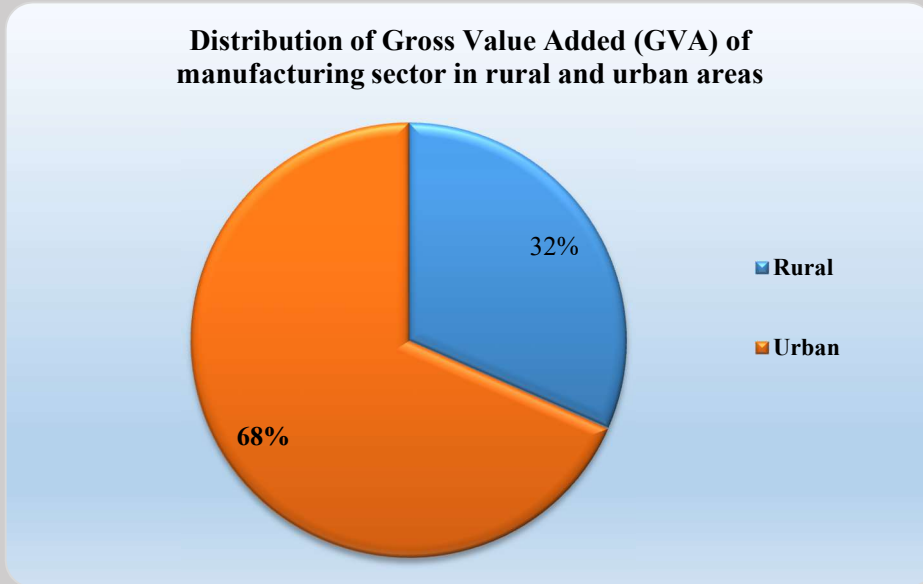


Figure 31

The number of persons engaged in factories in rural and urban areas is estimated at 160336 (49.3 % of state value) and 164437

(50.6% of state value) respectively. Figure 32 illustrate the same.

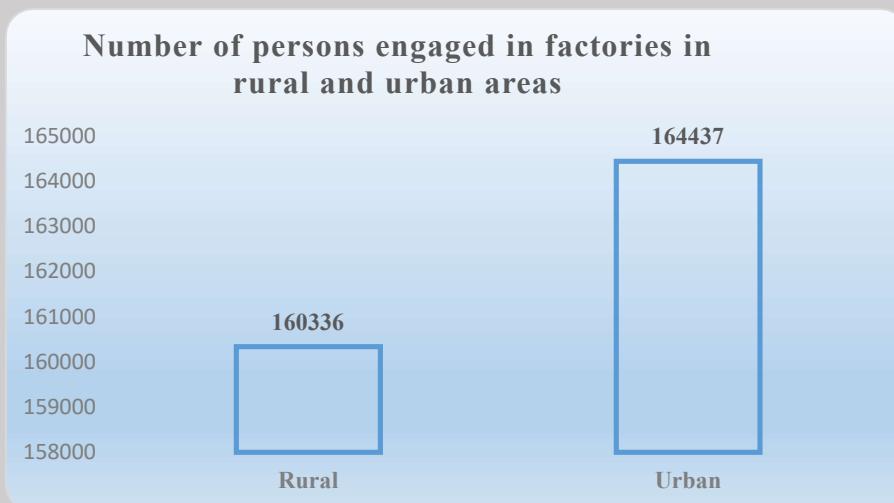


Figure 32



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असाधारण

EXTRAORDINARY

भाग II — खण्ड 1

PART II — Section 1

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नई दिल्ली, शुक्रवार, जनवरी 9, 2009/पौष 19, 1930

No. 8]

NEW DELHI, FRIDAY, JANUARY 9, 2009 / PAUSA 19, 1930

इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि यह अलग संकलन के रूप में रखा जा सके।
Separate paging is given to this Part in order that it may be filed as a separate compilation.

MINISTRY OF LAW AND JUSTICE

(Legislative Department)

New Delhi, the 9th January, 2009/Pausa 19, 1930 (Saka)

The following Act of Parliament received the assent of the President on the 7th January, 2009, and is hereby published for general information:—

THE COLLECTION OF STATISTICS ACT, 2008

No. 7 OF 2009

[7th January, 2009.]

An Act to facilitate the collection of statistics on economic, demographic, social, scientific and environmental aspects, and for matters connected therewith or incidental thereto.

BE it enacted by Parliament in the Fifty-ninth Year of the Republic of India as follows:—

CHAPTER I

PRELIMINARY

1. (1) This Act may be called the Collection of Statistics Act, 2008.
- (2) It extends to the whole of India except the State of Jammu and Kashmir.
- (3) It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint.
2. In this Act, unless the context otherwise requires,—
 - (a) “agency” includes a person or persons engaged by the appropriate Government, directly or by outsourcing, for collection of statistics;
 - (b) “appropriate Government” means—
 - (i) any Ministry or Department in the Central Government; or

Short title,
extent and
commence-
ment.

Definitions

(ii) any Ministry or Department in a State Government or Union territory Administration; or

(iii) any local government that is to say, Panchayats or Municipalities, as the case may be,

in relation to the collection of statistics under a direction issued by it under section 3;

(c) "informant" means any person, who supplies or is required to supply statistical information and includes a owner or occupier or person in-charge or his authorised representative in respect of persons or a firm registered under the Indian Partnership Act, 1932 or a co-operative society registered under any Co-operative Societies Act or a company registered under the Companies Act, 1956 or a society registered under the Societies Registration Act, 1860 or any association recognised or registered under any law for the time being in force;

9 of 1932.
1 of 1956.
21 of 1860.

(d) "information schedule" means any book, document, form, card, tape, disc or any storage media on which information required is entered or recorded or is required to be entered or recorded for statistical purposes under this Act;

(e) "prescribed" means prescribed by rules made under this Act;

(f) "sampling" means a statistical procedure by which information relating to a particular field of inquiry is derived by applying statistical techniques to information obtained in respect of a proportion of the total number of persons or units concerned relevant to the field of inquiry;

(g) "statistical survey" means a census or a survey, whereby information is collected from all the informants in the field of inquiry or from a sample thereof, by an appropriate Government under this Act or any other relevant Act, wholly or primarily for the purposes of processing and summarising by appropriate statistical procedures;

(h) "statistics" means statistics derived by collecting, classifying and using statistics, specially in or for large quantities or numbers by appropriate Government from statistical surveys, administrative and registration records, and other forms and papers, the statistical analysis of which are, whether in a published or unpublished form;

(i) "statistics officer" means any officer appointed under section 4 for the purposes of any direction issued under section 3 of this Act.

CHAPTER II

COLLECTION OF STATISTICS

Collection of statistics.

3. The appropriate Government may, by notification in the Official Gazette, direct that the statistics on economic, demographic, social, scientific and environmental aspects shall be collected through a statistical survey or otherwise, and thereupon the provisions of this Act shall apply in relation to those statistics:

Provided that—

(a) nothing contained in this section shall be deemed to authorise a State Government or Union territory Administration or any local government to issue any direction with respect to the collection of statistics relating to any matter falling under any of the entries specified in List I (Union List) in the Seventh Schedule to the Constitution; or

(b) where the Central Government has issued any direction under this section for the collection of statistics relating to any matter, no State Government or Union territory Administration or any local government shall, except with the previous approval of the Central Government, issue any similar direction for so long as the collection of such statistics by the Central Government remain to be completed; or

(c) where a State Government or Union territory Administration or any local government has issued a direction under this section for the collection of statistics relating to any matter, the Central Government shall not issue any similar direction for so long as the collection of such statistics by the State Government remain to be completed, except in cases where such statistics have to be collected with reference to two or more States or Union territories.

4. (1) The appropriate Government may appoint or cause to appoint an officer to be the statistics officer for any geographical unit for the purpose of collecting any statistics directed by it.

Powers of appropriate Government to appoint statistics officer, etc.

(2) The appropriate Government may appoint any agency or persons working in such agencies to take, or aid in, or supervise the collection of the statistics within any specified geographical unit and such agencies or persons, when so appointed, shall be bound to serve accordingly.

(3) The appropriate Government may employ on contract basis any agency or company or organisation or association or person, on such terms and conditions and on such safeguards as may be prescribed, for the purpose of collecting the statistics directed by it.

(4) The appropriate Government may delegate to any statistics officer, as it thinks fit, the power of appointing agencies or persons working in such agencies or employing on contract basis any agency or company or organisation or association of persons, conferred on it by sub-sections (2) and (3) within the geographical unit for which such statistics officer is appointed.

(5) The appropriate Government may, by order specify the form, the particulars required or the interval within which, and the statistics officer to whom, the statistical information by the informants shall be furnished.

(6) The appropriate Government may, by order published in the Official Gazette, delegate to any statistics officer, as it thinks fit, any power conferred under sub-section (5) for the purpose of the collection of statistics under a direction issued by it under section 3.

5. The statistics officer may, for the purpose of collection of statistics on any specified subject in any geographical unit for which the said officer was appointed—

Power of statistics officer to call for information.

(a) serve or cause to be served on any informant a notice in writing asking him to furnish the information specified under sub-section (5) of section 4 or cause a information schedule to be given to any informant for the purpose of its being filled up; or

(b) cause all questions relating to the subject to be asked from any informant; or

(c) seek information through tele fax or telephone or e-mail or in any other electronic mode or in a combination of different modes for different sets of information so specified.

6. The informants who are asked to furnish any information under the provisions of this Act shall be bound to furnish the information so asked in the prescribed manner to the best of knowledge or belief; and in cases where only a portion of a particular class or group of persons or units is asked to furnish information because of any sampling procedure, it shall not be a defence in failure on the part of any informant to furnish that information, if so asked.

Duty of informants.

7. Every agency shall render such help and assistance and furnish such information to the statistics officer or a person or an agency authorised by him in writing, as he may require for the discharge of his functions, and shall make available for inspection and examination of such records, plans and other documents, as may be necessary.

All agencies to assist.

Right of access to records or documents.

8. The statistics officer or any person authorised by him in writing in this behalf shall, for the purposes of collection of any statistics under this Act, have access to any relevant record or document in the possession of any informant required to furnish any information under this Act, and may enter at any reasonable time any premises where he believes such record or document is kept and may inspect or take copies of relevant records or documents or ask any question necessary for obtaining any information required to be furnished under this Act.

CHAPTER III

DISCLOSURE OF INFORMATION IN CERTAIN CASES AND RESTRICTIONS OF THEIR USE

Security of information.

9. (1) Any information furnished to the statistics officer or to any person or agencies authorised under this Act shall only be used for statistical purposes.

(2) No person other than a person engaged in the work of collection of statistics under this Act or preparation of statistics resultant to such collection shall be permitted to see any information schedule or any answer to a question asked, except for the purposes of a prosecution under this Act.

(3) No information contained in any information schedule and no answer to any question asked shall, except for the purposes of a prosecution under this Act, be separately published, or disclosed without suppressing the identification of informants to any agency.

(4) All statistical information published by any agency shall be arranged in such a manner so as to prevent any particulars becoming identifiable by any person (other than the informant by whom those particulars were supplied) as the particulars relating to the informant who supplied it, even through the process of elimination, unless—

(a) that informant has consented to their publication in that manner; or

(b) their publication in that manner could not reasonably have been foreseen by the concerned agency or any employee thereof.

(5) For the purposes of sub-section (4), the Central Government may make such rules or make such arrangement, as it may consider necessary.

Appropriate Government authorised to disclose certain information.

10. Notwithstanding the provisions contained in section 9 of this Act, the appropriate Government may disclose the following information, namely:—

(a) information supplied by informant in respect of which disclosure is consented to in writing by the informant or by any person authorised by the said informant;

(b) information otherwise available to the public under any Act or as a public document;

(c) information in the form of an index or list of the names and addresses of informants together with the classification, if any, allotted to them and the number of persons engaged.

Disclosure of information schedules for *bona fide* research or statistical purposes.

11. (1) Notwithstanding the provisions contained in section 9 of this Act, the appropriate Government may disclose individual returns or formats or information schedules to other agency or person or institutions or universities solely for *bona fide* research or statistical purposes pursuant to their functions and duties.

(2) No individual return or information schedule shall be disclosed pursuant to this section unless —

(a) the name and address of the informant by whom the schedule or related information was supplied is deleted;

(b) every agency or person or institutions or Universities involved in the research or statistical project makes a declaration to use the schedules disclosed to them only for *bona fide* research or statistical purposes; and

(c) the appropriate Government, making such disclosure is satisfied that the security of the schedules and any information contained therein shall not be impaired.

(3) The published results of any research or statistical project shall not divulge any more information than what the agency authorised for collection of statistics could publish under this Act.

(4) Every agency or person or institutions or universities to whom any individual return or information schedule is disclosed under this section shall comply with directions given by the agency authorised for collection of statistics making the disclosure relating to the schedules and any information contained therein.

12. Notwithstanding anything contained in section 9 of this Act, the appropriate Government may release such documents relating to information schedules, which in its opinion have attained historical importance.

Disclosure of historical documents.

13. The statistics officer or any person or agency authorised for collection of statistics shall, while copying or recording any statistical information collected pursuant to this Act from individual returns, information schedules, worksheets or any other confidential source by means of cards, tapes, discs, film or any other method, whether using encoded or plain language symbols for processing, storage or reproduction of particulars, take and cause to take such steps as are necessary to ensure that the security provisions of this Act are complied with.

Security of recorded information.

14. Save as otherwise provided under this Act,—

(a) no information obtained pursuant to this Act and no copy of the information in the possession of any informant shall be disclosed or used as evidence in any proceedings whatsoever; and

Restrictions on use of information.

(b) no person who has access to any information because of his official position in the collection of any statistics shall be compelled in any proceedings whatsoever to give oral testimony regarding the information or to produce any schedule, document, or record with respect to any information obtained in the course of administering this Act,

except in the manner provided under this Act.

CHAPTER IV

OFFENCES AND PENALTIES

15. (1) Whoever, fails to produce any books of accounts, vouchers, documents or other business records or whoever neglects or refuses to fill in and supply the particulars required in any information schedule or return given or sent to him or whoever neglects or refuses to answer any question or inquiry addressed to him as may be required under or for the purposes of any provision of this Act and the rules made thereunder, shall be punishable with a fine which may extend to one thousand rupees or, in the case of a company, with a fine which may extend to five thousand rupees.

Penalty for neglect or refusal to supply particulars.

(2) The conviction of a person or company for an offence shall not relieve him or it of the obligations under sub-section (1) and if after the expiry of fourteen days from the date of conviction, he or it still fails to give the required particulars or continues to neglect or refuses to fill in and supply the particulars or to answer the question or inquiry, then he or it shall be punishable with a further fine which may extend to one thousand rupees or, in the case of a

company, with a fine which may extend to five thousand rupees, for each day after the first during which the failure continues.

Penalty for making false statement.

16. Whoever, wilfully makes any false or misleading statement or material omission in any information schedule or return filled in or supplied, or in answer to any question asked to him under this Act or the rules made thereunder, shall be punishable with simple imprisonment for a term which may extend to six months or with a fine which may extend to one thousand rupees or, in the case of a company, with a fine which may extend to five thousand rupees or with both.

Penalty for mutilation or defacement of information schedule.

17. Whoever, destroys, defaces, removes, or mutilates any information schedule, form, or other document containing particulars collected under this Act or requesting any such particulars, shall be punishable with simple imprisonment for a term which may extend to six months or with a fine which may extend to two thousand rupees or, in the case of a company with a fine which may extend to ten thousand rupees or with both.

Penalty for obstruction of employees.

18. Whoever, interferes with, hinders, or obstructs any employee in the exercise of any power or duty conferred by this Act, shall be punishable with simple imprisonment for a term which may extend to six months or with a fine which may extend to two thousand rupees or, in the case of a company with a fine which may extend to ten thousand rupees or with both.

Penalty for other offences.

19. Whoever—

(a) acts in contravention of or fails to comply with any provision of this Act or any requirement imposed under this Act; or

(b) wilfully deceives or attempts to deceive any statistics officer or any agency or any employee thereof,

shall be punishable with simple imprisonment for a term which may extend to six months or with a fine which may extend to two thousand rupees or, in the case of a company, with a fine which may extend to ten thousand rupees or with both.

Penalty for failure to carry out duties and functions by employees.

20. If any person employed in the execution of any duty or functions under this Act,—

(a) omits without lawful excuse to carry out his duty, or knowingly makes any false declaration, statement or return; or

(b) pretends performance of his duties or obtains or seeks to obtain information which he is not authorised to obtain; or

(c) fails to keep inviolate the secrecy of the information gathered or entered in the information schedules collected pursuant to this Act and, except as permitted under this Act, divulges the contents of any schedule filled in or any information furnished by any informant under this Act,

shall be punishable with simple imprisonment for a term which may extend to six months or with a fine which may extend to two thousand rupees or, in the case of a company, with a fine which may extend to ten thousand rupees or with both.

Penalty for impersonation of employee.

21. Whoever, not being authorised to collect statistics under the provisions of this Act, by words, conduct or demeanor pretends that he is authorised to do so, shall be punishable with simple imprisonment for a term which may extend to six months or with a fine which may extend to two thousand rupees or, in the case of a company, with a fine which may extend to ten thousand rupees or with both.

General penalty.

22. Whoever, commits an offence under this Act for which no penalty is prescribed elsewhere than in this section, shall be punishable with simple imprisonment for a term which may extend to six months or with a fine which may extend to two thousand rupees or, in the case of a company, with a fine which may extend to ten thousand rupees or with both.

23. (1) Where an offence under this Act has been committed by a company, every person who at the time the offence was committed was in charge of, and was responsible to, the company for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Offences by companies.

Provided that nothing contained in this sub-section shall render any such person liable to any punishment provided in this Act, if he proves that the offence was committed without his knowledge or that he had exercised all due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a company and it is proved that the offence has been committed with the consent or connivance of, or is attributable to, any neglect on the part of any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall also be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly.

Explanation.—For the purpose of this section—

(a) “company” means any body corporate and includes a firm or other association of individuals; and

(b) “Director”, in relation to a firm, means a partner in the firm.

24. No court shall take cognizance of any offence under this Act except on a complaint made by the appropriate Government or an officer authorised in this behalf by such appropriate Government or, as the case may be, the statistics officer, and no court inferior to that of a Metropolitan Magistrate or a Judicial Magistrate of the first class shall try any offence punishable under this Act.

Cognizance of offences.

25. No prosecution for an offence committed by any informant shall be instituted except by or with the sanction of the statistics officer, and no prosecution for an offence committed by persons other than informants shall be instituted except by or with the consent of the appropriate Government.

Sanction for prosecution for offence.

2 of 1974.

26. Notwithstanding anything contained in the Code of Criminal Procedure, 1973, all offences under this Act shall be tried in a summary way by a Judicial Magistrate of the first class or by a Metropolitan Magistrate and the provisions of sections 262 to 265 (both inclusive) of the said Code shall, as far as may be, apply to such trial:

Power of court to try cases summarily.

Provided that when in the course of, a summary trial under this section it appears to the Magistrate that the nature of the case is such that it is, for any reason, undesirable to try the case summarily, the Magistrate shall after hearing the parties, record an order to that effect and thereafter recall any witness who may have been examined and proceed to hear or rehear the case in the manner provided by the said Code.

CHAPTER V

POWER IN RESPECT OF CORE STATISTICS

27. Without prejudice to the provisions contained in this Act, the Central Government may, by notification in the Official Gazette, declare from time to time any subject for the collection of statistics of national importance as ‘core statistics’ and make such arrangement, as it may consider necessary, for regulating the collection and dissemination of statistics on the subject so declared.

Power in respect of core statistics.

CHAPTER VI

MISCELLANEOUS

28. The Central Government may give directions to any State Government or Union territory Administration or to any local government that is to say Panchayats or Municipalities, as to the carrying into execution of this Act in the State or Union territory or Panchayats or Municipalities, as the case may be.

Power to give directions.

29. Any statistics officer and any person authorised for the collection of statistics or preparation of official statistics under the provisions of this Act shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal Code, 1860.

Public servants.

45 of 1860.

Bar of jurisdiction.

30. No civil court shall have jurisdiction to entertain any suit or proceeding in respect of any matter which the appropriate Government or the statistics officer or the agency is empowered by or under this Act to determine, and no injunction shall be granted by any court or other authority in respect of any action taken or to be taken in pursuance of any power conferred by or under this Act.

Protection of action taken in good faith.

31. No suit or other legal proceedings shall lie against the appropriate Government or agency or any statistics officer or other officers or employees in respect of anything which is in good faith done or intended to be done in pursuance of this Act or the rules or directions issued thereunder.

Overriding effect.

32. The provisions of this Act shall have effect notwithstanding anything inconsistent therewith contained in any other law for the time being in force except in relation to the conduct of human population census as per the directions, if any, issued under the Census Act, 1948.

37 of 1948.

Power to make rules.

33. (1) The Central Government may, by notification in the Official Gazette, make rules for carrying out the provisions of this Act.

(2) In particular, and without prejudice to the generality of the foregoing power, the Central Government may make rules under this section for all or any of the following matters, namely:—

(a) principles for coordinating as effectively as possible to achieve the objectives of section 3 including nomination and registration of statistics officers by the Central Government and also to avoid unnecessary duplication in the collection of statistics;

(b) the terms, conditions and safeguards under which any person or agency or company or organisation or association may be engaged by the appropriate Government for the purpose of collection of statistics under sub-section (3) of section 4;

(c) principles for prescribing the form and manner in which the information may be required to be furnished;

(d) principles for prescribing the manner in which the right of access to documents and the right of entry conferred by section 8 may be exercised; and

(e) any other matter which is to be or may be prescribed under this Act.

(3) Every rule made by the Central Government under this Act shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

Repeal and savings.

34. (1) The Collection of Statistics Act, 1953 is hereby repealed.

32 of 1953.

(2) Notwithstanding such repeal, anything done or any action taken under the said Act shall be deemed to have been done or taken under the corresponding provisions of this Act.

(3) All rules made under the said Act shall continue to be in force and operate till new rules are made under this Act.

T. K. VISWANATHAN,
Secy. to the Govt. of India.

Working steps for Pooling of ASI data for ASI 2017-18

Pooling of central and state level ASI data for publishing district level estimates is an important activity that need to be performed by each State/UT. Following guidelines provide mechanism for pooling of state and central data at district level in ASI 2017-18.

As per ASI sampling design, adopted in ASI 2017-18:

- (a) The entire census units (i.e. which are completely enumerated, say, c) of a State/UT *plus* all the units from sub-sample 1(say, n_1) and sub-sample 3(say, n_3) in each sample stratum of the State/UT, for which data is collected by NSSO (FOD) and processed by IS WING, DPD, are treated as the **Central Sample** for that State/UT.
- (b) The entire census units of a State/UT plus all the units from sub-sample 2(say, n_2) and sub-sample 4 (say, n_4) in each sample stratum of the State/UT, for which data is collected and processed by State/UT, are treated as the **State Sample**.
- (c) The entire census units of a State/UT plus all the units under the 4 sub-samples belonging to the State/UT are treated as the **Pooled Sample** for that State/UT.

For Census units:

Step 1: The multiplier for all the census units(say, c) are 1.

For Sample units (i.e. which are surveyed through different sub-samples):

Step 2: For the purpose of calculation of multipliers of the remaining sample units ($n_1+n_2+n_3+n_4$) belonging to 4 sub-samples, strata may be formed on the basis of **District x Sector x 3-digit Frame NIC**.

Step 3: Check the sub-sample codes (1/2/3/4), provided by IS WING, DPD, for each of the ($n_1+n_2+n_3+n_4$) sample units (i.e. each unit will have one of the sub-sample codes 1,2,3 or 4).

Step 4: Get the frame size(for the sample sector), say N , for each of these sample strata, from the column 'cap_n' in the excel file named '*<statename>1516.xls*', provided by IS WING, DPD in the CD .

Step 5: Calculate sub-sample wise multiplier in each sample stratum of i th district (say, m_{ijk}) $m_{ijk} = (N/n_{ijk}^*)$, where n_{ijk}^* , the no. of sample units in the k th sub-sample of j th stratum of i th district, to be obtained for each sub-sample by counting the number of sample units with status code (given in Block A item 12) 1,2,3,4,6,9. In this context, the treatment of different status code is as follows:

"

If A12=1,2,3 then the unit is treated as ‘Surveyed case’

If A12=4,6,9 then the unit is treated as ‘Zero case’

If A12=5,7,8 then the unit is treated as ‘Non-response’

Note that

- A closed unit may be given status code as ‘2’ (closed) if the closed factory has at least A,B,C and E block.
- An NOP unit may be given status code as ‘3’ (NOP) if the NOP factory has at least A,B and C block.
- Non-response units (i.e. units with status code 5,7,8 in current year) may be searched in last year for imputation. If available as open unit(i.e. with status code 1) in last year , then all the blocks may be borrowed from last year and in that case the unit may be treated as surveyed unit.

Only surveyed and zero cases are taken for calculating multiplier. That is, n_{ijk}^* , for each sub-sample, will count only the surveyed and zero cases of that sub-sample.

Step 6: The unit wise data for estimating the parameters for c census units and (n_1+n_3) sample units pertaining to central sample will be provided by IS WING, DPD. The individual State/UT need to determine the unit wise parameters for (n_2+n_4) sample units using the data collected by them (on the basis of state sample). In all cases the parameters are to be calculated as per the tabulation programme given.

Step 7: Let y_{il}^c = observed value of parameter y from l -th census unit in i -th district. (To be calculated from the data supplied by IS WING, DPD).

y_{ijkl}^s is the observed value of parameter y from l^{th} sample unit belonging to k^{th} sub-sample of j^{th} stratum of i th district. Here, y_{ijkl}^s values for $k=1$ and 3 (i.e., sub-sample 1 and 3) are to be calculated from the data supplied by IS WING, DPD and for $k=2$ and 4 ((i.e., sub-sample 2 and 4) are to be calculated from the data collected by the State/UT following instruction manual.

Step 8: Pooled stratum level estimator

Pooled estimator for j -th stratum of the i th district from k -th sub-sample (say, t_{ijk}) =

$$\sum_l y_{ijkl}^s \times m_{ijk}, \quad k=1,2,3,4$$

where m_{ijk} is the multiplier of k -th sub-sample in j -th stratum of i th district (obtained as per step 5).

Next, **pooled estimator of parameter y for j -th stratum of i th district** (say, S_{ij}) = $\frac{1}{n} \sum_{k=1}^n t_{ijk}$ where n (≤ 4) is number of non-void subsamples in j -th stratum. While calculating the pooled

estimates, please keep in mind the value of 'n'. The value of 'n' will be decided on the basis of non-void sub-samples.

Pooled estimator of variance of the parameter y for j-th stratum of ith district (say, V_{ij})=

$$\frac{1}{n(n-1)} \sum_{k=1}^n (t_{ijk} - \bar{t}_{ij})^2$$

where, $\bar{t}_{ij} = \frac{1}{n} \sum_{k=1}^n t_{ijk}$ (Note that, $S_{ij} = \bar{t}_{ij}$)

Step 9: Pooled District level estimator

Pooled estimator of parameter y for i-th district (say, T_i) = $\sum_j S_{ij} + \sum_1 y_{ii}^c$. The 1st part i.e.,

$\sum_j S_{ij}$, will come from stratum-level figure for ith district and the 2nd part, i.e., $\sum_1 y_{ii}^c$, will come

from census units for i-th district.

Estimator of Variance of the pooled estimator of parameter y for i-th district (say, D_i) =

$$\sum_j V_{ij}$$

Estimator of the Relative Standard Error (RSE) of the pooled estimator of parameter y for i-th district

$$= [(\sqrt{D_i})/T_i] \times 100.$$

Step 10: Pooled State level estimator

Finally, **pooled estimator of parameter y for the state (say, T)=** $\sum_i T_i$ and the pooled estimator

of variance of parameter y for the state (say, D) will be $\sum_i D_i$.

Estimator of the Relative Standard Error (RSE) of the pooled estimator of parameter y for the state = $[(\sqrt{D})/T] \times 100$.

Note: In the above, any parameter y stands for total of that parameter.

1 Notations:

i = subscript for i-th state.

s = subscript for s-th stratum in the i-th state.

m = subscript for sub-sample (m =1, 2, 3, 4) [m=1 and 3 for central and 2 and 4 for state].

k = subscript for k-th sample enterprise under a particular stratum.

E = total number of factory **in the sample sector** in a stratum.

e = number of factories surveyed out of total number of factory **in the sample sector** in a stratum.

x, y = observed value of characteristics x, y under estimation.

= estimate of population total X, Y for the characteristics x, y.

Under the above symbols,

Y_{ismk} = observed value of the characteristic y for the k-th enterprise belonging to the m-th sub-

\hat{X}, \hat{Y}

sample for the s-th stratum in the i-th state.

(a) Formulae for estimation of aggregates for a state based on central sample:

Estimation formula for any characteristics of the enterprise **for the sample sector** of the i-th state is:

$${}^c\hat{Y}_i = \sum_{s=1} \left[\frac{E_{is}}{\sum_{m=1,3} e_{ism}} \left[\sum_{k=1}^{e_{is1}} y_{is1k} + \sum_{k=1}^{e_{is3}} y_{is3k} \right] \right] = \sum_{s=1} \left[\hat{Y}_{is1} + \hat{Y}_{is3} \right] = \sum_{s=1} \sum_{m=1,3} \hat{Y}_{ism} \dots\dots\dots (1)$$

where superscript ‘C’ in

${}^c\hat{Y}_i$ stands for central sample.

The formula for corresponding sub-sample wise estimates **for the sample sector** of the i-th state is:

$${}^c\hat{Y}'_{im} = \sum_{s=1} \left[\frac{E_{is}}{e_{ism}} \sum_{k=1}^{e_{ism}} y_{ismk} \right], m=1,3. \dots\dots\dots (1.1)$$

If \hat{Y}''_i be the corresponding estimate for that characteristic of the enterprise **for the census sector** of the i-th state, then the estimate for that characteristic of the enterprise for the i-th state **as a whole** based on the central sample is given by:

$${}^c\hat{Y}_i = {}^c\hat{Y}'_i + \hat{Y}''_i \dots\dots\dots (2)$$

The estimate of the characteristic of the enterprise for all-India will be:

$${}^c\hat{Y} = \sum_i {}^c\hat{Y}_i \dots\dots\dots (3)$$

(b) Formulae for estimation of aggregates for a state based on state sample:

Estimation formula for any characteristics of the enterprise **for the sample sector** of the i-th state **based on state sample** is:

$${}^s\hat{Y}'_i = \sum_{s=1} \left[\frac{E_{is}}{\sum_{m=2,4} e_{ism}} \left[\sum_{k=1}^{e_{is2}} y_{is2k} + \sum_{k=1}^{e_{is4}} y_{is4k} \right] \right] = \sum_{s=1} \left[\hat{Y}_{is2} + \hat{Y}_{is4} \right] = \sum_{s=1} \sum_{m=2,4} \hat{Y}_{ism} \dots\dots (4)$$

where superscript ‘S’ in ${}^s\hat{Y}'_i$ stands for state sample.

The formula for sub-sample wise estimates **for the sample sector** of the i-th state **based on state sample** is:

$${}^s\hat{Y}'_{im} = \sum_{s=1} \left[\frac{E_{is}}{e_{ism}} \sum_{k=1}^{e_{ism}} y_{ismk} \right], m=2,4. \dots\dots\dots (4.1)$$

Using \hat{Y}''_i as the corresponding estimate for that characteristic of the enterprise **for the census sector** of the i-th state, then the estimate for that characteristic of the enterprise for the i-th state **as a whole** based on the state sample is given by:

$${}^s\hat{Y}_i = {}^s\hat{Y}'_i + \hat{Y}''_i \dots\dots\dots (5)$$

(c) Formulae for estimation of aggregates for a state based on pooled sample:

Estimation formula for any characteristics of the enterprise **for the sample sector** of the i-th state **based on pooled sample (i.e., central and state combined)** is:

$${}^p\hat{Y}'_i = \sum_{s=1} \left[\frac{E_{is}}{\sum_{m=1}^4 e_{ism}} \left[\sum_{m=1}^4 \sum_{k=1}^{e_{ism}} y_{ismk} \right] \right] \dots\dots\dots (6)$$

Using \hat{Y}_i'' as the corresponding estimate for that characteristic of the enterprise **for the census sector** of the i-th state, then the estimate for that characteristic of the enterprise for the i-th state **as a whole** based on the pooled sample is given by:

$${}^p\hat{Y}_i = {}^p\hat{Y}_i' + \hat{Y}_i'' \quad \dots\dots\dots (7)$$

The above equations are given for generating the estimates for the State. However, similar treatment may be given or same equations may be used in generating the estimates at district level.

All.4.2 Estimates of Ratios:

Let \hat{Y} and \hat{X} be the overall estimate of the aggregates Y and X for two characteristics y and x, respectively at the State/ UT/ all-India level.

Then the combined ratio estimate (\hat{R}) of the ratio ($R = \frac{Y}{X}$) will be obtained as

$$\hat{R} = \frac{\hat{Y}}{\hat{X}}$$

All.4.3 Estimates of Error for Aggregate \hat{Y} : The variance is to be obtained for the sample sector units only. The estimated variances of the estimates at state level will be as follows:

$$V\hat{a}r(\hat{Y}_i) = \sum_s V\hat{a}r(\hat{Y}_{is}) \quad \dots\dots\dots (8)$$

The sampling variance based on central Samples is:

$$V\hat{a}r(\hat{Y}_i) = \sum_s \{(\hat{Y}_{is1} - \hat{Y}_{is3}) / 2\}^2 \quad \dots\dots\dots (9.1)$$

The sampling variance based on state Samples is:

$$V\hat{a}r(\hat{Y}_i) = \sum_s \{(\hat{Y}_{is2} - \hat{Y}_{is4}) / 2\}^2 \quad \dots\dots\dots (9.2)$$

For generating estimates of variance for the pooled sample is:

$$V\hat{a}r(\hat{Y}_i) = \frac{1}{12} \sum_s \sum_{m=1}^4 (\hat{Y}_{ism} - \hat{Y}_{is})^2, \text{ where } \hat{Y}_{is} = \frac{1}{4} \sum_{m=1}^4 \hat{Y}_{ism} \quad \dots\dots(9.3)$$

For all-India, the estimated variances of the estimates of different types will be as follows:

$$V\hat{a}r(\hat{Y}) = \sum_i V\hat{a}r(\hat{Y}_i) \quad \dots\dots\dots (10)$$

II.4.4 For ratio \hat{R} :

For \hat{R} at all-India based on central sample (i.e. sub-sample 1 and 3) is,

$$\begin{aligned}
 M\hat{S}E(\hat{R}) &= \frac{1}{(\hat{X})^2} \left[\hat{V}(\hat{Y}) - 2\hat{R}Co\hat{v}(\hat{X}, \hat{Y}) + \hat{R}^2\hat{V}(\hat{X}) \right] \dots\dots\dots (11) \\
 &= \frac{1}{\hat{X}^2} \sum_s \left[\sum_{m=1,3} (\hat{Y}_{sm} - {}^c\hat{Y}_s)^2 - 2\hat{R} \sum_{m=1,3} (\hat{Y}_{sm} - {}^c\hat{Y}_s)(\hat{X}_{sm} - {}^c\hat{X}_s) + \hat{R}^2 \sum_{m=1,3} (\hat{X}_{sm} - {}^c\hat{X}_s)^2 \right] \dots(11.1) \\
 \text{where } {}^c\hat{Y}_s &= \frac{1}{2} \sum_{m=1,3} \hat{Y}_{sm} \text{ and } {}^c\hat{X}_s = \frac{1}{2} \sum_{m=1,3} \hat{X}_{sm}
 \end{aligned}$$

For \hat{R} at state level from central sample (i.e., for i-th state based on central sample),

$$\begin{aligned}
 M\hat{S}E(\hat{R}_i) &= \frac{1}{(\hat{X}_i)^2} \left[\hat{V}(\hat{Y}_i) - 2\hat{R}_iCo\hat{v}(\hat{X}_i, \hat{Y}_i) + \hat{R}_i^2\hat{V}(\hat{X}_i) \right] \dots\dots\dots (12) \\
 &= \frac{1}{\hat{X}_i^2} \sum_s \left[\sum_{m=1,3} (\hat{Y}_{ism} - {}^c\hat{Y}_{is})^2 - 2\hat{R}_i \sum_{m=1,3} (\hat{Y}_{ism} - {}^c\hat{Y}_{is})(\hat{X}_{ism} - {}^c\hat{X}_{is}) + \hat{R}_i^2 \sum_{m=1,3} (\hat{X}_{ism} - {}^c\hat{X}_{is})^2 \right] \dots(12.1) \\
 \text{where } {}^c\hat{Y}_{is} &= \frac{1}{2} \sum_{m=1,3} \hat{Y}_{ism} \text{ and } {}^c\hat{X}_{is} = \frac{1}{2} \sum_{m=1,3} \hat{X}_{ism}
 \end{aligned}$$

For \hat{R} at state level from state sample,

$$\begin{aligned}
 M\hat{S}E(\hat{R}_i) &= \frac{1}{\hat{X}_i^2} \sum_s \left[\sum_{m=2,4} (\hat{Y}_{ism} - {}^s\hat{Y}_{is})^2 - 2\hat{R} \sum_{m=2,4} (\hat{Y}_{ism} - {}^s\hat{Y}_{is})(\hat{X}_{ism} - {}^s\hat{X}_{is}) + \hat{R}^2 \sum_{m=2,4} (\hat{X}_{ism} - {}^s\hat{X}_{is})^2 \right] \dots(12.2) \\
 \text{where } {}^s\hat{Y}_{is} &= \frac{1}{2} \sum_{m=2,4} \hat{Y}_{ism} \text{ and } {}^s\hat{X}_{is} = \frac{1}{2} \sum_{m=2,4} \hat{X}_{ism}
 \end{aligned}$$

For \hat{R} at all-India based on pooled sample (i.e. sub-samples 1, 2, 3 and 4) is,

$$M\hat{S}E(\hat{R}) = \frac{1}{12\hat{X}^2} \sum_s \left[\sum_{m=1}^4 (\hat{Y}_{sm} - \hat{Y}_s)^2 - 2\hat{R} \sum_{m=1}^4 (\hat{Y}_{sm} - \hat{Y}_s)(\hat{X}_{sm} - \hat{X}_s) + \hat{R}^2 \sum_{m=1}^4 (\hat{X}_{sm} - \hat{X}_s)^2 \right] \dots(13)$$

where $\hat{Y}_{sm}, \hat{X}_{sm}$ = estimate of aggregate of characteristic Y, X of m-th sub-sample in the s-th stratum and $\hat{Y}_s = \frac{1}{4} \sum_{m=1}^4 \hat{Y}_{sm}$.

AII.4.5 Estimates of RSE:

$$R\hat{S}E(\hat{Y}) = \frac{\sqrt{Var(\hat{Y})}}{\hat{Y}} \times 100 \quad \dots\dots\dots (9)$$

$$R\hat{S}E(\hat{R}) = \frac{\sqrt{M\hat{S}E(\hat{R})}}{\hat{R}} \times 100 \quad \dots\dots\dots (13)$$

AII.4.6 Multipliers for enterprises:

The formulae for multipliers for a stratum are given below:

| formula for sub-sample wise multiplier | formula for combined sample multiplier |
|------------------------------------------------------|--------------------------------------------------------|
| $\frac{E_{is}}{e_{ism}}, m = 1, 2, 3 \text{ or } 4.$ | $\frac{E_{is}}{e_{is}}, e_{is} = \sum_{m=1}^4 e_{ism}$ |

AII.4.7 Treatment for surveyed cases and casualty cases:

AII.4.7.1 Casualty cases: The casualty case may occur in cases where the unit is existing but non-response due to closure and owner/occupier is not traceable (code 5), non-response due to production not yet started or accounting year not closed during the year (code 7) or non-response due to other reasons [incl. relevant records are with court/Income tax or recalcitrant/refuse to submit the return department, etc, or factory under prosecution in respect of earlier ASI] (code 8). Thus, the units with survey codes 5, 7 and 8 as per Item 12, Block A are treated as casualties. Moreover, if for the units that are found 'closed' or 'NOP', the relevant information are not available, those will be treated as casualty in counting the number of surveyed units (e_{ism}).

AII.4.7.2 Imputation of data from past survey for casualty units: In case any units in the census sector becomes casualty, information in respect of all the characteristics may be borrowed from the previous year, if available, for the census sector units belonging to that post-survey stratum of State By District By 4- Digit of NIC. Sometimes, this is also followed in case of sample units which are casualty but information on various characteristics for previous year of those units is available.

AII.4.7.3 While counting the number of units surveyed (e_{ism}) in the m-th sub-sample of a stratum, all the units with survey codes 1 to 9 in Item 12, Block A excluding the casualty cases will be considered.

AII.4.8 Treatment in cases of void strata

AII.4.8.1 A stratum may be void because of the casualty of all the units belonging to the stratum. This may occur in one sub-sample or more subsamples. If it relates to only one sub-

sample, then estimate for the void stratum may be replaced with the estimate as obtained from the other sub-sample for the same stratum separately for central and state. All the various cases are discussed below:

AII.4.8.2 When a stratum is void in the sub-samples 1 and 3, the following procedure is recommended:

Case (I): Sample sector is void, but Census sector is not void:

The estimated figures in respect of all the characteristics obtained for the census sector may be assumed to hold good for each of the units in the sample sector and accordingly, the estimate for the sample sector may be obtained. For example, if there are n units in the sample sector in a particular stratum, then the estimated figure per census units (i.e., average figures) for a characteristic will be multiplied by n to obtain the estimate for the sample sector in that stratum.

Case (II): Both the Sample sector and Census sector are void:

The stratum may be merged with the nearest stratum looking into the description of the 4-digit NIC activity, or else it could be merged with the 4-digit NIC activity 'others' within that 4-digit NIC group.

AII.4.8.3 The treatment will be similar if the stratum is void in the sub-samples 2 and 4 to generate estimate from the state sample. If only one sub-sample (out of sub-sample 2 and 4) is void, then estimate for the void stratum may be replaced with the estimate as obtained from the other sub-sample for the same stratum as is mentioned in earlier paragraph. It may be possible that in a particular stratum, sub-samples 1 and 3 are void but sub-samples 2 and 4 are not void or conversely sub-samples 1 and 3 are not void but sub-samples 2 and 4 are void. In the former case merging of stratum may be required in generating central sample estimates while that is not required in generating estimates from state sample. In the later case merging of stratum is required in generating state sample estimate while merging is not required in generating estimates from central sample. In such cases for generating pooled estimate, merging is also not required. The stratum merging in generating pooled estimate is required only when all the four sub-samples in a stratum are void. The same merging principle, which is mentioned in earlier paragraph, is to be followed in such cases.

Government of India
 Ministry of Statistics and Programme Implementation
 Return under Collection of Statistics Act, 2008 as amended in 2017 and rules framed there under in 2011
 Annual Survey of Industries 2017-2018 (Part –I)
(Please read the instructions before filling the return)

| Block A: Identification particulars (for official use) | | | | | |
|---------------------------------------------------------------|--|--|--|--|--|
| 1. Schedule Despatch (DSL) No. | | | | | |
| 2. PSL No. | | | | | |
| 3. Scheme code (<i>Census-1, Sample-2</i>) | | | | | |
| 4. Industry code as per frame (4-digit level of NIC-2008) | | | | | |
| 5. Industry code as per return (5-digit level of NIC-2008) | | | | | |
| 6. Description of Industry: | | | | | |
| 7. State Code | | | | | |
| 8. District Code | | | | | |
| 9. Sector (<i>Rural-1, Urban-2</i>) | | | | | |
| 10. RO /SRO code | | | | | |
| 11. No. of Units | | | | | |
| 12. Status of Unit (<i>Code</i>) | | | | | |

| Block B: Particulars of the factory (to be filled by owner of the factory) | | | | | |
|------------------------------------------------------------------------------------------------------------------------------|--|--------------------------|--|----|--|
| 1. Name and address of the Industrial undertaking: | | 1.1 Vill./Town: | | | |
| | | 1.2 District name: | | | |
| | | 1.3 State name: | | | |
| | | 1.4 PIN Code | | | |
| 2. Type of organisation (<i>code</i>) | | | | | |
| 3. Corporate Identification Number (CIN) | | | | | |
| 4. Whether the unit has ISO Certification, 14000 Series (<i>yes-1, no-2</i>) | | | | | |
| 5. Year of initial production | | | | | |
| 6. Accounting year (..... to | | | | to | |
| 7. Number of months of operation | | | | | |
| 8. Whether the share capital of the company includes share of foreign entities (<i>yes-1, no-2</i>) | | | | | |
| 9. Any R&D unit in your factory? (<i>yes & registered with DST/DBT-1, yes & registered with others-2, no-3</i>) | | | | | |
| 10. Details of contact person | | i) Name & designation: | | | |
| | | ii) Tele (with STD code) | | | |
| | | iii) FAX no. | | | |
| | | iv) E-mail | | | |

DECLARATION

I hereby declare that information furnished in this return is correct and complete to the best of my knowledge and belief.

Date :

Place :

(Name and Signature of owner with stamp)

DSL No PSL No

| Block C: FIXED ASSETS | | | | | | | | | | | | |
|------------------------------|-------------------------------------------------------------------|-----------------------|--------------------------|------------------|----------------------------------------|-----------------------|----------------------|-------------------------------|---------------------------------------------------|---------------------------------------|---------------------------------------|----------------------------------------|
| Sl. No. | Type of Assets | Gross value (Rs.) | | | | | Depreciation (Rs.) | | | | Net value (Rs.) | |
| | | Opening as on ---- | Addition during the year | | Deduction & adjustment during the year | Closing as on ---- | Up to year beginning | Provi- ded during the year | Adjustment for sold/ discarded during the year | Up to year end (cols. 8+9 -10) | Opening as on ----- (cols. 3-8) | Closing as on ----- (cols. 7-11) |
| | | | Due to revaluation | Actual additions | | | | | | | | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
| 1. | Land | | | | | | | | | | | |
| 2. | Building | | | | | | | | | | | |
| 3. | Plant & Machinery | | | | | | | | | | | |
| 4. | Transport equipment | | | | | | | | | | | |
| 5. | Computer equipment including software | | | | | | | | | | | |
| 6. | Pollution control equipment/ Environment improvement equipment | | | | | | | | | | | |
| 7. | Others | | | | | | | | | | | |
| 8. | Sub-total (items 2 to 7) | | | | | | | | | | | |
| 9. | Capital work in progress | | | | | | | | | | | |
| 10. | Total (items 1+8+9) | | | | | | | | | | | |

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| Block D: WORKING CAPITAL AND LOANS | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------|---------------|
| Sl. No. | Items | Opening (Rs.) | Closing (Rs.) |
| (1) | (2) | (3) | (4) |
| 1. | Raw Materials & Components and Packing materials | | |
| 2. | Fuels & Lubricants | | |
| 3. | Spares, Stores & others | | |
| 4. | Sub-total (items 1 to 3) | | |
| 5. | Semi-finished goods/work in progress | | |
| 6. | Finished goods | | |
| 7. | Total inventory (items 4 to 6) | | |
| 8. | Cash in Hand & at Bank | | |
| 9. | Sundry Debtors | | |
| 10. | Other current assets | | |
| 11. | Total current assets (items 7 to 10) | | |
| 12. | Sundry Creditors | | |
| 13. | Over draft, cash credit, other short term loan from banks & other financial institutions | | |
| 14. | Other current liabilities | | |
| 15. | Total current liabilities (items 12 to 14) | | |
| 16. | Working Capital (item 11-item 15)* | | |
| 17. | Outstanding loans (excluding interest but including deposits)** | | |
| <p><i>Note:</i></p> <p>* Give reasons in the footnote for negative values and abnormal verification in opening and closing values.</p> <p>** If outstanding loans include interest, a footnote may be given</p> | | | |

| Block E: EMPLOYMENT AND LABOUR COST | | | | | | | |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------|-------|----------------------------------|-------------------------|--------------------------|
| Sl. No. | Category of staff | Man-days worked | | | Average number of persons worked | No. of mandays paid for | Wages/ salaries (in Rs.) |
| | | Manu- facturing | Non Manufacturing | Total | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Part A: Details for each category of staff | | | | | | | |
| 1. | Male workers employed directly | | | | | | |
| 2. | Female workers employed directly | | | | | | |
| 3. | Sub-total (items 1 + 2) | | | | | | |
| 4. | Workers employed through contractors | | | | | | |
| 5. | Total workers (items 3 + 4) | | | | | | |
| 6. | Supervisory & managerial staff | | | | | | |
| 7. | Other employees | | | | | | |
| 8. | Unpaid family members/ proprietor/ coop. members | | | | | | |
| 9. | Total employees (items 5+6+7+8) | | | | | | |
| Part B: Some details for all categories of staff combined | | | | | | | |
| 10. | Bonus (in Rs.) | | | | | | |
| 11. | Contribution to provident & other funds (in Rs.) | | | | | | |
| 12. | Workmen & staff welfare expenses (in Rs.) | | | | | | |
| 13. | Number of working days | (i) Manufacturing days | | | | | |
| | | (ii) Non-manufacturing days | | | | | |
| | | (iii) Total (i+ ii) | | | | | |
| 14. | Total cost of production (in Rs.) [entry in col. 8 of item 9, 10, 11, and 12, block E + entry in col. 3 of item 1, 2(i), 2(ii), 3, 4, 5, 6, 7, 8, 9 & 10, block F + entry in col. 6 of item 23 of block H + entry in col. 6 of item 7, block I] | | | | | | |

| Block F : OTHER EXPENSES | | |
|---------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------|
| Sl. No. | Items | Expenditure (in Rs.) |
| (1) | (2) | (3) |
| O T H E R I N P U T | 1. | Work done by others on materials supplied by the industrial undertaking |
| | 2. | Repair & maintenance of |
| | | (i) Buildings and other construction |
| | | (ii) Other fixed assets |
| | 3. | Operating expenses |
| | 4. | Expenses on raw materials and other components for own construction |
| | 5. | Insurance charges |
| | 6. | Rent paid for plant & machinery and other fixed assets |
| | 7. | Expenses on Research & Development (R&D) |
| | 8. | Rent paid for buildings |
| | 9. | Rent paid for land on lease or royalties on mines, quarries and similar assets |
| 10. | Interest paid | |
| 11. | Purchase value of goods sold in the same condition as purchased | |

| Block G: OTHER OUTPUT/RECEIPTS | | |
|---------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Sl. No. | Items | Receipts (in Rs.) |
| (1) | (2) | (3) |
| O T H E R O U T P U T | 1. | Receipts from manufacturing services (including work done for others on materials supplied by them and sale value of waste left by the party) |
| | 2. | Receipts from non-manufacturing services (including non-industrial services) |
| | 3. | Value of electricity generated and sold |
| | 4. | Value of own construction |
| | 5. | Net balance of goods sold in the same condition as purchased. (item 11 of block G <i>minus</i> item 11 of block F) |
| | 6. | Rent received for plant & machinery and other fixed assets |
| | 7. | Variation in stock of semi-finished goods (col.4 <i>minus</i> col 3 against item 5 in block D) |
| | 8. | Rent received for buildings |
| | 9. | Rent received for land on lease or royalties on mines, quarries and similar assets |
| | 10. | Interest received |
| | 11. | Sale value of goods sold in the same condition as purchased |
| | 12. | Other production subsidies |

DSL No PSL No

| Block H: Indigenous input items consumed (if needed, additional sheets may be used for recording input items with serial nos. starting from 25) | | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------|------------------|-------------------|-------------------------|------------------------|
| Sl. No. | Item description | Item code (NPC-MS) | Unit of quantity | Quantity consumed | Purchase value (in Rs.) | Rate per unit (in Rs.) |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| | Major ten basic items (indigenous) | | | | | |
| 1. | | | | | | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. | | | | | | |
| 6. | | | | | | |
| 7. | | | | | | |
| 8. | | | | | | |
| 9. | | | | | | |
| 10. | | | | | | |
| 11. | Other basic items (indigenous)* | 9920100 | | | | |
| 12. | Total basic items (items 1 to 11) | 9990100 | | | | |
| 13. | Non-basic chemicals – all kinds | 9920300 | | | | |
| 14. | Packing items | 9990800 | | | | |
| 15. | Electricity own generated | 9990400 | KWH | | | |
| 16. | Electricity purchased & consumed | 9990500 | KWH | | | |
| 17. | Petrol, diesel, oil, lubricants consumed | 9990600 | | | | |
| 18. | Coal consumed | 9990700 | Tonne | | | |
| 19. | Gas consumed | 9990900 | KG | | | |
| 20. | Other fuel consumed | 9920400 | | | | |
| 21. | Consumable store | 9922000 | | | | |
| 22. | Total non-basic items (items 13 to 21) | 9992000 | | | | |
| 23. | Total inputs (items 12+ 22) | 9993000 | | | | |
| 24. | Any additional requirement of electricity (unmet demand) | 9999999 | KWH | | | |

* Full description of items not in NPC-MS 2011 (Revised):

| | | | | | | | |
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| Block I: Imported input items consumed - directly only (if needed, additional sheets may be used for recording input items with serial nos. starting from 8) | | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------------|------------------|-------------------|-------------------------|------------------------|
| Sl. No. | Item description (Major five imported items) | Item code (NPC-MS) | Unit of quantity | Quantity consumed | Purchase value (in Rs.) | Rate per unit (in Rs.) |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| 1. | | | | | | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. | | | | | | |
| 6. | Other imported items | 9922100 | | | | |
| 7. | Total imports (consumed) (items 1 to 6) | 9994000 | | | | |

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| Block J: Products and by-products manufactured by the unit (if needed, additional sheets may be used for recording output items with serial nos. starting from 14) | | | | | | | | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------|------------------|-----------------------|---------------|-----------------------|------------------------------|-------------------------------------------------|-----------------------------|-------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Sl. No. | Products/By-products description (First ten major items as per value - no brand name) | Item code (NPC-MS) | Unit of quantity | Quantity manufactured | Quantity sold | Gross sale value (Rs) | Distributive expenses (Rs.) | | | | Per unit net sale value (Rs. 0.00) (col. 7-[col. 8+col. 9+col.10-col.11]) ÷ col. 6 | Ex-factory value of quantity manufactured (Rs.) (col.12× col.5) |
| | | | | | | | Goods and Services Tax (GST) | Excise Duty/ Sales Tax/VAT/ Other Taxes, if any | Other Distributive Expenses | Subsidy (-) | | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
| 1. | | | | | | | | | | | | |
| 2. | | | | | | | | | | | | |
| 3. | | | | | | | | | | | | |
| 4. | | | | | | | | | | | | |
| 5. | | | | | | | | | | | | |
| 6. | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | |
| 11. | Other products/ by-products* | 9921100 | | | | | | | | | | |
| 12. | Total (items 1 to 11) | 9995000 | | | | | | | | | | |
| 13. | Share (%) of products/by-products directly exported | | | | | | | | | | | |

* Full description of items not in NPC-MS 2011 (Revised):

DSL No PSL No

| Block K: Information and Communication technology (ICT) usage | | |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------|
| Sl. No. | ICT indicator | yes-1, no-2 |
| 1. | Did the factory use computer/s during FY 2017-18? | |
| 2. | Did the factory use the internet during FY 2017-18? | |
| 3. | Did the factory have a website as on the date of survey? | |
| 4. | Did the factory receive orders via the internet during FY 2017-18? | |
| 5. | Did the factory place orders for business purpose via the internet during FY 2017-18? | |
| 6. | Did the factory connect to the internet either by a. Narrowband or b. Fixed broadband or c. Mobile broadband during FY 2017-18? | |
| 7. | Does the factory have a local area network (LAN) as on the date of survey? | |

| Block L: Energy Conservation (EC) measures | | |
|--------------------------------------------------------------------------------|--------------------|-------------|
| Sl. No. | EC indicator | yes-1, no-2 |
| Have any measures been taken during last financial year with regard to: | | |
| 1. | Electrical saving? | |
| 2. | Coal saving? | |
| 3. | Oil saving? | |
| 4. | Gas saving? | |

FOR OFFICIAL USE ONLY

| Block M: Particulars of field operations | | | | | |
|-------------------------------------------------|--------------------------------------------|--|----|----------------------------------|--|
| 1. | Name of Superintending Officer | | 5. | Date of receipt from factory | |
| 2. | Signature of Superintending Officer | | 6. | Date of verification/compilation | |
| 3. | Name & Designation of Scrutinising Officer | | 7. | Date(s) of scrutiny | |
| 4. | Signature of Scrutinising Officer | | 8. | Date of despatch | |

| Block N: Comments of Superintending Officer/Scrutinising Officer |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| |
| <i>Note: Reasons for negative working capital and for any abnormal values or entries (high or low) in respect to important characteristics (Such as GVA, working capital, wage rate, number of workers, distributive expenses, depreciation etc.) should be given invariably. For instance the reasons for high GVA could be increased demand/production, profit, govt. subsidy; or for low GVA, the reasons could be decreased demand/production, capacity under-utilization, high input cost etc. similarly reasons for any abnormal values of certain important ratios eg. Ratio of output to input, ratio of depreciation/distributive expenses to output etc should be given.</i> |
| <i>Please refer to detailed instructions also for further guidance.</i> |

Concepts, Definitions and Procedures

Important concepts and definitions used in ASI are explained below.

1. A number of accounting, economic and other terms related to the factories are used in conduct of Annual Survey of Industries. For proper assessment and interpretation of ASI data, those are given below.

2. **Accounting Year:** For the purpose of ASI, the accounting year is the period on which the factory closes its books of account. With the enactment of Income Tax Act, by and large, the accounting year of all factories is from April to March.

3. **Reference Period:** It corresponds to the financial year. For example, for ASI 2017-2018 the reference period is the financial year commencing from 1st April 2017 and ending on 31st March 2018 or the accounting year of the factory ending on any date between 01.04.2017 to 31.03.2018.

84. **Survey Period** U @ 7 8 January 9 31st
May 9

5. **Factory (as per the Factory Act 1948):** Factory is one, which is registered under Sections 2m(i) and 2m(ii) of the Factories Act, 1948. The Sections 2m(i) and 2m(ii) refer to any premises including the precinct thereof (i) wherein ten or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on with the aid of power, or is ordinarily so carried on, or (ii) wherein twenty or more workers are working, or were working on any day of the preceding twelve months and in any part of which a manufacturing process is being carried on without the aid of power, or is ordinarily so carried on. Closed factories with fixed assets on site are also considered as registered factories till they are de-registered and removed from the live-register maintained by the Chief Inspector of Factories (CIF) in the State.

6. **Manufacturing Process:** This is as per Section 2(k) of the Factories Act, 1948, and briefly mentioned in Section 1.

7. **Gross Value of Plant and Machinery:** Gross value of plant and machinery represents the total original (un-depreciated) value of installed plant and machinery as at the end of the accounting year. It includes the book value of own constructed plant and machinery, if installed, and the approximate value of rented-in plant and machinery as at the time of renting in but excludes the value of rented-out plant and machinery. Total value of all the plant and machinery acquired on hire-purchase basis is also included. Thus it represents the gross value of plant and machinery engaged in production process.

- 8. Fixed Capital:** Fixed Capital represents the depreciated value of fixed assets owned by the factory as on the closing day of the accounting year. Fixed assets are those, which have normal productive life of more than one year. Fixed capital covers all type of assets, new or used or own constructed, deployed for productions, transportation, living or recreational facilities, hospitals, schools, etc. for factory personnel. It would include land, building, plant and machinery, transport equipment etc. It includes the fixed assets of the head office allocable to the factory and also the full value of assets taken on hire-purchase basis (Whether fully paid or not) excluding interest element. It excludes intangible assets and assets solely used for post-manufacturing activities such as, sale, storage, distribution, etc.
- 9. Depreciation:** Depreciation is consumption of fixed capital by the factory due to wear and tear and obsolescence during the accounting year and is taken as provided by the factory owner, or if not provided by the factory this is estimated on the basis of cost of installation and working life of the fixed assets.
- 10. Finished Goods:** Finished Goods are those, which are manufactured by the factory for sale. Finished goods should conform to a prescribed standard.
- 11. Physical Working Capital:** This is defined to include all physical inventories owned, held or controlled by the factory as on the closing day of the accounting year such as the materials, fuels and lubricants, stores, etc. that enter into products manufactured by the factory itself or supplied by the factory to others for processing. Physical working capital also includes the value of stock of materials, fuels and stores etc. purchased expressly for re-sale, semi-finished goods and goods-in-process on account of others and goods made by the factory which are ready for sale at the end of the accounting year. However, it does not include the stock of the materials, fuels, stores, etc. supplied by others to the factory for processing. Finished goods processed by others from raw materials supplied by the factory and held by them are included and finished goods processed by the factory from raw materials supplied by others, are excluded.
- 12. Working Capital:** Working Capital is the sum total of the physical working capital as already defined above and the cash deposits in hand and at bank, land, the net balance of amounts receivable over amounts payable at the end of the accounting year. Amounts receivable include value of credit items on revenue account, such as sums due to the factory for goods sold, amounts advanced in connection with normal factory work, bills of exchange payable to the factory, payments made in advance such as for fire insurance, telephone charges, rates and taxes, call deposits and security deposits having a normal life of less than one year, etc. It excludes unused overdraft facility, fixed deposits irrespective of duration, advances for acquisition of fixed assets, long-term loans including interest thereon and investment.
- 13. Invested Capital:** Invested capital is the total of fixed capital and physical working capital.
- 14. Productive Capital:** This is the total of fixed capital and working capital.
- 15. Outstanding Loans:** Outstanding loans represent all loans, whether short-term or long-term, whether interest bearing or not, outstanding according to the books of the factory as on the closing day of accounting year.

16. Contract Worker: All persons who are not employed directly by an employer but through the third agency, i.e. contractor, are termed as contract workers. Those workers may be employed with or without the knowledge of the principal employer.

17. Employees: Employees relate to all persons engaged by the factory whether for wages or not, in work connected directly or indirectly with the manufacturing process and include all administrative, technical and clerical staff as also labour in production of capital assets for factory's own use. This is inclusive of persons holding position of supervision or management or engaged in administrative office, store-keeping section and welfare section, watch and ward staff, sales department as also those engaged in the purchase of raw materials etc. and production of fixed assets for the factory. It also includes all working proprietors and their family members who are actively engaged in the work of the factory even without any pay and the unpaid members of the co-operative societies who work in or for the factory in any direct and productive capacity. Persons in the head office connected with the manufacturing activity of the factory are also included in this item.

18. Labour Turnover: Labour turnover measures the extent of change in the working force due to accession and separation during a given period. The term 'accession' was defined as the total number of workers added to employment during the period, whether new or re-employed or transferred from other establishments or units under the same management. Inter-departmental transfers within the same establishment are, however ignored. The term 'separation' implies termination of employment at the instance of worker or employers. It includes termination of services due to death or retirement. As in the case of accession, transfers to other establishments are included but transfers within the same establishment are ignored. Retrenchment as a result of rationalization or modernization or any other cause, is also treated as separation.

19. Wages: Wages are defined to include all remuneration capable of being expressed in monetary terms and also payable/paid more or less regularly in each pay period to workers (defined above) as compensation for work done during the accounting year. It **includes**:

(i) Direct wages and salary (i.e. basic wages/salaries, payment of overtime, dearness, compensatory, house rent and other allowances);

(ii) Remuneration for period not worked (i.e. basic wages), salaries and allowances payable for leave period, paid holidays, lay-off payments and compensation for unemployment (if not paid from source other than employers);

(iii) Bonus and ex-gratia payment paid both at regular and less frequent intervals (i.e., incentive bonuses and good attendance bonuses, production bonuses, profit sharing bonuses, festival or yearend bonuses etc.).

It **excludes** layoff payments and compensation for employment except where such payments are for this purpose, i.e., payments not made by the employer. It **excludes** employer's contribution to old age benefits and other social security charges, direct expenditure on maternity benefits and creches and other group benefit in kind and travelling and other expenditure incurred for business purposes and reimbursed by the employer. The wages are expressed in terms of gross value, i.e., before deductions for fines, damages, taxes, provident fund, employee's state insurance contribution etc. Benefits in kind (perquisites) of individual nature are only **included**.

- 20. Bonus:** Profit sharing bonus, festival bonus, year-end bonus, and all other bonuses and ex-gratia payments paid at less frequent intervals are covered by this term.
- 21. Workmen and Staff Welfare Expenses:** These include expenditure incurred by the employer on the maternity benefits and crèches and other benefits such as supply of food, beverages, tobacco, clothing and group lodging at concessional rates and educational, cultural and recreational facilities and services and grants to trade unions and cooperative stores meant for employees. All group benefits are included.
- 22. Emoluments:** These are defined in the same way as wages but paid to all employees plus imputed value of benefits in kind i.e. the net cost to the employers on those goods and services provided to employees free of charge or at markedly reduced cost which are clearly and primarily of benefit to the employees as consumers. It includes profit sharing, festival and other bonuses and ex-gratia payments paid at less frequent intervals (i.e. other than bonus paid more or less regularly for each period). Benefits in kind include supplies or services rendered such as housing, medical, education and recreation facilities. Personal insurance, income tax, house rent allowance, conveyance etc. for payment by the factory also is included in the emoluments.
- 23. Supplements to Emoluments:** These include: (i) employer's contribution to old age benefits, i.e., provident fund, pension, gratuity, etc.; (ii) employer's contribution towards other social security charges such as Employees' State Insurance, compensation for work injuries, occupational diseases, maternity benefits, retrenchment and lay-off benefits etc.; and (iii) group benefits like direct expenditure on maternity, crèches, canteen facilities, educational, cultural and recreational facilities and grant to trade unions, co-operative stores etc. meant for employees.
- 24. Compensation of Employees:** Compensation of employees is the total of emoluments and supplement to emoluments.
- 25. Mandays Worked:** These are obtained by summing up the number of mandays worked by persons working in each shift over all the shifts on all days, i.e. both manufacturing and non-manufacturing days. This figure excludes persons who are paid but remain on leave, strike, etc.
- 26. Mandays Paid For:** The number of mandays paid for is arrived at by summing up the number of employees paid for in each shift. This also includes mandays on weekly schedule holidays if paid for and those absences with pay as also mandays lost through lay off/ strike for which compensation was payable.
- 27. Working Day:** Working day means the days on which a manufacturing process and/ or repair or maintenance work was carried on.
- 28. Non-working Day:** Apart from manufacturing day and repair and maintenance days there may be some non-working days. Non working days are those days on which the workers give their attendance but due to non-availability of raw materials power etc. no effective work is done. As the workers are paid for these days such days are also taken into account for the purpose of labour statistics.

29. Basic Materials: Basic materials are the materials which are important and of key nature to the industry, on which the manufacturing process is based, viz. metal for machine, leather for shoe. Such material is not lost through the process of production but only changes its forms.

30. Consumable Stores: All such materials which assist the manufacturing process and lose their identity without entering the products are called consumable stores, e.g., cotton waste.

31. Fuel Consumed: Fuel Consumed represent total purchase value of all items of fuels, lubricants, electricity, water (purchased to make steam) etc. consumed by the factory during the accounting year except those which directly enter into products as materials consumed. It excludes that part of fuels, which is produced and consumed by the factory in manufacture i.e., all intermediate products and also fuels consumed by employees as part of amenities. It includes quantities acquired and consumed from allied concerns, their book value being taken as their purchase value and also the quantities consumed in production of machinery or other capital items for factory's own use.

32. Materials Consumed: Materials consumed represent the total delivered value of all items of raw materials, components, chemicals, packing materials and stores which actually entered into the production process of the factory during the accounting year. It also includes the cost of all the materials used in the production of fixed assets, including construction work for factory's own use. Components and accessories fitted as purchased with the finished product during the accounting year are also to be included. It excludes intermediate products. Intermediate products in the above context mean all those products which are produced by the factory and consumed for further manufacturing process.

33. Total Input: This comprises gross value of fuel materials etc. consumed (as defined above) and also other inputs viz. (a) cost of non-industrial services received from others (b) cost of materials consumed for repair and maintenance of factory's fixed assets including cost of work done by others to the factory's fixed assets (c) cost of contract and commission work done by others on materials supplied by the factory (d) cost of office supplies and products reported for sale during last year & used for further manufacture during the accounting year.

34. Intermediate Product: Intermediate Product is a product which is obtained during a manufacturing process, which may or may not be saleable and is not the intended final product.

35. Net Value of Semi-Finished Goods: It represents the excess/deficit of value of semi-finished goods and/or goods-in-process at the end of the accounting year over that at the beginning of year.

36. Products: These are defined to include the ex-factory value (i.e. exclusive of taxes, duties etc. on sale and inclusive of subsidies etc., if any) of all products and by-products, excluding intermediate products, that have been completed during the accounting year for sale whether actually sold during the accounting year or entered into books. Also include fixed assets produced by the factory for its own use.

37. Gross Output: Gross output is defined to include the ex-factory value, (i.e., exclusive of taxes, duties, etc. on sale and inclusive of subsidies etc., if any) of products and by-products

manufactured during the accounting year, and the net value of the semi-finished goods, work-in-process, (represents the excess/deficit of value of semi-finished goods or work-in-process at the end of the accounting year over that of the beginning of the year plus net balance of semi-finished fixed assets on factory's capital account) and also the receipts for industrial and non-industrial services rendered to others, value of semi-finished goods of last year sold in the current year, sale value of goods sold in the same condition as purchased and value of electricity generated and sold. Value of gross output and total output has been used in the text interchangeable to mean the same thing.

38. Industrial Services: Any services taken or rendered from one to another unit resulting in increase in the value of material during the manufacturing process are industrial services.

39. Non-Industrial Services: All such services which do not have a direct bearing on the manufacturing process but are needed by any manufacturing unit are called non-industrial services, say, transport.

40. Net Value Added: This is the increment to the value of goods and services that is contributed by the factory and is obtained by deducting the value of total inputs and depreciation from gross value of output.

Annexure -5 : List of NIC-2008 4-digit codes covered under ASI

| Description | NIC-4 digit | Sector | Remarks |
|-------------------------------------------------------------------------------------------------------------|--------------------|---------------|-----------------------------------|
| 0163 - Post-harvest crop activities | 0163 | F | NIC 01632 is under coverage only. |
| 0164 - Seed processing for propagation | 0164 | F | NIC 01640 is under coverage only. |
| 0893 - Extraction of salt | 0893 | F | NIC 08932 is under coverage only. |
| 1010 - Processing and preserving of meat | 1010 | F | |
| 1020 - Processing and preserving of fish, crustaceans and molluscs | 1020 | F | |
| 1030 - Processing and preserving of fruit and vegetables | 1030 | F | |
| 1040 - Manufacture of vegetable and animal oils and fats | 1040 | F | |
| 1050 - Manufacture of dairy products | 1050 | F | |
| 1061 - Manufacture of grain mill products | 1061 | F | |
| 1062 - Manufacture of starches and starch products | 1062 | F | |
| 1071 - Manufacture of bakery products | 1071 | F | |
| 1072 - Manufacture of sugar | 1072 | F | |
| 1073 - Manufacture of cocoa, chocolate and sugar confectionery | 1073 | F | |
| 1074 - Manufacture of macaroni, noodles, couscous and similar farinaceous products | 1074 | F | |
| 1075 - Manufacture of prepared meals and dishes | 1075 | F | |
| 1079 - Manufacture of other food products n.e.c. | 1079 | F | |
| 1080 - Manufacture of prepared animal feeds | 1080 | F | |
| 1101 - Distilling, rectifying and blending of spirits | 1101 | F | |
| 1102 - Manufacture of wines | 1102 | F | |
| 1103 - Manufacture of malt liquors and malt | 1103 | F | |
| 1104 - Manufacture of soft drinks; production of mineral waters and other bottled waters | 1104 | F | |
| 1200 - Manufacture of tobacco products | 1200 | B | |
| 1311 - Preparation and spinning of textile fibres | 1311 | F | |
| 1312 - Weaving of textiles | 1312 | F | |
| 1313 - Finishing of textiles | 1313 | F | |
| 1391 - Manufacture of knitted and crocheted fabrics | 1391 | F | |
| 1392 - Manufacture of made-up textile articles, except apparel | 1392 | F | |
| 1393 - Manufacture of carpets and rugs | 1393 | F | |
| 1394 - Manufacture of cordage, rope, twine and netting | 1394 | F | |
| 1399 - Manufacture of other textiles n.e.c. | 1399 | F | |
| 1410 - Manufacture of wearing apparel, except fur apparel | 1410 | F | |
| 1420 - Manufacture of articles of fur | 1420 | F | |
| 1430 - Manufacture of knitted and crocheted apparel | 1430 | F | |
| 1511 - Tanning and dressing of leather; dressing and dyeing of fur | 1511 | F | |
| 1512 - Manufacture of luggage, handbags and the like, saddlery and harness | 1512 | F | |
| 1520 - Manufacture of footwear | 1520 | F | |
| 1610 - Sawmilling and planing of wood | 1610 | F | |
| 1621 - Manufacture of veneer sheets and wood-based panels | 1621 | F | |
| 1622 - Manufacture of builders' carpentry and joinery | 1622 | F | |
| 1623 - Manufacture of wooden containers | 1623 | F | |
| 1629 - Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials | 1629 | F | |

Annexure -5 : List of NIC-2008 4-digit codes covered under ASI

| Description | NIC-4 digit | Sector | Remarks |
|------------------------------------------------------------------------------------------------------------------|--------------------|---------------|----------------|
| 1701 - Manufacture of pulp, paper and paperboard | 1701 | F | |
| 1702 - Manufacture of corrugated paper and paperboard and of containers of paper and paperboard | 1702 | F | |
| 1709 - Manufacture of other articles of paper and paperboard | 1709 | F | |
| 1811 - Printing | 1811 | F | |
| 1812 - Service activities related to printing | 1812 | F | |
| 1820 - Reproduction of recorded media | 1820 | F | |
| 1910 - Manufacture of coke oven products | 1910 | F | |
| 1920 - Manufacture of refined petroleum products | 1920 | F | |
| 2011 - Manufacture of basic chemicals | 2011 | F | |
| 2012 - Manufacture of fertilizers and nitrogen compounds | 2012 | F | |
| 2013 - Manufacture of plastics and synthetic rubber in primary forms | 2013 | F | |
| 2021 - Manufacture of pesticides and other agrochemical products | 2021 | F | |
| 2022 - Manufacture of paints, varnishes and similar coatings, printing ink and mastics | 2022 | F | |
| 2023 - Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations | 2023 | F | |
| 2029 - Manufacture of other chemical products n.e.c. | 2029 | F | |
| 2030 - Manufacture of man-made fibres | 2030 | F | |
| 2100 - Manufacture of pharmaceuticals, medicinal chemical and botanical products | 2100 | F | |
| 2211 - Manufacture of rubber tyres and tubes; retreading and rebuilding of rubber tyres | 2211 | F | |
| 2219 - Manufacture of other rubber products | 2219 | F | |
| 2220 - Manufacture of plastics products | 2220 | F | |
| 2310 - Manufacture of glass and glass products | 2310 | F | |
| 2391 - Manufacture of refractory products | 2391 | F | |
| 2392 - Manufacture of clay building materials | 2392 | F | |
| 2393 - Manufacture of other porcelain and ceramic products | 2393 | F | |
| 2394 - Manufacture of cement, lime and plaster | 2394 | F | |
| 2395 - Manufacture of articles of concrete, cement and plaster | 2395 | F | |
| 2396 - Cutting, shaping and finishing of stone | 2396 | F | |
| 2399 - Manufacture of other non-metallic mineral products n.e.c. | 2399 | F | |
| 2410 - Manufacture of basic iron and steel | 2410 | F | |
| 2420 - Manufacture of basic precious and other non-ferrous metals | 2420 | F | |
| 2431 - Casting of iron and steel | 2431 | F | |
| 2432 - Casting of non-ferrous metals | 2432 | F | |
| 2511 - Manufacture of structural metal products | 2511 | F | |
| 2512 - Manufacture of tanks, reservoirs and containers of metal | 2512 | F | |
| 2513 - Manufacture of steam generators, except central heating hot water boilers | 2513 | F | |
| 2520 - Manufacture of weapons and ammunition | 2520 | F | |
| 2591 - Forging, pressing, stamping and roll-forming of metal; powder metallurgy | 2591 | F | |

Annexure - : List of NIC-2008 4-digit codes covered under ASI

| Description | NIC-4 digit | Sector | Remarks |
|--------------------------------------------------------------------------------------------------------------------|--------------------|---------------|----------------|
| 2592 - Treatment and coating of metals; machining | 2592 | F | |
| 2593 - Manufacture of cutlery, hand tools and general hardware | 2593 | F | |
| 2599 - Manufacture of other fabricated metal products n.e.c. | 2599 | F | |
| 2610 - Manufacture of electronic components and boards | 2610 | F | |
| 2620 - Manufacture of computers and peripheral equipment | 2620 | F | |
| 2630 - Manufacture of communication equipment | 2630 | F | |
| 2640 - Manufacture of consumer electronics | 2640 | F | |
| 2651 - Manufacture of measuring, testing, navigating and control equipment | 2651 | F | |
| 2652 - Manufacture of watches and clocks | 2652 | F | |
| 2660 - Manufacture of irradiation, electromedical and electrotherapeutic equipment | 2660 | F | |
| 2670 - Manufacture of optical instruments and photographic equipment | 2670 | F | |
| 2680 - Manufacture of magnetic and optical media | 2680 | F | |
| 2710 - Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus | 2710 | F | |
| 2720 - Manufacture of batteries and accumulators | 2720 | F | |
| 2731 - Manufacture of fibre optic cables | 2731 | F | |
| 2732 - Manufacture of other electronic and electric wires and cables | 2732 | F | |
| 2733 - Manufacture of wiring devices | 2733 | F | |
| 2740 - Manufacture of electric lighting equipment | 2740 | F | |
| 2750 - Manufacture of domestic appliances | 2750 | F | |
| 2790 - Manufacture of other electrical equipment | 2790 | F | |
| 2811 - Manufacture of engines and turbines, except aircraft, vehicle and cycle engines | 2811 | F | |
| 2812 - Manufacture of fluid power equipment | 2812 | F | |
| 2813 - Manufacture of other pumps, compressors, taps and valves | 2813 | F | |
| 2814 - Manufacture of bearings, gears, gearing and driving elements | 2814 | F | |
| 2815 - Manufacture of ovens, furnaces and furnace burners | 2815 | F | |
| 2816 - Manufacture of lifting and handling equipment | 2816 | F | |
| 2817 - Manufacture of office machinery and equipment (except computers and peripheral equipment) | 2817 | F | |
| 2818 - Manufacture of power-driven hand tools | 2818 | F | |
| 2819 - Manufacture of other general-purpose machinery | 2819 | F | |
| 2821 - Manufacture of agricultural and forestry machinery | 2821 | F | |
| 2822 - Manufacture of metal-forming machinery and machine tools | 2822 | F | |
| 2823 - Manufacture of machinery for metallurgy | 2823 | F | |
| 2824 - Manufacture of machinery for mining, quarrying and construction | 2824 | F | |
| 2825 - Manufacture of machinery for food, beverage and tobacco processing | 2825 | F | |
| 2826 - Manufacture of machinery for textile, apparel and leather production | 2826 | F | |
| 2829 - Manufacture of other special-purpose machinery | 2829 | F | |
| 2910 - Manufacture of motor vehicles | 2910 | F | |

Annexure -5 : List of NIC-2008 4-digit codes covered under ASI

| Description | NIC-4 digit | Sector | Remarks |
|--------------------------------------------------------------------------------------------------------|--------------------|---------------|-----------------------------------|
| 2920 - Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers | 2920 | F | |
| 2930 - Manufacture of parts and accessories for motor vehicles | 2930 | F | |
| 3011 - Building of ships and floating structures | 3011 | F | |
| 3012 - Building of pleasure and sporting boats | 3012 | F | |
| 3020 - Manufacture of railway locomotives and rolling stock | 3020 | F | |
| 3030 - Manufacture of air and spacecraft and related machinery | 3030 | F | |
| 3040 - Manufacture of military fighting vehicles | 3040 | F | |
| 3091 - Manufacture of motorcycles | 3091 | F | |
| 3092 - Manufacture of bicycles and invalid carriages | 3092 | F | |
| 3099 - Manufacture of other transport equipment n.e.c. | 3099 | F | |
| 3100 - Manufacture of furniture | 3100 | F | |
| 3211 - Manufacture of jewellery and related articles | 3211 | F | |
| 3212 - Manufacture of imitation jewellery and related articles | 3212 | F | |
| 3220 - Manufacture of musical instruments | 3220 | F | |
| 3230 - Manufacture of sports goods | 3230 | F | |
| 3240 - Manufacture of games and toys | 3240 | F | |
| 3250 - Manufacture of medical and dental instruments and supplies | 3250 | F | |
| 3290 - Other manufacturing n.e.c. | 3290 | F | |
| 3311 - Repair of fabricated metal products | 3311 | F | |
| 3312 - Repair of machinery | 3312 | F | |
| 3313 - Repair of electronic and optical equipment | 3313 | F | |
| 3314 - Repair of electrical equipment | 3314 | F | |
| 3315 - Repair of transport equipment, except motor vehicles | 3315 | F | |
| 3319 - Repair of other equipment | 3319 | F | |
| 3320 - Installation of industrial machinery and equipment | 3320 | F | |
| 3510 - Electric power generation, transmission and distribution | 3510 | E | |
| 3520 - Manufacture of gas; distribution of gaseous fuels through mains | 3520 | F | |
| 3530 - Steam and air conditioning supply | 3530 | F | |
| 3600 - Water collection, treatment and supply | 3600 | F | |
| 3700 - Sewerage | 3700 | F | |
| 3811 - Collection of non-hazardous waste | 3811 | F | |
| 3812 - Collection of hazardous waste | 3812 | F | |
| 3821 - Treatment and disposal of non-hazardous waste | 3821 | F | |
| 3822 - Treatment and disposal of hazardous waste | 3822 | F | |
| 3830 - Materials recovery | 3830 | F | |
| 4520 - Maintenance and repair of motor vehicles | 4520 | F | |
| 4540 - Sale, maintenance and repair of motorcycles and related parts and accessories | 4540 | F | NIC 45403 is under coverage only. |
| 5210 - Warehousing and storage | 5210 | F | |
| 5811 - Book publishing | 5811 | F | |
| 5812 - Publishing of directories and mailing lists | 5812 | F | |
| 5813 - Publishing of newspapers, journals and periodicals | 5813 | F | |
| 5819 - Other publishing activities | 5819 | F | |

Annexure -5 : List of NIC-2008 4-digit codes covered under ASI

| Description | NIC-4 digit | Sector | Remarks |
|----------------------------------------------------------------------------------|--------------------|---------------|----------------|
| 5911 - Motion picture, video and television programme production activities | 5911 | F | |
| 5912 - Motion picture, video and television programme post-production activities | 5912 | F | |
| 5913 - Motion picture, video and television programme distribution activities | 5913 | F | |
| 5920 - Sound recording and music publishing activities | 5920 | F | |
| 7420 - Photographic activities | 7420 | F | |
| 8292 - Packaging activities | 8292 | F | |
| 9511 - Repair of computers and peripheral equipment | 9511 | F | |
| 9512 - Repair of communication equipment | 9512 | F | |
| 9521 - Repair of consumer electronics | 9521 | F | |
| 9522 - Repair of household appliances and home and garden equipment | 9522 | F | |
| 9523 - Repair of footwear and leather goods | 9523 | F | |
| 9524 - Repair of furniture and home furnishings | 9524 | F | |
| 9529 - Repair of other personal and household goods | 9529 | F | |
| 9601 - Washing and (dry-) cleaning of textile and fur products | 9601 | F | |

The Factories Act 1948
[63 of 1948]

AIV.1 "**Factory**" means any premises including the precincts thereof

(i) Wherein ten or more workers are working or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on with the aid of power or is ordinarily so carried on, or,

(ii) Wherein twenty or more workers are working or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on without the aid of power or is ordinarily so carried on, but does not include a mine subject to the operation of the Mines Act, 1952, or a railway running shed.

AIV.2 The "**Manufacturing Process**" referred to above has been defined [vide section 2(k)]

in the Factories Act, 1948

as: "Any process

for-

(i) making, altering, ornamenting, finishing, packing, oiling, washing, cleaning, breaking up, demolishing or otherwise treating or adapting any article or substance with a view to its use, sale, transport, delivery or disposal; or,

(ii) pumping oil, water or sewage ;

or,

(iii) generating, transforming or transmitting power;

or,

(iv) composing types for printing by letter press, lithography, photogravure or other similar process or book binding; or,

(v) constructing, reconstructing, repairing, refitting, finishing or breaking up ships or vessels.

(vi) preserving or storing any article in cold storage"

[Abstract from Factories Act 1948 for ASI]



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