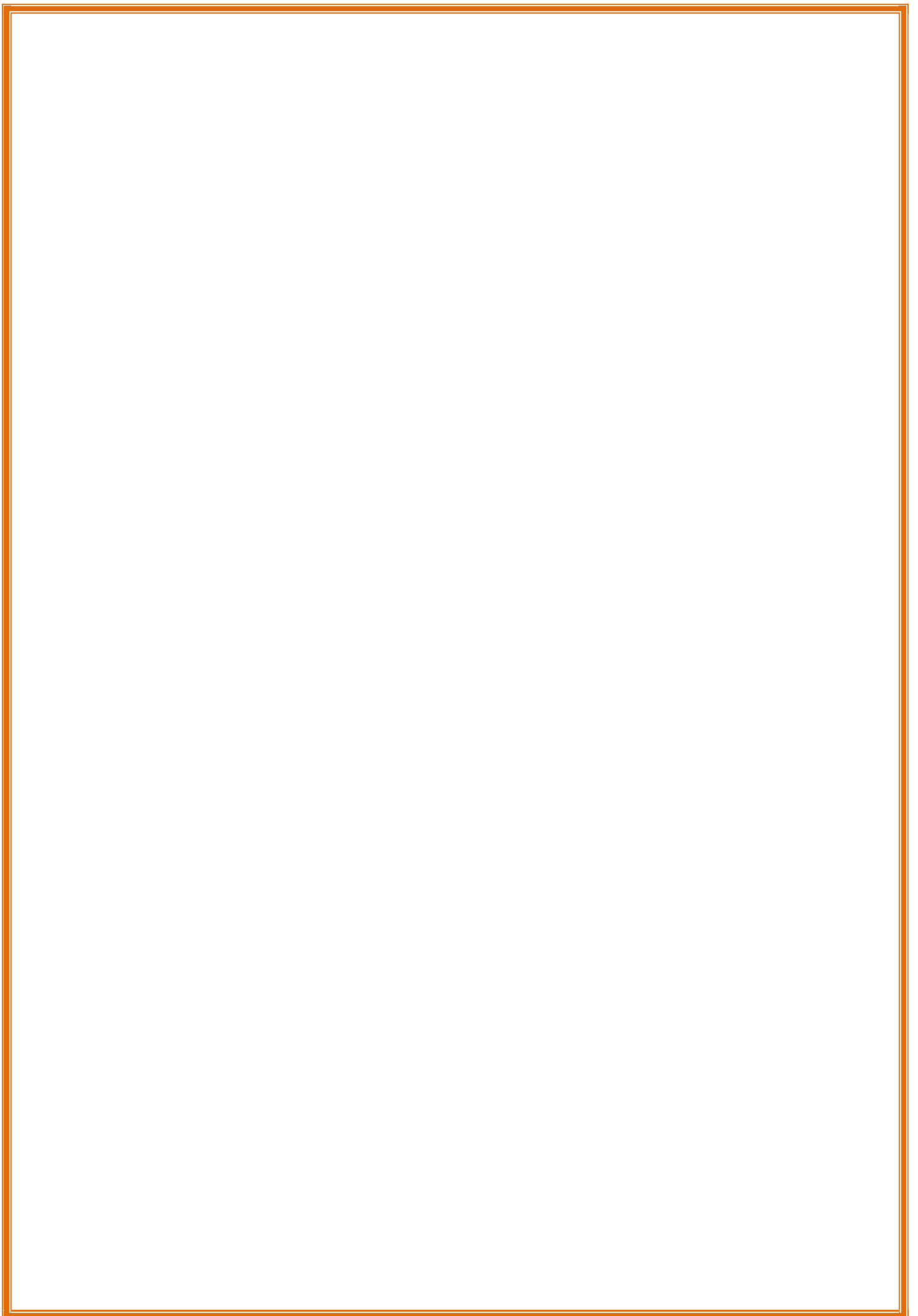




**Government of Kerala**

# **Report on Annual Survey of Industries 2018-19 Volume I**

**ASI DIVISION  
DEPARTMENT OF ECONOMICS AND STATISTICS, KERALA**



## PREFACE

One of the important factors that concern the state's economic situation is industrial growth. The manufacturing industry significantly contributes to the state's GDP. Surveys are important for giving planners and policy makers information so they can create new plans and strategies that can improve the industrial sector. The Department of Economics and Statistics conducts the major survey in Kerala focused on the organised industrial sector is the Annual Survey of Industries (ASI). In accordance with the guidelines set forth in the Collection of Statistics Act of 2008, the survey is carried out each year in collaboration with the Central Statistics Office (IS Wing), Kolkata.

The report on Annual Survey of Industries 2018–19 is published in two volumes. The Volume I highlights the key characteristics of the organized manufacturing sector. An attempt has been made in this volume to analyze the major characteristics based on industrial classification and States/Districts. The characteristics such as fixed capital, working capital, invested capital, employment information, Gross Value Added (GVA), input, output, profit, and income are estimated based on the annual returns of the factory sector for the financial year 2018–19. The Volume II of the publication provides the detailed table of major characteristics at 2/3/4 –digit level industrial classification by State and Districts.

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 791 state sample units (surveyed by DES), 791 Central Sample units and 1994 Census sector units (attended by NSSO, FOD).

The guidance and support extended by Smt. Sunitha Bhaskar, Deputy Director General, NSO, Sri. Rajiv Kumar, SSO ( NSO,FOD), Kollam, and P.Santhosh, SSO (NSO, FOD), Thiruvananthapuram was incredible. The incessant and dedicated work done by the District level officers, field staffs and Directorate level officers for the success of the survey is highly commendable. I also express my sincere appreciation to the entire team for their extraordinary work and commitment.

The survey's specified industrial units' cooperation and the technical support given by the Central Statistics Office (IS Wing) in Kolkata and the NSSO (FOD) in Thiruvananthapuram are indeed honoured.

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

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



**SAJEEVU P.P**  
**Director**

**Place: Thiruvananthapuram**  
**Date : 14/10/2022**



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# **CONTENTS**

Chapter	Contents	Page No.
1	<b>Introduction</b>	<b>13 - 20</b>
2	<b>Organized Manufacturing Sector-State Estimates</b>	<b>21 - 26</b>
3	<b>District wise Estimates</b>	<b>27 - 46</b>
4	<b>Statistics based on National Industrial Classification (NIC 2008)</b>	<b>47 - 66</b>
5	<b>Annual Trends in Industrial Statistics</b>	<b>67 - 78</b>
6	<b>Rural and Urban Statistics of Manufacturing Sector</b>	<b>79 - 84</b>
Annexure 1	<b>Collection of Statistics Act and Rules</b>	<b>87 - 94</b>
Annexure 2	<b>Pooling of ASI data and estimation procedure</b>	<b>95 - 103</b>
Annexure 3	<b>ASI schedule of Enquiry</b>	<b>104 -115</b>
Annexure 4	<b>Concepts, Definitions and Estimation Procedures</b>	<b>116 - 121</b>
Annexure 5	<b>List of NIC-2008 4-digit codes covered under ASI</b>	<b>122 - 126</b>
Annexure 6	<b>Factories Act 1948</b>	<b>127</b>





# **TECHNICAL ASSISTANCE AND SURVEY PROCESS**

## **Technical Guidance and support**

National Statistical Office

Industrial Statistics Wing, Kolkata

## **ASI Survey Notification**

Survey is notified in Kerala Government Gazette

## **Training programmes**

Training programmes 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 Directors 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 7695 factories in the organized manufacturing sector of Kerala.
- The estimated invested capital of the factories is ₹ 70,31,597 lakhs. Out of the total invested capital, Fixed capital and Physical working capital accounts to about 69.79 % and 30.21 % respectively.
- The estimated output and input from the factories production is ₹ 2,26,51,833 lakhs and ₹ 2,01,85,943 lakhs.
- The estimated profit earned by the factories is ₹ 8,24,389 lakhs.
- Across the state the factories provide employment to an estimate of 342465 people. Out of which 79.27 % are workers, 20.10% employees other than workers and 0.62 % unpaid family member.
- Out of 230788 directly employed workers 1,31,597 are men and ₹ 99,191 are women which accounts to about 57 % and 43 % respectively.
- The Gross Value Added of production of the factories is ₹ 24,65,890 lakhs which is 12.21 % of total input.

## Top Industries

Rank	Characteristics				
	Total No .of Factories	Fixed Capital	Total Persons Engaged	Output	Gross Value Added (GVA)
1	Food Products (21.3%)	Coke & Refined Petroleum products (52.9%)	Food Products (28.3%)	Coke & Refined Petroleum products (32.9%)	Food Products (15.5%)
2	Other Non-metallic mineral products (12.7%)	Food Products (11.6%)	Others (9.6%)	Other manufacturing (19.2%)	Chemicals & Chemical products (15.4%)
3	Wood & products of wood & cork, except furniture; manufacture of articles of straw & plating materials (11.2%)	Rubber & plastic products (5.4%)	Rubber & plastic products (8.9%)	Food Products (16.3%)	Rubber & plastic products (11.4%)
4	Others (10.5 %)	Others (5.1%)	Textiles (7.2%)	Rubber & plastic products (5.8%)	Coke & Refined Petroleum products (10.9%)
5	Rubber & plastic products (8.3%)	Other Non-metallic mineral products (4.9%)	Other Non-metallic mineral products (5.9%)	Chemicals & Chemical products (4.5%)	Other Non-metallic mineral products (6.3%)
Aggregate Total (All industries)*	7695	4907497	342465	22651833	2465890

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

## Top Districts

Rank	Characteristics				
	Total No .of Factories	Fixed Capital	Total Persons Engaged	Output	Gross Value Added (GVA)
1	Ernakulam (19.5%)	Ernakulam (69.8 %)	Ernakulam (29.8 %)	Ernakulam (69.5%)	Ernakulam (50.9%)
2	Kollam (14.5%)	Palakkad (4.3 %)	Kollam (14.3 %)	Thrissur (5.5%)	Kottayam (8.0%)
3	Thrissur (11.4%)	Alappuzha (4.1 %)	Alappuzha (10.0 %)	Palakkad (4.5%)	Thrissur (7.5%)
4	Kannur (9.3%)	Kottayam (4.0 %)	Thrissur (8.0 %)	Alappuzha (4.3%)	Alappuzha (5.8%)
5	Alappuzha (8.5%)	Thrissur (3.7 %)	Thiruvananthapuram (6.2 %)	Kottayam (4.0%)	Palakkad (5.7%)
<b>Aggregate Total (All industries)*</b>	<b>7695</b>	<b>4907497</b>	<b>342465</b>	<b>22651833</b>	<b>2465890</b>
<b>*Estimates of Fixed Capital, Output and GVA are in ₹ lakhs</b>					

## Rates & Ratios

Estimates of some important rates and ratios as per ASI 2018-19 are given below:-

➤ Fixed capital per factory in operation	₹ 717 lakhs
➤ No. of persons engaged per factory in operation	50
➤ No. of workers per factory in operation	40
➤ Output per factory in operation	₹ 3312 lakhs
➤ Gross Value Added (GVA) per factory in operation	₹ 360 lakhs
➤ Net Value Added (NVA) per factory in operation	₹ 308 lakhs
➤ Output per person engaged	₹ 66,14,369
➤ Gross Value Added (GVA) per person engaged	₹ 7,20,043
➤ Net Value Added (NVA) per person engaged	₹ 6,14,503
➤ Wages per worker	₹ 1,86,037
➤ Fixed Capital to Net Value Added (NVA)	2.33
➤ Fixed Capital to Output	0.22
➤ Net Value Added(NVA) to Output	0.09
➤ Gross Value Added (GVA) to Fixed Capital	0.50
➤ Output to Input	1.12
➤ Profit to Output	0.04



**CHAPTER 1  
INTRODUCTION**

**Methodology of Annual Survey of Industries**





# **Methodology of Annual Survey of Industries**

Industrial sector occupies an important position in Indian Economy. The Annual Survey of Industries (ASI) is the main source of industrial statistics in Kerala . Till 2009-10, the survey was conducted annually under the statutory provisions of the Collection of Statistics Act 1953 and Rules framed there under in 1959. From 2010-11 onwards, the survey is being conducted annually under the statutory provisions of the Collection of Statistics (COS) Act , 2008 and the rules framed there-under in 2011. The Collection of Statistics Act, 2008 has been amended in 2017 as Collection of Statistics (Amendment) Act, 2017 which extends the coverage to All India. Presently, ASI 2018-19 is being conducted under this amendment

## **1.1. Scope and Coverage**

**1.1.1.**The ASI extends to the entire State. It covers all factories registered under 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.*

**1.1.2** 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.

**1.1.3** 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.

**1.1.4** 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. Sampling Unit

**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 2018-2019 was the accounting year of the factory, ending on any day during the financial year 2018-2019. Thus in ASI 2018-2019, data collected from establishments relate to their respective accounting years that ended on any day between 1<sup>st</sup> April 2018 and 31<sup>st</sup> March 2019.

## 1.5 Methodology of the survey

**1.5.1** The methodology of the survey being followed by the guidelines issued by National Statistical office (NSO), Industrial statistics (IS) wing, Kolkata (Under MOSPI). The instruction manual, the software package and installation procedure will be receiving from NSO during the survey period. But the unit level data for pooling with state sample being provided by NSO at the end of survey. 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 2018-19, 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-subsamples 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 2018-19 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 2018-19 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 2018-19 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 publish the detailed information corresponding to industry codes 10 to 33, 38 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.



# CHAPTER 2

## Statewide outlook of the

### Industrial Statistics



**Organised Manufacturing Sector – State Estimates**





## **Statewide outlook of the Industrial Statistics**



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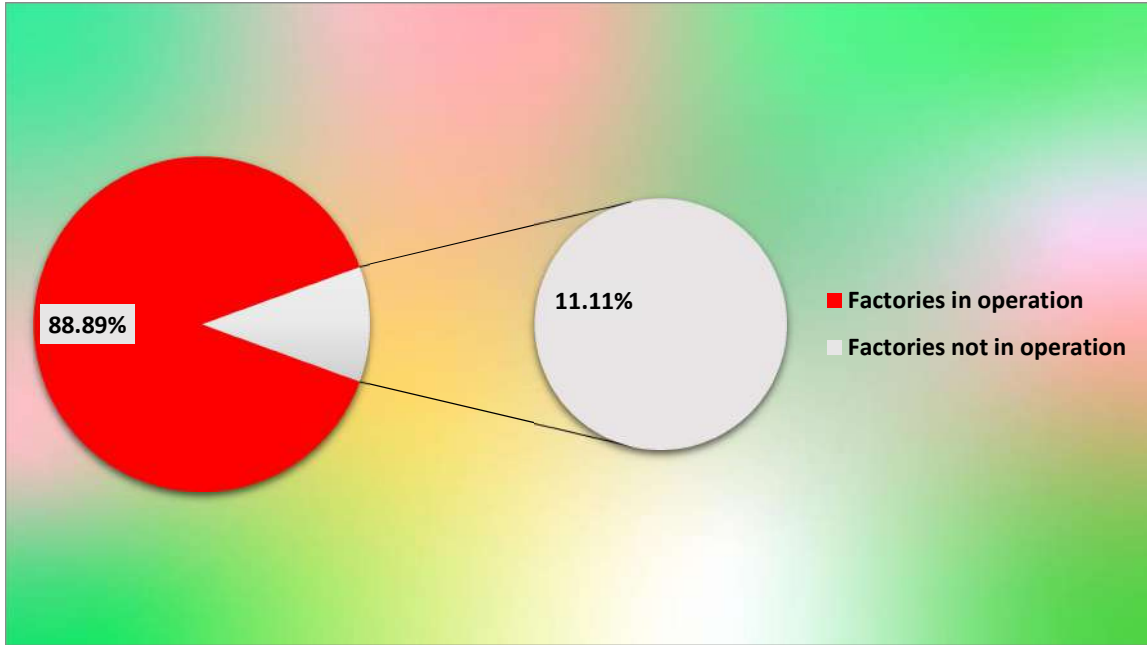
### *Factories in Kerala's organized/registered manufacturing sector*

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In Kerala, the Annual Survey of Industries is one of the most important sources of industrial statistics. It is essential to frame industrial policies in order to address the sector's issues and, as a result, achieve a balanced economy. Surveys have an important role at this point. When relevant and correct data is analysed, the most efficient results are produced, allowing policymakers to design new methods capable of attaining the goal. In this part, we've attempted to summarise the state's manufacturing industry situation. By integrating the Central sample with the State sample, the main features of the organised manufacturing sector for the financial year 2018-19 were estimated. The organised manufacturing sector of the state is defined by registered industries that produce goods. Kerala's manufacturing sector has 7695 factories, according to the 2018-19 annual survey of industries. 6840 factories are operational, whereas 855 are not. The number of factories that are not in operation makes up roughly 11.11% of the total. In comparison to the previous

financial year, estimated value reveals a slight increase of roughly 1.3 % in the number of factories in the current year.

**Figure 1: Distribution of factories in operation and not in operation Kerala**



### Significant characteristics of organised manufacturing sector of Kerala

Financial statement analysis is an important tool for developing effective industrial policies. Annual industry surveys help to a large extent for this. One facet of the industrial sector is the organised manufacturing sector. The profit and loss account, balance sheet, and employment statistics of the factories in this sector give a framework within which the economic status of the sector can be analysed and further planning for improved development can be done. These remarks serve as the survey's data source. According to the survey, there are 27 primary features of the industrial sector that can be estimated. The number of factories, the capital of the industries, total input, total output, Gross Value Added (GVA), Gross Fixed Capital Formation (GFCF), net income, profit, and so on are some of the important features. The survey also calculates the employment data of workers in the factories of manufacturing sector and 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 2018-19**

Sl. No.	Characteristics (All Industries)	Values in ₹ lakh unless otherwise mentioned
1	Number of factories	7695
2	Factories in operation	6840
3	Fixed Capital	4907497
4	Physical Working Capital	2124099
5	Working Capital	1798995
6	Invested Capital	7031597
7	Gross Value of Additions to Fixed Capital	740005
8	Rent Paid	5824
9	Outstanding Loan	1640538
10	Interest paid	236767
11	Rent received	301
12	Interest received	55469
13	Gross Value of P & M	2977932
14	Value of Products & By-products'	20281266
15	Total Output	22651833
16	Fuel Consumed	949617
17	Materials Consumed for Manufacturing	17161571
18	Total Input	20185943
19	Gross Value Added(GVA)	2465890
20	Depreciation	361438
21	Net Value Added(NVA)	2104452
22	Net Fixed Capital Formation(NFCF)	335095
23	Gross Fixed Capital Formation (GFCF)	696533
24	Addition in stock of:	
	(a) Materials, Fuels etc.	22743
	(b) Semi-Finished Goods	9541
	(c ) Finished Goods	51372
	(d) Total	83656
25	Gross Capital Formation	780189
26	Net Income	1861860
27	Profit	824389

### *Employment and emoluments paid in the manufacturing industries*

Production is significantly influenced by the amount of labour that the manufacturing industries need. The number of man-days worked or the number of hours worked should be considered when analysing the change in productivity.

The survey makes some important employment-related estimation, like the number of people employed, wages or salaries paid, etc. According to the data, 3, 42,465 people are employed by the state's organised manufacturing sector in its factories. Out of these employees, 79.27% are workers, 20.10 % are employees other than workers, and 0.62 % are unpaid family members or the owner. The estimated total man-days employed in the factories is 99,573 (in thousands) Employer's wages and Salaries including bonus, are estimated to be ₹ 886503 lakhs, while the employer's contribution is ₹150968 lakhs.

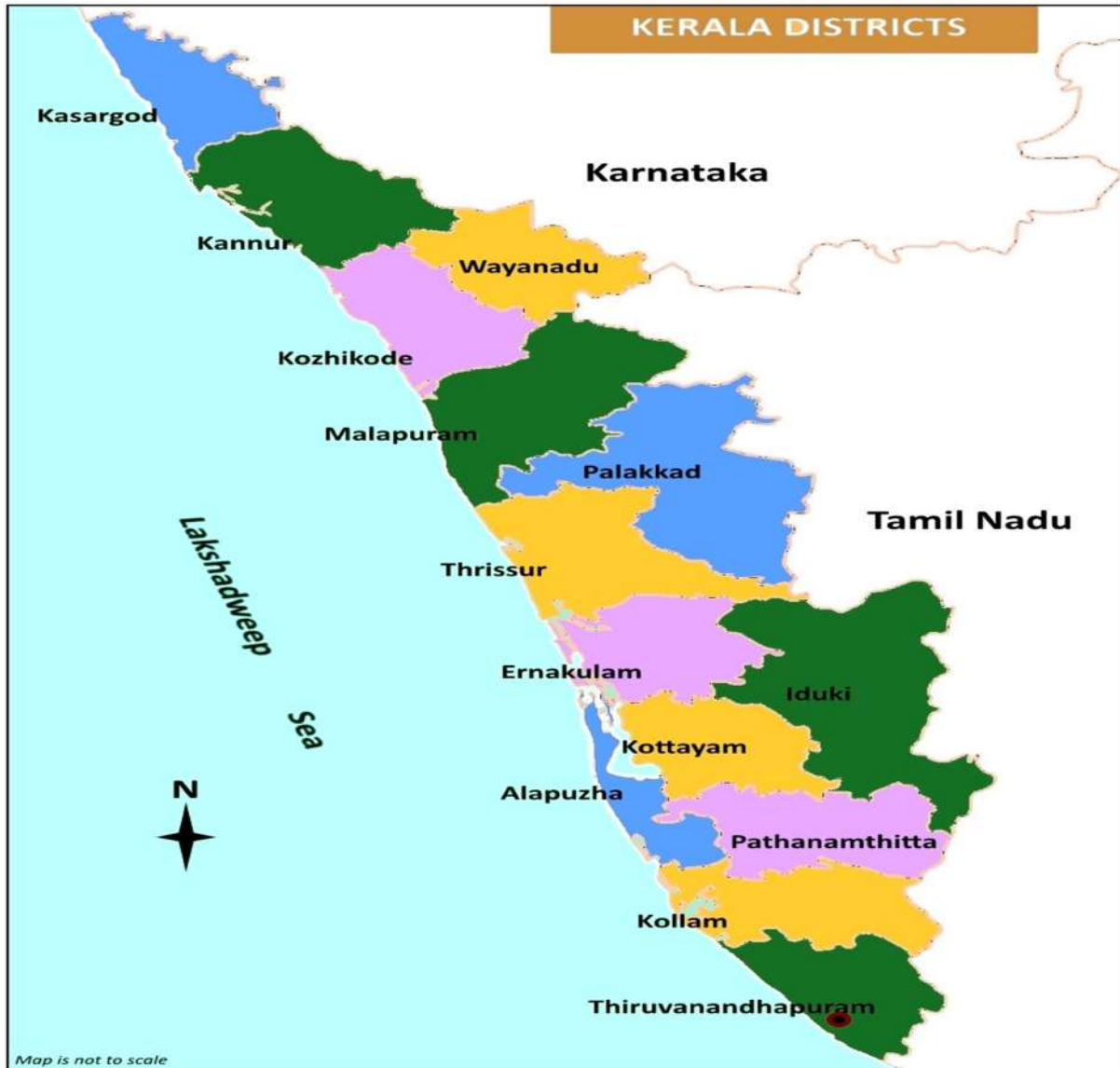
**Table 2: Distribution of employment, man-days worked and emoluments paid to employees in manufacturing sector of Kerala**

<b>A. No. of Persons Engaged (no.)</b>	342465
1. Workers	271485
1.1 Directly employed	230788
1.1.1 Men	131597
1.1.2 Women	99191
1.2 Employed Through Contractors	40697
2. Employees Other Than Workers	68838
2.1 Supervisory and Managerial Staff	30990
2.2 Other Employees	37848
3. Unpaid family members/proprietor etc.	2143
<b>B. Total Man-days employed (in '000)</b>	99573
<b>C. Wages and Salaries Including Employer's Contribution (₹ lakhs)</b>	1037471
1 Wages and Salaries Including Bonus	886503
1.1 Wages and Salaries	841056
1.1.1 Workers	505060
1.1.2 Supervisory & Managerial Staff	224351
1.1.3 Other Employees	111646
1.2 Bonus to all Staff	45447
2. Employer's Contribution	150968



# CHAPTER 3

## DISTRICT WISE ESTIMATES





## District wise view of principal characteristics of organized manufacturing sector

Disparities between the State's different districts on a regional and geographic level could be reflected in their industrial statistics. Planning at the local level is necessary for sustainable development plans that are supportive of success in this sector while taking into account the geographical peculiarities. Decentralized planning, which is essential for industrial development, is made possible by surveys and research at this level. The industrial industry in Kerala's 14 districts is vividly depicted in this section. The survey's results are crucial in determining which areas need to be addressed for greater development.

With 1501 factories, or nearly 19.5% of all estimated factories in Kerala, the Ernakulam district tops the list. Wayanad district has the fewest factories, with only 69, (approx. 1% of state value) (see Figure 5).



Figure 5

Ernakulam district leads the other 14 districts in Kerala (19.5% of state value). The district of Ernakulam has consistently recorded the highest percentage of factories for at least 8 years. Kollam district, which is estimated to have 1119 factories, has the second-highest number. Third place (11.41 % of state value), with 878 factories, goes to the Thrissur district . With an estimated



69 factories, the Wayanad district is the one with the fewest (approximately 1 % of state value). (see Table 3).

**Table 3: District wise distribution of Factories of Kerala, 2018-19**

Districts	Number of factories	Percentage of factories
Kasaragod	356	4.6
Kannur	718	9.3
Wayanad	69	0.9
Kozhikode	479	6.2
Malappuram	262	3.4
Palakkad	523	6.8
Thrissur	878	11.4
Ernakulam	1501	19.5
Idukki	153	2.0
Kottayam	429	5.6
Alappuzha	654	8.5
Pathanamthitta	217	2.8
Kollam	1119	14.5
Thiruvananthapuram	336	4.4
<b>Total</b>	<b>7695</b>	<b>100</b>

**Figure 6: District wise distribution of factories in organized manufacturing sector**



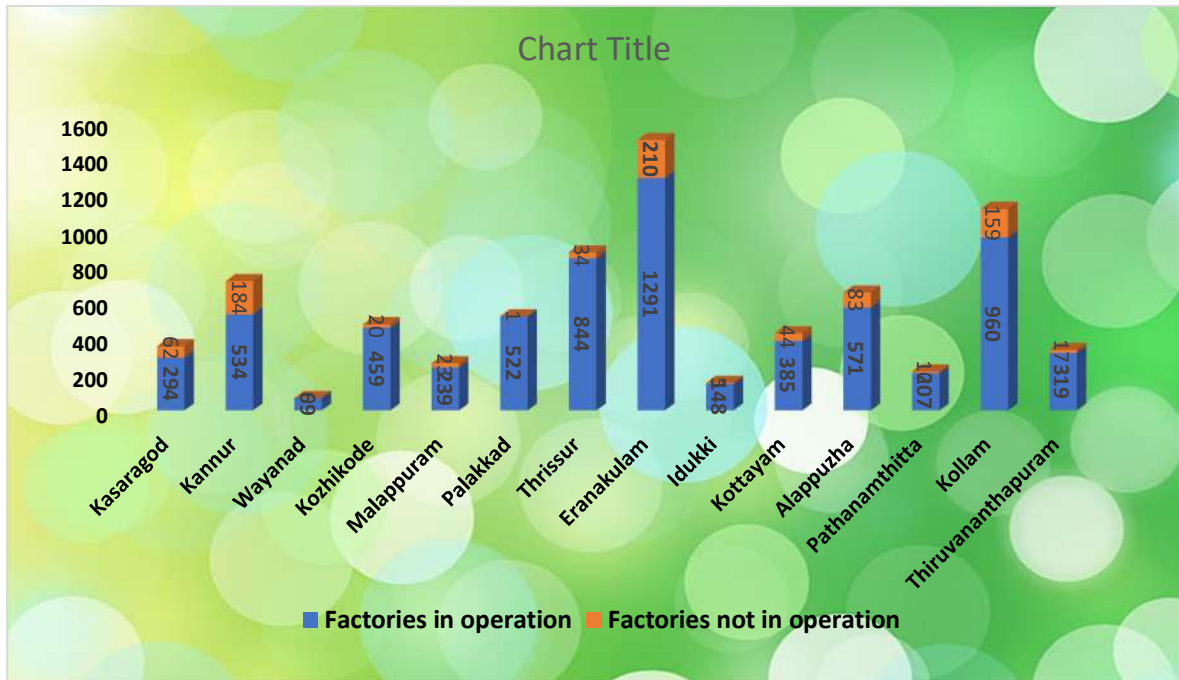


It's interesting to note that the estimated number of factories inactive in the state has reduced from 1058(13.9%) in 2017–18 to 855 (11.11%) in 2018–19. The majority of idle factories(210 out of 855) are located in the Ernakulam district, accounting for 24.6% of the state's value. Kannur and Kollam are the districts with the second- and third-highest numbers of factories that aren't in operation (21.5% and 18.6% of state value respectively). Table 4 and Figure 7 provide a full depiction of the same.

**Table 4: District wise distribution of Factories not in operation in Kerala, 2018-19**

Districts	Factories not in operation	Percentage of factories not in operation
Kasaragod	62	7.3
Kannur	184	21.5
Wayanad	0	0.0
Kozhikode	20	2.3
Malappuram	23	2.7
Palakkad	1	0.1
Thrissur	34	4.0
Ernakulam	210	24.6
Idukki	5	0.6
Kottayam	44	5.1
Alappuzha	83	9.7
Pathanamthitta	10	1.2
Kollam	159	18.6
Thiruvananthapuram	17	2.0
<b>Total</b>	<b>855</b>	<b>100</b>

Figure 7: District wise distribution of factories in operation and not in operation



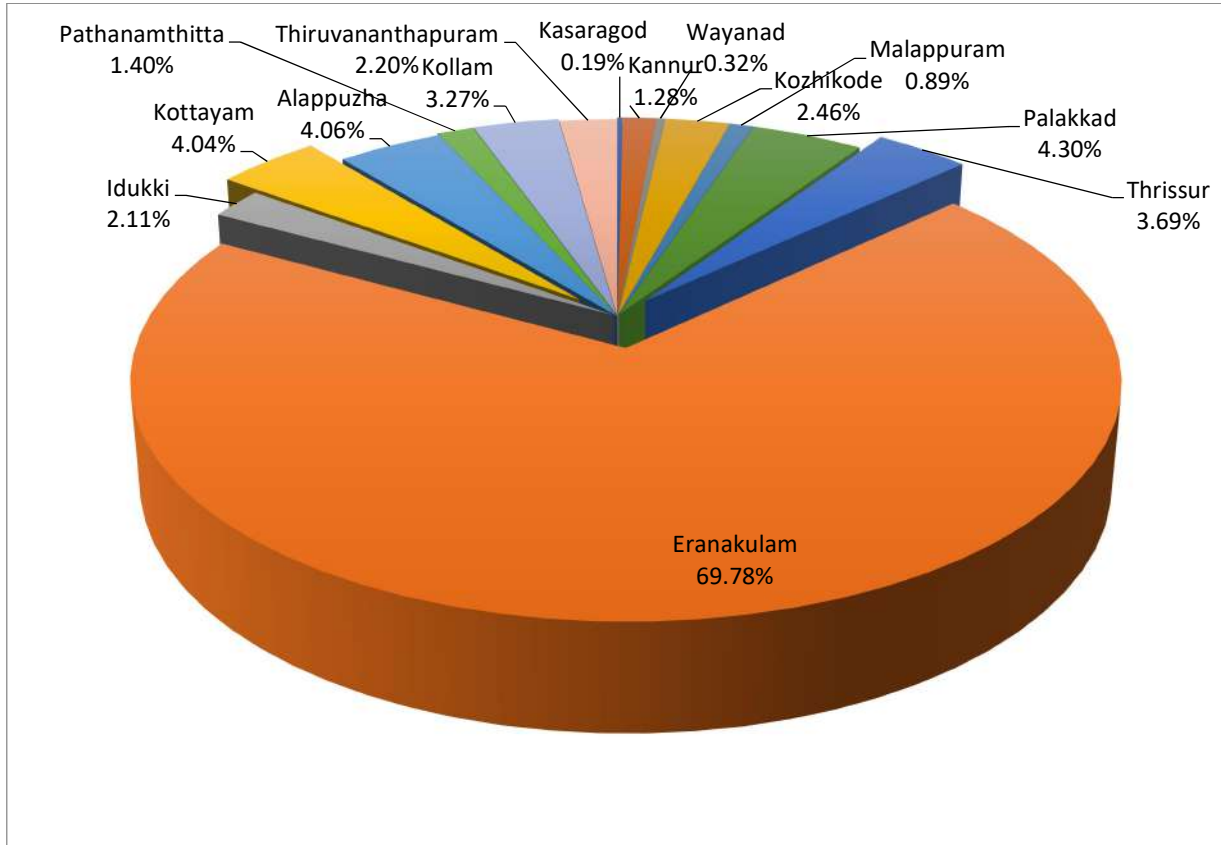
### Capital of manufacturing sector

A manufacturing company's capital investment is one of the elements that adds value to the finished product. Working capital is the capital that is used in the day-to-day operations of production, whereas fixed capital is the capital that the factory owns in the form of land, buildings, plant and machinery, transportation equipment and other equipment. The invested capital of the industry is the total of the fixed capital and physical working capital. According to survey findings, the manufacturing sector in the Ernakulam district has the largest fixed capital, invested capital, and physical functioning, with estimates of ₹ 34,24,555 lakhs (69.78%), ₹ 45,92,147 lakhs (65.31%), and ₹ 11,67,592 lakhs (54.97%), respectively. While Kasargod district has the least fixed capital at ₹ 9,568 lakhs (0.19% of state value), invested and physical working capital at ₹ 20,312lakhs (0.29%) and ₹ 10,744 lakhs (0.51%), respectively.

**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	9568	10744	20312
Kannur	62815	41392	104206
Wayanad	15860	18734	34594
Kozhikode	120503	63111	183615
Malappuram	43715	38469	82184
Palakkad	210926	184929	395855
Thrissur	181222	106253	287474
Ernakulam	3424555	1167592	4592147
Idukki	103698	27564	131263
Kottayam	198477	90291	288768
Alappuzha	199060	144728	343788
Pathanamthitta	68752	19702	88455
Kollam	160460	148708	309168
Thiruvananthapuram	107886	61881	169767
<b>Total</b>	<b>4907497</b>	<b>2124099</b>	<b>7031597</b>

**Figure 8: District wise distribution of fixed capital of factories in Kerala**



### Input and Output

Any policy that seeks to employ available resources in a way that could increase output is likely to succeed in its objective. The input and output of the manufacturing sector have been estimated. The cost of the fuels used, the materials used in manufacturing, and other costs are included in the production process' input. Gross output is defined as the value of goods and by products ex-factory produced during the accounting year, as well as the net value of unfinished goods or work-in-progress, receipts for commercial and non commercial services provided to others, the value of semi-finished goods sold in the

current year from the previous year, the sale value of goods sold in the same condition as purchased, and the value of electricity generated and sold. Ernakulam district has the highest input and output, estimated at ₹ 1,44,85,605 lakhs and ₹ 1,57,39,574 lakhs, respectively (71.8%) and (69.5% of the state value). Table 6, Figure 9, and Figure 10 show the same estimate.

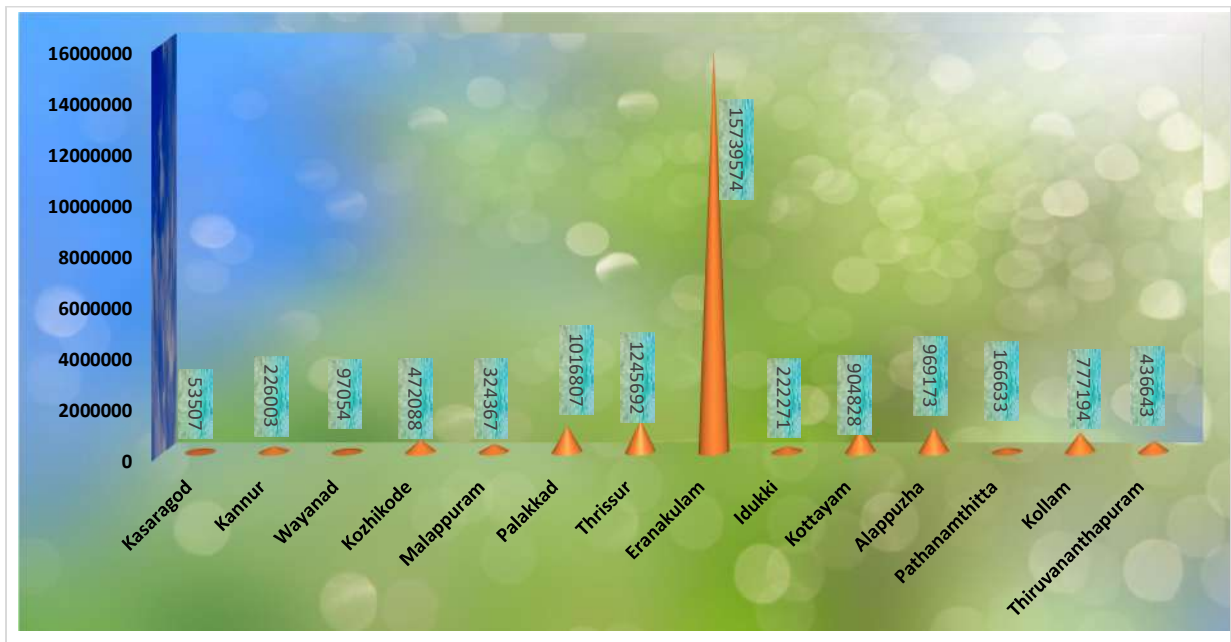
**Table 6: District wise estimate of Input and output of the factories of Kerala, 2018-19**

Districts	Total Input (in ₹ lakhs )	Percentage of input	Total Output (in ₹ lakhs)	Percentage of output
Kasaragod	38832	0.19	53507	0.24
Kannur	181306	0.90	226003	1.00
Wayanad	87976	0.44	97054	0.43
Kozhikode	381534	1.89	472088	2.08
Malappuram	278469	1.38	324367	1.43
Palakkad	875551	4.34	1016807	4.49
Thrissur	1060063	5.25	1245692	5.50
Ernakulam	14485605	71.76	15739574	69.48
Idukki	168999	0.84	222271	0.98
Kottayam	707095	3.50	904828	3.99
Alappuzha	826818	4.10	969173	4.28
Pathanamthitta	118380	0.59	166633	0.74
Kollam	649098	3.22	777194	3.43
Thiruvananthapuram	326217	1.62	436643	1.93
<b>Total</b>	<b>20185943</b>	<b>100</b>	<b>22651833</b>	<b>100</b>

**Figure 9: District wise distribution of input (in ₹ lakhs) of the factories in Kerala**



**Figure 10: District wise distribution of output (in ₹ lakhs) of the factories in Kerala**



## Profit

Total emoluments and supplements to emoluments are subtracted from net income to determine profit. The biggest profit was recorded in the Ernakulam district at around ₹ 4,87,567 lakhs (59.1% of state value). With only roughly ₹ 318 lakhs, the Kannur district has the least profit. Table 7 shows the profit made by the organised manufacturing sector in 14 districts of state.

**Table 7: District wise distribution of Profit earned by organised manufacturing sector of Kerala.**

Districts	Profit ( in ₹ lakhs)	Percentage of profit
Kasaragod	2361	0.3
Kannur	318	0.0
Wayanad	945	0.1
Kozhikode	17085	2.1
Malappuram	9625	1.2
Palakkad	49326	6.0
Thrissur	70634	8.6
Ernakulam	487567	59.1
Idukki	22775	2.8
Kottayam	72225	8.8
Alappuzha	41542	5.0
Pathanamthitta	10921	1.3
Kollam	16719	2.0
Thiruvananthapuram	22345	2.7
<b>Total</b>	<b>824389</b>	<b>100</b>

## Gross Value Added (GVA)

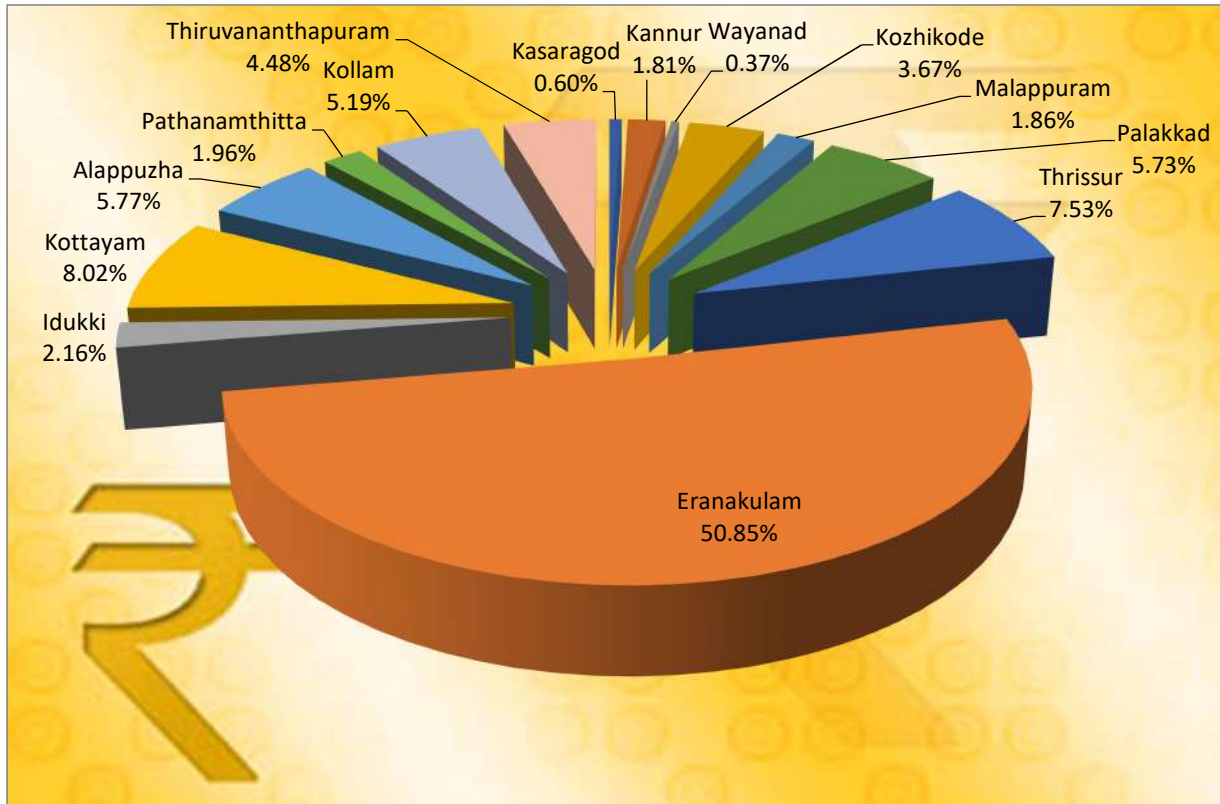
A key indicator of a state's GDP contribution is the value added by each industry. By subtracting the value of all input from all output, the factory's contribution to the value of the goods and services is increased, and this is known as Gross Value Added. The manufacturing sector of the Ernakulam district is estimated to contribute the most ₹ 12,53,969 lakhs, (50.9%, to the state's GVA). The remaining districts make up between 0 and 10% of the total. (View Table 8)

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

<b>Districts</b>	<b>Gross Value Added (GVA) ( Value in ₹ Lakhs)</b>	<b>Percentage of GVA</b>
Kasaragod	14674	0.60
Kannur	44697	1.81
Wayanad	9078	0.37
Kozhikode	90554	3.67
Malappuram	45898	1.86
Palakkad	141256	5.73
Thrissur	185629	7.53
Ernakulam	1253969	50.85
Idukki	53273	2.16
Kottayam	197733	8.02
Alappuzha	142355	5.77
Pathanamthitta	48252	1.96
Kollam	128095	5.19
Thiruvananthapuram	110426	4.48
<b>Total</b>	<b>2465890</b>	<b>100</b>



**Figure 11: District wise distribution of Gross Value Added (GVA) of manufacturing sector in Kerala.**



*Employment and Emoluments paid*

The work force that is available, the amount of time spent engaging in productive activity, the representation of women, the compensation received, etc. are some of the key elements that drive this sector's economic development. With an estimate of roughly 101,989 people (or 29.8 % of the state value), the Ernakulam district has the biggest number of people working in the manufacturing sector in the state. The Kollam area comes in second with an estimated 48950 workers providing 14.3% of the state's worth. The range of the percentage contribution from other districts ranges from 0 to 10. (see Table 9 and Figure 12).

**Table 9: District wise distribution of number of persons engaged in manufacturing sector of Kerala.**

Districts	Number of persons Engaged	Percentage of persons engaged
<i>Kasargod</i>	10492	3.1
Kannur	16777	4.9
Wayanad	2557	0.7
Kozhikode	16782	4.9
Malappuram	8801	2.6
Palakkad	18640	5.4
Thrissur	27302	8.0
Ernakulam	101989	29.8
Idukki	7609	2.2
Kottayam	18714	5.5
Alappuzha	34273	10.0
Pathanamthitta	8258	2.4
Kollam	48950	14.3
Thiruvananthapuram	21320	6.2
<b>Total</b>	<b>342465</b>	<b>100</b>

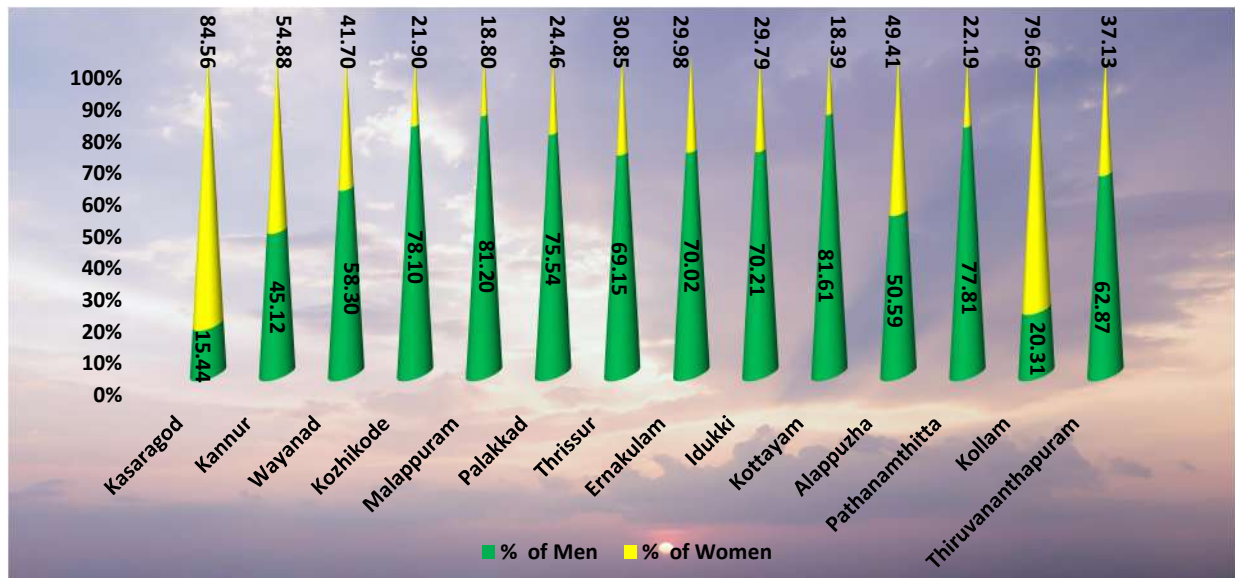
Figure 12: Distribution of number of persons engaged in factories of Kerala



The survey divides the respondents into three categories: workers, employees other than workers, and unpaid family members/proprietors, among others. Workers can also be classified as directly employed or employed via contractors. The Ernakulam district's manufacturing industry has the most directly employed workers (25.8 % of state value). Out of these 30% of them are women and 70% of them are men. With a share of 19 % of state value, Kollam district ranks second highest, with a proportion of 79.69% for women and 20.31% for men (see Table 10 and Figure 13).

**Table 10: District wise gender based distribution directly employed workers in manufacturing sector of Kerala.**

Districts	Men	Women	Total
Kasargod	713	3906	4619
Kannur	5956	7245	13201
Wayanad	969	693	1662
Kozhikode	9011	2527	11538
Malappuram	4597	1064	5661
Palakkad	7481	2422	9902
Thrissur	12616	5629	18245
Ernakulam	41621	17824	59445
Idukki	3397	1441	4838
Kottayam	9411	2121	11532
Alappuzha	13136	12830	25966
Pathanamthitta	5013	1430	6444
Kollam	8888	34870	43758
Thiruvananthapuram	8787	5189	13976
<b>Total</b>	<b>131597</b>	<b>99191</b>	<b>230788</b>

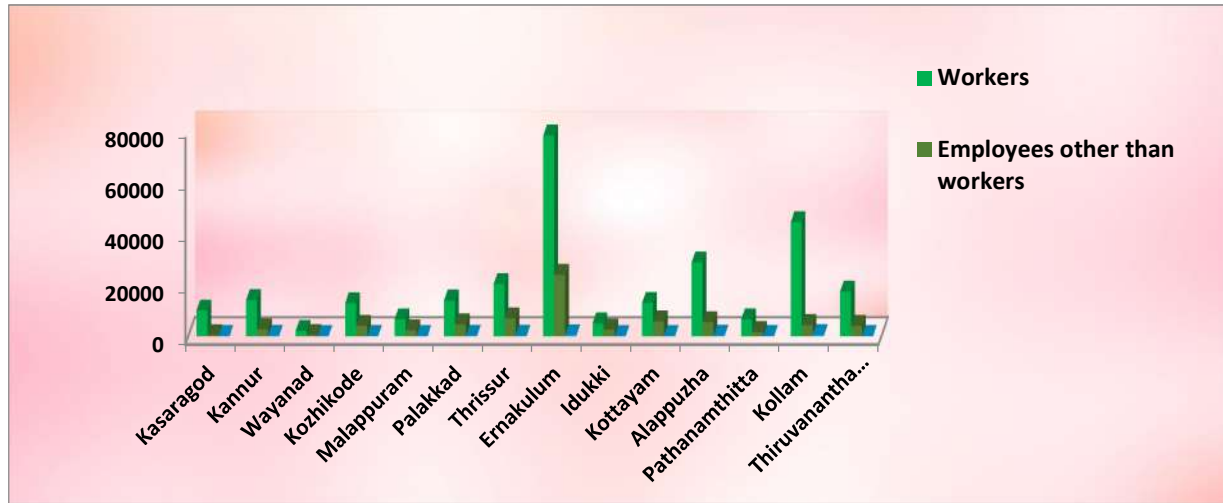
**Figure 13: District wise distribution of directly employed Men- women workers**

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**

Districts	Workers	Employees Other Than Workers	Unpaid family members/proprietor etc.
Kasaragod	9961	426	105
Kannur	13999	2633	144
Wayanad	2042	492	23
Kozhikode	12729	3954	99
Malappuram	6498	2251	53
Palakkad	13858	4621	162
Thrissur	20215	6890	196
Ernakulum	77775	23825	389
Idukki	5026	2560	23
Kottayam	12852	5786	75
Alappuzha	28583	5460	229
Pathanamthitta	6527	1650	81
Kollam	44160	4316	475
Thiruvananthapuram	17258	3974	89
<b>Total</b>	<b>271485</b>	<b>68838</b>	<b>2143</b>

**Figure 14: Categorical distribution of persons engaged in manufacturing sector of districts of Kerala**

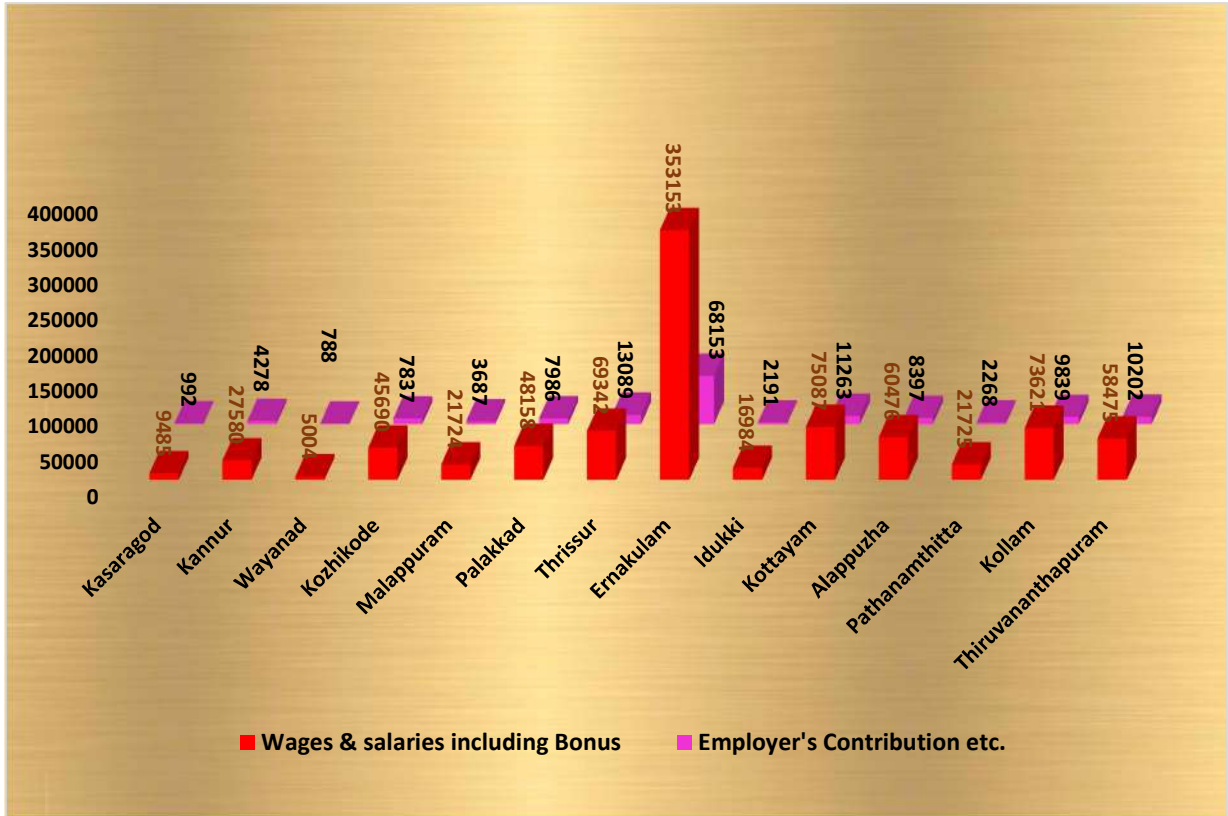


In addition, the study makes an estimate of the wages paid to workers in the manufacturing sector. According to statistics, the earnings and salaries of employees in the Ernakulam district, including bonus, amount to about ₹ 3,53,153 lakhs, while the employers' contribution comes to about 68,153. Table 12 and Figure 15 provide a full depiction of the same.

**Table 12: District wise Distribution of emoluments paid to employees in manufacturing sector of Kerala.**

Districts	Wages & Salary Including Bonus	Employers' Contribution
Kasargod	9485	992
Kannur	27580	4278
Wayanad	5004	788
Kozhikode	45690	7837
Malappuram	21724	3687
Palakkad	48158	7986
Thrissur	69342	13089
Ernakulam	353153	68153
Idukki	16984	2191
Kottayam	75087	11263
Alappuzha	60476	8397
Pathanamthitta	21725	2268
Kollam	73621	9839
Thiruvananthapuram	58475	10202
<b>Total</b>	<b>886503</b>	<b>150968</b>

Figure 15: District wise distribution of emoluments (in ₹ lakhs) paid to the employees in manufacturing sector of Kerala.







# **CHAPTER 4**

## **INDUSTRIAL STATISTICS BASED ON NATIONAL INDUSTRIAL CLASSIFICATION (NIC 2008)**





## Estimation of principle characteristics of factory sector by economic activity of the industries



National Industrial Classification (NIC), 2008 is a Statistical Standard used to group industries according to the economic activity they involve and to make comparisons easier. The NIC code is assigned based on the primary product's maximal ex-factory value out of all the other goods and by-products that the unit produces. It's a system of standard industrial classification that was created to make it easier to compare with international standards and to provide a foundation for analysing a wide range of industries based on the economic activity involved. In this survey, an effort has been made to present industrial statistics based on NIC classification. It helps decision-makers determine how much each economic activity contributes to the state's economy and develop strategies that will advance the sector.

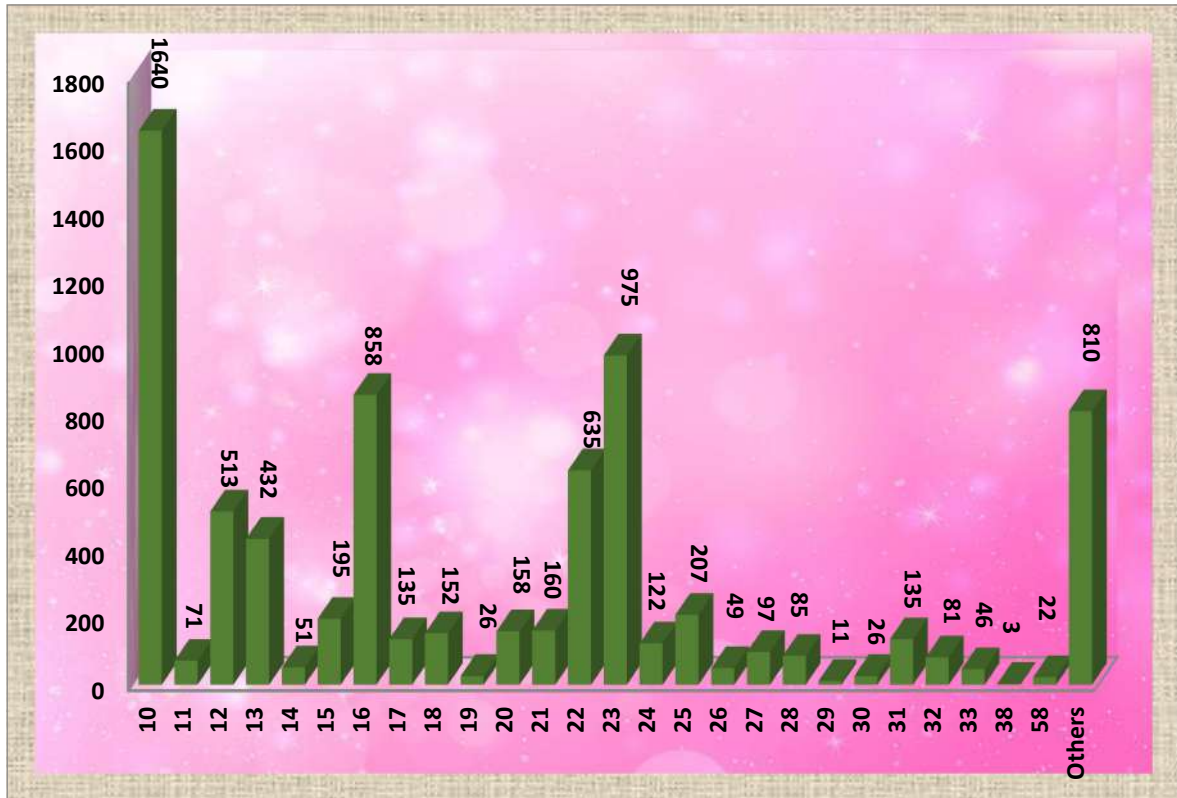
### Manufacturing industries by 2-digit NIC, 2008

The production of food products stands for the biggest percentage of factories in Kerala's organised manufacturing sector (21.3%) and the lowest percentage (0.03%) of companies that produce Waste collection, treatment and disposal activities; materials recovery. Non-metallic mineral products (12.7%) and wood and items made of wood and cork, excluding furniture (11.2%) respectively, rank second and third in terms of manufacturing output.(see Table 13 and Figure16).

**Table 13: Distribution of factories by major factory group at 2-digit NIC 2008**

<b>NIC Code</b>	<b>Description</b>	<b>Number of factories</b>	<b>Percentage of Factories</b>
10	Manufacture of food products	1640	21.3
11	Manufacture of beverages	71	0.9
12	Manufacture of tobacco products	513	6.7
13	Manufacture of textiles	432	5.6
14	Manufacture of wearing apparel	51	0.7
15	Manufacture of leather and related products	195	2.5
16	Manufacture of wood and products of wood and cork, except furniture ;manufacture of articles of straw and plating materials	858	11.2
17	Manufacture of paper and paper products	135	1.8
18	Printing and reproduction of recorded media	152	2.0
19	Manufacture of coke and refined petroleum products	26	0.3
20	Manufacture of chemicals and chemical products	158	2.1
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	160	2.1
22	Manufacture of rubber and plastic products	635	8.3
23	Manufacture of other non-metallic mineral products	975	12.7
24	Manufacture of basic metals	122	1.6
25	Manufacture of fabricated metal products, except machinery and equipment	207	2.7
26	Manufacture of computer, electronic and optical products	49	0.6
27	Manufacture of electrical equipment	97	1.3
28	Manufacture of machinery and equipment n.e.c	85	1.1
29	Manufacture of motor vehicles, trailers and semitrailers	11	0.1
30	Manufacture of other transport equipment	26	0.3
31	Manufacture of furniture	135	1.8
32	Other manufacturing	81	1.1
33	Repair and installation of machinery and equipment	46	0.6
38	Waste collection, treatment and disposal activities; materials recovery	3	0.03
58	Publishing activities	22	0.3
	Others	810	10.5
	<b>Total</b>	<b>7695</b>	<b>100.0</b>

**Figure 16: Distribution of number of factories of major factory group at 2-digit NIC, 2008.**



### *Capital of industries by 2-digit NIC, 2008*

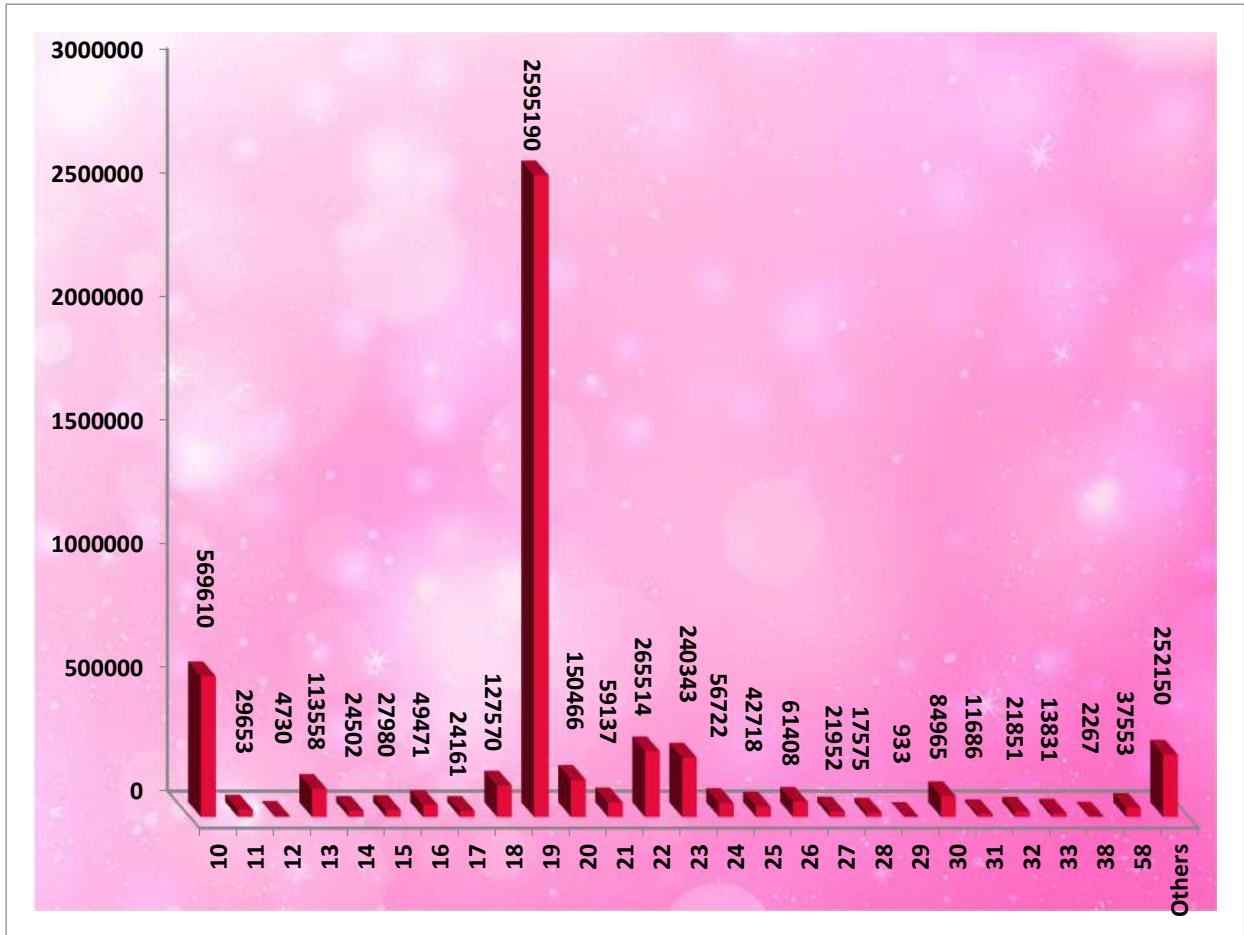
The highest fixed asset investments in 2018–19 were made by the coke and refined petroleum product production industries. Fixed capital is expected to be worth ₹ 25,95,190 lakhs, or approximately 52.88 % of the state value. Food manufacturing industries are estimated to be worth ₹ 5,69,610 lakhs, or about 11.61% of the state value. The remaining industries fixed capital is between 0 and 10 % of state value (see Table 14 and Figure17).



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

<b>NIC 2 digit Code</b>	<b>Description</b>	<b>Fixed Capital (Value In ₹ Lakhs)</b>	<b>Percentage of Fixed Capital</b>
10	Manufacture of food products	569610	11.61
11	Manufacture of beverages	29653	0.60
12	Manufacture of tobacco products	4730	0.10
13	Manufacture of textiles	113558	2.31
14	Manufacture of wearing apparel	24502	0.50
15	Manufacture of leather and related products	27980	0.57
16	Manufacture of wood and products of wood and cork, except furniture ;manufacture of articles of straw and plating materials	49471	1.01
17	Manufacture of paper and paper products	24161	0.49
18	Printing and reproduction of recorded media	127570	2.60
19	Manufacture of coke and refined petroleum products	2595190	52.88
20	Manufacture of chemicals and chemical products	150466	3.07
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	59137	1.21
22	Manufacture of rubber and plastic products	265514	5.41
23	Manufacture of other non-metallic mineral products	240343	4.90
24	Manufacture of basic metals	56722	1.16
25	Manufacture of fabricated metal products, except machinery and equipments	42718	0.87
26	Manufacture of computer, electronic and optical products	61408	1.25
27	Manufacture of electrical equipment	21952	0.45
28	Manufacture of machinery and equipment n.e.c	17575	0.36
29	Manufacture of motor vehicles, trailers and semitrailers	933	0.02
30	Manufacture of other transport equipment	84965	1.73
31	Manufacture of furniture	11686	0.24
32	Other manufacturing	21851	0.45
33	Repair and installation of machinery and equipment	13831	0.28
38	Waste collection, treatment and disposal activities; materials recovery	2267	0.05
58	Publishing activities	37553	0.77
	Others	252150	5.14
	<b>Total</b>	<b>4907497</b>	<b>100.00</b>

Figure 17: Distribution of fixed capital (in ₹ lakh) in the factory sector by 2-digit NIC,2008



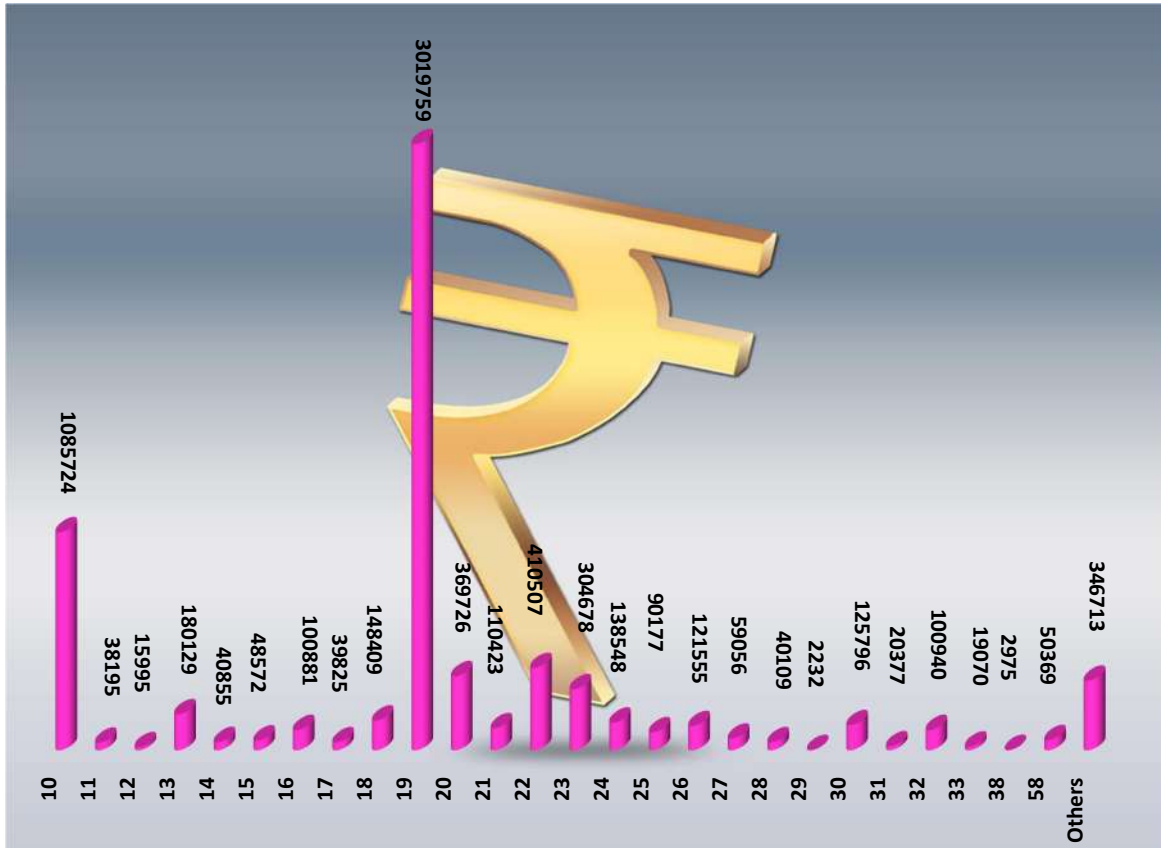
According to survey results, the manufacturing of coke and refined petroleum products has the greatest invested capital at ₹ 30,19,759 lakhs (42.95 % of state value). With an estimated worth of ₹ 10,85,724 lakhs, or roughly 15.44 % of state value, the food manufacturing industries are estimated to be in second place. Table 15 and Figure 18 demonstrate the contribution of the remaining industries.

**Table 15: 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	1085724	15.44
11	Manufacture of beverages	38195	0.54
12	Manufacture of tobacco products	15995	0.23
13	Manufacture of textiles	180129	2.56
14	Manufacture of wearing apparel	40855	0.58
15	Manufacture of leather and related products	48572	0.69
16	Manufacture of wood and products of wood and cork, except furniture ; manufacture of articles of straw and plaiting materials	100881	1.43
17	Manufacture of paper and paper products	39825	0.57
18	Printing and reproduction of recorded media	148409	2.11
19	Manufacture of coke and refined petroleum products	3019759	42.95
20	Manufacture of chemicals and chemical products	369726	5.26
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	110423	1.57
22	Manufacture of rubber and plastic products	410507	5.84
23	Manufacture of other non-metallic mineral products	304678	4.33
24	Manufacture of basic metals	138548	1.97
25	Manufacture of fabricated metal products, except machinery and equipments	90177	1.28
26	Manufacture of computer, electronic and optical products	121555	1.73
27	Manufacture of electrical equipment	59056	0.84
28	Manufacture of machinery and equipment n.e.c	40109	0.57
29	Manufacture of motor vehicles, trailers and semitrailers	2232	0.03
30	Manufacture of other transport equipment	125796	1.79
31	Manufacture of furniture	20377	0.29
32	Other manufacturing	100940	1.44
33	Repair and installation of machinery and equipment	19070	0.27
38	Waste collection, treatment and disposal activities; materials recovery	2975	0.04
58	Publishing activities	50369	0.72
	Others	346713	4.93
	<b>Total</b>	<b>7031597</b>	<b>100.00</b>



Figure 18: Distribution of invested capital (in ₹ lakh) in the factory sector by 2-digit NIC,2008



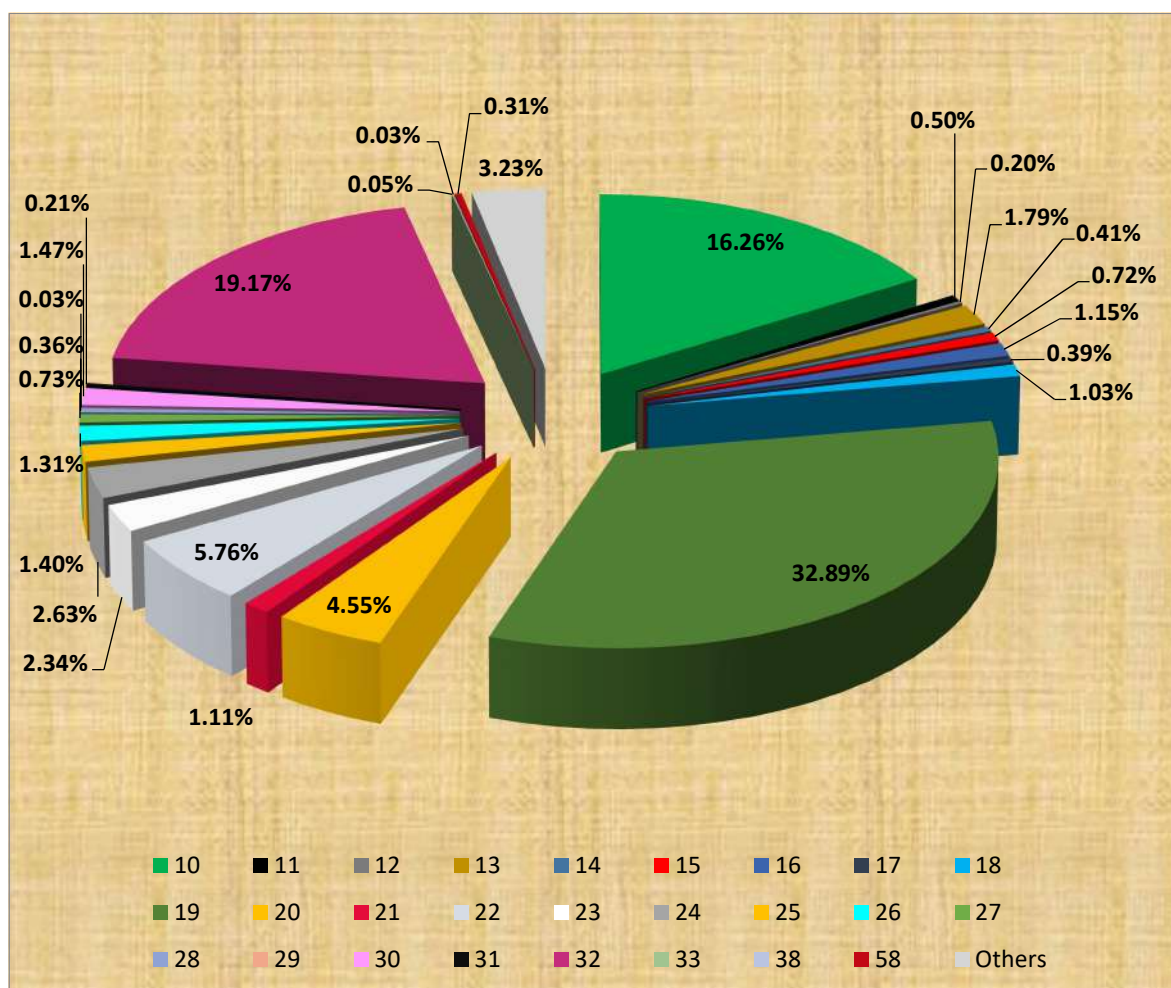
### Output of factory sector by 2-digit NIC 2008

The industry producing coke and refined petroleum products has produced at the highest estimate of ₹ 74,49,089 lakhs (32.89 % of state value), followed by the other manufacturing estimated at ₹ 43,43,480 lakhs (19.17 % of state value). The detail image of the same is shown in Table 16 and Figure 19.

**Table 16: 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	3683183	16.26
11	Manufacture of beverages	112182	0.50
12	Manufacture of tobacco products	44658	0.20
13	Manufacture of textiles	404979	1.79
14	Manufacture of wearing apparel	92078	0.41
15	Manufacture of leather and related products	162182	0.72
16	Manufacture of wood and products of wood and cork, except furniture ;manufacture of articles of straw and plaiting materials	260011	1.15
17	Manufacture of paper and paper products	88065	0.39
18	Printing and reproduction of recorded media	234331	1.03
19	Manufacture of coke and refined petroleum products	7449089	32.89
20	Manufacture of chemicals and chemical products	1030426	4.55
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	252393	1.11
22	Manufacture of rubber and plastic products	1303806	5.76
23	Manufacture of other non-metallic mineral products	530197	2.34
24	Manufacture of basic metals	595446	2.63
25	Manufacture of fabricated metal products, except machinery and equipments	317371	1.40
26	Manufacture of computer, electronic and optical products	295646	1.31
27	Manufacture of electrical equipment	165427	0.73
28	Manufacture of machinery and equipment n.e.c	80988	0.36
29	Manufacture of motor vehicles, trailers and semitrailers	6061	0.03
30	Manufacture of other transport equipment	333141	1.47
31	Manufacture of furniture	47017	0.21
32	Other manufacturing	4343480	19.17
33	Repair and installation of machinery and equipment	10893	0.05
38	Waste collection, treatment and disposal activities; materials recovery	5857	0.03
58	Publishing activities	70763	0.31
	Others	732161	3.23
	<b>Total</b>	<b>22651833</b>	<b>100.00</b>

Figure 19: Distribution of output of factory sector by 2-digit NIC, 2008



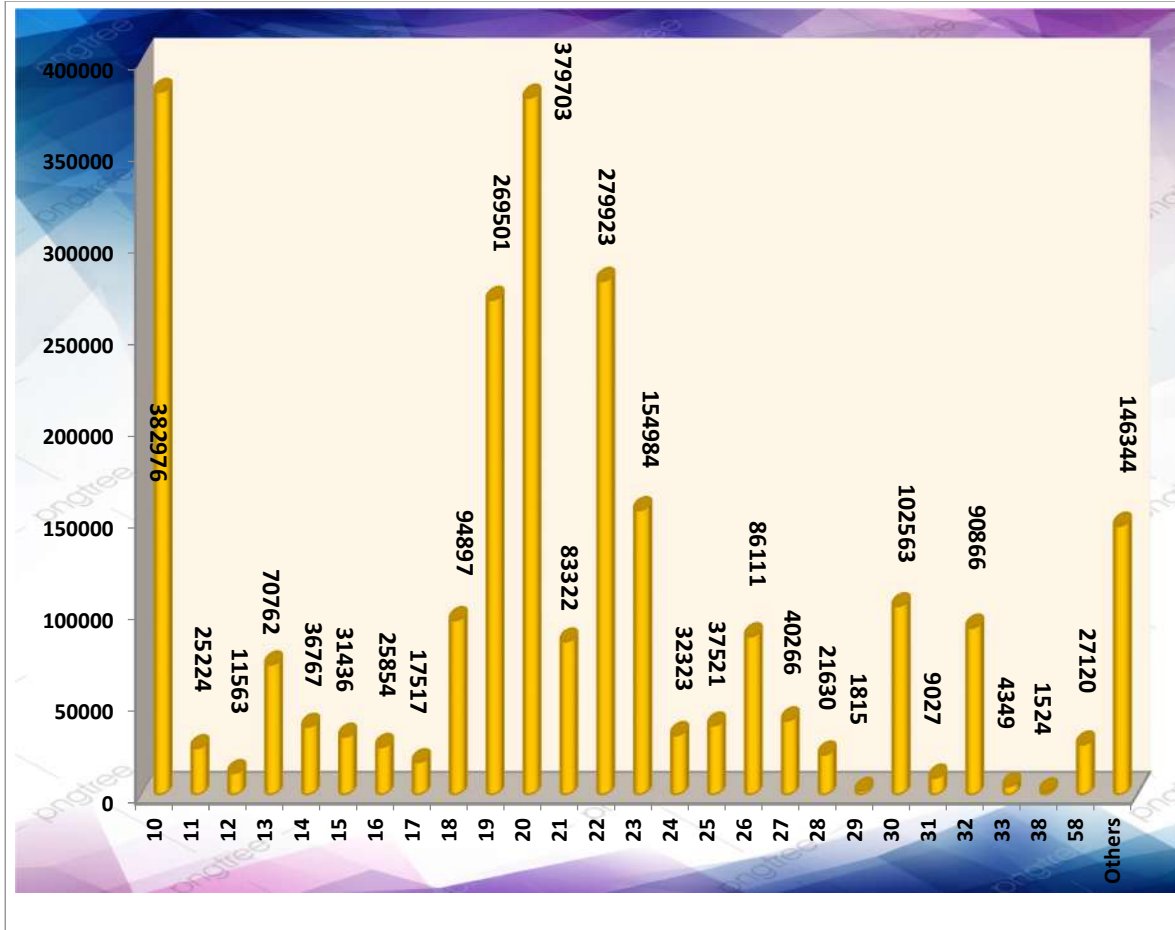
### Gross Value Added (GVA)

The industries producing Manufacture of food products contributed the most to the state's manufacturing sector's Gross Value Added. According to the report, this industry contributes about 15.5% of the total GVA. Manufacturing of chemicals and chemical products (15.4 %) and Manufacture of rubber and plastic products (11.4%) are the two industries with the second and third highest GVA, respectively. Table 17 and Figure 20 provide a detailed depiction of the remaining industries.

**Table 17: 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	382976	15.5
11	Manufacture of beverages	25224	1.0
12	Manufacture of tobacco products	11563	0.5
13	Manufacture of textiles	70762	2.9
14	Manufacture of wearing apparel	36767	1.5
15	Manufacture of leather and related products	31436	1.3
16	Manufacture of wood and products of wood and cork, except furniture ;manufacture of articles of straw and plating materials	25854	1.0
17	Manufacture of paper and paper products	17517	0.7
18	Printing and reproduction of recorded media	94897	3.8
19	Manufacture of coke and refined petroleum products	269501	10.9
20	Manufacture of chemicals and chemical products	379703	15.4
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	83322	3.4
22	Manufacture of rubber and plastic products	279923	11.4
23	Manufacture of other non-metallic mineral products	154984	6.3
24	Manufacture of basic metals	32323	1.3
25	Manufacture of fabricated metal products, except machinery and equipments	37521	1.5
26	Manufacture of computer, electronic and optical products	86111	3.5
27	Manufacture of electrical equipment	40266	1.6
28	Manufacture of machinery and equipment n.e.c	21630	0.9
29	Manufacture of motor vehicles, trailers and semitrailers	1815	0.1
30	Manufacture of other transport equipment	102563	4.2
31	Manufacture of furniture	9027	0.4
32	Other manufacturing	90866	3.7
33	Repair and installation of machinery and equipment	4349	0.2
38	Waste collection, treatment and disposal activities; materials recovery	1524	0.1
58	Publishing activities	27120	1.1
	Others	146344	5.9
	<b>Total</b>	<b>2465890</b>	<b>100</b>

Figure 20: Distribution of GVA (in ₹ lakh) in the factory sector by 2-digit NIC, 2008



### Income generated by the industries

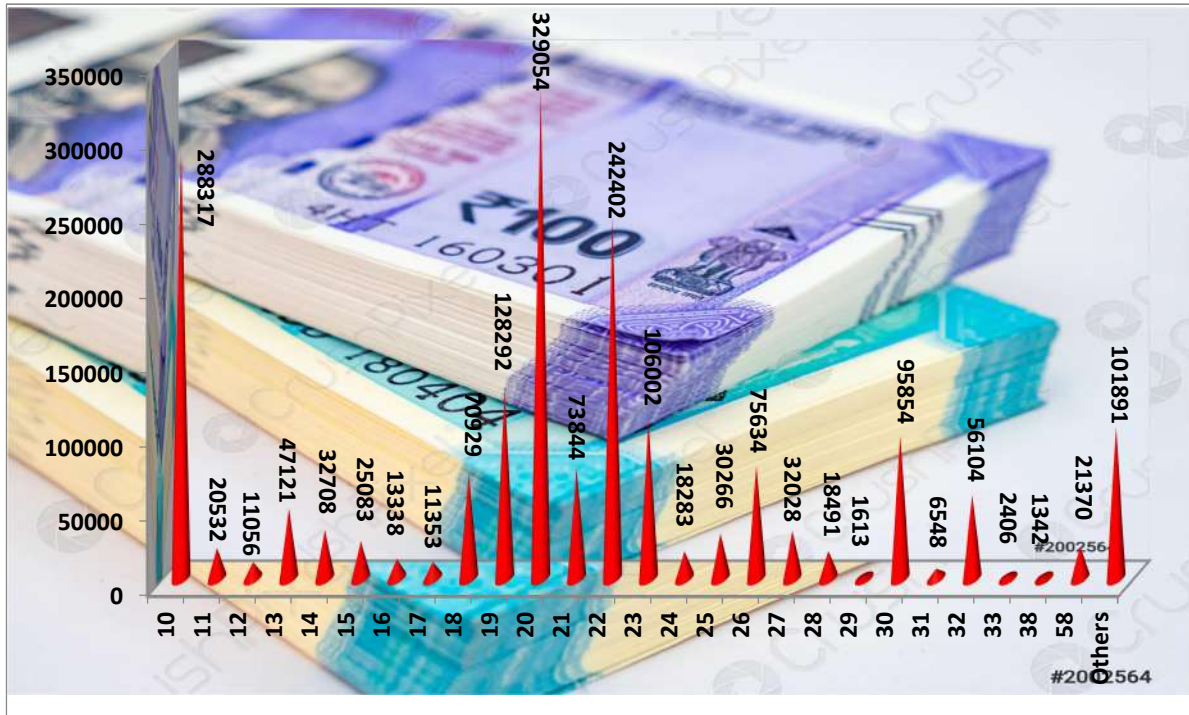
According to survey results, the biggest income is produced by, Manufacture of chemicals and chemical products which make it up around 17.7% of the state's total value. The manufacturing of food is ranked second, while the manufacturing of rubber and plastic products is ranked third, contributing approximately 15.5% and 13.0% respectively. The contributions from all other industries range from 0 to 10. Refer to Figure 21 and Table 18.

Table 18: 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	288317	15.5
11	Manufacture of beverages	20532	1.1
12	Manufacture of tobacco products	11056	0.6
13	Manufacture of textiles	47121	2.5
14	Manufacture of wearing apparel	32708	1.8
15	Manufacture of leather and related products	25083	1.3
16	Manufacture of wood and products of wood and cork, except furniture ;manufacture of articles of straw and plating materials	13338	0.7
17	Manufacture of paper and paper products	11353	0.6
18	Printing and reproduction of recorded media	70929	3.8
19	Manufacture of coke and refined petroleum products	128292	6.9
20	Manufacture of chemicals and chemical products	329054	17.7
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	73844	4.0
22	Manufacture of rubber and plastic products	242402	13.0
23	Manufacture of other non-metallic mineral products	106002	5.7
24	Manufacture of basic metals	18283	1.0
25	Manufacture of fabricated metal products, except machinery and equipments	30266	1.6
26	Manufacture of computer, electronic and optical products	75634	4.1
27	Manufacture of electrical equipment	32028	1.7
28	Manufacture of machinery and equipment n.e.c	18491	1.0
29	Manufacture of motor vehicles, trailers and semitrailers	1613	0.1
30	Manufacture of other transport equipment	95854	5.1
31	Manufacture of furniture	6548	0.4
32	Other manufacturing	56104	3.0
33	Repair and installation of machinery and equipment	2406	0.1
38	Waste collection, treatment and disposal activities; materials recovery	1342	0.1
58	Publishing activities	21370	1.1
	Others	101891	5.5
	<b>Total</b>	<b>1861860</b>	<b>100</b>



Figure 21: Distribution of Income (in ₹ lakh) in the factory sector by 2-digit NIC,2008



### Gross Fixed Capital Formation (GFCF)

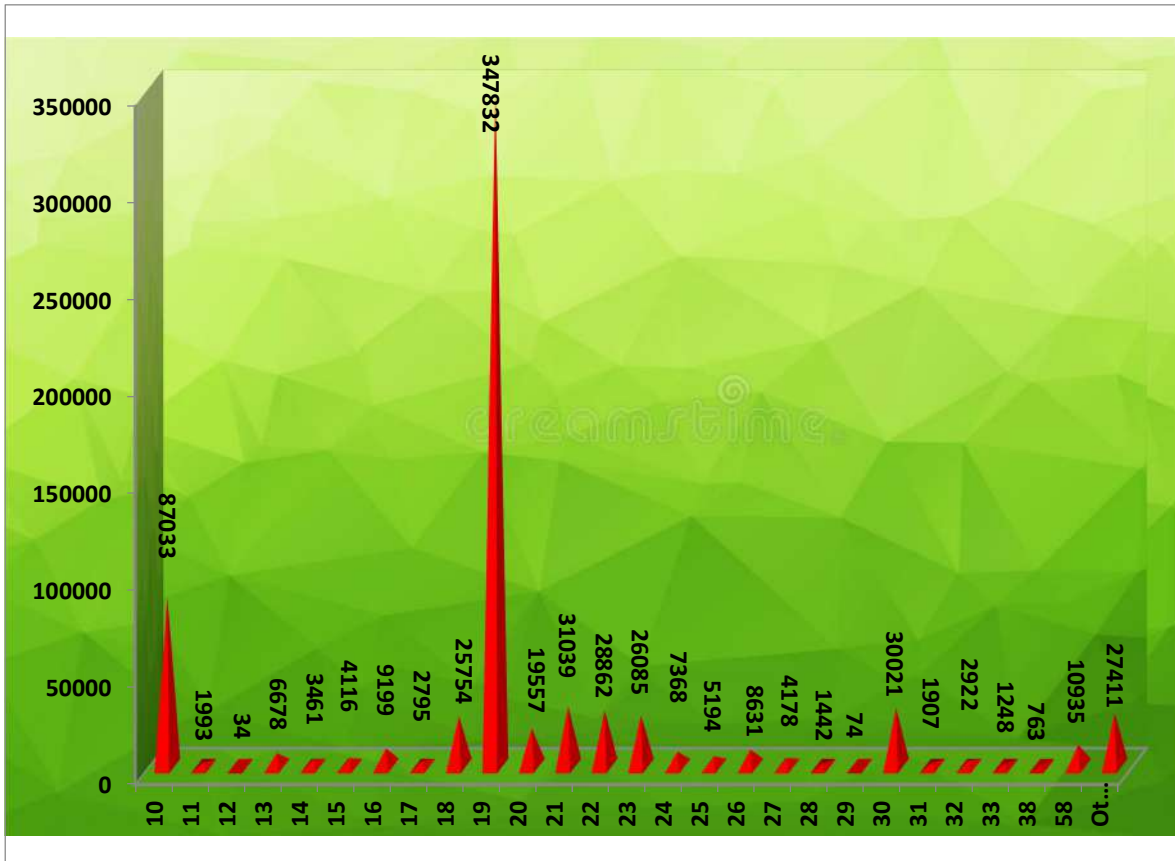
Gross Fixed Capital Formation is computed as the total of a producer's acquisitions of fixed assets over the accounting period, less disposals of those assets, plus a specific amount for services that increase the value of non-produced assets. The industries that produce coke and refined petroleum products have the largest GFCF, accounting for 49.9% of the state's value, followed by the food manufacturing sector at 12.5%.The same is seen in Figure 22 and Table 19.

**Table 19: Distribution of Gross Fixed Capital Formation of factories by major factory group by 2-digit NIC 2008**

NIC 2 digit Code	Description	GFCF (Value In ₹ Lakhs)	Percentage of GFCF
10	Manufacture of food products	87033	12.5
11	Manufacture of beverages	1993	0.3
12	Manufacture of tobacco products	34	0.0
13	Manufacture of textiles	6678	1.0
14	Manufacture of wearing apparel	3461	0.5
15	Manufacture of leather and related products	4116	0.6
16	Manufacture of wood and products of wood and cork, except furniture ;manufacture of articles of straw and plating materials	9199	1.3
17	Manufacture of paper and paper products	2795	0.4
18	Printing and reproduction of recorded media	25754	3.7
19	Manufacture of coke and refined petroleum products	347832	49.9
20	Manufacture of chemicals and chemical products	19557	2.8
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	31039	4.5
22	Manufacture of rubber and plastic products	28862	4.1
23	Manufacture of other non-metallic mineral products	26085	3.7
24	Manufacture of basic metals	7368	1.1
25	Manufacture of fabricated metal products, except machinery and equipments	5194	0.7
26	Manufacture of computer, electronic and optical products	8631	1.2
27	Manufacture of electrical equipment	4178	0.6
28	Manufacture of machinery and equipment n.e.c	1442	0.2
29	Manufacture of motor vehicles, trailers and semitrailers	74	0.0
30	Manufacture of other transport equipment	30021	4.3
31	Manufacture of furniture	1907	0.3
32	Other manufacturing	2922	0.4
33	Repair and installation of machinery and equipment	1248	0.2
38	Waste collection, treatment and disposal activities; materials recovery	763	0.1
58	Publishing activities	10935	1.6
	Others	27411	3.9
	<b>Total</b>	<b>696533</b>	<b>100</b>



Figure 22: Distribution of GFCF (in ₹ lakh) of the factory sector by 2-digit NIC, 2008



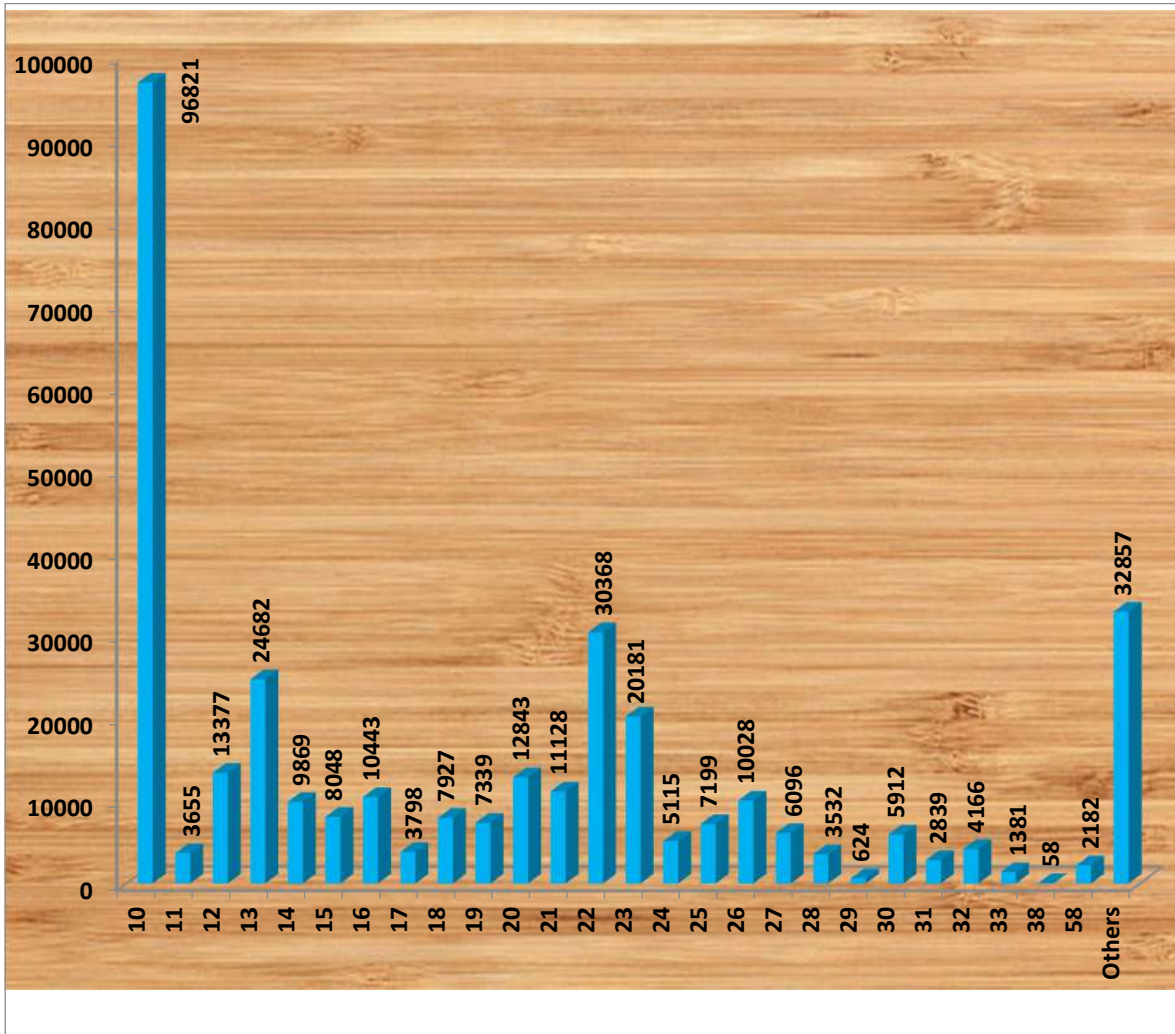
### Number of persons engaged

The term "people engaged" refers to all workers the factory employs, whether or not they are paid, and who are involved in some way in the manufacturing process. This includes all administrative, technical, and clerical staff members as well as labourers who produce capital assets for the factory's own use. The highest number of employees is recorded by manufacturing food products, about 96821 (28.3% of state value). The number of people employed in the state's various manufacturing industry groups is shown in Table 20 and Figure 23

**Table 20: Distribution of Number of persons engaged in factories by major factory group by 2-digit NIC 2008**

<b>NIC 2 digit Code</b>	<b>Description</b>	<b>No.of persons engaged</b>	<b>percentage of persons engaged</b>
10	Manufacture of food products	96821	28.3
11	Manufacture of beverages	3655	1.1
12	Manufacture of tobacco products	13377	3.9
13	Manufacture of textiles	24682	7.2
14	Manufacture of wearing apparel	9869	2.9
15	Manufacture of leather and related products	8048	2.4
16	Manufacture of wood and products of wood and cork, except furniture ;manufacture of articles of straw and plating materials	10443	3.0
17	Manufacture of paper and paper products	3798	1.1
18	Printing and reproduction of recorded media	7927	2.3
19	Manufacture of coke and refined petroleum products	7339	2.1
20	Manufacture of chemicals and chemical products	12843	3.8
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	11128	3.2
22	Manufacture of rubber and plastic products	30368	8.9
23	Manufacture of other non-metallic mineral products	20181	5.9
24	Manufacture of basic metals	5115	1.5
25	Manufacture of fabricated metal products, except machinery and equipments	7199	2.1
26	Manufacture of computer, electronic and optical products	10028	2.9
27	Manufacture of electrical equipment	6096	1.8
28	Manufacture of machinery and equipment n.e.c	3532	1.0
29	Manufacture of motor vehicles, trailers and semitrailers	624	0.2
30	Manufacture of other transport equipment	5912	1.7
31	Manufacture of furniture	2839	0.8
32	Other manufacturing	4166	1.2
33	Repair and installation of machinery and equipment	1381	0.4
38	Waste collection, treatment and disposal activities; materials recovery	58	0.02
58	Publishing activities	2182	0.6
	Others	32857	9.6
	<b>Total</b>	<b>342465</b>	<b>100</b>

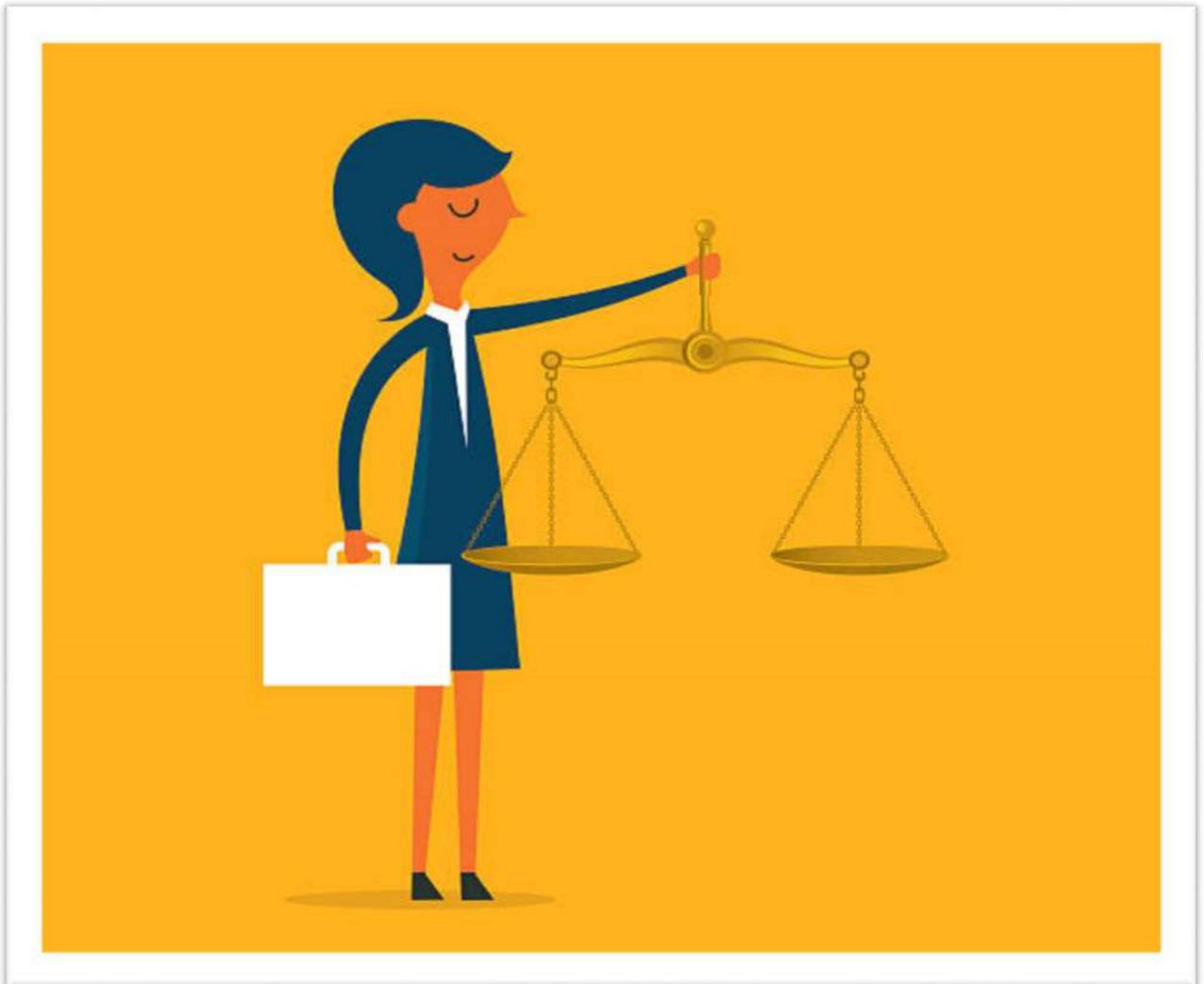
Figure 23: Distribution of number of persons engaged in factory sector by 2-digit NIC, 2008





# **CHAPTER 5**

## **ANNUAL TRENDS IN INDUSTRIAL STATISTICS**



**A Comparative Study of Principal Characteristics of Survey Estimates  
over a period of 8 years.**



## **A Comparative Study of Principal Characteristics of Survey Estimates over a period of 8 years.**



**F**or the manufacturing sector to be promoted, it is crucial to analyse and follow the annual trend in the industrial data over time. Surveys are essential for determining the causes of statistical fluctuations, aiding in estimation and establishing a development strategy for future advancement. This section aims to present the annual trends in various key manufacturing sector features from 2011–12 to 2018–19.

**Table 21: Distribution of significant characteristics of organised manufacturing sector of state from 2011-12 to 2018-19**

Sl. No.	Characteristics	Financial Year							
		2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
1	Number of Factories	7021	7129	7132	7295	7584	7982	7596	7695
2	Fixed Capital	1559998	1793601	2454515	3312566	4069375	4784549	4369284	4907497
3	Invested Capital	2955044	3254204	4042414	4804167	5717150	6547340	6194820	7031597
4	Total Output	10986032	12064788	13573186	14237493	12052212	13942718	16556578	22651833
5	Total Input	9803836	10774729	12014395	12680764	10237768	11643987	14256475	20185943
6	Gross Value Added (GVA)	1182196	1290059	1558791	1556729	1814445	2298731	2279897	2465890
7	Gross Fixed Capital Formation (GFCF)	214086	294297	802434	662239	947818	1154951	485582	696533
8	Net Value Added (NVA)	1024346	1128481	1370155	1315095	1568912	2047964	1987576	2104452
9	Net Income	919956	1009353	1235082	1092333	1377101	1863677	1799319	1861860
10	Profit	313490	381847	573135	319992	509639	1043683	884010	824389

According to the survey results, the estimated number of factories increased from 2011–12 to 2016–17, however it declined by 386 in 2017–18 and increased by 99 compared to the last year 2018-19 (see Figure 24). From 2011–12 to 2016–17, the fixed capital and invested capital both exhibit a growing tendency; however, the year 2017–18 marks a decline in these capitals and increases in 2018-19 (refer Figure 25).



Figure 24: Year wise distribution of number of factories in organized manufacturing sector

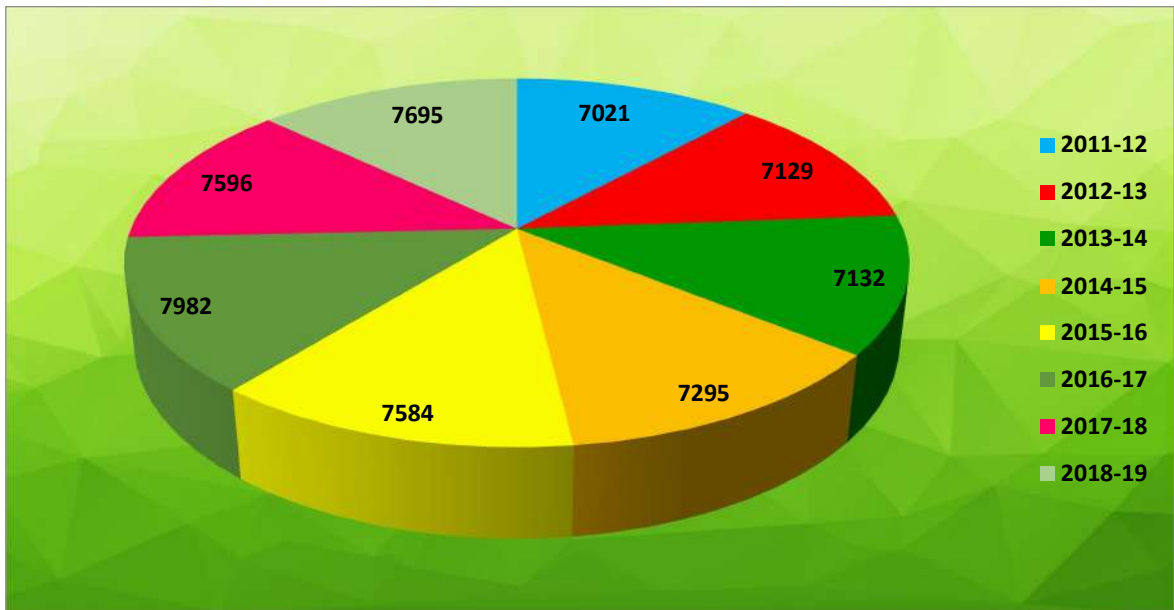
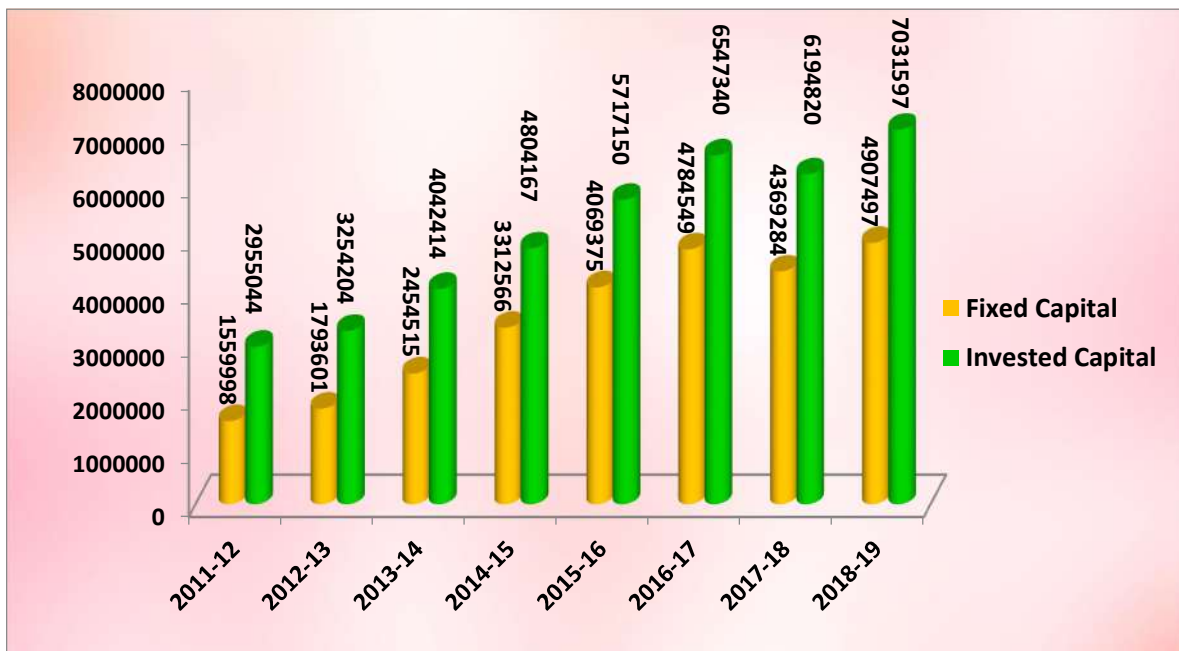
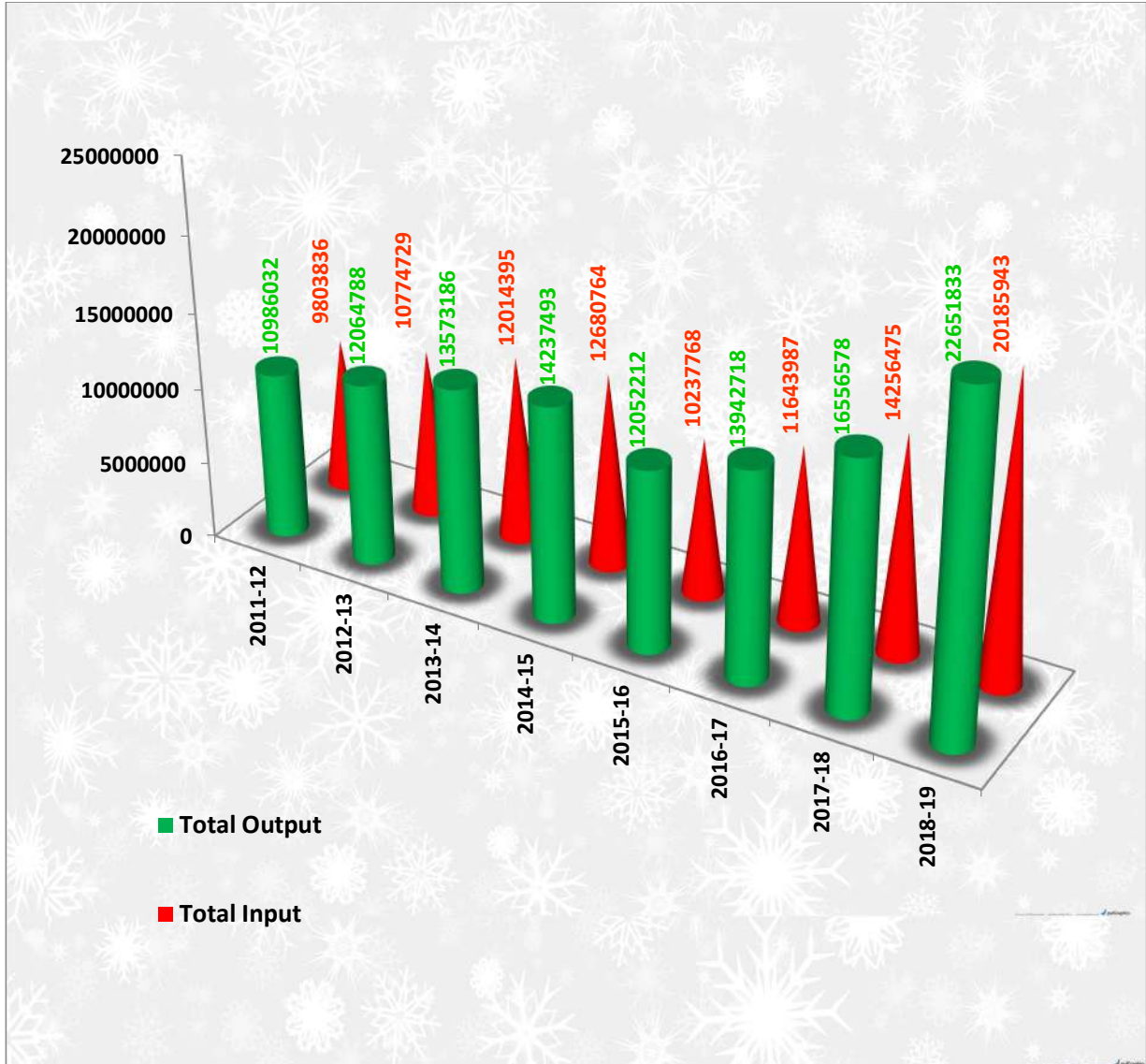


Figure 25: : Year wise distribution of fixed capital and invested capital (in ₹ lakh)



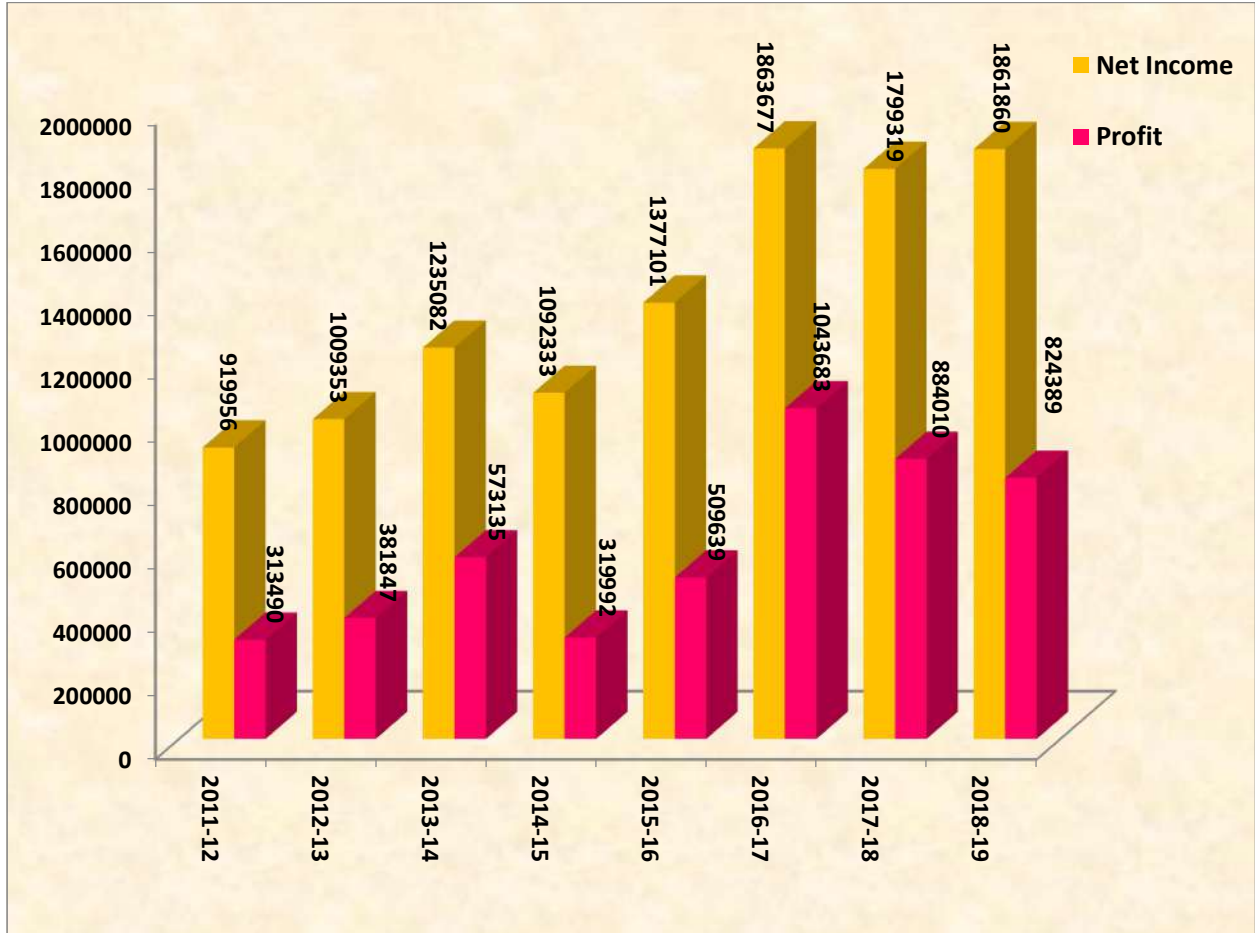
Furthermore, this data shows a rising tendency in the input and output of the manufacturing sector from 2011–12 to 2014–15, a declining trend in 2015–16, and a rising trend for the following three financial years.

Figure 26: Year wise distribution of input and output (in ₹ lakh) of manufacturing sector

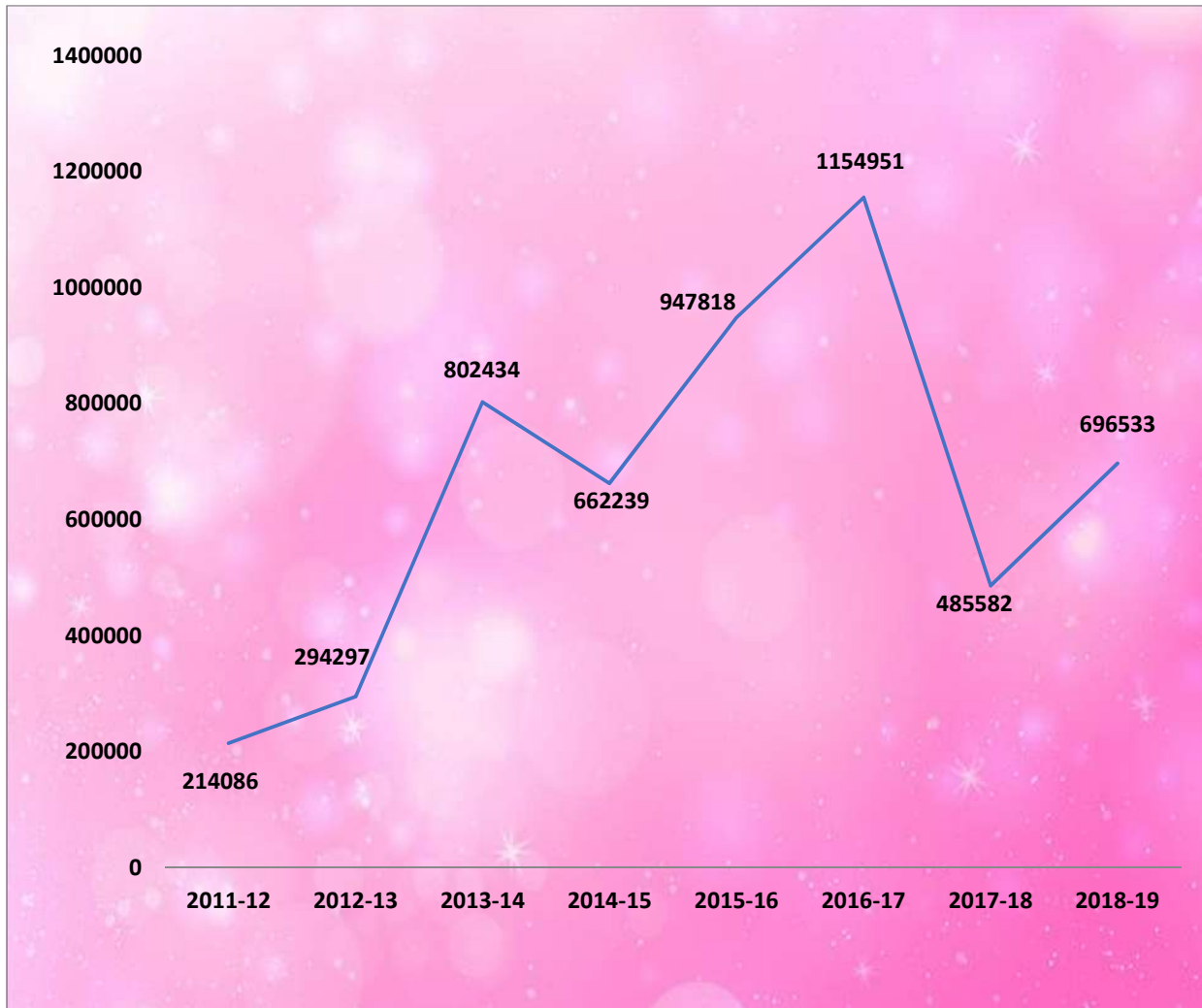


The net income and profit shows an increasing trend during 2011-2012 to 2013-14 which dropped in 2014-15 and again an increasing trend is noticed during 2015-16 to 2016-2017. There is a slight decrease of net income in 2017-18 and increase in 2018-19. Figure 27 shows the trend of the same.

Figure 27: Year wise distribution of net income and profit (in ₹ lakh) of organized manufacturing sector



Gross Fixed Capital Formation (GFCF) noticeably increased from 2011–12 to 2013–14, but then sharply decreased in 2014–15 and increased in 2015-16 and 2016-17 and again a sharp decline is seen in 2017-18. In 2018 -19 an increasing trend is noticed. Figure 28 provides an illustration of the GFCF trend.

**Figure 28: Annual trend of GFCF (in ₹ lakh)**

Gross Value Added (GVA) in production is seen to be somewhat declining in the years 2014–15 and 2017–18. In 2017–18, the GVA decreased from 22,98,731 lakhs to 22,79,897 lakhs and in 2018-19 it increases as 24,65,890 lakhs. The trend in GVA over a period of 8 years is depicted in vivid detail in Figure 29.

Figure 29: GVA of organized manufacturing sector of Kerala for 8 consecutive years



Two consecutive financial years, 2017–18 and 2018–19, were used to analyse the growth rate of several features. According to the data, the number of factories, fixed capital, invested capital, total output, total input, GVA, GFCF, NVA, Net Income shows an increasing trend. The growth rate of profit (-6.74 %) shows negative growth. In 2018–19, production's Gross Value Added (GVA) is 8.16%. According to data, the estimates show a growth rate of 1.30 % in number of factories, 12.3 % in fixed capital, 13.51 % in invested capital, 36.81 % in total output, 41.60 % in input, 8.16 % in GVA, 43.44 % in GFCF and 3.48 % in net income of the manufacturing sector.

**Table 22: Growth rate of significant characteristics of organised manufacturing sector in two successive years**

Sl.No.	Characteristics	2017-18	2018-19	percentage growth rate over 2017-18
1	Number of Factories	7596	7695	1.30
2	Fixed Capital	4369284	4907497	12.32
3	Invested Capital	6194820	7031597	13.51
4	Total Output	16556578	22651833	36.81
5	Total Input	14256475	20185943	41.60
6	Gross Value Added (GVA)	2279897	2465890	8.16
7	Gross Fixed Capital Formation (GFCF)	485582	696533	43.44
8	Net Value Added (NVA)	1987576	2104452	5.88
9	Net Income	1799319	1861860	3.48
10	Profit	884010	824389	- 6.74

For the manufacturing sector to be more gender equal, the employment structure must be updated, new wage regulations must be developed, and the size of the workforce, wage trends, and gender-based participation of the workforce must all be examined. The number of persons engaged in the factories reflects the employment status in the manufacturing sector. The fluctuations in the number of workers, employees other than worker and unpaid family member/proprietor for 8 consecutive years have been depicted in the Table 23.

The estimated figures shows that number of workers in the factories for the year 2018-19 has recorded the highest, compared to the previous 2 years. Although there was a little increase in employees other than workers and unpaid family members from 2017–18 to 2018–19.

**Table 23: 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	2018-19
Workers	310398	302971	287071	294750	317472	259160	256090	271485
Employees other than workers	51440	54175	58514	82641	61857	65021	67045	68838
Unpaid Family Members/ Proprietor etc.	1407	786	1774	1943	1573	2463	1638	2143
<b>Total</b>	<b>363245</b>	<b>357932</b>	<b>347359</b>	<b>379334</b>	<b>380901</b>	<b>326644</b>	<b>324773</b>	<b>342465</b>

The workers engaged in the factories are categorized as directly employed and employed through contractors. Among the directly employed workers male and female categorization was done. Analytic view of the estimated figures of directly employed male and female workers in 8 consecutive fiscal years shows a decreasing trend of 66.2% in 2011-12 to 43.0% in 2018-19 in the female participation in the manufacturing sector whereas the male participation has increased from 33.8% to 57.0%.

**Table 24: Gender based distribution of directly employed workers**

Directly employed workers	percentage of workers in 8 consecutive years							
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Men</b>	33.8	37.7	39.5	40.9	50	52.1	54	57
<b>Women</b>	66.2	62.3	60.5	59.1	50	47.9	46	43



**Table 25: Emoluments paid to the employees in organised manufacturing sector.**

<b>Financial year</b>	<b>Wages and salaries including employees contribution (value in ₹ lakhs)</b>
2011-12	562506
2012-13	627506
2013-14	661948
2014-15	781658
2015-16	867462
2016-17	819994
2017-18	915447
2018-19	1037471





## **CHAPTER 6**

# **RURAL AND URBAN STATISTICS OF MANUFACTURING SECTOR**



## **An Overview of Principal Characteristics of Manufacturing Sector in the Rural & Urban areas**



## **An Overview of Principal Characteristics of Manufacturing Sector in the Rural & Urban areas**

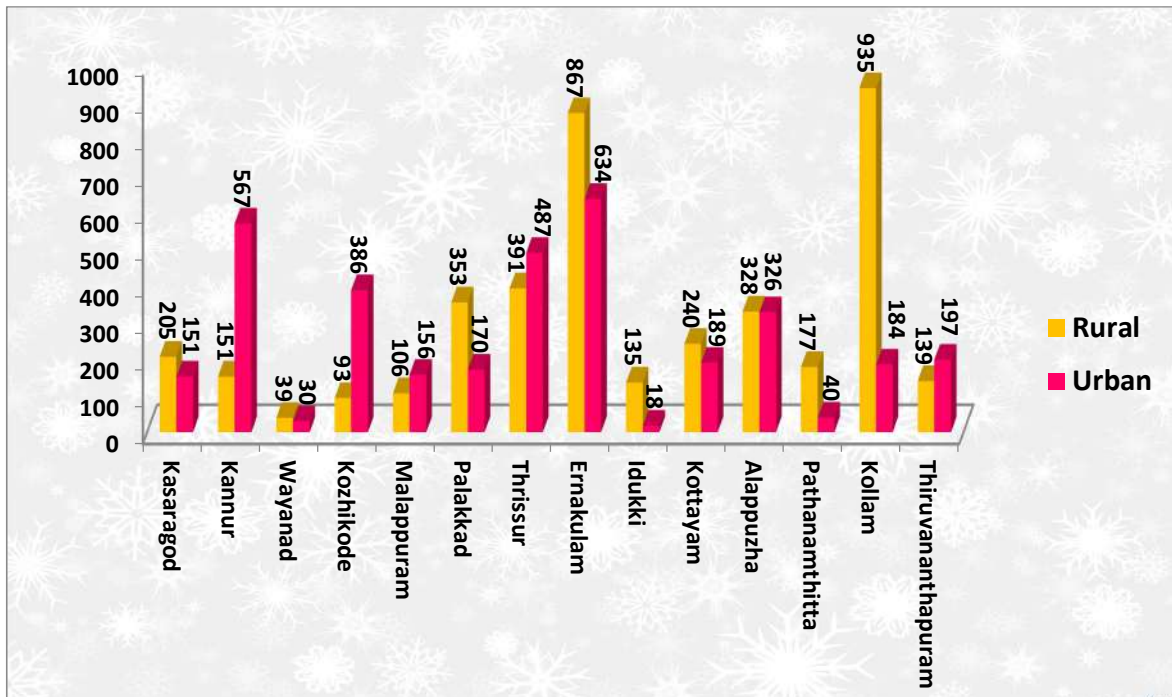


Location of industries is one of the key elements that can have both positive and negative effects on the industrial sector. The necessity for an industrial policy that supports the growth of the sector in underdeveloped areas may be revealed by field studies of various industries in rural and urban areas. In both urban and rural areas, efforts have been made to highlight the key characteristics of the manufacturing sector. According to the Annual Survey of Industries, urban areas are about 46% of industries, while rural areas are 54%. Estimates by district reveal that Ernakulam has the highest concentration of industries, with 58% located in rural and 42% in urban areas. Table 26 shows the district wise estimates of factories.

**Table 26: District wise Distribution of factories in rural and urban areas**

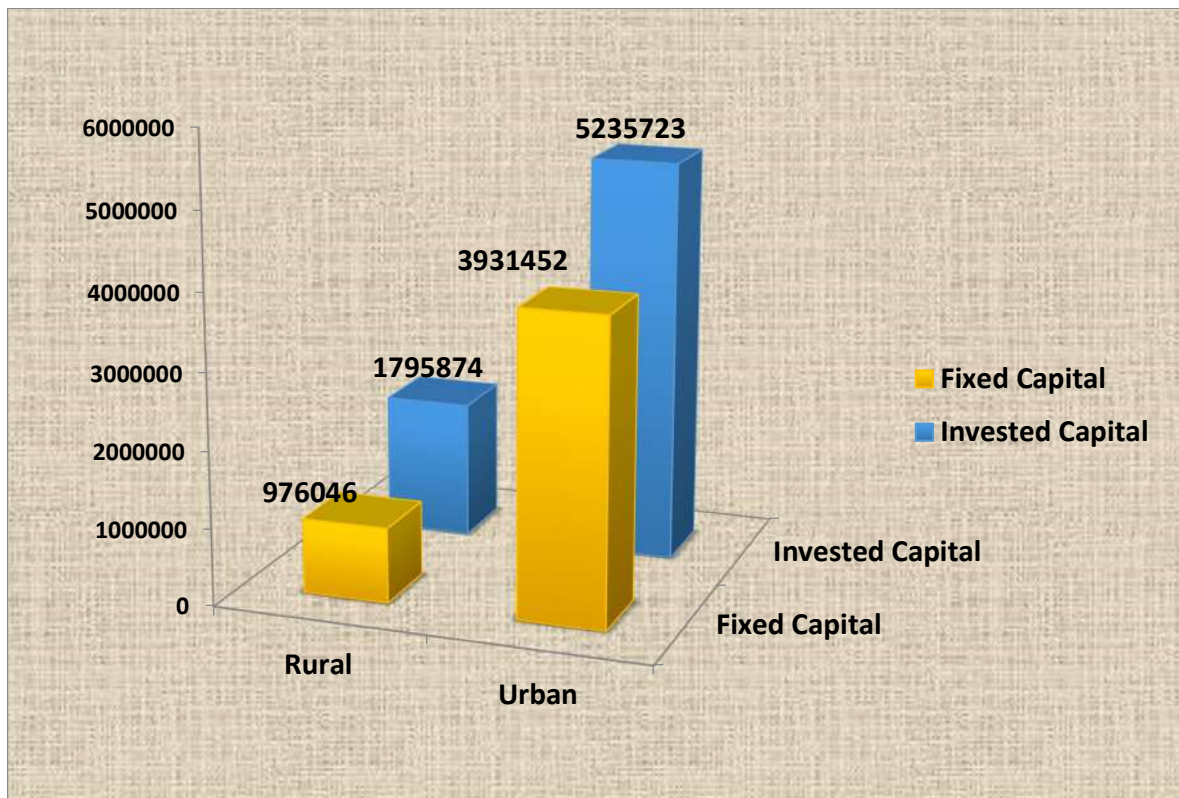
Districts	Number of factories	
	Rural	Urban
Kasargod	205	151
Kannur	151	567
Wayanad	39	30
Kozhikode	93	386
Malappuram	106	156
Palakkad	353	170
Thrissur	391	487
Ernakulam	867	634
Idukki	135	18
Kottayam	240	189
Alappuzha	328	326
Pathanamthitta	177	40
Kollam	935	184
Thiruvananthapuram	139	197

**Figure 30: District wise distribution of number of factories in Rural and Urban areas.**



In addition, fixed capital for the factory sector in rural and urban areas are ₹ 9,76,046 lakhs and ₹ 39,31,452 lakhs, while invested capital comes out to be ₹ 17,95,874 lakhs and ₹ 52,35,723 lakhs respectively. The factory sector's input in urban and rural areas are ₹ 1,61,40,941 lakhs and ₹ 40,45,002 lakhs, while its output is estimated to be ₹ 1,77,82,014 lakhs and ₹ 48,69,818 lakhs respectively.

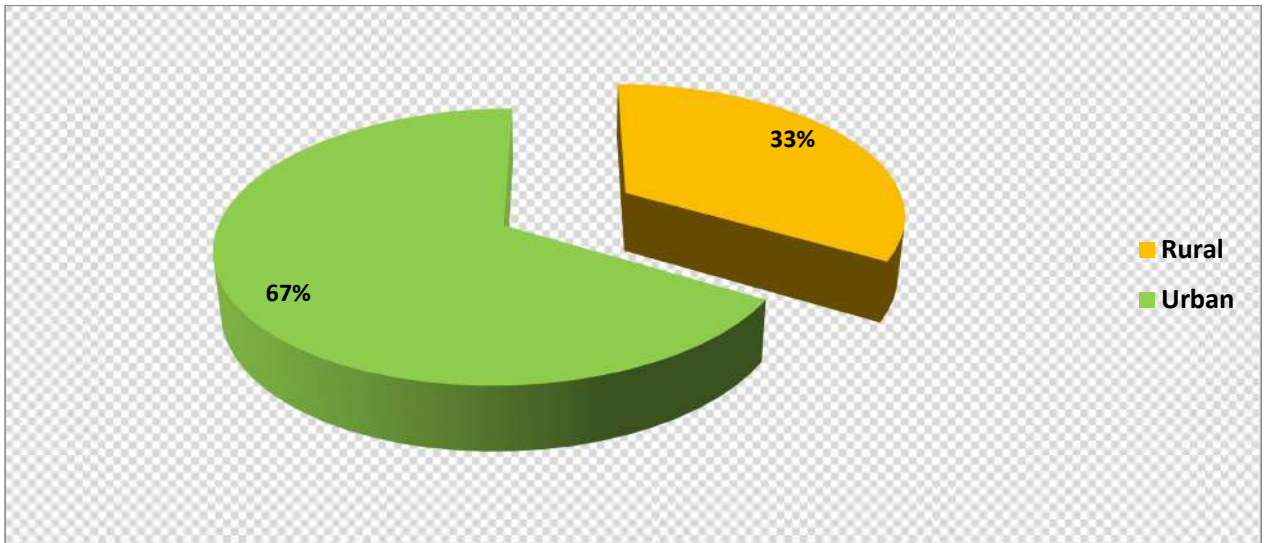
**Figure 31: Distribution of fixed and invested capital of manufacturing sector in rural and urban areas**



Gross Fixed Capital Formation (GFCF) is estimated to be ₹ 1,29,905 lakhs in rural factories and ₹ 5,66,628 lakhs in urban factories respectively. According to survey findings, the manufacturing sector's Gross Value Added is contributed by 67 % of industries in urban and 33 % of industries in rural areas.

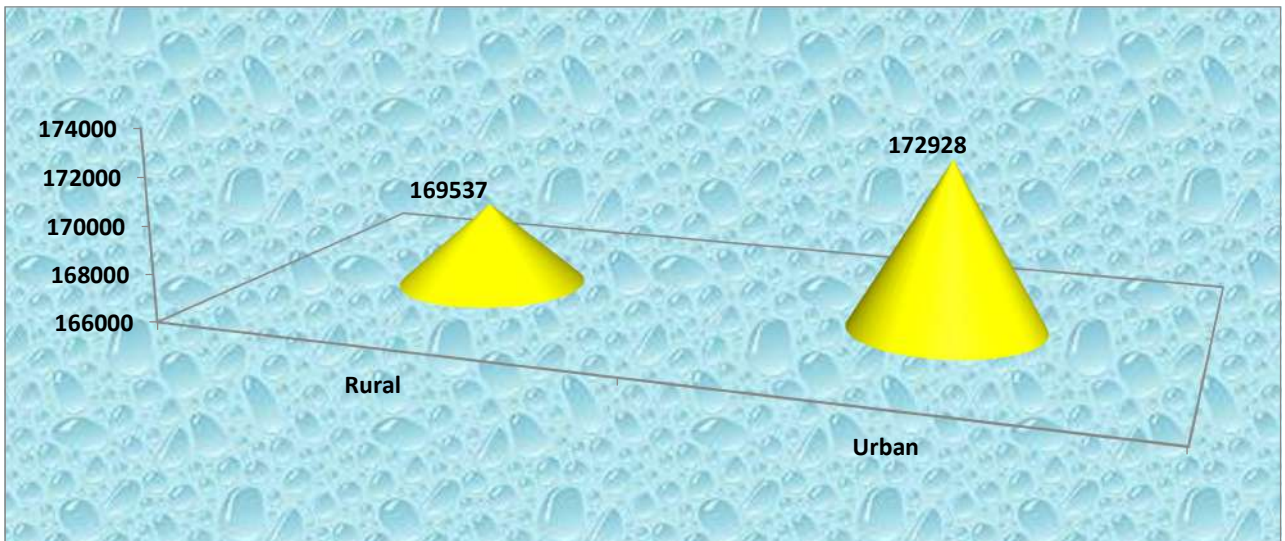


Figure 32: Distribution of GVA of manufacturing sector in rural and urban Areas



According to estimates, there are 169537 (49.5 % of the state value) and 172928 (50.5 % of the state value) people in industries in rural and urban areas, respectively. The same is seen in Figure 33.

Figure 33: Number of persons engaged in factories in rural and urban areas



# **Annexures**







# भारत का राजपत्र The Gazette of India

असाधारण

EXTRAORDINARY

भाग II — खण्ड 1

PART II — Section 1

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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.

Short title,  
extent and  
commence-  
ment.

2. In this Act, unless the context otherwise requires,—

Definitions

(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

(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,—

Restrictions on use of information.

(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

(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 2018-19

The pooling of central and state level ASI data for publishing district-level estimates is an important activity that needs to be performed by each State/UT. Following guidelines provide a mechanism for pooling state and central data at the district level in ASI 2018-19.

As per the ASI sampling design, adopted in ASI 2018-19:

- (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 NSO (FOD) and processed by IS WING, DQAD, 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, DQAD, 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 'Tot\_Frame' in the excel file named '<statename>1819.xlsx', provided by IS WING, DQAD in the CD.

**Step 5:** Calculate sub-sample wise multiplier in each sample stratum of  $i^{\text{th}}$  district (say,  $m_{ijk}$ )  $m_{ijk} = (N/n_{ijk}^*)$ , where  $n_{ijk}^*$ , the no. of sample units in the  $k^{\text{th}}$  sub-sample of  $j^{\text{th}}$  stratum of  $i^{\text{th}}$  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. 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 then the unit is treated as ‘Zero case’

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

Note that

- a) A closed unit may be given status code as ‘2’ (closed) if the closed factory has at least A, B, C and E block.
- b) An NOP unit may be given status code as ‘3’ (NOP) if the NOP factory has at least A, B and C block.
- c) 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, DQAD. 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  $l^{\text{th}}$  census unit in  $i^{\text{th}}$  district. (To be calculated from the data supplied by IS WING, DQAD).

$y_{ijkl}^s$  is the observed value of parameter  $y$  from  $l^{\text{th}}$  sample unit belonging to  $k^{\text{th}}$  sub-sample of  $j^{\text{th}}$  stratum of  $i^{\text{th}}$  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, DQAD 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  $j^{\text{th}}$  stratum of the  $i^{\text{th}}$  district from  $k^{\text{th}}$  sub-sample (say,  $t_{ijk}$ ) =  $\sum_i y_{ijkl}^s \times m_{ijk}$  ,  $k=1, 2, 3, 4$  where  $m_{ijk}$  is the multiplier of  $k^{\text{th}}$  sub-sample in  $j^{\text{th}}$  stratum of  $i^{\text{th}}$  district (obtained as per step 5).

Next, **pooled estimator of parameter  $y$  for  $j^{\text{th}}$  stratum of  $i^{\text{th}}$  district** (say,  $S_{ij}$ ) =  $\frac{1}{n} \sum_{k=1}^n t_{ijk}$ , where  $n$  ( $\leq 4$ ) is number of non-void subsamples in  $j^{\text{th}}$  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<sup>th</sup> stratum of i<sup>th</sup> 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<sup>th</sup> district** (say,  $T_i$ ) =  $\sum_j S_{ij} + \sum_l y_{il}^c$ . The 1<sup>st</sup> part i.e.,  $\sum_j S_{ij}$  will come from stratum-level figure for i<sup>th</sup> district and the 2<sup>nd</sup> part, i.e.,  $\sum_l y_{il}^c$  will come from census units for i<sup>th</sup> district.

**Estimator of Variance of the pooled estimator of parameter y for i<sup>th</sup> district** (say,  $D_i$ ) =  $\sum_j V_{ij}$

Estimator of the Relative Standard Error (RSE) of the pooled estimator of parameter y for i<sup>th</sup> 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:

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

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:

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

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

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

**(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:

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

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:

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

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:

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

**(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:

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

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,

$$\begin{aligned} M\hat{S}E(\hat{R}) &= \frac{1}{12\hat{X}^2} \sum_s \left[ \sum_{m=1}^4 (\hat{Y}_{sm} - \hat{Y}_s)^2 - 2\hat{R} \sum_{m=1}^4 (\hat{Y}_{sm} - \hat{Y}_s)(\hat{X}_{sm} - \hat{X}_s) + \hat{R}^2 \sum_{m=1}^4 (\hat{X}_{sm} - \hat{X}_s)^2 \right] \dots(13) \\ \text{where } \hat{Y}_{sm}, \hat{X}_{sm} &= \text{estimate of aggregate of characteristic Y, X of m-th sub-sample in the s-th stratum and } \hat{Y}_s = \frac{1}{4} \sum_{m=1}^4 \hat{Y}_{sm} . \end{aligned}$$

#### 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 2018-2019 (Part –I)  
(Please read the instructions before filling the return)

<b>Block A: Identification particulars (for official use)</b>					
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> )					

<b>Block B: Particulars of the factory (to be filled by owner of the factory)</b>					
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 &amp; registered with DST/DBT-1, yes &amp; 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)

<b>Block C: FIXED ASSETS</b>												
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.	<b>Sub-total (items 2 to 7)</b>											
9.	Capital work in progress											
10.	<b>Total (items 1+8+9)</b>											

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<b>Block D: WORKING CAPITAL AND LOANS</b>			
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.	<b>Sub-total (items 1 to 3)</b>		
5.	Semi-finished goods/work in progress		
6.	Finished goods		
7.	<b>Total inventory ( items 4 to 6)</b>		
8.	Cash in Hand & at Bank		
9.	Sundry Debtors		
10.	Other current assets		
11.	<b>Total current assets (items 7 to 10)</b>		
12.	Sundry Creditors		
13.	Over draft, cash credit, other short term loan from banks & other financial institutions		
14.	Other current liabilities		
15.	<b>Total current liabilities (items 12 to 14)</b>		
16.	<b>Working Capital (item 11-item 15)*</b>		
17.	Outstanding loans (excluding interest but including deposits)**		
<i>Note:</i>			
* Give reasons in the footnote for negative values and abnormal verification in opening and closing values.			
** If outstanding loans include interest, a footnote may be given			

<b>Block E: EMPLOYMENT AND LABOUR COST</b>							
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
<b>Part A: Details for each category of staff</b>							
1.	Male workers employed directly						
2.	Female workers employed directly						
3.	<b>Sub-total (items 1 + 2)</b>						
4.	Workers employed through contractors						
5.	<b>Total workers (items 3 + 4)</b>						
6.	Supervisory & managerial staff						
7.	Other employees						
8.	Unpaid family members/ proprietor/ coop. members						
9.	<b>Total employees (items 5+6+7+8)</b>						
<b>Part B: Some details for all categories of staff combined</b>							
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					
		<b>(iii) Total ( i+ ii)</b>					
14.	<b>Total cost of production (in Rs.)</b> [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]						

<b>Block F : OTHER EXPENSES</b>		
Sl. No.	Items	Expenditure (in Rs.)
(1)	(2)	(3)
<b>O T H E R  I N P U T</b>	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	

<b>Block G: OTHER OUTPUT/RECEIPTS</b>		
Sl. No.	Items	Receipts (in Rs.)
(1)	(2)	(3)
<b>O T H E R  O U T P U T</b>	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

<b>Block H: Indigenous input items consumed (if needed, additional sheets may be used for recording input items with serial nos. starting from 25)</b>						
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.	<b>Total basic items (items 1 to 11)</b>	<b>9990100</b>				
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.	<b>Total inputs (items 12+ 22)</b>	<b>9993000</b>				
24.	Any additional requirement of electricity (unmet demand)	<b>9999999</b>	KWH			

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

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<b>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)</b>						
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.	<b>Total imports (consumed) (items 1 to 6)</b>	<b>9994000</b>				

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<b>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)</b>												
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.	<b>Total ( items 1 to 11)</b>	<b>9995000</b>										
13.	Share (%) of products/by-products directly exported											

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



DSL No  PSL No

<b>Block K: Information and Communication technology (ICT) usage</b>		
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?	

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

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<b>Block M: Particulars of field operations</b>					
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	

<b>Block N: Comments of Superintending Officer/Scrutinising Officer</b>
<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. <b>Please refer to detailed instructions also for further guidance.</b></i>

**Annual Survey of Industries 2018-2019**

**Part A**

Report of scrutiny on Part-I of the return

State (code) \_\_\_\_\_ Distt. (code) \_\_\_\_\_ DSL No./PSL No. \_\_\_\_\_  
 Ind. code (5-digit NIC 2008) as per return \_\_\_\_\_ Scheme Code \_\_\_\_\_

Sl. No.	Bl. no.	Item	Unit	Average rate per unit*	If high or low, reasons to be furnished by	
1	H	Input items (Indigenous) Major Ten basic items consumed	<b>X</b>	<b>X</b>	Superintending Officer	Scrutinising Officer
		1)				
		2)				
		3)				
		4)				
		5)				
		6)				
		7)				
		8)				
		9)				
		10)				
		11) Electricity purchased				
		12) Coal				
2	I	Directly imported items consumed (major five items)				
		1)				
		2)				
		3)				
		4)				
		5)				

\*Average value per unit in nearest whole rupee is to be reported.

3. Percentage yield of product from the basic materials consumed (in case the quantity are common or directly convertible in whole number)

4	Item	Current year (2018-19)	Previous year (2017-18)	Reasons for significant variation, if any.
	1) Average salaries/wages per manday worked (Rs.) (E <sub>5,8</sub> / E <sub>5,5</sub> )			
	2) Total worker (number) (E <sub>5,6</sub> )			
	3) Total employees (number) (E <sub>9,6</sub> )			
	4) Total emoluments (E <sub>9,8</sub> + E <sub>10,8</sub> + E <sub>11,8</sub> + E <sub>12,8</sub> )			
	5) Variation in finished goods (D <sub>6,4</sub> - D <sub>6,3</sub> )			
	6) Working Capital (D <sub>16,4</sub> )			
	7) <b>Total input</b> (F <sub>1,3</sub> +F <sub>2a,3</sub> +F <sub>2b,3</sub> +F <sub>3,3</sub> +F <sub>4,3</sub> +F <sub>5,3</sub> +F <sub>6,3</sub> +F <sub>7,3</sub> ) (+) (H <sub>23,6</sub> ) (+) (L <sub>7,6</sub> )			
	8) <b>Total output</b> (J <sub>12,7</sub> ) (-) (J <sub>12,8</sub> +J <sub>12,9</sub> +J <sub>12,10</sub> -J <sub>12,11</sub> ) + (D <sub>6,4</sub> - D <sub>6,3</sub> ) + (G <sub>1,3</sub> +G <sub>2,3</sub> +G <sub>3,3</sub> +G <sub>4,3</sub> +G <sub>5,3</sub> +G <sub>6,3</sub> +G <sub>7,3</sub> )			
	9) Gross value added (GVA) (Item 8-Item 7 as above)			

Item	Current year (2018-19)	Previous year (2017-18)	Reasons for significant variation, if any.
10) Net value added (Item 9 as above) - Depreciation (C <sub>10,9</sub> )			
11) Net Income (Item 10 as above) (-) (F <sub>8,3</sub> +F <sub>9,3</sub> +F <sub>10,3</sub> ) (+) (G <sub>8,3</sub> +G <sub>9,3</sub> +G <sub>10,3</sub> )			
12) Profit (Item 11 as above) (-) (E <sub>9,8</sub> +E <sub>10,8</sub> +E <sub>11,8</sub> +E <sub>12,8</sub> )			
13) Actual addition to fixed assets (C <sub>10,5</sub> )			
14) <b>GVA (through Ex-factory Value) (J<sub>12,13</sub>)</b> (+) (G <sub>1,3</sub> +G <sub>2,3</sub> +G <sub>3,3</sub> +G <sub>4,3</sub> +G <sub>5,3</sub> +G <sub>6,3</sub> +G <sub>7,3</sub> ) (-) (F <sub>1,3</sub> +F <sub>2a,3</sub> +F <sub>2b,3</sub> +F <sub>3,3</sub> +F <sub>4,3</sub> +F <sub>5,3</sub> +F <sub>6,3</sub> +F <sub>7,3</sub> ) (-) (H <sub>23,6</sub> ) (-) (I <sub>7,6</sub> )			

5. Impose check on the following and give observations against each item		
Sl. No.	Check points	Observations (Yes-1/No-2)
1.	Whether codes and identification particulars have been correctly furnished in Block A?	
2.	Whether information for all the items in Block B have been correctly furnished?	
3.	If the working capital in item 16 of Block D is negative whether reasons furnished in the footnote of Block D of the Return and also in Block N along with code.	
4.	Whether the return has been duly signed by owner with stamp?	
5.	If wide variation is noticed between Opening & Closing value of Working Capital, whether reasons furnished in the footnote of Block D and also in Block N along with code	
6.	Whether special check has been made in case of negative GVA?	
7.	Whether basic entries have been thoroughly rechecked where output/input ratio is less than 0.5	
8.	Whether ratio of Distributive expenses to gross sales is reasonable? If no, whether the relevant entries have been rechecked particularly where this ratio exceeds 20%.	
9.	If the total Bonus is more than 20% of total wages/salaries whether suitable remarks given in the Return?	
10.	If sale value of goods sold in same condition as purchased (Item-11 of Block G) is less than the purchase value of the same (Item-11 of Block F), whether reasons furnished in the return ?	
11.	Whether Balance Sheet, Profit & Loss Account and Working Sheet are attached with the O/C of the Return ?	
12.	Whether, the ex-factory value of output in column-13 of Block J have been calculated correctly for each of the 10 major items of product and by-product and also for item 11 ?	
13.	Whether the entries in Blocks H & I are reported independently ?	

Signature of the Superintending Officer

( )  
Name of the Superintending Officer

<b>PART-B</b> <b>(To be filled in by Scrutinizing officer)</b>		
Impose check on the following and give observations against each item		
<b>Sl. No.</b>	<b>Check points</b>	<b>Observations (Yes-1/No-2)</b>
1.	Examine the Industry Code with reference to Production/Process and state whether Industry Code is reported in 5 digit NIC 2008 against item 5 of Block A.	
2.	Whether valid new State Code has been entered against item 7 of Block 'A'?	
3.	Whether Schedule Despatch no. has been correctly filled in against item 1 of Block A ?	
4.	State whether proper remarks in Block N for all important parameters such as GVA, working capital, wage rate, number of workers, distributive expenses, depreciation etc. are given.	
5.	Whether average salaries/wages per manday worked (worker) has been checked calculated correctly and are within the reasonable limits?	
6.	Whether special check has been made in case of negative GVA?	
7.	Whether basic entries have been rechecked where output/Input ratio is less than 0.5	
8.	Whether ratio of distributive expenses to gross sales is reasonable? If no, whether the relevant entries have been rechecked particularly where this ratio exceeds 20%.	
9.	If total bonus exceeds 20% of total salaries & wages, whether suitable remarks furnished ?	
10.	Whether yield ratio of products from basic materials consumed (in case the units of quantity are common or directly convertible) are correctly calculated and are within prescribed limits ?	
11.	Whether data reported in the return have been checked with Balance Sheet and Profit & Loss Account ?	

Signature of Scrutinizing officer

( )  
Name of Scrutinizing officer

**ANNUAL SURVEY OF INDUSTRIES 2018-2019**  
**PART II MANDAYS WORKED, ABSENTEEISM & LABOUR TURNOVER**

**Block 1. Identification and other Particulars**

1. Schedule Despatch No.				10. Type of Organisation (code)		16. Signature	
2. PSL No.							
3. Scheme Code (census - 1, sample - 2)				11. Company Identification Number (CIN)		17. Name of Scrutinizing Officer	
4. Industry code as per frame (4-digit level of NIC - 08)				12. Accounting Year		18. Personnel code	
5. Industry code as per return (5- digit level of NIC - 08)							
6. Description of Industry				13. Name of Superintending Officer		19. Head Quarter	
7. State code				14. Personnel code		20. Signature.	
8. District code				15. Head Quarter			
9. RO/SRO code							
Name and address of the Industrial Undertaking							
City/ Town/ Village		Tehsil/ Taluk		District		State	

**Block 2-** Mandays worked, absenteeism, labour turnover for regular workers directly employed for each month of the year.

Sl no.	Month	Scheduled Working days for Workers	No of Mandays Worked	No of Mandays lost due to absence	No of Workers in employment on		Accessions during the Month	Separations during the month due to	
					First day of month	Last day of month		Death or retirement	Other causes
0	1	2	3	4	5	6	7	8	9
1.	Apr, 2018								
2.	May, 2018								
3.	June, 2018								
4.	July, 2018								
5.	Aug, 2018								
6.	Sep, 2018								
7.	Oct, 2018								
8.	Nov, 2018								
9.	Dec, 2018								
10.	Jan, 2019								
11.	Feb, 2019								
12.	Mar, 2019								

## CONCEPTS AND DEFINITIONS

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 2018-2019 the reference period is the financial year commencing from 1<sup>st</sup> April 2018 and ending on 31<sup>st</sup> March 2019 or the accounting year of the factory ending on any date between 01.04.2018 to 31.03.2019.
4. **Survey Period:** *Survey period is a period during which work of any Annual Survey of Industries is undertaken. The survey period for ASI 2018-2019 is from November, 2019 to June, 2020.*
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.  
  
*'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.*

**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 fuels, 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 and (e) rent paid for buildings and plant & machinery and other fixed assets, (f) expenses on Research & Development (R&D).

**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, value of own construction and also the receipts for industrial and non-industrial services rendered to others, rent received for building, plant & machinery and other fixed assets, net balance of goods sold in the same condition as purchased, value of electricity generated and sold and an amount equal to expenses on research & development (R&D). Value of gross output and total output has been used in the text inter-changeably 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.

**41.        *Net Income:*** It is obtained by deducting the value of rent paid & interest paid from the NVA.

**42.        *Net Profit:*** It is obtained by deducting compensation of employees from net income.

**List of NIC-2008 4-digit codes covered under ASI**

<b>Description</b>	<b>NIC-4 digit</b>	<b>Sector</b>	<b>Remarks</b>
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	

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

<b>Description</b>	<b>NIC-4 digit</b>	<b>Sector</b>	<b>Remarks</b>
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	

**List of NIC-2008 4-digit codes covered under ASI**

<b>Description</b>	<b>NIC-4 digit</b>	<b>Sector</b>	<b>Remarks</b>
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	

**List of NIC-2008 4-digit codes covered under ASI**

<b>Description</b>	<b>NIC-4 digit</b>	<b>Sector</b>	<b>Remarks</b>
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	

**List of NIC-2008 4-digit codes covered under ASI**

<b>Description</b>	<b>NIC-4 digit</b>	<b>Sector</b>	<b>Remarks</b>
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]