# THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA 

## CENTRAL STATISTICAL AGENCY

REPORT ON LARGE AND MEDIUM SCALE MANUFACTURING AND ELECTRICITY INDUSTRY SURVEY

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## Abbreviations

CSA - Central Statistical Agency
E.C -Ethiopian Calendar
E.F.Y. - Ethiopian Fiscal Year

ISIC (Rev 3.1) -International Standard Industrial Classification of all Economic Activities, Revision 3.1
S.N.N.P. - Southern Nations, Nationalities and Peoples’ Region
N.E.C. - Not Elsewhere Classified
S.N.A. - System of National Accounts

CSPro -Census and Survey Processing System
KW - Kilowatt
KWH - Kilowatt Hour

## 1. Introduction and Objectives of the Survey

### 1.1 Introduction

The presence of adequate and current statistical data in various economic sectors that are considered essential for development planning, socio-economic policy formulation and economic analysis is vital in promoting the economic development of a country. Based on this general objective, the Central Statistical Agency (CSA) has been conducting surveys of various economic activities, of which, the annual Large and Medium Scale Manufacturing Industries survey is one.

Manufacturing is defined here according to International Standard Industrial Classification (ISIC Revision-3.1) as "the physical or chemical transformation of materials or components into new products, whether the work is performed by power-driven machines or by hand, whether it is done in a factory or in the worker's home, and whether the products are sold at wholesale or retail. The assembly of the component parts of manufactured products is also considered as manufacturing activities."

CSA has been publishing results of the survey of Manufacturing and Electricity Industries on annual basis since 1968 Ethiopian Calendar to provide users with reliable, comprehensive and timely statistical data on these sectors. In this respect, this survey, which is conducted on annual basis, is the principal source of industrial statistics on large and medium scale manufacturing industries in the country.

This bulletin has six parts: - Part I, deals with an introduction and objective of the survey. Part II gives an overview about the survey methodology, data collection and processing. Part III presents summary of selected survey results. Part IV presents statistical tables of the survey for the year 2000 E.F.Y (2007/08). Part V deals with time series data and various ratios for the period of five years i.e. 1996-2000 E.F.Y. (2003/04-2007/08) for Large and Medium Scale Manufacturing Industries. Finally part VI presents the activity and performance of the Electricity Industry which also refers to the same five years period. At the end, the survey questionnaire is attached as an appendix.

### 1.2 Objectives of the survey

The main objectives of the annual survey of Large and Medium Scale Manufacturing and Electricity Industries are to:-

1. Obtain basic statistical data that are essential for policy makers, planners and researchers by major industrial group.
2. Collect basic quantitative information on employment, volume of quantitative information on employment, volume of production and raw materials, structure and performance of the country's Large and Medium Scale Manufacturing and Electricity Industries.
3. Compile statistical data which will be an input to the System of National Accounts (SNA), on Large and Medium Scale Manufacturing and Electricity establishments as a whole and by major industrial group.
4. Obtain the number of proprietors engaged in these sectors and find out the major problems that create stumbling blocks for their activities.

## 2. Survey Methodology, Data Collection and Processing

### 2.1 Scope, Coverage and Content

The scope of the Large and Medium Scale Manufacturing survey is confined to those establishments which engage ten persons and above and use power-driven machinery and covers both public and private industries in all Regions of the country, where establishments under the scope of the survey are found. With regard to electricity data, the survey covered only the electricity supplied by the Ethiopian Electric Power Corporation.

Like in the previous years, in the current survey an attempt was made to update the directory using as source of information - the licenses issued by the Ministry of Trade and Industry and corresponding bureaus of the Regional States of the country, for the public and private establishments. From this list, all manufacturing establishments which engaged ten persons and above, were selected and included in the directory of large and medium scale manufacturing establishments.

In this publication detailed information on number of establishments, number of persons engaged, and employees, wages and salaries paid by major industrial groups, sex, nationality and occupation, paid-up capital, gross value of production, industrial and non-industrial costs, value added, operating surplus, quantity of production and raw materials consumed, fixed assets, investment and production capacity are presented.

### 2.2 Basic Concepts and Definitions:-

(i) An Establishment: - is defined as the whole of the premises under the same ownership or management at a particular address. ( e.g. Bakery, Saw mill, etc.)
(ii) Paid -up Capital: - is that part of the issued capital of an establishment that has been paid by the shareholders or the individual owner.
(iii) Working Proprietors, Active Partners and Family Workers: - include all unpaid working proprietors, active partners and members of their household who actively participate in the operation of the establishment.
(iv) Administrative and Technical Employees:- include salaried directors and managers, technicians, superintendents, research workers, draftsmen and designers, engineers,
chemists, architects, accountants, book-keepers, office machine operators, receptionists, sales men, delivery personnel, guards and other office staff.
(v) Production Workers:- include workers directly engaged in production i.e., persons engaged in fabricating, processing, assembling, maintenance, repair, janitorial, record keeping and other associated activities.
(vi) Seasonal and Temporary Workers: - include workers who are employed for a whole or a part of the year. These workers are not regularly on the payroll of the establishment.
(vii) Number Employed: - includes all persons on the payroll whether seasonal or temporary workers. The number of seasonal and temporary workers has been adjusted to give equivalent of full-time worker.
(viii) Number Engaged: - includes paid employees and working proprietors. Active partners and unpaid family workers are also included here.
(ix) Basic Wages and Salaries: - includes all payments in cash made to employees during the reference year. It excludes commissions, bonuses, professional and hardship, allowances.
(x) Wages and Salaries: - includes all payments in cash or in kind made to employees during the reference year in connection with the work done for the establishments.
(xi) Commissions, Bonuses, Professional and Hardship Allowances: - refer to the total of commissions, bonuses and cost of living allowances paid in cash to employees. It excludes car allowance and perdiem.
(xii) Supplements to Wages and Salaries of Employees: - represents payments made by the employer to social security systems, insurance premiums, etc on behalf of his employees. (xiii) Revenue from Sales: - represents the total sales value of all products and byproducts during the reference year, valued at market price.
(xiv) Receipt from Industrial Services Rendered to Others: - include all contract, repair and maintenance work done to others, with raw materials and spare parts supplied by the customer.
(xv) Receipt of Products bought and Resold: - refers to revenue obtained from sales of all goods bought and resold during the reference year without any transformation or processing.
(xvi) Other Receipts: - include rental income from lease of machinery and equipment, income from sales of scrap, the value of fixed assets produced by the unit for its own use and other income.
(xvii) Difference of Stocks in the Value of Finished Goods and Semi-Finished Goods:is the net change of stocks between the end and the beginning of the reference period in the value of finished and semi-finished goods.
(xviii) Gross Value of Production: - includes the sales value of all products of the establishment, the net change of stocks between the beginning and end of the reference period in the value of finished goods and the value of semi finished goods, the value of industrial services rendered to others, the value of goods bought and resold without any transformation or processing, and other receipts. The valuation of Gross Value of Production is in terms of producers' values where indirect taxes are included in the value of sales of the establishment and the value of subsidies received is excluded.
(xix) Raw Materials: - include all raw and auxiliary materials, parts and containers which are consumed during the reference year. The value of local raw materials is the value of locally produced raw materials and is the cost at the factory which includes the purchase price, transport charges, taxes and other incidental costs. The value of imported raw materials is the value of raw materials produced in other countries and obtained directly or from local source and is the cost at the factory which includes the purchase price, transport charges, taxes and other incidental costs.
(xx) Other Industrial Services Rendered by Others: - refer to contract, repair and maintenance work done by others in the reference year on materials controlled by the establishment. Included are also the cost of all goods purchased and resold without any transformation during the reference year and the cost of water consumed.
(xxi) Industrial Cost: - Includes the cost of raw materials, fuels, and other supplies consumed, cost of industrial services rendered by others, cost of goods bought and resold without any transformation or processing and cost of electricity consumed.
(xxii) Non-industrial Cost: - includes payments like professional fees, postage, telephone, insurance, advertising, hired transport, rental payments, etc. (interest, amortization and depreciation are excluded).
(xxiii) Value Added in the National Account Concept (at Market Price):- is defined as the difference between the gross value of production and industrial and non-industrial costs.
(xxiv) Value Added in the National Account Concept (at Basic Price):-Is the difference between gross value of production and intermediate consumption which is adjusted for tax on product such as license tax.
(xxv) Fixed Capital Assets: - are those with a productive life of one year or more which are intended for the use of the establishment including fixed assets made by the
establishment's own labour force for its own use. They are valued in this report at bookvalue at the end of the reference year that is the net book value at the beginning, plus new capital expenditure minus those sold and disposed and depreciation during the reference year.
(xxvi) Cost of goods Sold: - (CGS) - Cost is unexpired expense. Cost of goods sold represents to the amount spent to buy raw materials, to pay the labourers and other costs incurred related to the production which is sold within the accounting period.
(xxvii) Inventory: is the amount of goods produced within the accounting period or before the accounting period but not sold at the end of the year. Inventories are classified as finished goods work in process and raw materials.
(xxviii)Raw material inventory: As it is used for inventory turnover computation only includes direct material. Thus, it excludes spare parts, stationeries and packing materials. Whereas when there is only beginning or ending inventory this figure will be taken.
(xxix) Purchase of raw material: The amount spent by the enterprise to buy direct raw material during the year.
(xxx) Inventory turnover in days: is obtained by dividing the inventory to the cost of sales and multiplied by 365 days. Manufacturing companies may have an inventory turnover ratio of 60 to 100 days, this period is likely to increase as the goods made become larger and more complex.
(xxxi) Inventory turnover p. a: is obtained by dividing the cost of sale by the inventory. An increasing multiple implies that the inventory is turning over more quickly and it is a good sign.

### 2.3 Methods of Data Collection and Field Organization

All of CSA's branch offices were involved in this survey. The training was given in two stages the first one for all branch offices except Addis Ababa, in which 17 statisticians and 72 supervisors took part 15 editors from the head office, also attended this training. The second stage was for statisticians, supervisors and enumerators (hired on contract basis for the duration of survey period) of Addis Ababa branch office. All 35 drivers (two from Head office, seven from Addis Ababa branch and 26 from the others) which took from $30-45$ working days, depending on the number of establishments each branch office was covering.

### 2.4 Data Processing

### 2.4.1 Editing, Coding and Verification

A number of quality control steps were taken to ensure the quality of data. The first step taken in this direction was, to revise the questionnaire, to make it easier for internal consistency checking or editing, both at field and office level. Furthermore, based on this revised questionnaire, revised instruction manual with field editing procedures were prepared in Amharic for both enumerators and supervisors (field editors). Using this manual, some editing and coding were carried out by field editors during the data collection stage.

After the majority of the completed questionnaires were brought back to head office, final editing, coding and verification were performed by editors, statistical technicians and statisticians. Finally, the edited and coded questionnaires were checked and verified by other senior professionals.

### 2.4.2 Data Entry, Cleaning and Tabulation

The data were entered and verified on personal computers using CSpro (Census and Survey Processing System) Software. Fifteen CSA data entry staff and one data cleaner participated in this activity for fifteen days with close supervision of the activities by two professionals. Then, the data entered were cleaned hundred percent using personal computers in combination with manual cleaning for some serious errors. Finally, the tabulation of the results was processed using the same software by one programmer with technical assistance from Industry, Trade and Services Statistics Department staff.

## 3. Summary of the Major Findings of the Survey

The distribution of Large and Medium Scale Manufacturing Industries by Regional states and major Industrial groups is shown in summary Table 3.1. The figures in the table indicate that, the total number of large and medium scale manufacturing establishments for the country as a whole stood at 2203 in 2001 E.F.Y. (2008/2009). It has shown an increase of 273 establishments or 14.1 percent compared to the year before in absolute and relative terms, respectively. For the country as a whole, establishments classified under manufacture of Other Non-Metallic Mineral Products industrial group constituted the largest share accounting for 27.6 percent of the total. The output by these industries among others include: glass and glass products, structural clay products, cement, lime and plaster and article of concrete, cement and plaster. Manufacture of food products and beverages and manufacture of furniture, which represented 25.5 and 16.5 percent of the total number of establishments, were in second and third position, respectively. That means the share of the three industrial groups combined was 69.6 percent of the total number of manufacturing industries, which indicates that, the Ethiopian Large and Medium Scale Manufacturing Industry is characterized by a high concentration of a limited range of manufacturing activities.

On the other hand, the figures in the same table reveal that, the distribution of large and medium scale manufacturing industries by regional states of the country is highly skewed. Slightly more than forty percent of the total large and medium scale manufacturing industries, which were operating in the reference year, were located in Addis Ababa. Following Addis Ababa, Oromiya, S.N.N.P., Amhara and Tigray Regional States covered 16.5, 14.0, 12.3 and 11.2 percent of the total establishments, respectively.

The data shown in summary Tables 3.2 and 3.3 refer to the total number of persons engaged and number of employees over five years period, i.e. 1997-2001 E.F.Y. (2004/5-2008/9), respectively. In 2001 E.F.Y, there were 151,303 persons engaged, out of which, 148,817 were, employees in the sector. Number of persons engaged and employees during the survey period, showed an increase of 13.2 and 12.9 percent, compared to that of 2000 E.F.Y, respectively. These increases in the number of persons engaged and employees could be attributed to the increase in the number of establishments covered in 2001 E.F.Y. An examination of the distribution of persons engaged and employees by major industrial groups reveals that manufacture of food and beverage and other non-metallic mineral manufacturing industrial groups, as could be expected, accommodated the largest number of employees. These two
industrial groups, alone, contributed nearly 44.0 percent in both number of persons engaged and number of employees throughout the period under review. The relative importance of the rest of the industrial groups in terms of employees varies between 0.1 percent in machinery and equipment manufacturers, to 12.1 percent in textile products manufacturers.

The percentage distribution of value added, which indicates the contribution level of, Large and Medium scale, manufacturing industries, to the total value added in the manufacturing sector, by industrial groups is given in summary Table 3.4 for the period 1997-2001 E.F.Y. The data in this table make obvious, the fact that, food and beverages manufacturing industrial group's contribution to the value added, was significantly higher than the other industrial groups, throughout the period under review. During 2001 E.F.Y., about 37.2 percent of the total manufacturing value added was generated from manufacture of food and beverage manufacturing establishments.

Following the food industries, other non-metallic mineral products, manufacturers of chemical and chemical products and manufacture of rubber \& plastic products contributed 16.4, 8.9 and 5.9 percent of the total value added of the large and medium scale manufacturing establishments, respectively.

However, it is important to note here that, despite their small share in the total value added, the following industrial groups: manufacture of tobacco products, manufacture of wearing apparel, manufacture of tanning and dressing of leather; manufacture of foot wear, luggage and hand bags, manufacture of wood and of products of wood and cork, except furniture, manufacturing of chemical and chemical products, manufacture of other non-metallic mineral products, manufacture of machinery and equipment and also manufacture of furniture; increased their share of value added, while the share of the remaining six industrial groups declined in 2001 E.F.Y. as compared to that of 2000 E.F.Y.

## Summary Table 3.1: Distribution of Large and Medium Scale Manufacturing Industries by Regional States* and Major Industrial Group - Public and Private 2000 E.F.Y

 (2007/08)| $\begin{gathered} \text { Division } \\ \text { of } \\ \text { ISIC } \\ \text { Rev. } 3 \end{gathered}$ | Major Industrial Group | Regional States |  |  |  |  |  |  |  |  |  |  | Total | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Tigray | Afar | Amhara | Oromiya | Somalie | Bensha. | SNNP | Gambella | Harari | Addis <br> Ababa | Dire <br> Dawa |  |  |
|  |  | Number of manufacturing industries |  |  |  |  |  |  |  |  |  |  |  |  |
| 15 | Manufacture of Food Products and Beverages | 36 | - | 45 | 130 | 7 | 2 | 54 | 1 | 7 | 255 | 25 | 562 | 25.51 |
| 16 | Manufacture of Tobacco Products | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 0.05 |
| 17 | Manufacture of Textiles | 1 | 2 | 4 | 3 | - | - | 6 | 1 | - | 29 | 1 | 47 | 2.13 |
| 18 | Manufacture of Wearing Apparel, Except Fur Apparel | 1 | - | - | 5 | - | - | - | - | - | 34 | 1 | 41 | 1.86 |
| 19 | Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags | 3 | - | 6 | 26 | - | - | - | - | 1 | 53 | - | 89 | 4.04 |
| 20 | Manufacture of Wood and Products of Wood and Cork, Except Furniture <br> Manufacture of Paper, Paper Products and | 1 | - | 2 | 17 | - | - | 12 | - | - | 16 | - | 48 | 2.18 |
| 21-22 | Printing | 5 | - | 4 | 8 | - | - | 1 | - | 3 | 102 | 4 | 127 | 5.76 |
| 24 | Manufacture of Chemicals and Chemical Products | 2 |  | - | 16 | - | - | 1 | - | - | 55 | 1 | 75 | 3.40 |
| 25 | Manufacture of Rubber and Plastic Products | 2 | - | - | 22 | - | - | 1 | - | - | 61 | 1 | 87 | 3.95 |
| 26 | Manufacture of Other Non-Metallic |  |  |  |  |  | - |  |  |  |  |  |  |  |
|  | Mineral Products | 129 | 9 | 109 | 84 | - | - | 131 | 3 | 20 | 121 | 2 | 608 | 27.60 |
| 27 | Manufacture of Basic Iron and Steel | 4 | - | - | - |  | - | - | - | - | 13 | 1 | 18 | 0.82 |
| 28 | Manufacture of Fabricated Metal Products Except Machinery and Equipment | 33 | - | 18 | 10 | - | - | 11 | - | 3 | 45 | - | 120 | 5.45 |
| 29 | Manufacture of Machinery and Equipment N.E.C. | - | - | - | 1 | - | - | - | - | - | 3 | 1 | 5 | 0.23 |
| 34 | Manufacture of Motor Vehicles, Trailers |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | and Semi-Trailers | 1 | - | - | 1 | - | - | - | - | - | 10 | - | 12 | 0.54 |
| 36 | Manufacture of Furniture; Manufacturing N.E.C. | 29 | 1 | 83 | 41 | 5 | 5 | 92 | 3 | 9 | 89 | 6 | 363 | 16.48 |
|  | Total | 247 | 12 | 271 | 364 | 12 | 7 | 309 | 8 | 43 | 887 | 43 | 2,203 | 100.00 |
|  | \% | 11.21 | 0.54 | 12.30 | 16.52 | 0.54 | 0.32 | 14.03 | 0.36 | 1.95 | 40.26 | 1.95 | 100.00 |  |

Summary Table 3.2: Number of Persons Engaged by Major Industrial Group Public and Private 1996-2000 E.F.Y (2003/04-2007/08)

*Revised

The data in Table 3.5 presents the ratio of imported to total consumed raw material cost by major industrial groups. It is evident that all the establishments covered in the survey consume imported raw material though the degree of the usage varies among them. The highest dependency ratio was observed in manufacture of rubber \& plastic production slightly ahead of machinery and equipment manufacturing, followed by motor vehicles, trailers semi trailers manufacturing, basic iron and steel, manufacture of machinery and equipment and chemical manufacturers, respectively. The lowest level of usage of imported raw materials was observed in tobacco manufacturing followed by non-metallic mineral products manufacturing. Overall the ratio has shown ups and downs during the five year period, which stood at 52.6 percent in

2001 E.F.Y which is a slight decrease from a year earlier. This clearly shows that the Ethiopian manufacturing industry is dependent on imported raw materials

Summary Table 3.3: Number of Employees by Major Industrial Group Public and Private 1996-2000 E.F.Y (2003/04-2007/08)


The data in summary table 3.6 refers to the per capita and ratios of major manufacturing indicators. In 2001 E.F.Y., gross value of production per employee and value of fixed assets per employee, value added per employee, operating surplus per employee and wages and salaries paid per employee have increased by 11.1 percent, 8.8 percent, 16.1 percent, 19.4 percent, and 5.7 percent, respectively, when compared to that of 2000 E.F.Y. It is evident from the same table that among the ratios presented, value added to total fixed capital assets, value added to gross value of production, operating surplus to gross value of production and cost of energy to value
of production showed an increase, while that of fixed assets to gross value of production, cost of labor to gross value of production, industrial costs to gross value of production decreased during the same period.

## Summary Table 3.4: Percentage Distribution of Value Added* by Major Industrial Group Public and Private 1996-2000 E.F.Y (2003/04-2007/08)

| $\begin{gathered} \text { Division } \\ \text { of } \\ \text { ISIC } \\ \text { Rev. } 3 \end{gathered}$ | Major Industrial Group | Year (E.F.Y) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1997 | 1998 | 1999 | 2000 | 2001 |
|  |  | Value Added in Percent |  |  |  |  |
| 15 | Manufacture of Food Products and Beverages | 41.8 | 40.31 | **36.48 | 38.51 | 37.15 |
|  | Manufacture of Tobacco Products |  |  |  |  | 4.92 |
|  |  | 3.41 |  |  |  |  |
| 16 |  |  | 3.73 | 2.86 | 3.63 | 4.87 |
| 17 | Manufacture of Textiles | 5.81 | 3.41 | 4.22 | 1.53 |  |
| 18 | Manufacture of Wearing Apparel, Except Fur Apparel | 0.53 | 0.56 | 1.21 | 1.22 | . 86 |
| 19 | Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags | 4.45 | 4.37 | 3.10 | 4.37 | 2.89 |
| 20 | Manufacture of Wood and Products of Wood and Cork, Except Furniture | 0.85 | 0.82 | 0.65 | 0.67 | . 41 |
| 21-22 | Manufacture of Paper, Paper Products and Printing | 7.93 | 5.34 | 5.50 | 5.45 | 5.68 |
| 24 | Manufacture of Chemicals and Chemical Products | 5.35 | 4.85 | 4.86 | 5.98 | 8.89 |
| 25 | Manufacture of Rubber and Plastic Products | 5.54 | 8.85 | 4.56 | 4.45 | 5.90 |
| 26 | Manufacture of Other Non-Metallic |  |  | 22.10 |  |  |
|  | Mineral Products | 8.87 | 15.67 |  | 23.20 | 16.41 |
| 27 | Manufacture of Basic Iron and Steel | 7.87 | 3.92 | 2.86 | 2.46 | 3.39 |
| 28 | Manufacture of Fabricated Metal Products |  |  |  |  |  |
|  | Except Machinery and Equipment | 3.38 | 3.03 | 5.46 | 3.94 | 4.59 .08 |
| 29 | Manufacture of Machinery and Equipment N.E.C. | 0.08 | 0.32 | 0.07 | 0.10 | . 08 |
| 34 | Manufacture of Motor Vehicles, Trailers |  |  |  |  |  |
| 36 | and Semi-Trailers | 0.50 | 2.40 | 4.00 | 2.41 | 1.57 |
|  | Manufacture of Furniture; Manufacturing N.E.C. | 3.55 | 2.42 | 2.08 | 2.09 | 2.39 |
|  | Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

* In the national account concept at basic price **Revised

The ratio of cost of energy consumed to total industrial cost by major industrial groups for the period 1997-2001 E.F.Y. is presented in summary Table 3.7. The figures in this table indicate that, non-metallic mineral products manufacturing, recorded the highest proportion of cost of energy consumed to the total industrial cost, throughout the period under review, exhibiting about 62.1 percent in 2001 E.F.Y. that is an increase of 8.6 percent compared to the previous
year. This large proportion is mainly due to the high energy requirement by cement and glass and glass products manufacturing establishments.

Following non-metallic mineral products, the highest energy consumption, compared to their industrial cost was observed in manufacture of wearing apparel, despite a decline of a 2.8 percent in 2001 E.F.Y. as compared to 2000 E.F.Y.

To summarize, the total cost of energy consumed to the industrial cost was showing ups and down in the previous years. As a matter of this fact, in the 2001 E.F.Y. it has shown an increase of 16 percent as compared to the year earlier.

Summary Table 3.5: Ratio of Imported to Total Consumed Raw Material Costs by Major Industrial Group Public and Private 1996-2000 E.F.Y (2003/04-2007/0)

| Division of ISIC Rev. 3 | Major Industrial Group | Year (E.F.Y) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1997 | 1998 | 1999 | 2000 | 2001 |
|  |  | Ratio of imported raw material |  |  |  |  |
| 15 | Manufacture of Food Products and Beverages | . 205 | . 206 | . 238 | . 279 | . 311 |
| 16 | Manufacture of Tobacco Products | . 433 | . 824 | . 990 | . 138 |  |
| 17 | Manufacture of Textiles | . 396 | . 409 | . 415 | . 296 | . 461 |
| 18 | Manufacture of Wearing Apparel, Except Fur Apparel | . 212 | . 312 | . 527 | . 373 | . 349 |
| 19 | Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags | . 162 | . 210 | . 216 | . 236 | . 261 |
| 20 | Manufacture of Wood and Products of Wood and Cork, Except Furniture | . 484 | . 445 | . 443 | . 239 | . 365 |
| 21-22 | Manufacture of Paper, Paper Products and Printing | . 816 | . 789 | . 717 | . 815 | . 737 |
| 24 | Manufacture of Chemicals and Chemical Products | . 857 | . 831 | . 785 | . 871 | . 799 |
| 25 | Manufacture of Rubber and Plastic Products | . 977 | . 918 | . 954 | . 772 | . 950 |
| 26 | Manufacture of Other Non-Metallic |  |  |  |  |  |
|  | Mineral Products | . 054 | . 095 | . 192 | . 198 | . 186 |
| 27 | Manufacture of Basic Iron and Steel | . 608 | . 672 | . 989 | . 998 | . 804 |
| 28 | Manufacture of Fabricated Metal Products Except Machinery and Equipment | . 812 | . 926 | . 875 | . 802 | . 866 |
| 29 | Manufacture of Machinery and Equipment N.E.C. | . 961 | . 997 | . 962 | . 977 | . 948 |
| 34 | Manufacture of Motor Vehicles, Trailers and Semi-Trailers | . 986 | . 947 | . 850 | . 971 | . 936 |
| 36 | Manufacture of Furniture; Manufacturing N.E.C. | . 421 | . 485 | . 524 | . 525 | . 554 |
|  | Total | . 460 | . 501 | . 583 | . 536 | . 526 |

The ratio in summary Table 3.8 depicts the ratio of value added to gross value of production by major industrial groups. The share of the industrial groups like that of manufacture of tobacco products, manufacture of textiles, manufacture of paper \& paper products manufacturing manufacture of basic iron \& steel, manufacture of fabricated metal products and manufacture of motor vehicle, trailers and semi-trailers recorded an increase while the ratio of the remaining six industrial groups declined in 2001 E.F.Y. as compared to the year before. On the other hand the ratio of value added to gross value of production for all industrial groups combined has increased by 4.7 percent during the survey year against a year ago.

## Summary Table 3.6: Per Capita and Ratios of Major Indicators Public and Private 1996-2000 E.F.Y (2003/04-2007/08)

| Major Industrial Group | Year (E.F.Y) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1997 | 1998 | 1999 | 2000 | 2001 |
|  | Per Capita |  |  |  |  |
| Wage and Salaries Paid Per Employee | 8,571 | 9,237 | **10,198 | 12,730 | 13,458 |
| Gross Value of Production Per Employee | 112,839 | 127,014 | **149,173 | 174,399 | 193,722 |
| Value Added* Per Employee | 27,766 | 31,036 | **39,589 | 45,005 | 52,269 |
| Operating Surplus Per Employee | 19,140 | 21,734 | **29,334 | 32,223 | 38,485 |
| Value of Fixed Asset Per Employee | 60,641 | 59,064 | **59,939 | 64,659 | 70,378 |
|  | Ratio |  |  |  |  |
| Fixed Assets to Gross Value of Production | . 537 | . 465 | . 402 | . 371 | . 363 |
| Cost of Labour to Gross Value of Production | . 076 | . 073 | **. 068 | . 073 | . 069 |
| Industrial Costs to Gross Value of Production | . 541 | . 542 | . 506 | . 513 | . 507 |
| Cost of Energy to Gross Value of Production | . 058 | . 054 | . 054 | . 051 | . 059 |
| Value Added* to Gross Value of Production | . 246 | . 244 | . 265 | . 258 | . 270 |
| Operating Surplus to Gross Value of Production | . 170 | . 171 | **. 197 | . 185 | . 199 |
| Value Added* to Total Fixed Capital | . 458 | . 525 | **. 660 | . 696 | . 743 |

The ratio of cost of labour to gross value of production for major industrial groups, which roughly measures, labour productivity, is treated in summary table 3.9. It is evident from the data in this table, that, the ratio of cost of labour to gross value of production varies across major industrial groups. In 2001 E.F.Y., the highest ratios were registered in manufacturing of wood and products of wood and cork, while both manufacture of tobacco products \& manufacture of chemicals registered equally the lowest ratio, respectively. Ratio of cost of labour to gross value of production for all manufacturing industries combined, showed a continuous decline in the past four years and except in 2000 E.F.Y.

The ratio of operating surplus to gross value of production by major industrial groups combined is presented in summary table 3.10 . The share of nine out of fifteen major industrial groups and the overall average exhibited an increase in 2001 E.F.Y against that of 2000 E.F.Y.

Summary Table 3.7: Ratio of Cost of Energy Consumed to Total Industrial Cost by Major Industrial Group Public and Private 1996-2000 E.F.Y (2003/04-2007/08)


Summary Table 3.8: Ratio of Value Added* to Gross Value of Production by Major Industrial Group Public and Private 1996-2000 E.F.Y (2003/04-2007/08)

| $\begin{gathered} \text { Division } \\ \text { of } \\ \text { ISIC } \\ \text { Rev. } 3 \end{gathered}$ | Major Industrial Group | Year (E.F.Y) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1997 | 1998 | 1999 | 2000 | 2001 |
|  |  | Ratio of value added* to gross value of production |  |  |  |  |
| 15 | Manufacture of Food Products and Beverages | . 287 | . 274 | . 301 | . 261 | . 249 |
| 16 | Manufacture of Tobacco Products | . 318 | . 331 | . 301 | . 379 | . 607 |
| 17 | Manufacture of Textiles <br> Manufacture of Wearing Apparel, Except <br> Fur Apparel <br> Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags <br> Manufacture of Wood and Products of Wood and Cork, Except Furniture | . 196 | . 136 | . 189 | . 131 | . 265 |
| 18 |  | $\text { . } 258$ | . 257 | . 218 | . 186 | . 164 |
| 19 |  | $\text { . } 137 .$ | . 157 | . 126 | . 179 | . 169 |
| 20 |  | . 445 | . 420 | . 355 | . 334 | . 278 |
| 21-22 | Manufacture of Paper, Paper Products and Printing | . 308 | . 247 | . 281 | . 261 | . 345 |
| 24 | Manufacture of Chemicals and Chemical Products | . 206 | . 192 | . 207 | . 205 | . 266 |
| 25 | Manufacture of Rubber and Plastic Products | . 244 | $.331$ | . 211 | . 178 | . 240 |
| 26 | Manufacture of Other Non-Metallic | $231$ |  |  |  |  |
|  |  |  | . 344 | . 434 | . 448 | . 365 |
| 27 | Manufacture of Basic Iron and Steel | . 220 | . 105 | . 096 | . 135 | . 219 |
| 28 | Manufacture of Fabricated Metal Products Except Machinery and Equipment | . 216 | . 211 | . 370 |  | . 218 |
| 29 | Manufacture of Machinery and Equipment N.E.C. Manufacture of Motor Vehicles, Trailers | . 175 | . 085 | . 226 | . 215 | . 263 |
| 36 | Manufacture of Motor Vehicles, Trailers and Semi-Trailers <br> Manufacture of Furniture; Manufacturing N.E.C. | . 063 | . 209 | . 159 | . 181 | . 239 |
|  |  | . 323 | . 309 | . 333 | . 315 | . 284 |
|  | Total | . 246 | . 244 | . 265 | . 258 | . 270 |

* In the national account concept at basic price

Summary Table 3.9: Ratio of Cost of Labour to Gross Value of Production by Major Industrial Group Public and Private 1996-2000 E.F.Y (2003/04-2007/08)

| Division of ISIC Rev. 3 | Major Industrial Group | Year (E.F.Y) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1997 | 1998 | 1999 | 2000 | 2001 |
|  |  | Ratio of cost of labour |  |  |  |  |
| 15 | Manufacture of Food Products and Beverages | . 073 | . 072 | *. 073 | . 067 | . 064 |
| 16 | Manufacture of Tobacco Products | . 043 | . 055 | . 056 | . 108 | . 044 |
| 17 | Manufacture of Textiles | . 131 | . 144 | . 122 | . 140 | . 115 |
| 18 | Manufacture of Wearing Apparel, Except Fur Apparel | . 207 | . 316 | . 224 | . 188 | . 150 |
| 19 | Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags | . 070 | . 072 | . 060 | . 061 | . 074 |
| 20 | Manufacture of Wood and Products of Wood and Cork, Except Furniture | . 183 | . 172 | . 184 | . 196 | . 169 |
| 21-22 | Manufacture of Paper, Paper Products and Printing | . 097 | . 107 | . 099 | . 113 | . 110 |
| 24 | Manufacture of Chemicals and Chemical Products | . 072 | . 060 | 076 | . 061 | . 044 |
| 25 | Manufacture of Rubber and Plastic Products | . 069 | . 055 | . 059 | . 054 | . 065 |
| 26 | Manufacture of Other Non-Metallic Mineral Products | . 066 | . 059 | . 044 | . 074 | . 071 |
| 27 | Manufacture of Basic Iron and Steel | . 026 | . 022 | . 021 | . 025 | . 051 |
| 28 | Manufacture of Fabricated Metal Products Except Machinery and Equipment | . 072 | . 079 | . 062 | . 056 | . 054 |
| 29 | Manufacture of Machinery and Equipment N.E.C. | . 098 | . 078 | . 102 | . 064 | . 089 |
| 34 | Manufacture of Motor Vehicles, Trailers and Semi-Trailers | . 073 | . 057 | . 037 | . 050 | . 082 |
| 36 | Manufacture of Furniture; Manufacturing N.E.C. | . 152 | . 122 | . 136 | . 139 | . 116 |
|  | Total | . 076 | . 073 | *. 068 | . 073 | . 069 |

*Revised

Summary Table 3.10: Ratio of Operating Surplus to Gross Value of Production by Major Industrial Group -
Public and Private 1996-2000 E.F.Y (2003/04-2007/08)

| Division of ISIC Rev. 3 | Major Industrial Group | Year (E.F.Y) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1997 | 1998 | 1999 | 2000 | 2001 |
|  |  | Ratio of operating Surplus |  |  |  |  |
| 15 | Manufacture of Food Products and Beverages | . 213 | . 202 | *. 227 | . 193 | . 185 |
| 16 | Manufacture of Tobacco Products | . 275 | . 275 | . 245 | . 270 | . 564 |
| 17 | Manufacture of Textiles | . 065 | -. 010 | . 067 | -. 011 | . 148 |
| 18 | Manufacture of Wearing Apparel, Except Fur Apparel | . 050 | -. 060 | -. 007 | -. 003 | . 084 |
| 19 | Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags | . 067 | . 084 | . 066 | . 118 | . 094 |
| 20 | Manufacture of Wood and Products of Wood and Cork, Except Furniture | . 261 | . 247 | . 169 | . 138 | . 109 |
| 21-22 | Manufacture of Paper, Paper Products and Printing | . 211 | . 139 | . 182 | . 148 | . 234 |
| 24 | Manufacture of Chemicals and Chemical Products | . 133 | . 131 | . 131 | . 144 | . 222 |
| 25 | Manufacture of Rubber and Plastic Products | . 174 | . 275 | . 152 | . 123 | . 175 |
| 26 | Manufacture of Other Non-Metallic Mineral Products | . 165 | . 284 | . 389 | . 374 | . 294 |
| 27 | Manufacture of Basic Iron and Steel | . 194 | . 082 | . 075 | . 109 | . 168 |
| 28 | Manufacture of Fabricated Metal Products Except Machinery and Equipment | . 144 | . 131 | . 308 | . 138 | . 165 |
| 29 | Manufacture of Machinery and Equipment N.E.C. | . 075 | . 007 | . 124 | . 150 | . 173 |
| 34 | Manufacture of Motor Vehicles, Trailers and Semi-Trailers | -. 012 | . 151 | . 122 | . 131 | . 157 |
| 36 | Manufacture of Furniture; Manufacturing N.E.C. | . 169 | . 185 | . 195 | . 175 | . 167 |
|  | Total | . 170 | . 171 | *. 197 | . 185 | . 199 |

During the survey, establishments that worked less than 12 months were asked to state their reasons for not working the whole year, during the reference period and the results are presented in summary table 3.11.

It can be observed that among 1,088 establishments which operated less than 12 months, during the reference period, 31.0 percent and 30.5 percent indicated that shortage of supply of raw materials and shortage of electricity (a significant increase over the previous year) followed by
lack of market for their produce (7.9 percent). Close to ten percent of the establishments gave other reasons.

In a similar note to the above, establishments which were not working at full capacity were asked to state their reasons for working below capacity during the reference period and the responses are displayed in summary table 3.12. Shortage of supply of raw materials and absence of market demand emerged as the first and second major causes for under utilization of capacity.

In a similar way, the data in summary table 3.13 depict the first major problems faced by establishments during the survey period. As the data in the table indicate, 34.1 percent of the establishments reported that the first major current operating difficulty was shortage of supply of raw materials, followed by absence of market demand which was reported by 15.3 percent of the total reporting establishments.

Summary Table 3.11: Percentage Distribution of Establishments by First Major Reason for Not Being Fully Operational and
and Major Industrial Group - Public and Private 2001 E.F.Y (2008/09)

| Division of ISIC Rev. 3 | Major Industrial Group | Type of reasons |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Shortage of supply of raw materials | Shortage of supply of spare parts | Lack of foreign exchange | Absence of market demand | Lack of working capital | Shortage of electricity and water supply | Frequent machinery breakage | Obstacles from Gov. Rules and regulations | Others | Not <br> stated |
|  |  | Percentage distribution of establishments |  |  |  |  |  |  |  |  |  |
| 15 | Manufacture of Food Products and Beverages | 50 | 2 | 3 | 19 | 6 | 60 | 9 | 4 | 28 | 27 |
| 16 | Manufacture of Tobacco Products | - | - | - | - | - | - | - | - | - | - |
| 17 | Manufacture of Textiles | 6 | 1 | 1 | 2 | - | 13 | - | - |  | 1 |
| 18 | Manufacture of Wearing Apparel, Except |  |  |  |  |  |  |  |  | 3 |  |
|  | Fur Apparel | 4 | - | - | 1 | - | 4 | - | - | - | 2 |
| 19 | Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags | 9 | - | 1 | 5 | 4 | 33 | - | 1 | 2 | - |
| 20 | Manufacture of Wood and Products of Wood and Cork, Except Furniture | 11 | 1 | - | 2 | 1 | 8 | 1 | - | 1 | 3 |
| 21-22 | Manufacture of Paper, Paper Products and Printing | 4 | - | 4 | 2 | - | 7 | - | - | 1 | 1 |
| 24 | Manufacture of Chemicals and Chemical Products | 4 | - | - | 2 | 1 | 14 | 1 | - | 2 | 4 |
| 25 | Manufacture of Rubber and Plastic Products | 8 | - | 2 | 1 | - | 30 | - | - | 3 | 3 |
| 26 | Manufacture of Other Non-Metallic |  |  |  |  |  |  |  |  |  |  |
|  | Mineral Products | 216 | 9 | - | 28 | 15 | 94 | 19 | 10 | 49 | 43 |
| 27 | Manufacture of Basic Iron and Steel | 2 | 1 | - | - | 2 | 3 | - | - | - | - |
| 28 | Manufacture of Fabricated Metal Products |  |  |  |  |  |  |  |  |  |  |
|  | Except Machinery and Equipment | 10 | - | 3 | 5 | - | 18 | - | 5 | 6 | 8 |
| 29 | Manufacture of Machinery and Equipment N.E.C. | - | - | - | 1 | - | - | - | - | - | - |
| 34 | Manufacture of Motor Vehicles, Trailers |  |  |  |  |  |  |  |  |  |  |
|  |  | - | - | - | - | 1 | 1 | - | - | - | - |
| 36 | Manufacture of Furniture; Manufacturing N.E.C. | 13 | - | - | 18 | 4 | 47 | 2 | - | 11 | 21 |
|  | Total | 337 | 14 | 14 | 86 | 34 | 332 | 32 | 20 | 106 | 113 |
|  | \% | 30.97 | 1.29 | 1.29 | 7.90 | 3.13 | 30.51 | 2.94 | 1.84 | 9.74 | 10.39 |

## Summary Table 3.12: Percentage Distribution of Establishments by First reason for not working at full capacity

 and Major Industrial Group - Public and Private 2001 E.F.Y (2008/09)

## Summary Table 3.13: Distribution of Establishments by Type of First Major Operational problems faced by the establishments during the survey period

 and Major Industrial Group - Public and Private 2001 E.F.Y (2008/09)

FIG. I Gross Value of Production at Current Price by Ownership 1995-1999 E.F.Y (2002/03-2006/07)


FIG. II Value Added* Puplic and Private
1995-1999 E.F.Y (2002/03-2006/07)

*In the National Account Concept at Basic Price

FIG. III Percentage Distribution of Value Added**
by Major Industrial Group 1999 E.F.Y (2006/7)


* In the National Account Concept at Basic Price
** Includes Basic Iron, Fabricated Metal, Machinery and Motor Vehicles
*** Includes Rubber and Plastic

FIG. IV Ratio of Imported to Total Raw Material Cost by Major Industrial Group 1999E.F.Y 2006/07

*Includes Rubber and Plastics
**Includes Basic Iron,Fabricated Metal,Machinery and Motor Vehicles

FIG. V - Ratio of Value Added* to Gross Value of Production 1999 E.F.Y (2006107)


* In the National Account Concept at Basic Price
** Includes Basic Iron, Fabricated Metal, Machinery and Motor Vehicles
*** Includes Rubber and Plastic

FIG. VI - Installed Generating Capacity of Electricity
1995-1999 E.F.Y (2002/03- 2006/07)


FIG. VII - Production of Electricity

## 1995-1999 E.F.Y (2002103-2006107)



| INDUSTRIAL GROUP | type of reasons |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SHORTAGE <br> OF SUPPLY <br> OF RAW <br> MATERIALS | SHORTAGE <br> OF SUPPLY <br> OF SPARE PARTS | LACK OF FOREIGN EXChANGE | ABSENCE OF MARKET DEMAND | LACK OF WORKING CAPITAL | SHORTAGE OF ELECTRICITY AND WATER SUPPLY | FREQUENT MACHINERY BREAKAGE | OBSTACLES FROM GOV. RULES AND REGULATIONS | OTHERS | $\begin{gathered} \text { NOT } \\ \text { STATED } \end{gathered}$ | TOTAL |
| MANUFACTURE OF FOOD PRODUCTS AND BEVERAGES. | 50 | 2 | 3 | 19 | 6 | 60 | 9 | 4 | 28 | 27 | 208 |
| MANUFACTURE OF TOBACCO PRODUCTS | - | - | - | - | - | - | - | - | - | - | - |
| manufacture of textiles | 6 | 1 | 1 | 2 | - | 13 | - | - | 3 | 1 | 27 |
| MANUFACTURE OF WEARING APPAREL, except fur apparel.... | 4 | - | - | 1 | - | 4 | - | - | - | 2 | 11 |
| TANNING AND DRESSING OF LEATHER; MANUFACTURE OF FOOTWEAR, LUGGAGE AND HANDBAGS | 9 | - | 1 | 5 | 4 | 33 | - | 1 | 2 | - | 55 |
| MANUFACTURE OF WOOD AND OF PRODUCTS OF WOOD AND CORK, EXCEPT FURNITURE ........................................ | 11 | 1 | - | 2 | 1 | 8 | 1 | - | 1 | 3 | 28 |
| manfacture of paper, Paper products and printing | 4 | - | 4 | 2 | - | 7 | - | - | 1 | 1 | 19 |
| MANUFACTURE OF Chemicals and Chemical products...... | 4 | - | - | 2 | 1 | 14 | 1 | - | 2 | 4 | 28 |
| MANUFACTURE OF RUBBER AND PLAStic products. | 8 | - | 2 | 1 | - | 30 | - | - | 3 | 3 | 47 |
| MANUFACTURE OF Other non-METALLIC MINERAL Products ... | 216 | 9 | - | 28 | 15 | 94 | 19 | 10 | 49 | 43 | 483 |
| manufacture of basic iron and steel.. | 2 | 1 | - | - | 2 | 3 | - | - | - | - | 8 |
| MANUFACTURE OF FABRICATED METAL PRODUCTS EXCEpT MACHINERY AND EQUIPMENT | 10 | - | 3 | 5 | - | 18 | - | 5 | 6 | 8 | 55 |
| MANUFACture of machinery and equipment n.e.c. . . . . . . . | - | - | - | 1 | - | - | - | - | - | - | 1 |
| MANUFACTURE OF MOTOR VEhICLES, TRAILERS \& SEMI-TRAILERS | - | - | - | - | 1 | 1 | - | - | - | - | 2 |
| manufacture of furniture; manufacturing n.e.c. . . . . . . | 13 | - | - | 18 | 4 | 47 | 2 | - | 11 | 21 | 116 |
| T 0 T $\quad$ A | 337 | 14 | 14 | 86 | 34 | 332 | 32 | 20 | 106 | 113 | 1,088 |
| \% | 30.97 | 1.29 | 1.29 | 7.90 | 3.13 | 30.51 | 2.94 | 1.84 | 9.74 | 10.39 | 100.00 |

