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CENTRAL STATISTICAL AGENCY

REPORT ON LARGE AND MEDIUM SCALE
MANUFACTURING AND ELECTRICITY
INDUSTRIES SURVEY

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Abbreviations

CSA	- Central Statistics Agency
E.C	-Ethiopian Calendar
E .F.Y.	- Ethiopian Fiscal Year
ISIC	-International Standard Industrial Classification
Rev.3	-Economic Activities Revision 3
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) 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 E.C. 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.

In this edition value added in the national account concept at factor cost is replaced with value added in the national account concept at basic price. So as to comply with the current practice of System of National Account (SNA). As a result, the time series data for the previous four years have also been adjusted. In addition to this the concept and data in respect of census value added is withdrawn from the report because its application is no more used in practice.

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 1998 E.F.Y (2005/06). Part V deals with time series data and various ratios for the period of five years i.e. 1994-1998 E.F.Y. (2001/02 - 2005/06) 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 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. a bakery, a saw mill, etc.)

(ii) **Paid -up Capital:** - is that part of the issued capital of an establishment which 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 per diem.

(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 by-products 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 book-value 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 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 CSA Statistical Branch Offices were involved in this survey. Accordingly, 20 statisticians from Branch Statistical Offices, about 136 enumerators and supervisors (82 from Addis Ababa Branch Office and 54 from other Branch Offices), and 10 statisticians from the Head Office and about 33 drivers (9 from Addis Ababa branch and 25 from the rest) were involved in the data collection activity.

In Addis Ababa Branch Statistical Office, where the majority of the establishments under the scope of the survey are located, enumerators were organized into teams and each team on the average constituted five enumerators and a field editor (a supervisor). The supervisor was provided with a four-wheel drive vehicle and a driver. At the Head Office, prior to the deployment of the teams, the list of the establishments under the scope of the survey were distributed among the teams, in accordance with their location. Then, each enumerator was assigned to collect data, on average, from 8 establishments. The data collection operation was carried out in collaboration with the concerned personnel of each establishment. Similar arrangement was in place in other branch offices. Overall, the data collection activity took 30-45 days in most of the regions of the country.

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 was 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. Twelve 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 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 1,244 in 1998 E.F.Y. (2005/2006). It has shown an increase of 33 establishments and 3.1 percent compared to the year before in absolute and relative terms, respectively. For the country as a whole, establishments classified under manufacture of food products and beverages industrial group constituted the largest share accounting for 29.9 percent of the total. The output by these industries among others include: flour, bread, edible oil, soft drinks, beer and alcohol drinks. Manufacture of furniture and manufacture of non-metallic mineral products, which represented 16.2 and 12.2 percent of the total, were in second and third position, respectively. That means the share of the three industrial groups combined was 58.2 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. Nearly half (54.3 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, Amhara, S.N.N.P, Tigray and Dire Dawa regions covered 14.9, 9.4, 9.0, 8.4 and 2.0 percent of the total establishments, in that order.

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., from 1994-1998 E.F.Y. (2001/02 – 2005/06), respectively. In 1997 E.F.Y., there were 119,397 persons engaged, out of which, 118,468 were, employees in the sector. Number of persons engaged and employees during the survey period, showed an increase of 8.4 and 8.5 percent, compared to that of a year before, respectively. These increases in the number of persons engaged and employees could be attributed to the increase in the number of establishments covered in 1998 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 manufacture of textiles industrial groups, as could be expected, accommodated the largest number of employees. These two industrial groups alone, contributed nearly 49 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 employment varies between 0.3 percent in manufacture of machinery and equipment, to 8.5 percent in manufacture of non-metallic mineral products.

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 1994-1998 E.F.Y. The data in this table make obvious, the fact that, food and beverages manufacturing industrial group's contribution to the total value added, was significantly higher than the other industrial groups, throughout the period under review. During 1998 E.F.Y., about 40.3 percent of the total manufacturing value added was generated from manufacture of food and beverage industrial groups. Other important industrial groups in this respect are: manufacture of other non-metallic mineral products, manufacture of rubber and plastic, manufacture of paper and paper products, manufacture of chemical and chemical products, manufacture of footwear, luggage and handbags, manufacture of basic iron and steel and manufacture of tobacco products. However it is important to note here that, despite the small share in the total value added, manufacture of tobacco products, manufacture of wearing apparel except fur apparel, manufacture of rubber and plastic products, manufacture of other non –metallic mineral products, manufacture of machinery and equipment and

manufacture of motor vehicles, trailers & semi- trailers increased, while the share of the remaining nine industrial groups declined in 1998 E.F.Y. as compared to that of 1997 E.F.Y.

Furthermore, the textile manufacturing industrial group, being the second most important in terms of employment creation, its share in manufacturing value added however, was ranked ninth in 1998 E.F.Y.

**Summary Table 3.1: Distribution of Large and Medium Scale Manufacturing Industries
By Regional States * And Industrial Group- Public and Private 2005/2006(1998 E.F.Y)**

**Summary Table 3.2: Number of Persons Engaged by Major Industrial Group -
Public and Private 1994 - 1998 E.F.Y (2001/02 - 2005/06)**

Division of ISIC Rev. 3	Major Industrial Group	Year (E.F.Y)				
		1994	1995	1996	1997	1998
		Number of Persons Engaged				
15	Manufacture of Food Products and Beverages	29,133	30,840	31,589	32,096	35,934
16	Manufacture of Tobacco Products	792	792	785	697	755
17	Manufacture of Textiles	22,388	21,957	22,914	20,734	22,131
18	Manufacture of Wearing Apparel, Except Fur Apparel	3,716	4,312	3,840	2,643	4,128
19	Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags	6,757	7,278	7,718	7,965	7,964
20	Manufacture of Wood and Products of Wood and Cork, Except Furniture	1,329	1,694	1,639	1,579	1,798
21 - 22	Manufacture of Paper, Paper Products and Printing	6,179	6,424	6,955	7,528	8,083
24	Manufacture of Chemicals and Chemical Products	5,079	5,102	5,075	5,977	5,674
25	Manufacture of Rubber and Plastic Products	4,331	4,429	4,412	5,679	6,916
26	Manufacture of Other Non-Metallic Mineral Products	8,354	8,049	9,266	9,163	10,211
27	Manufacture of Basic Iron and Steel	1,449	1,466	1,700	1,767	2,122
28	Manufacture of Fabricated Metal Products Except Machinery and Equipment	2,808	3,488	3,516	3,913	5,903
29	Manufacture of Machinery and Equipment N.E.C.	202	260	267	225	410
34	Manufacture of Motor Vehicles, Trailers and Semi-Trailers	1,087	1,021	1,132	1,234	1,457
36	Manufacture of Furniture; Manufacturing N.E.C.	5,382	5,235	5,343	8,960	5,929
	Total	98,986	102,347	106,151	110,160	119,397

The data in Summary Table 3.5 refer to the ratio of cost of imported raw materials to that of the total cost of raw materials consumed by major industrial groups for the period 1994-1998 E.F.Y. In general, the industrial groups which had the highest rates in the previous years continued to do so in the survey year as well. The high ratio of imported raw materials to the total cost of raw materials consumed, over the five years period, is an indication of the dependency of large and medium scale manufacturing industries in the country, on imported raw materials.

**Summary Table 3.3: Number of Employees by Major Industrial Group -
Public and Private 1994 - 1998 E.F.Y (2001/02 - 2005/06)**

Division of ISIC Rev. 3	Major Industrial Group	Year (E.F.Y)				
		1994	1995	1996	1997	1998
		Number of Employees				
15	Manufacture of Food Products and Beverages	28,860	30,570	31,359	31,693	35,660
16	Manufacture of Tobacco Products	792	792	785	697	755
17	Manufacture of Textiles	22,373	21,938	22,900	20,701	22,100
18	Manufacture of Wearing Apparel, Except Fur Apparel	3,681	4,278	3,806	2,606	4,099
19	Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags	6,740	7,232	7,665	7,913	7,914
20	Manufacture of Wood and Products of Wood and Cork, Except Furniture	1,313	1,669	1,616	1,563	1,759
21 - 22	Manufacture of Paper, Paper Products and Printing	6,142	6,405	6,940	7,507	8,059
24	Manufacture of Chemicals and Chemical Products	5,072	5,094	5,071	5,975	5,668
25	Manufacture of Rubber and Plastic Products	4,326	4,424	4,410	5,673	6,899
26	Manufacture of Other Non-Metallic Mineral Products	8,232	7,835	9,138	9,047	10,093
27	Manufacture of Basic Iron and Steel	1,448	1,466	1,699	1,762	2,122
28	Manufacture of Fabricated Metal Products Except Machinery and Equipment	2,740	3,412	3,453	3,828	5,796
29	Manufacture of Machinery and Equipment N.E.C.	190	244	256	221	400
34	Manufacture of Motor Vehicles, Trailers and Semi-Trailers	1,082	1,019	1,130	1,232	1,456
36	Manufacture of Furniture; Manufacturing N.E.C.	5,145	5,026	5,153	8,732	5,688
	Total	98,136	101,404	105,381	109,150	118,468

The overall dependency ratio, i.e., for all industrial groups combined, showed a fluctuation throughout the years under review. Manufacture of machinery and equipment, manufacture of motor vehicles, trailers and semi trailers, Manufacture of rubber and plastic, Manufacture of chemicals and chemical products, manufacture of tobacco products and manufacture of paper, paper products and printing and manufacture of basic iron, consumed the highest proportion of imported raw materials, to that of the total cost of raw materials, ranging from 67.2 to 99.7 percent in 1998 E.F.Y.

As shown in Summary Table 3.6, where per capita and ratios of major manufacturing indicators are summarized, in 1998 E.F.Y., wages and salaries paid per employee, gross value of production per employee, value added per employee and operating surplus per employee, have shown an increase by 8.0, 12.6, 11.8 and 13.6 percent, respectively, compared to that of 1997 E.F.Y., while value of fixed assets per employee showed a decrease of 2.6 percent in the same year. Among the ratios presented in the table, fixed assets to gross value of production, cost of labour to gross value of production, and cost of energy to gross value of production, value added to gross value of production declined, while operating surplus to gross value of production, value added to fixed capital assets showed an increase during the stated period.

**Summary Table 3.4: Percentage Distribution of Value Added* by Major Industrial Group -
Public and Private 1994 - 1998 E.F.Y (2001/02 - 2005/06)**

Division of ISIC Rev. 3	Major Industrial Group	Year (E.F.Y)				
		1994	1995	1996	1997	1998
		Value Added in Percent				
15	Manufacture of Food Products and Beverages	45.35	46.97	44.99	41.87	40.31
16	Manufacture of Tobacco Products	4.06	3.49	5.25	3.41	3.73
17	Manufacture of Textiles	4.97	4.22	4.26	5.81	3.41
18	Manufacture of Wearing Apparel, Except Fur Apparel	.64	.90	.74	.53	.56
19	Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags	6.8	4.38	5.03	4.45	4.37
20	Manufacture of Wood and Products of Wood and Cork, Except Furniture	.76	1.04	.85	.85	.82
21 - 22	Manufacture of Paper, Paper Products and Printing	6.56	5.54	6.2	7.93	5.34
24	Manufacture of Chemicals and Chemical Products	5.33	5.41	6.66	5.35	4.85
25	Manufacture of Rubber and Plastic Products	6.09	5.99	6.2	5.54	8.85
26	Manufacture of Other Non-Metallic Mineral Products	9.72	13.77	12.52	8.87	15.67
27	Manufacture of Basic Iron and Steel	3.1	2.39	3.66	7.87	3.92
28	Manufacture of Fabricated Metal Products Except Machinery and Equipment	2	1.94	2.72	3.38	3.03
29	Manufacture of Machinery and Equipment N.E.C.	.07	.06	.09	.08	.32
34	Manufacture of Motor Vehicles, Trailers and Semi-Trailers	2.51	1.61	-1.19	.50	2.40
36	Manufacture of Furniture; Manufacturing N.E.C.	2.05	2.28	2	3.55	2.42
	Total	100	100	100	100	100

* In the national account concept at Basic Price

The ratio of cost of energy consumed to total industrial cost by major industrial groups for the period 1994-1998 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 58.1 percent in 1998 E.F.Y. This large proportion is mainly due to the high energy requirement by cement and glass and glass products manufacturing establishments. The proportion of cost of energy to industrial cost for non-metallic industries evidenced a similar trend to the previous years. In this respect, the proportion for this industrial group alone ranged from 46.0 to 58.0 percent from 1994-1998 E.F.Y. Following non-metallic mineral products, the highest energy consumption, compared to their industrial cost was observed in manufacture of wood and products of wood. The share for manufacture of wood and products of wood showed a 4.5 percent decline in 1998 E.F.Y. as compared to 1997 E.F.Y. The total cost of energy consumed to the industrial cost is volatile in the previous years. As a matter of this fact, in the present year it has shown a decrease of 6.5 percent as compared to the 1997 E.F.Y.

Summary Table 3.5: Ratio of Imported to Total Consumed Raw Material Costs by Major Industrial Group - Public and Private 1994 - 1998 E.F.Y (2001/02 - 2005/06)

Division of ISIC Rev. 3	Major Industrial Group	Year (E.F.Y)				
		1994	1995	1996	1997	1998
		Ratio of imported raw material				
15	Manufacture of Food Products and Beverages	.250	.220	.214	.205	.206
16	Manufacture of Tobacco Products	.798	.798	.368	.433	.824
17	Manufacture of Textiles	.259	.290	.311	.396	.409
18	Manufacture of Wearing Apparel, Except Fur Apparel	.099	.257	.163	.212	.312
19	Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags	.230	.216	.184	.162	.210
20	Manufacture of Wood and Products of Wood and Cork, Except Furniture	.568	.546	.564	.484	.445
21 - 22	Manufacture of Paper, Paper Products and Printing	.732	.754	.712	.816	.789
24	Manufacture of Chemicals and Chemical Products	.772	.732	.779	.857	.831
25	Manufacture of Rubber and Plastic Products	.826	.850	.940	.977	.918
26	Manufacture of Other Non-Metallic Mineral Products	.047	.298	.170	.054	.095
27	Manufacture of Basic Iron and Steel	.992	.992	.990	.608	.672
28	Manufacture of Fabricated Metal Products Except Machinery and Equipment	.899	.890	.850	.812	.926
29	Manufacture of Machinery and Equipment N.E.C.	.945	.923	.942	.961	.997
34	Manufacture of Motor Vehicles, Trailers and Semi-Trailers	.892	.934	.926	.986	.947
36	Manufacture of Furniture; Manufacturing N.E.C.	.416	.423	.442	.421	.485
	Total	.452	.437	.471	.460	.501

The ratio in Summary Table 3.8 depicts the share of value added in gross value of production by major industrial groups. The share of the industrial groups like that of manufacture of tobacco products, tanning and dressing of leather, manufacture of footwear, luggage, and handbags, manufacture of rubber and plastic products, manufacture of other non-metallic mineral products and manufacture of motor vehicles, trailers and semi trailers recorded an increase, while the ratio of the remaining ten industrial groups declined in 1998 E.F.Y., as compared to a year before. On the other hand, the share of value added in gross value of production for all industrial groups combined, has decreased during the survey year.

**Summary Table 3.6: Per Capita and Ratios of Major Indicators -
Public and Private 1994 - 1998 E.F.Y (2001/02 - 2005/06)**

Major Industrial Group	Year (E.F.Y)				
	1994	1995	1996	1997	1998
	Per Capita				
Wage and Salaries Paid Per Employee	7,575	7,913	8,268	8,571	9,237
Gross Value of Production Per Employee	82,454	88,993	103,166	112,839	127,014
Value Added* Per Employee	22,626	25,478	27,027	27,766	31,036
Operating Surplus Per Employee	14,983	17,484	18,669	19,140	21,734
Value of Fixed Asset Per Employee	63,073	64,370	61,790	60,641	59,064
	Ratio				
Fixed Assets to Gross Value of Production	.765	.723	.599	.537	.465
Cost of Labour to Gross Value of Production	.092	.089	.080	.076	.073
Industrial Costs to Gross Value of Production	.512	.504	.513	.541	.542
Cost of Energy to Gross Value of Production	.048	.055	.055	.058	.054
Value Added* to Gross Value of Production	.274	.287	.262	.246	.244
Operating Surplus to Gross Value of Production	.182	.196	.181	.170	.171
Value Added* to Total Fixed Capital	.359	.396	.437	.458	.525

* In the national account concept at factor cost

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 1998 E.F.Y., the highest and lowest ratios were registered in manufacture of wearing apparel and manufacture of basic iron and steel, respectively. Ratio of cost of labour to gross value of production for all manufacturing industries combined, showed a continuous decline from year to year during the period under review.

The ratio of operating surplus to gross value of production by major industrial groups and for all manufacturing industrial groups combined is presented in Summary Table 3.10. The share of eight out of fifteen major industrial groups have shown a decrease while the overall average increased in 1998 E.F.Y. against that of 1997 E.F.Y.

Summary Table 3.7: Ratio of Cost of Energy Consumed to Total Industrial Cost by Major Industrial Group - Public and Private 1994 - 1998 E.F.Y (2001/02 - 2005/06)

Division of ISIC Rev. 3	Major Industrial Group	Year (E.F.Y)				
		1994	1995	1996	1997	1998
		Ratio of cost of energy consumed				
15	Manufacture of Food Products and Beverages	.074	.075	.108	.118	.062
16	Manufacture of Tobacco Products	.008	.008	.009	.006	.034
17	Manufacture of Textiles	.141	.104	.092	.116	.109
18	Manufacture of Wearing Apparel, Except Fur Apparel	.030	.022	.019	.018	.020
19	Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags	.018	.016	.021	.019	.027
20	Manufacture of Wood and Products of Wood and Cork, Except Furniture	.224	.221	.240	.243	.232
21 - 22	Manufacture of Paper, Paper Products and Printing	.055	.054	.054	.045	.063
24	Manufacture of Chemicals and Chemical Products	.035	.037	.040	.041	.038
25	Manufacture of Rubber and Plastic Products	.093	.083	.086	.085	.060
26	Manufacture of Other Non-Metallic Mineral Products	.484	.518	.460	.461	.581
27	Manufacture of Basic Iron and Steel	.022	.024	.014	.018	.012
28	Manufacture of Fabricated Metal Products Except Machinery and Equipment	.063	.070	.054	.037	.042
29	Manufacture of Machinery and Equipment N.E.C.	.064	.037	.022	.013	.002
34	Manufacture of Motor Vehicles, Trailers and Semi-Trailers	.010	.018	.014	.032	.007
36	Manufacture of Furniture; Manufacturing N.E.C.	.023	.020	.026	.021	.019
	Total	.095	.109	.106	.107	.100

**Summary Table 3.8: Ratio of Value Added* to Gross Value of Production by Major Industrial Group -
Public and Private 1994 - 1998 E.F.Y (2001/02 - 2005/06)**

Division of ISIC Rev. 3	Major Industrial Group	Year (E.F.Y)				
		1994	1995	1996	1997	1998
		Ratio of value added* to gross value of production				
15	Manufacture of Food Products and Beverages	.321	.339	.321	.287	.274
16	Manufacture of Tobacco Products	.351	.351	.411	.318	.331
17	Manufacture of Textiles	.163	.145	.127	.196	.136
18	Manufacture of Wearing Apparel, Except Fur Apparel	.247	.317	.245	.258	.257
19	Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags	.183	.143	.176	.137	.157
20	Manufacture of Wood and Products of Wood and Cork, Except Furniture	.409	.440	.416	.445	.420
21 - 22	Manufacture of Paper, Paper Products and Printing	.338	.329	.288	.308	.247
24	Manufacture of Chemicals and Chemical Products	.230	.256	.261	.206	.192
25	Manufacture of Rubber and Plastic Products	.289	.316	.317	.244	.331
26	Manufacture of Other Non-Metallic Mineral Products	.311	.347	.302	.231	.344
27	Manufacture of Basic Iron and Steel	.151	.161	.137	.220	.105
28	Manufacture of Fabricated Metal Products Except Machinery and Equipment	.272	.230	.259	.216	.211
29	Manufacture of Machinery and Equipment N.E.C.	.268	.166	.181	.175	.085
34	Manufacture of Motor Vehicles, Trailers and Semi-Trailers	.244	.218	-.123	.063	.209
36	Manufacture of Furniture; Manufacturing N.E.C.	.324	.301	.336	.323	.309
	Total	.274	.287	.262	.246	.244

* In the national account concept at factor cost

Summary Table 3.9: Ratio of Cost of Labour to Gross Value of Production by Major Industrial Group - Public and Private 1994 - 1998 E.F.Y (2001/02 - 2005/06)

Division of ISIC Rev. 3	Major Industrial Group	Year (E.F.Y)				
		1994	1995	1996	1997	1998
		Ratio of cost of labour				
15	Manufacture of Food Products and Beverages	.086	.081	.076	.073	.072
16	Manufacture of Tobacco Products	.053	.053	.036	.043	.055
17	Manufacture of Textiles	.177	.153	.154	.131	.144
18	Manufacture of Wearing Apparel, Except Fur Apparel	.290	.294	.242	.207	.316
19	Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags	.074	.073	.067	.070	.072
20	Manufacture of Wood and Products of Wood and Cork, Except Furniture	.177	.175	.194	.183	.172
21 - 22	Manufacture of Paper, Paper Products and Printing	.122	.125	.099	.097	.107
24	Manufacture of Chemicals and Chemical Products	.073	.077	.064	.072	.060
25	Manufacture of Rubber and Plastic Products	.069	.072	.069	.069	.055
26	Manufacture of Other Non-Metallic Mineral Products	.082	.070	.063	.066	.059
27	Manufacture of Basic Iron and Steel	.037	.051	.028	.026	.022
28	Manufacture of Fabricated Metal Products Except Machinery and Equipment	.124	.121	.100	.072	.079
29	Manufacture of Machinery and Equipment N.E.C.	.174	.129	.084	.098	.078
34	Manufacture of Motor Vehicles, Trailers and Semi-Trailers	.057	.081	.071	.073	.057
36	Manufacture of Furniture; Manufacturing N.E.C.	.181	.134	.170	.152	.122
	Total	.092	.089	.080	.076	.073

Summary Table 3.10: Ratio of Operating Surplus to Gross Value of Production by Major Industrial Group - Public and Private 1994 - 1998 E.F.Y (2001/02 - 2005/06)

Division of ISIC Rev. 3	Major Industrial Group	Year (E.F.Y)				
		1994	1995	1996	1997	1998
		Ratio of operating Surplus				
15	Manufacture of Food Products and Beverages	.235	.257	.244	.213	.202
16	Manufacture of Tobacco Products	.297	.297	.375	.275	.275
17	Manufacture of Textiles	-.015	-.011	-.028	.065	.010
18	Manufacture of Wearing Apparel, Except Fur Apparel	-.044	.022	.002	.050	.060
19	Tanning and Dressing of Leather; Manufacture of Footwear, Luggage and Handbags	.108	.069	.109	.067	.084
20	Manufacture of Wood and Products of Wood and Cork, Except Furniture	.231	.257	.216	.261	.247
21 - 22	Manufacture of Paper, Paper Products and Printing	.215	.203	.188	.211	.139
24	Manufacture of Chemicals and Chemical Products	.157	.179	.196	.133	.131
25	Manufacture of Rubber and Plastic Products	.219	.243	.247	.174	.275
26	Manufacture of Other Non-Metallic Mineral Products	.227	.277	.239	.165	.284
27	Manufacture of Basic Iron and Steel	.113	.108	.109	.194	.082
28	Manufacture of Fabricated Metal Products Except Machinery and Equipment	.147	.106	.158	.144	.131
29	Manufacture of Machinery and Equipment N.E.C.	.088	.033	.095	.075	.007
34	Manufacture of Motor Vehicles, Trailers and Semi-Trailers	.186	.136	-.198	-.012	.151
36	Manufacture of Furniture; Manufacturing N.E.C.	.141	.165	.164	.169	.185
	Total	.182	.196	.181	.170	.171

During the survey, establishments that worked less than 12 months during the reference period 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 the total establishments which operated less than 12 months, 37.3 percent and 21.8 percent indicated that shortage of supply of raw material and absence of market demand stood as the first and second major reasons, respectively.

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. Absence of market demand and shortage of supply of raw materials 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, about 34.2 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 were reported by about 25.9 percent of the total establishments.