# THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA CENTRAL STATISTICAL AGENCY

# REPORT ON LARGE AND MEDIUM SCALE MANUFACTURING AND ELECTRICITY INDUSTRY SURVEY

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Abbrevia	ations
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 KWH	- Kilowatt - 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 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 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 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 CSA Statistical Branch Offices were involved in this survey. The training was given in two stages, Head Office and Addis Ababa Branch Office. Accordingly, at the first stage of the training 17 statisticians form Branch Statistical Offices, about 72 supervisors for data collection excluding Addis Ababa from other Branches and 4 statisticians form the Head Office were in the training. Further more 15 editors from the Head Office were attending the training to have a clear understanding of the whole content of the survey questionnaire and to edit when coming back from the field. At the actual survey period about 35 drivers (7 from Addis Ababa branch, 2 from Head Office and 26 from the rest) were involved in the data collection activity.

In Addis Ababa Branch Statistical Office, where the majority of the establishments (more than 1000 establishments) under the scope of the survey are located, enumerators of this survey (80 enumerators and 18 supervisors) were given a second stage training following the first one. They were also 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 11-15 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 35-45 working 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 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 1930 in 2000 E.F.Y. (2007/2008). It has shown an increase of 487 establishments and 33.75 percent compared to the year before in absolute and relative terms, respectively. For the country as a whole, establishments classified under manufacture Other Non-Metallic Mineral Products industrial group constituted the largest share accounting for 25.28 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 25.13 and 15.49 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 65.9 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 below half (46.42 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, Tigray, S.N.N.P., and Amhara regions covered 16.74, 12.59, 10.00 and 8.7 percent of the total establishments, respectively.

The data shown in summary Tables 3.2 and 3.3 refers to the total number of persons engaged and number of employees over five years period, i.e. 1996 -2000 E.F.Y. (2003/4-2007/8), respectively. In 2000 E.F.Y, there were 133,673 persons engaged, out of which, 131,803 were, employees in the sector. Number of persons engaged and employees during the survey period, showed an increase of 6.4 and 5.8 percent, compared to that of 1999 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 2000 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 percent in both number of persons engaged and number of employees throughout the period under review. The relative importance of the rest of industrial groups in terms of employment varies between 0.15 percent in machinery and equipment manufacturers, to 9.05 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 1996-2000 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, thought out the period under review. During 2000 E.F.Y., about 38.4 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 manufacturers of paper, paper products and printing contributed 23.1, 6.0 and 5.4 percent of the total value added by large and medium scale establishments, respectively.

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, manufacture of tanning and dressing 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; manufacturing of N.E.C. increase their share of value added, while the share of the remaining six industrial groups declined in 2000 E.F.Y. as compared to that of 1999 E.F.Y.

Furthermore, other non-metallic mineral manufacturing establishments, being the second most important in terms of both employment creation and their share in manufacturing value added in 2000 E.F.Y.

Summary Table 3.1: Distribution of Large and Medium Scale Manufacturing Industries by Regional States\* and Major I (2007/08)

						Re	gional State	es	
Division of									
ISIC Rev. 3	Major Industrial Group	Tigray	Afar	Amhara	Oromiya	Somalie	Bensha.	SNNP	Gar
					Nu	mber of ma	anufacturii	ng industi	ries
	Manufacture of Food Products and								
15	Beverages	28	-	40	102	6	_	43	
16	Manufacture of Tobacco Products	-	-	-	-	-	_	-	
17	Manufacture of Textiles	1	2	3	2	_	-	4	
18	Manufacture of Wearing Apparel, Except						-	'	
ļ	Fur Apparel	1	-	-	3	_	-	- !	
ļ	Tanning and Dressing of Leather;								
19	Manufacture						-		
ļ	of Footwear, Luggage and Handbags	5	-	5	17	-	-	1	
20	Manufacture of Wood and Products of Wood								
20				2	17				
ļ	and Cork, Except Furniture Manufacture of Paper, Paper Products and	-	_	2	1 /	-	-	6	
21 - 22	Printing	6	_	2	7	_		1	
21 22	Manufacture of Chemicals and Chemical				,			*	
24	Products	2		5	14	_	-	1 1	
25	Manufacture of Rubber and Plastic Products	3	_	-	20	-	- 1	1	
26	Manufacture of Other Non-Metallic						- 1		
ŀ	Mineral Products	125	7	49	96	_	-	60	
27	Manufacture of Basic Iron and Steel	4	_				- 1	- !	
28	Manufacture of Fabricated Metal Products						-		
ļ	Except Machinery and Equipment	32	-	7	8	_	-	4	
ļ	Manufacture of Machinery and Equipment								
29	N.E.C.	-	-	-	-	-	- '	- !	

	Total %	243 12.59	9 <b>0.47</b>	168 8.70	323 16.74	10 <b>0.52</b>	4 0.21	193 10.00	
36	and Semi-Trailers Manufacture of Furniture; Manufacturing N.E.C.	34	-	55	35	4	4	72	
34	Manufacture of Motor Vehicles, Trailers						-	-	

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

				Year (E.F.Y	)	
Division of ISIC Rev. 3	Major Industrial Group	1996	1997	1998	1999	2000
			Number	r of Persons	Engaged	
15	Manufacture of Food Products and Beverages	31,589	32,096	35,934	*36049	41681
16	Manufacture of Tobacco Products	785	697	755	799	1254
17	Manufacture of Textiles	22,914	20,734	22,131	21,715	12095
18	Manufacture of Wearing Apparel, Except					
	Fur Apparel	3,840	2,643	4,128	7,621	7635
19	Tanning and Dressing of Leather; Manufacture					
	of Footwear, Luggage and Handbags	7,718	7,965	7,946	8,404	8650
20	Manufacture of Wood and Products of Wood					
	and Cork, Except Furniture	1,639	1579	1798	2037	3231
21 - 22	Manufacture of Paper, Paper Products and Printing	6,955	7,528	8,083	8,181	8941
24	Manufacture of Chemicals and Chemical Products	5,075	5,977	5,674	7,045	7778
25	Manufacture of Rubber and Plastic Products	4,412	5,679	6,916	7,639	8751
26	Manufacture of Other Non-Metallic					
	Mineral Products	9,266	9,163	10,211	11,386	17687
27	Manufacture of Basic Iron and Steel	1,700	1,767	2,122	1,924	1329
28	Manufacture of Fabricated Metal Products					
	Except Machinery and Equipment	3,516	3,913	5,903	3,547	5237
29	Manufacture of Machinery and Equipment N.E.C.	267	225	410	187	206
34	Manufacture of Motor Vehicles, Trailers					
	and Semi-Trailers	1,132	1,234	1,457	3,173	1727
36	Manufacture of Furniture; Manufacturing N.E.C.	5,343	8,960	5,929	5,942	7471
	Total	106,151	110,160	119,397	*125,649	133,673

\*Revised

In Ethiopia the major industrial groups still relied on imported raw materials. The data in summary table 3.5 presents the ratio of imported to total consumed raw material costs by major industrial groups. It can be easily seen the share of major industrial groups like that of manufacture of paper, paper products and printing, manufacture of chemicals and chemical products, manufacture of rubber and plastic products, manufacture of basic iron and steel, manufacture of fabricated metal products except machinery and equipment, manufacture of machinery and equipment N.E.C and manufacture of motor vehicles, trailers and semi-trailers consumed the highest proportion than the other major industrial groups while the other four from the remaining industrial groups tended to decline and the other four are the same in 2000

E.F.Y as compared to the previous year. In general the steady high ratio of imported raw materials to total consumed raw material costs over five years period, is an indication of the dependency of large and medium scale manufacturing industries on imported raw materials even though the over all ratio shows a slight decline from 58.3 percent to 53.6 percent.

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

				Year (E.F.Y	)	
Division of ISIC Rev. 3	Major Industrial Group	1996	1997	1998	1999	2000
			Num	ber of Empl	loyees	
15	Manufacture of Food Products and Beverages	31,359	31,693	35,660	*35686	41265
16	Manufacture of Tobacco Products	785	697	755	799	1254
17	Manufacture of Textiles	22,900	20,701	22,100	21,702	12088
18	Manufacture of Wearing Apparel, Except					
	Fur Apparel	3,806	2,606	4,099	7,604	7613
19	Tanning and Dressing of Leather; Manufacture					
	of Footwear, Luggage and Handbags	7,665	7,913	7,914	8,351	8586
20	Manufacture of Wood and Products of Wood					
	and Cork, Except Furniture	1,616	1,563	1,759	2,010	3166
21 - 22	Manufacture of Paper, Paper Products and Printing	6,940	7,507	8,059	8,161	8917
24	Manufacture of Chemicals and Chemical Products	5,071	5,975	5,668	7,030	7762
25	Manufacture of Rubber and Plastic Products	4,410	5,673	6,899	7,619	8727
26	Manufacture of Other Non-Metallic					
	Mineral Products	9,138	9,047	10,093	11,137	16853
27	Manufacture of Basic Iron and Steel	1,699	1,762	2,122	1,923	1328
28	Manufacture of Fabricated Metal Products					
	Except Machinery and Equipment	3,453	3,828	5,796	3,517	5180
29	Manufacture of Machinery and Equipment N.E.C.	256	221	400	186	205
34	Manufacture of Motor Vehicles, Trailers					
	and Semi-Trailers	1,130	1,232	1,456	3,131	1725
36	Manufacture of Furniture; Manufacturing N.E.C.	5,153	8,732	5,688	5,713	7134
	Total	105,381	109,150	118,468	* <b>124,569</b> *Revise	<b>131,803</b> ed

The data in summary table 3.6 refers to the per capital and ratios of major manufacturing indicators. In 2000 E.F.Y., per capital of wages and salaries per employee, gross value of production per employee and value of fixed assets per employee, value added per employee, operating surplus per employee and wages and salary paid per employee have increased by 16.9 percent, 7.9 percent 13.7 percent, 9.8 percent, and 24.8 percent, respectively, when compared to

that of 1999 E.F.Y. It is evident from the same table that among the ratios presented, cost of labor to gross value of production, industrial costs to gross value of production and value added to total fixed capital assets showed an increase, while that of fixed assets to gross value of production, value added to gross value of production, operating surplus to gross value of production and cost of energy to value of production decrease 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)

			,	Year (E.F.)	Y)	
Division of ISIC Rev. 3	Major Industrial Group	1996	1997	1998	1999	2000
			Value	Added in l	Percent	
1.7	Manufacture of Food Products and Beverages	44.00	44.05	40.04	ded: <b>2</b> < 40	20.51
15	Manufacture of Tobacco Products	44.99	41.87	40.31	**36.48	38.51
16	Manufacture of Tobacco Froducts	5.25	3.41	3.73	2.86	3.63
17	Manufacture of Textiles	4.26	5.81	3.41	4.22	1.53
18	Manufacture of Wearing Apparel, Except					
	Fur Apparel	.74	.53	.56	1.21	1.22
19	Tanning and Dressing of Leather; Manufacture					
	of Footwear, Luggage and Handbags	5.03	4.45	4.37	3.10	4.37
20	Manufacture of Wood and Products of Wood					
	and Cork, Except Furniture	.85	.85	.82	.65	.67
21 - 22	Manufacture of Paper, Paper Products and Printing	6.20	7.93	5.34	5.50	5.45
24	Manufacture of Chemicals and Chemical Products	6.66	5.35	4.85	4.86	5.98
25	Manufacture of Rubber and Plastic Products	6.20	5.54	8.85	4.56	4.45
26	Manufacture of Other Non-Metallic					
	Mineral Products	12.52	8.87	15.67	22.10	23.20
27	Manufacture of Basic Iron and Steel	3.66	7.87	3.92	2.86	2.46
28	Manufacture of Fabricated Metal Products					
	Except Machinery and Equipment	2.72	3.38	3.03	5.46	3.94
29	Manufacture of Machinery and Equipment N.E.C.	.09	.08	.32	.07	.10
34	Manufacture of Motor Vehicles, Trailers					
	and Semi-Trailers	-1.19	.50	2.40	4.00	2.41
36	Manufacture of Furniture; Manufacturing N.E.C.	2.00	3.55	2.42	2.08	2.09
	Total	100.00	100.00	100.00	100.00	100.00

<sup>\*</sup> 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 1996-2000 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 57.2 percent. This large proportion is mainly due to the high energy requirement by cement and glass and glass products manufacturing establishments.

<sup>\*\*</sup>Revised

The proportion of cost of energy to industrial cost for non-metallic industries evidenced a similar increasing trend up to 1999 E.F.Y. but in 2000 E.F.Y. it showed a 5.66 percent decline compared to the previous year. The decline in the proportion of cost of energy to industrial cost for non-metallic industries happened because of the scarcity of electric power energy in all over the country in 2000 E.F.Y.

Following non-metallic mineral products, the highest energy consumption, compared to their industrial cost was observed in manufacture of wearing apparel, except fur Apparel.

The share for manufacture of wearing apparel, except fur Apparel showed a 13.13 percent increment in 2000 E.F.Y. as compared to 1999 E.F.Y.

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 2000 E.F.Y. it has shown a decline of 5.7 percent as compared to the 1999 E.F.Y.

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)

			1	Year (E.F.Y	)	1
Division of ISIC Rev. 3	Major Industrial Group	1996 F	1997 Ratio of i	1998 mported ray	1999 v materi	2000 al
15	Manufacture of Food Products and Beverages	.214	.205	.206	.238	.279
16	Manufacture of Tobacco Products	.368	.433	.824	.990	.138
17	Manufacture of Textiles	.311	.396	.409	.415	.296
18	Manufacture of Wearing Apparel, Except					
	Fur Apparel	.163	.212	.312	.527	.373
19	Tanning and Dressing of Leather; Manufacture					
	of Footwear, Luggage and Handbags	.184	.162	.210	.216	.236
20	Manufacture of Wood and Products of Wood					
	and Cork, Except Furniture	.564	.484	.445	.443	.239
21 - 22	Manufacture of Paper, Paper Products and Printing	.712	.816	.789	.717	.815
24	Manufacture of Chemicals and Chemical Products	.779	.857	.831	.785	.871
25	Manufacture of Rubber and Plastic Products	.940	.977	.918	.954	.772
26	Manufacture of Other Non-Metallic					
	Mineral Products	.170	.054	.095	.192	.198
27	Manufacture of Basic Iron and Steel	.990	.608	.672	.989	.998
28	Manufacture of Fabricated Metal Products					
	Except Machinery and Equipment	.850	.812	.926	.875	.802
29	Manufacture of Machinery and Equipment N.E.C.	.942	.961	.997	.962	.977
34	Manufacture of Motor Vehicles, Trailers					
	and Semi-Trailers	.926	.986	.947	.850	.971
36	Manufacture of Furniture; Manufacturing N.E.C.	.442	.421	.485	.524	.525
	Total	.471	.460	.501	.583	.536

The ratio in summary Table 3.8 depicts the share of value added in gross value of production by major industrial group. 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 other non-metallic mineral products, Manufacture of Basic Iron and Steel, and Manufacture of Motor Vehicle, Trailers and Semi-trailers recorded an increase while the ratio of the remaining ten industrial groups declined in 2000 E.F.Y. as compared to the year before. On the other hand the share of value added in gross value of production for all industrial groups

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

		Y	ear (E.F.Y)	, 	
Major Industrial Group	1996	1997	1998	1999	2000
			Per Capita		
Wage and Salaries Paid Per Employee	8,268	8,571	9,237	**10198	12730
Gross Value of Production Per Employee	103,166	112,839	127,014	**149173	174399
Value Added* Per Employee	27,027	27,766	31,036	**39589	45005
Operating Surplus Per Employee	18,669	19,140	21,734	**29334	32223
Value of Fixed Asset Per Employee	61,790	60,641	59,064	**59939	64659
			Ratio		
Fixed Assets to Gross Value of Production	.599	.537	.465	.402	.371
Cost of Labour to Gross Value of Production	.080	.076	.073	**.068	.073
Industrial Costs to Gross Value of Production	.513	.541	.542	.506	.513
Cost of Energy to Gross Value of Production	.055	.058	.054	.054	.05
Value Added* to Gross Value of Production	.262	.246	.244	.265	.258
Operating Surplus to Gross Value of Production	.181	.170	.171	**.197	.18:
Value Added* to Total Fixed Capital	.437	.458	.525	**.660	.69

<sup>\*</sup> In the national account concept at factor cost

combined has decreased during the survey year.

The ratio of cost of labour to gross value of production for major industrial groups, which roughly measures, labour productivity, is treated in summery 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 2000 E.F.Y., the highest and lowest ratios were registered in manufacturer of wood and products of wood and cork, except furniture 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 in the past four years and rises in 2000 E.F.Y. during the period under review.

<sup>\*\*</sup>Revised

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 eight out of fifteen major industrial groups and the overall average exhibited a decrease in 2000 E.F.Y against that of 1999 E.F.Y. The data in this table further indicate that, manufacturing of textiles and manufacturing of wearing apparel except fur apparel recorded a negative ratio of operating surplus to gross value of production in 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)

				Year (E.F.Y)	)	
Division of ISIC Rev. 3	Major Industrial Group	1996	1997	1998	1999	2000
		]	Ratio of	cost of energy	consume	ed
15	Manufacture of Food Products and Beverages	.108	.118	.062	.082	.058
16	Manufacture of Tobacco Products	.009	.006	.034	.026	.030
17	Manufacture of Textiles	.092	.116	.109	.108	.122
18	Manufacture of Wearing Apparel, Except					
10	Fur Apparel	.019	.018	.020	.160	.181
19	Tanning and Dressing of Leather; Manufacture					
20	of Footwear, Luggage and Handbags	.021	.019	.027	.024	.029
20	Manufacture of Wood and Products of Wood					
	and Cork, Except Furniture	.240	.243	.232	.178	.090
21 - 22	Manufacture of Paper, Paper Products and Printing	.054	.045	.063	.048	.052
24	Manufacture of Chemicals and Chemical Products	.040	.041	.038	.031	.031
25	Manufacture of Rubber and Plastic Products	.086	.085	.060	.064	.038
26	Manufacture of Other Non-Metallic					
	Mineral Products	.460	.461	.581	.605	.572
27	Manufacture of Basic Iron and Steel	.014	.018	.012	.012	.008
28	Manufacture of Fabricated Metal Products					
	Except Machinery and Equipment	.054	.037	.042	.042	.035
29	Manufacture of Machinery and Equipment N.E.C.	.022	.013	.002	.014	.007
34	Manufacture of Motor Vehicles, Trailers					
	and Semi-Trailers	.014	.032	.007	.011	.023
36	Manufacture of Furniture; Manufacturing N.E.C.	.026	.021	.019	.014	.025
	Total	.106	.107	.100	.106	.100

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)

			Y	ear (E.I	F.Y)	
Division of ISIC Rev. 3	Major Industrial Group	1996	1997	1998	1999	2000
		Ratio o		added* oroducti		value of
15	Manufacture of Food Products and Beverages	.321	.287	.274	.301	.261
16	Manufacture of Tobacco Products	.411	.318	.331	.301	.379
17	Manufacture of Textiles	.127	.196	.136	.189	.131
18	Manufacture of Wearing Apparel, Except					
	Fur Apparel	.245	.258	.257	.218	.186
19	Tanning and Dressing of Leather; Manufacture					
	of Footwear, Luggage and Handbags	.176	.137	.157	.126	.179
20	Manufacture of Wood and Products of Wood					
	and Cork, Except Furniture	.416	.445	.420	.355	.334
21 - 22	Manufacture of Paper, Paper Products and Printing	.288	.308	.247	.281	.261
24	Manufacture of Chemicals and Chemical Products	.261	.206	.192	.207	.205
25	Manufacture of Rubber and Plastic Products	.317	.244	.331	.211	.178
26	Manufacture of Other Non-Metallic					
	Mineral Products	.302	.231	.344	.434	.448
27	Manufacture of Basic Iron and Steel	.137	.220	.105	.096	.135
28	Manufacture of Fabricated Metal Products					
	Except Machinery and Equipment	.259	.216	.211	.370	.194
29	Manufacture of Machinery and Equipment N.E.C.	.181	.175	.085	.226	.215
34	Manufacture of Motor Vehicles, Trailers					
	and Semi-Trailers	123	.063	.209	.159	.181
36	Manufacture of Furniture; Manufacturing N.E.C.	.336	.323	.309	.333	.315
	Total	.262	.246	.244	.265	.258

 $<sup>^{\</sup>star}$  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)

			Y	ear (E.F.	<b>Y</b> )	
Division of ISIC Rev. 3	Major Industrial Group	1996	1997	1998	1999	2000
				of cost of		
15	Manufacture of Food Products and Beverages	.076	.073	.072	*.073	.067
16	Manufacture of Tobacco Products	.036	.043	.055	.056	.108
17	Manufacture of Textiles	.154	.131	.144	.122	.140
18	Manufacture of Wearing Apparel, Except					
	Fur Apparel	.242	.207	.316	.224	.188
19	Tanning and Dressing of Leather; Manufacture					
	of Footwear, Luggage and Handbags	.067	.070	.072	.060	.061
20	Manufacture of Wood and Products of Wood					
	and Cork, Except Furniture	.194	.183	.172	.184	.196
21 - 22	Manufacture of Paper, Paper Products and Printing	.099	.097	.107	.099	.113
24	Manufacture of Chemicals and Chemical Products	.064	.072	.060	076	.061
25	Manufacture of Rubber and Plastic Products	.069	.069	.055	.059	.054
26	Manufacture of Other Non-Metallic					
	Mineral Products	.063	.066	.059	.044	.074
27	Manufacture of Basic Iron and Steel	.028	.026	.022	.021	.025
28	Manufacture of Fabricated Metal Products					
	Except Machinery and Equipment	.100	.072	.079	.062	.056
29	Manufacture of Machinery and Equipment N.E.C.	.084	.098	.078	.102	.064
34	Manufacture of Motor Vehicles, Trailers					
	and Semi-Trailers	.071	.073	.057	.037	.050
36	Manufacture of Furniture; Manufacturing N.E.C.	.170	.152	.122	.136	.139
	Total	.080	.076	.073	*.068	.073

<sup>\*</sup>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)

			,	Year (E.F.Y	<u> </u>	
Division of ISIC Rev. 3	Major Industrial Group	1996	1997 Ratio o	1998 f operating	1999 Surplus	2000
15	Manufacture of Food Products and Beverages	.244	.213	.202	*.227	.193
16	Manufacture of Tobacco Products	.375	.275	.275	.245	.270
17	Manufacture of Textiles	028	.065	010	.067	011
18	Manufacture of Wearing Apparel, Except					
	Fur Apparel	.002	.050	060	007	003
19	Tanning and Dressing of Leather; Manufacture					
	of Footwear, Luggage and Handbags	.109	.067	.084	.066	.118
20	Manufacture of Wood and Products of Wood					
	and Cork, Except Furniture	.216	.261	.247	.169	.138
21 - 22	Manufacture of Paper, Paper Products and Printing	.188	.211	.139	.182	.148
24	Manufacture of Chemicals and Chemical Products	.196	.133	.131	.131	.144
25	Manufacture of Rubber and Plastic Products	.247	.174	.275	.152	.123
26	Manufacture of Other Non-Metallic					
	Mineral Products	.239	.165	.284	.389	.374
27	Manufacture of Basic Iron and Steel	.109	.194	.082	.075	.109
28	Manufacture of Fabricated Metal Products					
	Except Machinery and Equipment	.158	.144	.131	.308	.138
29	Manufacture of Machinery and Equipment N.E.C.	.095	.075	.007	.124	.150
34	Manufacture of Motor Vehicles, Trailers					
	and Semi-Trailers	198	012	.151	.122	.131
36	Manufacture of Furniture; Manufacturing N.E.C.	.164	.169	.185	.195	.175
	Total	.181	.170 *Revi	.171	*.197	.185

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 the summary table 3.11. It can be observed that among the total establishments which operated less than 12 months. During the reference period 37.9 percent and 9.2 percent indicated that shortage of supply of raw materials and shortage of electricity and water supply stood as the first and second major reasons ignoring 13.8 percent for others that are not clearly known for fully operational, 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. 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, 33.5 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 12.9 percent of the total reporting establishments ignoring 34.5 percent for others that are not clearly known reason.

Summary Table 3.11: Percentage Distribution of Establishments by First Major Reason and Major Industrial Group - Public and Private 2000 E.F.Y.

Division of ISIC Rev. 3	Major Industrial Group	Shortage of supply of raw materials	Shortage of supply of spare parts	Lack of foreign exchange	Absence of market demand	La wo
1.5	Manufacture of Food Buckeyer and Barrers	50		1	Percentage	disti
15	Manufacture of Food Products and Beverages	30	6	1	17	
16	Manufacture of Tobacco Products	-	-	-	-	
17	Manufacture of Textiles	6	-	=	=	
18	Manufacture of Wearing Apparel, Except	4				
10	Fur Apparel	1	-	-	-	
19	Tanning and Dressing of Leather; Manufacture	_			2	
20	of Footwear, Luggage and Handbags	7	-	-	3	
20	Manufacture of Wood and Products of Wood	10				
	and Cork, Except Furniture	13	-	-	-	
21 - 22	Manufacture of Paper, Paper Products and Printing	3	1	-	-	
24	Manufacture of Chemicals and Chemical Products	10	1	1	1	
25	Manufacture of Rubber and Plastic Products	6	2	1	2	
26	Manufacture of Other Non-Metallic					
	Mineral Products	148	5	-	21	
27	Manufacture of Basic Iron and Steel	2	-	-	-	
28	Manufacture of Fabricated Metal Products					
	Except Machinery and Equipment	11	-	2	5	
29	Manufacture of Machinery and Equipment N.E.C.	-	-	-	-	
34	Manufacture of Motor Vehicles, Trailers					
	and Semi-Trailers	1	-	-	-	
36	Manufacture of Furniture; Manufacturing N.E.C.	9	-	-	15	
	Total	267	15	5	64	
	0/0	37.93	2.13	.71	9.09	

Summary Table 3.12: Percentage Distribution of Establishments by First reason for not wor and Major Industrial Group - Public and Private 2000 E.F.Y (2007/08)

		Type of reas			
Division of ISIC Rev. 3	Major Industrial Group	Shortage of supply of raw materials	Shortage of supply of spare parts	Absence of market demand	Absence of credit facility
				numbe	er of establishi
15	Manufacture of Food Products and Beverages	150	9	99	19
16	Manufacture of Tobacco Products	-	-	-	-
17	Manufacture of Textiles	10	2	2	4
18	Manufacture of Wearing Apparel, Except				

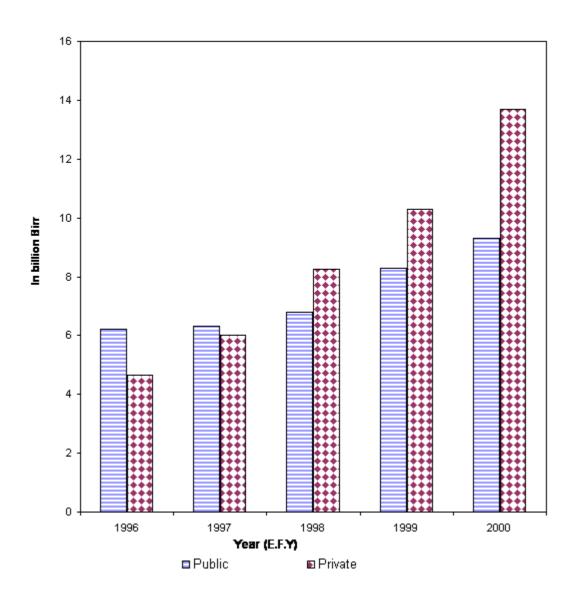
	Fur Apparel	13	-	5	7
19	Tanning and Dressing of Leather; Manufacture				
	of Footwear, Luggage and Handbags	37	5	7	5
20	Manufacture of Wood and Products of Wood				
	and Cork, Except Furniture	38	-	9	3
21 - 22	Manufacture of Paper, Paper Products and Printing	46	6	27	1
24	Manufacture of Chemicals and Chemical Products	38	1	6	9
25	Manufacture of Rubber and Plastic Products	30	2	15	3
26	Manufacture of Other Non-Metallic				
	Mineral Products	237	16	33	12
27	Manufacture of Basic Iron and Steel	7	-	-	1
28	Manufacture of Fabricated Metal Products				
	Except Machinery and Equipment	29	1	8	9
29	Manufacture of Machinery and Equipment N.E.C.	1	-	2	-
34	Manufacture of Motor Vehicles, Trailers				
	and Semi-Trailers	3	-	2	2
36	Manufacture of Furniture; Manufacturing N.E.C.	59	2	99	32
	Total	698	44	314	107
	%	40.77	2.57	18.34	6.25

Summary Table 3.13: Distribution of Establishments by Type of First Major Operational problems fact and Major Industrial Group - Public and Private 2000 E.F.Y (

					1	Type of rea	
		Shortage of supply of	Shortage of supply of	Absence	Lack of	Frequent	Lack
Division of ISIC Rev.		raw	spare	of market	working	Machinery	work
3	Major Industrial Group	materials	parts	demand	capital	Failure	pren
						number of	establis
15	Manufacture of Food Products and Beverages	123	11	82	18	8	
16	Manufacture of Tobacco Products	-	-	-	-	1	
17	Manufacture of Textiles	9	2	1	4	2	
18	Manufacture of Wearing Apparel, Except						
	Fur Apparel	12	-	3	5	-	
19	Tanning and Dressing of Leather; Manufacture						
	of Footwear, Luggage and Handbags	27	1	9	6	3	
20	Manufacture of Wood and Products of Wood						
	and Cork, Except Furniture	38	-	4	2	1	
21 - 22	Manufacture of Paper, Paper Products and Printing	49	5	19	6	-	
24	Manufacture of Chemicals and Chemical Products	33	2	3	11	4	
25	Manufacture of Rubber and Plastic Products	27	3	7	-	1	
26	Manufacture of Other Non-Metallic						
	Mineral Products	211	15	33	13	22	
27	Manufacture of Basic Iron and Steel	6	-	-	1	-	
28	Manufacture of Fabricated Metal Products						

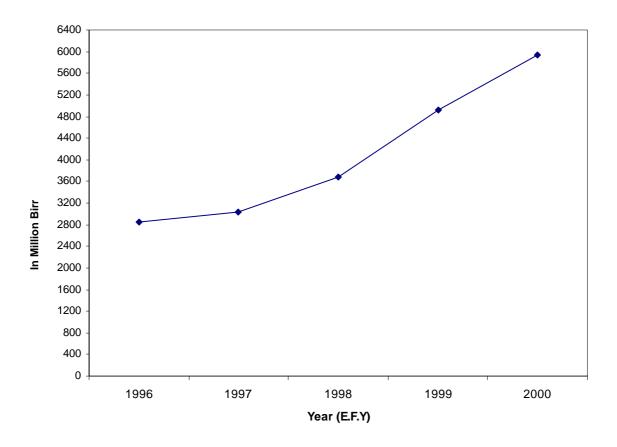
	Total	632	42	243	103	47
30	Manufacture of Furniture; Manufacturing N.E.C.	62	3	76	29	4
36		62	-	1 76	29	1
34	and Semi-Trailers	4		1	1	1
34	Manufacture of Motor Vehicles, Trailers					
29	Manufacture of Machinery and Equipment N.E.C.	2	_	1	-	_
	Except Machinery and Equipment	29	-	4	7	-

FIG. I Gross Value of Production at Current Price by Ownership 1996 -2000E.F.Y (2003/04 - 2007/08)



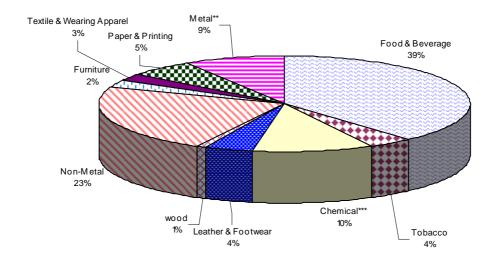
### FIG. II Value Added\* Puplic and Private

1996- 2000 E.F.Y (2003/04- 2007/08)



#### FIG. III Percentage Distribution of Value Added\*

by Major Industrial Group 2000 E.F.Y (2007/8)



<sup>\*</sup> In the National Account Concept at Basic Price \*\* Includes Basic Iron, Fabricated Metal, Machinery and Motor Vehicles

<sup>\*\*\*</sup> Includes Rubber and Plastic

# FIG. IV Ratio of Imported to Total Raw Material Cost by Major Industrial Group 2000E.F.Y 2007/08

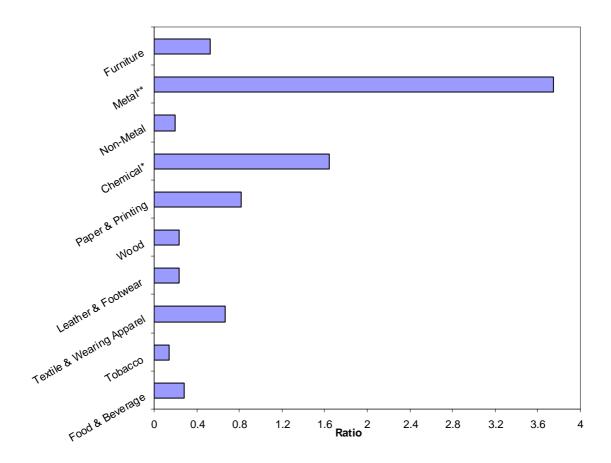


FIG. V - Ratio of Value Added\* to Gross Value of Production 2000 E.F.Y (2007/08)

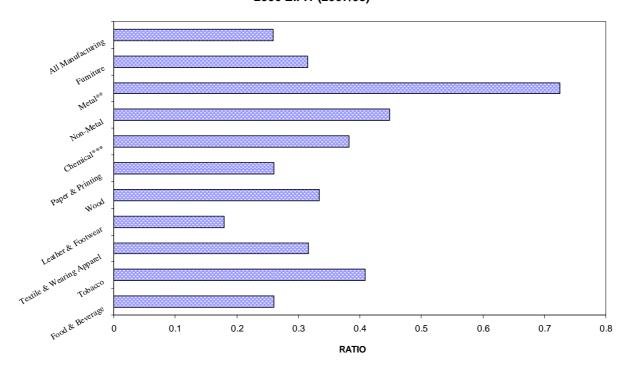


FIG. VI - Installed Generating Capacity of Electricity 1996- 2000 E.F.Y (2003/04- 2007/08)

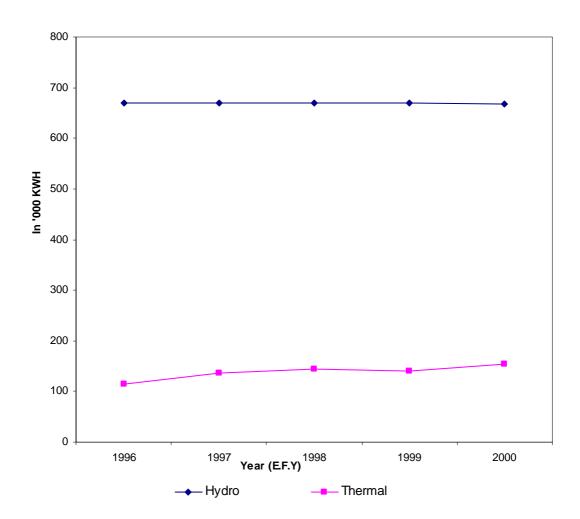


FIG. VII - Production of Electricity 1996- 2000 EF.Y (2003/04 - 2007/08)

