THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

# **CENTRAL STATISTICAL AGENCY**

## **Report on Large and Medium Scale Manufacturing**

And

# **Electricity Industries Survey**

**ADDIS ABABA** 

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#### PART I

#### Introduction and Objectives of the Survey

## **1.1 Introduction**

**Manufacturing** is the production of goods for use or sale using <u>machines</u>, <u>tools</u> and labour. It refers to a series of human activities, from <u>handicraft</u> to <u>high tech</u>, but is most commonly applied to <u>industrial</u> production, in which <u>raw materials</u> are transformed into new products <u>finished</u> goods on a large scale. The new products of a manufacturing establishment may be finished in the sense that they are ready for utilization or consumption, or they may be semi finished to become inputs for other establishments engaged in further manufacturing and then sold to <u>wholesalers</u>, <u>retailers</u>, and <u>consumers</u>.

The Manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The establishments are often described as plants, factories, or mills and typically use power-driven machines and materials-handling equipment. They include all intermediate processes required for the production and integration of a product's components.

**Manufacturing** is a wealth-creating sector of an economy, and closely connected with engineering and industrial design in which it provide important material support for national infrastructure and development. It involves the mechanical or chemical transformation of materials or substances into new products. It makes products from raw materials by the use of manual labour and/or machines and is usually carried out systematically with a division of labour. In a more limited sense, manufacturing is the fabrication or assembly of components into finished products on a fairly large scale. Manufacturing Establishments that transform materials or substances into new products by hand or in the worker's home and those engaged in selling to the general public products made on the same premises from which they are sold, such as

bakeries, and pastries may also be included in the manufacturing sector. They either process materials themselves or contract with other establishments to process their materials for them.

Manufacturing industry refers to those industries which involve in the manufacturing and processing of items, creation of new commodities or value addition. Manufacturing industries came into being with the occurrence of technological and socio-economic transformations and were widely **known as industrial revolution**.

**Manufacturing** takes turns and twists under different types of <u>economic systems</u>. In a free market economy, manufacturing is directed toward the <u>mass production</u> of <u>products</u> for sale to <u>consumers</u> at a profit with some degree of government <u>regulation</u>. In a <u>collective economy</u>, manufacturing is often directed by the state to supply a centrally <u>planned economy</u>. The twists and turns that manufacturing navigates necessitate statistical measures.

Since **manufacturing** is often thought of as the heart and soul of a country's economy and is critical in employing a huge part of the labour force; producing materials of strategic importance using labour, capital, raw materials as an input to the emerging markets. Globalization is matters of concern to manufacturing industries in particular and governments in general; as a result statistics collected on manufacturing industries are, therefore, indispensable for policy making, planning, business running, research activities, and other purposes. The provision of such reliable data is realized by employing standard procedures of data collection of which definitions are a part.

With this code of statistics in mind, and for the purpose of this survey, according to **International Standard Industrial Classification (ISIC Revision 3.1)**, **manufacturing** is defined here 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 a manufacturing activity" (source).

The Central Statistical Agency (CSA) has been providing statistical information on the country's manufacturing and electricity industries since 1976 (1968 E.C.) annually, to alert policy interventionists on the changes taking place in the sector. As part of this mission, this 36<sup>th</sup> survey on manufacturing and electricity industries for 2013/14 (2006 E.C.) was conducted in 2015 and the results are presented in this bulletin. The survey is the principal source of facts about the structure and function of the manufacturing industries in Ethiopia.

This bulletin has six parts: - Part I, deals with the introduction and objectives of the survey. Part II gives an overview of the survey methodology, data collection and processing. Part III presents summary of selected survey results. Part IV offers statistical tables of the survey for the year 2006 E.F.Y ((2013/14)). Part V portrays time series data on Large and Medium Scale Manufacturing Industries and various ratios for a five year period i.e. 2002-2006 E.F.Y. (2009/10 - (2013/14)). Finally part VI demonstrates the activities and performance of the Electricity Industry for the same five year period. Finally, the survey questionnaire is attached as an appendix.

## **1.2 Objectives of the Survey**

The general objective of Manufacturing and Electricity Industries Survey is to collect basic quantitative information on the country's manufacturing that are essential for planning, policy making, monitoring, System of National Accounts (SNA) and evaluation of the performance and structure of the manufacturing industries, and ensure the smooth supply of inputs and production of commodities and deal with the problems that crop up in the sector.

The specific objectives of Large and Medium Scale Manufacturing and Electricity Industries Survey are to gauge the total number of proprietors/manufacturing industries, persons engaged/employment, income obtained, volume and value of production and inputs, book value of fixed assets, value added and other variables of interest. The specific objectives also enable to reveal the distribution of manufacturing industries across the regions and major towns of the country, the sector's contribution to the economy, their investment situation and source of finance, etc.

#### PART II

#### SURVEY METHODOLOGY, DATA COLLECTION & PROCESSING

## 2.1 Scope and Coverage

Manufacturing comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is also considered manufacturing. However, the scope of manufacturing industries in this survey is limited to those establishments which engage ten persons and more and use power-driven machinery. It covers both public and private industries in all regions of the country, where establishments in the scope of this survey are found; the survey is said Large and Medium Scale Manufacturing Industries and Electricity. As to electricity data, the survey covered *only* the electricity supplied by the Ethiopian Electric Power.

The range of data items that the 2013/14 (2006 E.C.) Large and Medium Scale Manufacturing and Electricity Industries survey comprises are number of proprietors [enterprises involved in manufacturing], employment, income obtained, volume and value of production and inputs, wages and salaries paid by the establishments, paid-up capital, costs of production, value added, distribution of manufacturing industries across the country, investment in manufacturing, and others in the sector. Manufacturing industries/enterprises which engaged ten persons and more and used power-driven machinery were entirely enumerated as census all over the country and data on the enterprises acquired.

As in the preceding years, the directory used as a frame/list of establishments enumerated was updated using the licenses issued by the Ministry of Trade and the Regional States' Trade bureau to both public and private establishments. From this list, all manufacturing establishments which have ten persons and more and used power-driven machine were drawn and placed in the directory of Large and Medium Scale Manufacturing Industries.

### **2.2 Concepts and Definitions**

Data items of manufacturing industries have to be identified and distinctly defined, so that the information about the items becomes accurate and useful. Stating data items and related terms is a prerequisite in the standard procedures of data collection and compilation. The purpose of using standard concepts and definitions is not only to provide quality data but also to ensure that the right items are enumerated and measured accurately to reflect the situation in the manufacturing industries.

Standard concepts and definitions used in a survey help to maintain consistent enumeration and measurement of variables of interest. To achieve this, the CSA communicates concepts and definitions to the field staff via training and instruction manuals. Thus, the concepts and definitions used for the purpose of data collection during this survey are as follows.

(i) <u>An Establishment</u>: - 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) <u>Paid -up Capital</u>: - is that part of the issued capital of an establishment that has been paid by the shareholders or the individual owner and can be either in cash or in kind or both.

(iii) <u>Working Proprietors, Active Partners and Family Workers</u>: - include all unpaid working proprietors, active partners and members of their households who actively participate in the operation of the establishment.

(iv) <u>Administrative and Technical Employees</u>:- 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) <u>Production Workers</u>:- include workers directly engaged in production i.e., persons engaged in fabricating, processing, assembling, maintenance, repair, janitorial, record keeping and other associated activities.

(vi) <u>Seasonal and Temporary Workers</u>: - 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) <u>Number Employed</u>: - includes all persons on the payroll whether seasonal or temporary workers. The number of seasonal and temporary workers has been adjusted to give the equivalent of full-time worker.

(viii) <u>Number Engaged</u>: - includes paid employees and working proprietors. Active partners and unpaid family workers are also included here.

(ix) <u>Basic Wages and Salaries</u>: - includes all payments in cash made to employees during the reference year. It excludes commissions, bonuses, professional, and hardship allowances.

(x) <u>Wages and Salaries</u>: - 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) <u>Commissions, Bonuses, Professionals, and Hardship Allowances</u>: - refers to the total of commissions, bonuses and cost of living allowances paid in cash to employees. It excludes car allowance and per diem.

(xii) <u>Supplements to Wages and Salaries of Employees</u>: - represents payments made by employers to social security systems, insurance premiums, etc on behalf of their employees.

(xiii) <u>Revenue from Sales</u>: - represents the total sales value of all products and by-products during the reference year, valued at market price.

(xiv) <u>Receipt from Industrial Services Rendered to Others</u>: - include all contract, repair and maintenance work done to others, with raw materials and spare parts supplied by the customer.

(xv) <u>Receipt of Products bought and Resold</u>: - refers to revenue obtained from sales of all goods bought and resold during the reference year without any transformation or processing.

(xvi) <u>Other Receipts</u>: - 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.

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(xvii) <u>Difference of Stocks in the Value of Finished Goods and Semi-Finished Goods</u>:-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) <u>Gross Value of Production</u>: - 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) <u>Raw Materials</u>: - 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 incidents the purchase price, transport charges, taxes and other includes the purchase price, transport charges, taxes and other includes the purchase price, transport charges, taxes and other incidental costs.

(**xx**) <u>Other Industrial Services Rendered by Others</u>: - refers 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**) <u>Industrial Cost</u>: - 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**) <u>Non-industrial Cost</u>: - includes payments like professional fees, postage, telephone, insurance, advertising, hired transport, rental payments, etc. (interest, amortization and depreciation are excluded).

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(**xxiii**) <u>Value Added in the National Account Concept (at Market Price)</u>:- is defined as the difference between the gross value of production and industrial and non-industrial costs.

(xxiv) <u>Value Added in the National Account Concept (at Basic Price)</u>:-is the difference between gross value of production and intermediate consumption which is adjusted for tax on product such as license tax.

(**xxv**) **<u>Fixed Assets</u>:** - are those assets 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, i.e., the net book value at the beginning, plus new capital expenditure minus those sold and disposed and depreciation during the reference year.

(**xxvi**) <u>**Cost of Goods Sold (CGS)</u>: - 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.</u>** 

(**xxvii**) <u>Inventory</u>:- 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**) <u>**Raw material inventory:**</u> 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) <u>Purchase of raw materials</u>:- the amount spent by the enterprise to buy direct raw materials during the year.

(**xxx**) <u>Inventory turnover in days</u>:- 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**) <u>Inventory turnover p. a</u>:- 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 Organization of Field Work

The conduct of a survey cannot be executed without the arrangement of fieldwork. In recognition of this, the organization of fieldwork for this survey has been entrusted to the 25 Branch Statistical Offices placed across the country. At least one statistical branch office is available at regional level to handle such national surveys. All Branch Offices took part in the survey execution especially in recruiting the enumerators, participating in the training, assigning the field staff to their sites of enumeration, supervising the data collection and retrieving completed questionnaires and submitting them to the Head Office for data processing.

The Branch Offices were also responsible for administering the financial and logistic aspects of the survey within their areas of operation. A total of 200 enumerators, 65 field supervisors, and 30 statisticians were involved in the data collection where on the average one supervisor was assigned to five - seven manufacturing establishments for data collection and supervise three data collectors in Addis Ababa. supervision of data collection. All the enumerators were supplied with the necessary survey equipment after the completion of the training to ensure the smooth operation of the survey. To facilitate the data collection activities, about 45 four-wheel drive vehicles were used.

## 2.4 Training of Field Staff

The execution of a survey and quality of data acquired from the survey highly depend on the type of training given to the enumerators and supervisors and the consequent understanding of the tasks to be performed and the standard procedures to be followed by the enumerators and supervisors in the survey undertaking. The quality and completeness of data are ensured when the training meets its objective of producing responsible and fervent enumerators and supervisors.

In light of this point, thorough training was given to the field staff. The training which took place at the Head Quarter of CSA and lasted 7 days targeted to train the staff from the Head Office, statisticians, senior field supervisors, and enumerators from Branch Statistical Offices. In the training, the field staff was given detailed classroom instruction on interviewing procedures, how to collect data and fill the survey questionnaire accordingly, edit and code data, verify them, etc. The training also included demonstrations and classroom exercises to reinforce their understanding of concepts, definitions and theories discussed in the classroom with regard to interviewing methods, data collection and authentication, and other related activities.

### **2.5 Method of Data Collection**

The large and medium scale manufacturing and electricity industries data for the year 2013/14 (2006 E.C) was collected from establishments by interviewing the manager/owner or the designated person and recording the data to obtain the required information on manufacturing industries. The data obtained were recorded in a set of forms designed for this purpose.

For this purpose an enumerator was assigned to **five - seven** manufacturing establishments which were drawn from the Large and Medium Scale Manufacturing Industries directory and information on the industries was elicited. The reference year for the survey was 2013/14 (2006 E.C).

## 2.6 DATA PROCESSING

#### A. Editing, Coding and Verification

Statistical data editing plays an important role in ensuring the quality of the collected survey data. It minimizes the effects of errors introduced while collecting data in the field, hence the need for data editing, coding and verification. Although coding and editing are done by the enumerators and supervisors in the field, respectively, verification of this task is also done at the Head Office comprehensively.

An editing, coding and verification instruction manual was prepared and reproduced for this purpose. Then 30 editors-coders and verifiers were trained for two days in editing, coding and verification using the aforementioned manual as a reference and teaching aid. The completed questionnaires were edited, coded and later verified on a 100 % basis before the questionnaires were passed over to the data entry unit. The editing, coding and verification exercise of all questionnaires took 30 days.

#### **B.** Data Entry, Cleaning and Tabulation

Before data entry, the Business Statistics Directorate of the CSA prepared edit specification for the survey for use on personal computers for data consistency checking purposes. The data on the edited and coded questionnaires were then entered into personal computers using CSPro software. Encoded data were checked and cleaned for consistency purposes using the edit specification prepared earlier for this purpose. The data entry operation involved about 20 data encoders and took 30 days to finish the job. Finally, summarization of the data was done on personal computers to produce statistical tables as per the tabulation plan.

#### DISCLOSURE

In accordance with federal law governing census/survey reports data that would disclose the operations of an individual establishment or company are not published at all nor will they be known to users. The law applies to the information gathered and this survey data.

#### PART III

#### SUMMARY OF THE SURVEY FINDINGS

## **3.1 Description of Findings**

The thorough functioning of manufacturing industries affirms a steady supply of raw materials & other inputs, and continual production of new products. This attainment in manufacturing does not only imply the availability of and demand for products and services in the market, but also signals a positive feature of the economy. To maintain this, collective efforts are being geared to ensuring sustainable expansion of manufacturing industries of the desired sort for the growth of the country's economy.

Surveys on manufacturing are intended to focus on the nature and sources of variations that occur at all levels of manufacturing industries, competitiveness and attractiveness to foreign direct investors, the features and factors affecting manufacturing development, and others. Hence, to get a reflection of these and other circumstances the major manufacturing items on which data are collected are number & type of manufacturing enterprises, number of persons engaged, wages and salaries paid by establishments, paid – up capital, gross value of production, value added, volume of production and inputs, fixed assets, investment, etc.

In the statistical tables, these data items are categorized into various groups for simplicity, description, clarity, and comparison purposes. In this regard, the following **Statistical Tables** attempt to paint a picture of the performance of large and medium scale manufacturing industries in Ethiopia.

**Summary Table – 3.1** shows the distribution of large and medium scale manufacturing industries both public and private by regional state and industrial group. The total number of large and medium scale manufacturing industries reported in 2013/14 (2006 E.C.) was 2,758. From the total manufacturing industries about 33% of them were located in Addis Ababa followed by Oromia almost 30% and Amhara with 12% of the industries.

The number of manufacturing industries by industrial classification in the same year also varied from one group to another. More than 27% of the manufacturing industries fell in the category of food products and beverages followed by non-metallic mineral products with more than 24% and the furniture industry with more than 12%. More details are available in the table.

**Summary Table** – **3.2** presents the number of persons engaged in manufacturing industries between 2002 and 2006 E.C. Well over 304,764 persons were engaged in all the manufacturing industries surveyed in 2013/14 (2006 E.C.). The table shows a steady increase of persons working in the industries over the last four years except in 2003 E.C. was more than 175,000. More than 20% of the persons engaged in the manufacturing industries were reported to be in the manufacture of Fabricated Metal Products, more than 19% in the food and beverage manufacturing industry, and almost 19% in the manufacture of Textile products in 2013/14 (2006 E.C.). Further details are offered in the table.

**Summary Table** – **3.3** depicts the number of persons employed by manufacturing industries in Ethiopia between 2002 and 2006 E.C. The total number of persons employed by the various industries was reported to be more than 296,355 in 2013/14 (2006 E.C.). The table illustrates a continually increasing trend in the number of employees working in all industries over the previous four years except 2003. The manufacture of Fabricated Metal manufacturing industry employed nearly 21% of the employees, the manufacture of Textile industry more than 19%, and manufacture of Food and Beverages industry took up almost 19% of the employees during the survey year. Supplementary details are accessible to the user in the table.

**Summary Table 3.4** portrays the percentage distribution of value added in the national account concept at basic price by industrial group between 2002 and 2006 E.C. Almost 37.9% of the value added by manufacturing industries to the national account was contributed by food and beverages manufacturing industry, while 18.7% of the value added by manufacturing industries to the national account was contributed by the non-metallic mineral products manufacturing industry, and more than 9% by the chemicals and chemical products manufacturing industry, and more than 7% by both the manufacture of Rubber and Plastic and also Tanning and Dressing of Leather industry. More details are obtainable from the table.

**Summary Table 3.5** reveals the ratio of the cost of imported raw materials to the total cost of all industrial raw materials consumed by industrial group for both public and private manufacturing industries for the period 2002 – 2006 E.C. When comparing the current year to the past four years the raw material consumed by the manufacturing sector was a decrease and again a rise in almost all industrial groups having no stable pattern was reported. The table shows a higher ratio (dependency on imported raw materials) over the same period for most industrial groups. The table further indicates basic Iron and Steel, Machinery and Equipment and Furniture's manufacturing industries consumed more imported raw materials than the others over the past five years period and it is minimum for the manufacture of Non-metal; Food and Beverages. Details are given in the table.

**Summary Table 3.6** demonstrates major per capita and ratio indicators of both public and private manufacturing industries for the years 2002 - 2006 E.C. All the per capita indicators displayed in the table show an increasing trend over the past five years with the exception 2004 E.C. a big leap. Wages and salaries per employee (paid to an employee) have increased and gross value of production per employee has risen over the same period. The ratio indicators show a semblance of stability despite some slight fluctuations in the past five years. Further details are available in the table.

**Summary Table 3.7** illustrates the ratio of cost of energy consumed to total industrial cost by industry group over a period of five years (2002-2006 E.C.) for both public and private industries. As pointed out in the table the non – metallic mineral industry consumed more energy followed by manufacture of Textile, Wood and Products of Wood and Cork industry than the others. More details are given in the table.

**Summary Table 3.8** describes the ratio of value added to gross value of production by industrial group over the period of the past five years. The total ratio of value added to gross value of production displayed by all industries over the same period is about the same except Wearing Apparel (53%) and Tanning and Dressing of Leather and Footwear (8%). Nevertheless there isn't much difference among the ratio indicators of each industrial group over the past five years. The ratio of value added to gross value of production of almost all of the industrial groups has

decreased during the survey year over that of the previous year as displayed in the table. More details can be obtained from the table.

**Summary Table 3.9** exhibits the ratio of cost of labour to gross value of production by industrial group over a period of five years. The total ratio for all manufacturing industries is very low and remained about the same over the same period. When considered by industrial group similar picture to the overall situation is painted giving the perception that labour is cheap to the reader when what is paid to labour is compared to the value of what is produced. It is more pronounced in the manufacture of Wood and products of Wood and Cork dropped by about half than the preceding year. Supplementary details are put on view in the table.

**Summary Table 3.10** gives the idea about the operating surplus of manufacturing industries. It offers the ratio of operating surplus to gross value of production by industrial group over a period of five years. The overall ratio of operating surplus to the gross value of total industrial production displayed a stable trend over the same period with the exception of Wearing Apprel. When the ratio is taken into account by industrial group it showed an upward variation in more than two third of the groups over the past year. More details are obtainable to the user from the table.

**Summary Table 3.11** reflects on the percentage distribution of manufacturing industries both public and private that are not fully operational by industrial group and first major reason in the reference year of 2013/14 (2006 E.C.). All in all more than 27% the manufacturing industries reported shortage of supply of raw materials as a first problem for not being fully operational. Of those which stated shortage of supply of raw materials as a first major problem 31% were from non - metallic mineral industry group followed by the manufacture of food products and beverage 36% and 31%, respectively. More than 14% of the manufacturing industry reported shortage of electricity and water supply; absence of market demand has similar percentage share as a first major reason for not being fully operational. In general, non-metallic products (42%) and food & beverage (22%) manufactures has reported more than the others as their first major reason for not being fully operational. The table conveys more details.

**Summary Table 3.12** indicates the percentage distribution of manufacturing industries both public and private that are not working at full capacity by industrial group and type of first reason during the survey year of 2013/14 (2006 E.C.). Overall almost36% the manufacturing industries reported shortage of supply of raw materials as a first problem for not working at full capacity. Of those who uttered shortage of supply of raw materials as a first major problem more than 33% were from the food products and beverage industry group. More than 18% of all the manufacturing industries reported absence of demand for products as a first major reason for not working at full capacity. Similarly as in Table 3.11, the first major reason for not fully operational, the same industrial group has more total number of all reasons except lesser percentage but higher number for non-metallic products and for food and beverage manufacturers. The table carries further details.

**Summary Table 3.13** sheds light on the percentage distribution of manufacturing industries both public and private by industrial group and type of first major operational problem faced in 2013/14 (2006 E.C.). More than 34% of all manufacturing industries reported shortage of supply of raw materials as a first major operational problem faced during the survey year. About 23% of all the manufacturing industries reported other problems as a first major operational problem faced that are different from the problems stated in the same year and about than 15% of the industries reported absence of demand for products as a first major operational problem faced. Of those that reported shortage of supply of raw materials as a first major operational problem faced more than 26% were from the food and beverages industrial group, and 25% from the non – metallic mineral industry group. More details are accessible to the user in the table.

**Table 5.1** discloses the distribution of manufacturing industries by industrial group over a period of five years (2002 - 2006). The total number of industries has shown an increasing trend from 2,172 to 2,758 over the same time series. This trend was also conspicuously noticeable in the manufacture of food products and beverages, manufacture of footwear, manufacture of chemicals and chemical products and non –metallic mineral products and others as indicated in the table. Details are presented in the table.

**Table 5.4** exposes the number of female employees by industrial group over the past five years 2002 - 2006. During this period the number of female employees virtually displayed an increasing trend from almost 60,414 to around 82,866. This trend was particularly and evidently observed in the textiles, food and beverages even with a declining female employees and rubber and plastics in the same period as shown in the table. Some 31% of the female workforce was employed by the textile industry, about 18% by the food and beverages industry and 10% by the rubber and plastics industry in 2013/14 (2006 E.C.). Much of the rest industrial groups show an oscillating pattern in the five year period. Further details are in the table.

**Table 5.5** gives a picture of wages and salaries paid by manufacturing industries over a period of five years 2002 - 2006 E.C. by industrial group. The total wages and salaries paid out over the same period have shown an increasing trend in amount over the same period as pointed out in the table. The remuneration paid by the food and beverages, non – metallic mineral, and textile industries has also clearly demonstrated an increasing trend over the same period. The same industries paid more than 36%, 10%, and 10% of the total wages and salaries paid in 2013/14 (2006 E.C.), respectively, in that order. The table offers more details.

**Table 5.6** portrays the gross value of production of manufacturing industries by industrial group over the period of 2002 - 2006. The total gross value of production of all manufacturing industries has displayed an appreciable increasing trend over the same period as presented in the table. The total gross value of production in 2013/14 (2006 E.C.) was more than 125 billion Birr about three fold against 2002 E.C.. The food and beverages, non – metallic mineral and fabricated metal products except Machinery equipment industries have also shown an exceptionally increasing trend over the same period of performance. The same industries

contributed more than 35%, 10%, and 9% of the gross value of production to the total in 2013/14 (2006 E.C.), respectively, in the same order. The table provides further details.

**Table 5.7** describes value added in the national account concept at market price by industrial group over a period of five years from 2002 – 2006 E.C. The total value added by manufacturing industries has increased tremendously over the past five years. During the survey year (2013/14) the value added was worth more than 47 billion Birr. As in the preceding table the food and beverages, non – metallic mineral, and chemical industry have demonstrated a visible increasing trend in value added over the same period. These industries contributed more than 38%, 15%, and 8% of the value added to the industrial total in 2013/14 (2006 E.C.), respectively, in that order. The table furnishes further details.

**Table 5.11** explains about the capital expenditure of manufacturing industries by industrial group for the years 2002 - 2006 E.C. The total capital expenditure of the manufacturing industries surveyed has practically increased over a period of five years totaling over 3 billion Birr in 2013/14 (2006 E.C.) as depicted in the table. This increasing trend in capital expenditure was also evidently exhibited by the food and beverages industry, non – metallic mineral industries and textile industry. The same manufacturing industries added more than 35%, 12%, and 10% of the capital expenditure to the industrial total in 2013/14 (2006 E.C.), respectively, in the same order. Further details are within reach of the user in the table.

**Table 5.12** affords the operating surplus of manufacturing industries under study by industrial group for the years 2002 - 2006 E.C. The total industrial operating surplus has greatly risen over the same period of time. It amounted to nearly 25.1 billion Birr in 2013/14 (2006 E.C.). The food and beverages, non – metallic mineral and chemical industries have also shown a remarkably increasing trend in their operating surplus over the same period of functioning. These industries contributed more than 38%, 20%, and 9% of the operating surplus to the industrial total in 2013/14 (2006 E.C.), respectively, in the same order. The table supplies further details.

# PART IV

# STATISTIACAL TABLES ON DATA OF

# LARGE and MEDIUM SCALE MANUFACTURING INDUSTRIES

2002-2006 E.F.Y (2009/10-2013/14)

# PART V

# STATISTIACAL TABLES ON TIME SERIES DATA OF LARGE and MEDIUM SCALE MANUFACTURING INDUSTRIES 2002-2006 E.F.Y (2009/10-2013/14)

# PART VI

# STATISTIACAL TABLES ON LARGE and MEDIUM SCALE MANUFACTURING INDUSTRIES ELECTRICITY INDUSTRIES 2002-2006 E.F.Y (2009/10-2013/14)