

The Federal Democratic Republic of Ethiopia

Central Statistical Agency

**Report on Large and Medium Scale
Manufacturing and
Electricity Industries Survey**

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STATISTICAL BULLETIN

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Abbreviations

CSA - Central Statistical Agency

E.C - Ethiopian Calendar

E .F.Y. - Ethiopian Fiscal Year

ISIC (Rev 3.1) - International Standard Industrial Classification of all Economic Activities,
Revision 3.1

S.N.N.P. - Southern Nations, Nationalities and Peoples' Region

N.E.C. - Not Elsewhere Classified

S.N.A. - System of National Accounts

CSPro - Census and Survey Processing System

KW - Kilowatt

KWH - Kilowatt Hour

PART I

Introduction and Objectives of the Survey

1.1 Introduction

Manufacturing is the production of goods for use or sale using machines, tools and labour. It refers to a series of human activities, from handicraft to high tech, but is most commonly applied to industrial production, in which raw materials are transformed into new products / finished 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 wholesalers, retailers, and consumers.

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 and provides important material support for national infrastructure. 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 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 economic systems. In a free market economy, manufacturing is directed toward the mass production of products for sale to consumers at a profit with some degree of government regulation. In a collective economy, manufacturing is often directed by the state to supply a centrally planned economy. 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 and producing materials of strategic importance, and labour, capital, raw materials, emerging markets, and globalization are matters of concern to manufacturing industries in particular and governments in general, statistics collected on manufacturing industries are, therefore, indispensable for policy making, planning, business running, researches, 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.”

The Central Statistical Agency (CSA) has been providing information on the country’s manufacturing and electricity industries in a statistical report since 1976 (1968 E.C.) annually, to alert policy interventionists on the changes taking place in the sector. As part of this mission, this 40th survey on manufacturing and electricity industries for 2016/17 (2009 E.C) was conducted in April, 2016 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 2009 E.F.Y (2016/17). Part V portrays time series data on Large and Medium Scale Manufacturing Industries and various

ratios for a five year period i.e. 2005-2009 E.F.Y. (2012/13 - 2016/17). Ultimately part VI demonstrates the activities and performance of the Electricity Industry for the same five year period. At last, 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 is essential for planning, policy making, monitoring, System of National Accounts (SNA), structure and evaluation of the performance 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 Manufacturing and Electricity Industries Survey are to gauge the total number of proprietors/manufacturing industries, employment, income obtained, and volume and value of production and inputs, 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, the investment situation, etc. The report is based on establishments which engage ten persons and more and use power-driven machinery and of both public and private industries in the country.

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 and covers both public and private industries in all regions of the country, where establishments in scope of the survey are found. As to electricity data, the survey covered *only* the electricity supplied by the Ethiopian Electricity Power.

The range of data items that the 2016/17 (2009 E.C) manufacturing and electricity industries survey comprises are number of proprietors / establishments 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/establishments which engaged ten persons and more and used power-driven machinery were entirely enumerated all over the country and data on the establishments acquired.

As in the preceding years, the directory used as a frame / list of establishments enumerated was updated using the registration licenses issued by the Ministries of Trade, Industries, Ethiopian revenue and Customs Authority, Federal Small and Micro Enterprises Development Agency, and the Regional States' Trade Bureaux to both public and private establishments. From this list, all manufacturing establishments which employed ten persons and more and used power-driven machines 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) **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 households 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 who are not directly engaged in the production of new products.

(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 part of the year. These workers are not on the payroll of the establishment.

(vii) **Number Employed**: - includes all persons on the payroll whether permanent or contract workers. The number of seasonal and temporary workers has been adjusted to give the 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 Salaries** : - includes all payments in cash made to employees during the reference year. It excludes commissions, bonuses, professional, and hardship allowances.

(x) **Wages**: - includes all payments in cash or in kind made to seasonal / temporary workers during the reference year in connection with the work done for the establishment.

(xi) **Commissions, Bonuses, Professional, and Hardship Allowances:** - refer to the total benefits comprising commissions, bonuses and cost of living allowances paid in cash to employees. It excludes car allowance and per diem.

(xii) **Supplements to Salaries of Employees:** - represent payments made by employers to social security systems, insurance premiums, etc on behalf of their 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:** - includes all contract, repair, consultancy 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 in 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' prices 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:** - refers to contract, repair and maintenance, consultancy work done by others in the reference year for the establishment.

(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 materials**: the amount spent by the establishments to buy direct raw materials 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 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. 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 150 enumerators, 50 field supervisors, and 25 statisticians were involved in the data collection where on the average one supervisor was assigned to three enumerators for 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 35 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 Quarters of CSA and lasted 7 days targeted 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, edit and code data, and 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, analysing audit reports, and other related activities.

2.5 Method of Data Collection

The manufacturing and electricity industries data for the year 2016/17 (2009 E.C) was collected from establishments by interviewing the establishments' managers

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 manufacturing establishments which were drawn from the Large and Medium Scale Manufacturing Industries directory and information on the establishments was elicited. The reference year for the survey was 2016/17 (2009 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 40 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 and checked and cleaned for consistency purposes using the edit specification and the cleaning programme prepared earlier for this purpose. The data entry operation involved about 40 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 the federal law governing census/survey reports data that would disclose the operations of an individual establishment or company did not publish at all nor will they be known to users.

PART III

SUMMARY OF THE SURVEY FINDINGS

3.1 Description of the 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 an encouraging feature of the economy.

To uphold 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 establishments, number of persons engaged, wages and salaries paid by the 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 manufacturing industries in Ethiopia in 2016/17 (2009 E.C) .

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 2016/17 (2009 E.C) was 3627. About 39% of the manufacturing industries were located in Addis Ababa followed by Oromiya with more than 29% and Amhara with about 14% of the industries.

The number of manufacturing industries by industrial classification in the same year also varied from one group to another. More than 26% of the manufacturing industries fell in the category of food products and beverages followed by non-metallic mineral products with about than 18% and the furniture industry with more than 13%. More details are available in the table.

Summary Table – 3.2 presents the number of persons engaged in manufacturing industries between 2005 and 2009 E.C. Over 298,510 persons were engaged in all the manufacturing industries surveyed in 2016/17 (2009 E.C) . The table shows a steady increase of persons working in the manufacturing sector over the last three years except in 2013/14. A little more than 21% of the persons engaged in the manufacturing industries were reported to be in the manufacture of food products and beverages, more than 14% in the rubber and plastic industry, and more than 12% in the manufacture of textile products in 2016/17 (2009 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 2005 and 2009 E.C. The total number of persons employed by the various manufacturing industries was reported to be more than 293,058 in 2016/17 (2009 E.C) . The table illustrates a continually increasing trend in the number of employees working in all industries over the previous five years. The food and beverages manufacturing industry employed more than 21% of the employees, the rubber and plastic industry more than 14%, and the textile industry took up more than 12% of the employees during the survey year. Supplementary details are reachable for 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 2005 and 2009 E.C. About 30% of the value added by manufacturing industries to the national account was contributed by food and beverages manufacturing industry, more than 14% by the non – metallic mineral industry, and more than 9% by the wearing apparel 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 years 2005 – 2009 E.C. All in all about half of the raw materials consumed by the manufacturing industries was reported to have been imported over the past two years. The table shows a stable ratio of dependency on imported raw materials over the period of five years. The table indicates that the motor vehicles, trailers and semi-trailers, machinery & equipment, rubber and plastic, and the chemical and chemical products manufacturing industries consumed more imported raw materials than the others over the period of the past five years. 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 2005 – 2009 E.C. All the per capita indicators displayed in the table show an increase trend over the past five years for wages and salaries per employee / paid to an employee, value added per employee, gross value of production per employee, operating surplus per employee, and value of fixed assets per employee a fluctuation trend over the past five years. 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 (2005-2009 E.C.) for both public and private industries. As pointed out in the table the ratio of cost of

energy consumed to the total industrial cost has shown a steady decline over a period of five years meaning the cost of energy is decreasing over the period. When analysed by industrial division non – metallic mineral industry consumed more energy followed by the wearing apparel industry, and wood and wood products 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 has been increasing over the past five years meaning value added has been showing an increasing trend over the past five years. The ratio indicators of wearing apparel, paper and paper products, and leather and leather products, industrial divisions contributed more value added in 2017. The ratio of value added to gross value of production of almost all of the industrial divisions has increased 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 division over a period of five years. The total ratio for all manufacturing industries is very low and showed some variations over the same period. When considered by industrial group a picture of constant tend is painted by more than half of the manufacturing divisions 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. Supplementary details are put on view in the table.

Summary Table 3.10 gives an 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 an increasing trend over the past three years meaning more and more operating surplus has been obtained. When the ratio is taken into account by industrial division more than half of the divisions showed variation over the past five years. 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 were not fully operational throughout the year by industrial group and first major reason in the reference year of 2016/17 (2009 E.C). All in all, about 29% of the manufacturing industries reported shortage of supply of raw materials as a first problem for not being operational throughout the reference year. Of those which stated shortage of supply of raw materials as a first

major problem more than 20% were from the food products and beverage industry group. More than 24% of the manufacturing industry reported shortage of electricity and water supply as a first major reason for not being fully operational throughout the year. Of all the manufacturing industries which reported first major reasons for not being operational throughout the year about 28% of them were from the non-metallic mineral industry followed by the food and beverage industry 18%, furniture industry about 18%, respectively. 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 2016/17 (2009 E.C). Overall a little more than 41% of 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 30% were from the food & beverage industry group. More than 24% of all the manufacturing industries did not state their first major reason even though they did not work at full capacity. Of all those reporting first reason for not working at full capacity more than 25% were from the food & beverage industry followed by the non-metallic mineral industry about 21%, and the furniture industry more than 15%, respectively. 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 2016/17 (2009 E.C). About 47% of all manufacturing industries reported shortage of supply of raw materials as a first major operational problem faced during the survey year. More than 5% of all the manufacturing industries reported no operational problems faced. A little more than 14% 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 36% were from the food and beverages industrial group, and more than 14% from the non – metallic mineral industry group. Of all manufacturing industries reporting first major operational problems more than 29% were from the food and beverage industry followed by the furniture industry more than 15%, and the non-metallic mineral industry more than 9 %, in the same order. 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 (2005 – 2009). The total number of industries has shown an increasing trend from 2,655 to 3,627 over the same period. This trend was also conspicuously noticeable in the manufacture of food products and beverages,

wearing apparel, paper, paper products & printing, rubber and plastic products, and machinery and equipment for the immediate past three years 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 2005-2009. During this period the number of female employees virtually displayed an increasing trend from about 75,099 to more than 100,000. This trend was particularly and evidently observed in the food and beverage, tanning & dressing, rubber and plastic, and non-metallic mineral, motor vehicle, and furniture industries in the same period as shown in the table. About 19% of the female workforce was employed by the food and beverage industry, more than 17% by the rubber and plastic industry, and more than 15% by the textile industry in 2016/17 (2009 E.C) . 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 2005 – 2009 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 from about 6.5 million to more than 12 million as pointed out in the table. The remuneration paid by the basic iron and steel, wearing apparel, paper and paper product and non – metallic mineral industries has also clearly demonstrated an increasing trend over the same period. The food and beverage, non metallic minerals, paper and paper products paid more than 31%, 15%, and 7% of the total wages and salaries paid in 2016/17 (2009 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 2005 – 2009. 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 2016/17 (2009 E.C) was about 167 billion Birr. The food and beverages, non – metallic mineral, rubber and plastic, and basic iron & steel industries have also shown an exceptionally increasing trend over the same period of performance. The same industries contributed more than 32%, 16%, 7% and 6% of the gross value of production to the total in 2016/17 (2009 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 2005-2009 E.C. The total value added by manufacturing industries has increased tremendously over the past five years from more than 38 billion to more than 93 billion Birr. During the survey year

(2016/17) the value added was worth more than 93 billion Birr. As in the preceding table the food & beverages, and non-metallic minerals industries have demonstrated a visible increasing trend in value added over the same period. These industries contributed about 31%, and 16% of the value added to the industrial total in 2016/17 (2009 E.C), respectively, in that order. The table furnishes further details.

Table 5.11 explains about the new capital expenditure (investment) of manufacturing industries by industrial group for the years 2005 – 2009 E.C. The total new capital expenditure of the manufacturing industries surveyed has practically increased over a period of five years totalling more than 26 billion Birr in 2016/17 (2009 E.C) as depicted in the table. This increasing trend in new capital expenditure was also evidently exhibited by the food and beverage, non-metallic mineral, furniture, and paper and paper product industries. The same manufacturing industries added more than 34%, 16%, 13% and nearly 10% of the new capital expenditure to the industrial total in 2016/17 (2009 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 2005-2009 E.C. The total industrial operating surplus has greatly risen over the same period of time from about 15 billion to more than 67 billion Birr. It amounted to more than 67 billion Birr in 2016/17 (2009 E.C) . The food and beverages, non – metallic mineral, and wearing apparel industries have also shown a remarkably increasing trend in their operating surplus over the same period of functioning. These industries contributed about 30%, more than 14%, and more than 10% of the operating surplus to the industrial total in 2016/17 (2009 E.C) , respectively, in the same order. The table supplies further details.