



**ST. MARY'S UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**

**THE ECONOMIC IMPACT OF MANUFACTURING INDUSTRY  
ON THE ECONOMY OF WOLISO TOWN**

**BY:**  
**BAROCK WOLDETENSAY**

**DECEMBER, 2020**  
**ADDIS ABABA, ETHIOPIA**

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**BY:**

**BAROCK WELDETENSAY**

**ADVISOR: TIRUNEH LEGESSE (ASSISTANT PROFESSOR)**

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**APPROVED BY BOARD OF EXAMINERS**

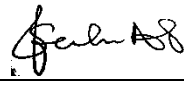
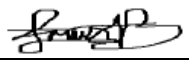

<hr/> <b>Dean, Graduate Study</b>	<hr/> <b>Signature</b>
<u>Tiruneh Legesse (Assistant Professor)</u>	
<b>Advisor</b>	<b>Signature</b>
<u>Maru Shete (PhD)</u>	
<b>Internal Examiner</b>	<b>Signature</b>
<u>Chalechew Getahun (PhD)</u>	
<b>External Examiner</b>	<b>Signature</b>

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## **Abbreviations**

UNIDO - United Nations Industrial Development Organization

LDC - Least Developed Countries

CDP - Committee for Development Policy

MVA - Manufacturing Value Added

GDP - Gross Domestic Product

AfDB - African Development Bank

E.C - Ethiopian Calendar

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## ***Abstract***

*Manufacturing industry is an important economic sector in many developed and developing countries. The purpose of this study was to assess economic impacts of manufacturing industry in the economy of Woliso town. In this study the research was focus on direct and induced economic impact and exclude indirect economic impact because of different limitation. For the purpose of this study, the researcher used quantitative method with quantitative data. A total of 290 questionnaires were distributed to owners or managers and employees of manufacturing industry selected based on random sampling technique of which 194 (66.89%) questionnaires were properly filled and returned. The secondary data were collected from office of Woliso town labor and social affairs, office of Woliso town investment, office of micro and small enterprises. The Microsoft-Excel 2010 version was used to analyze the primary data that collected through questionnaire. The result is presented in the form of tables and figures with discussions for further interpretation on the findings. The findings indicate that there is a positive direct economic impact of manufacturing industry in employment opportunities, income generation and tax revenue on the economy of Woliso town. The effect of manufacturing industry has 1051 employment, 26532000 birr income generation and 5850000 birr tax revenue for local government. Manufacturing industry has induced economic impact in household and house rent in the economy of Woliso town. The share of large scale manufacturing industry in employment, income generation and tax revenue is larger than small scale manufacturing. Therefore, based on the findings the researcher has recommended that the government must provide incentive to develop the share of small scale manufacturing industry. Another recommendation is the government creates different policy to link large and small manufacturing industry. Economic impact assessment is important instrument to understand economic impacts in different sector so, the government established institution that collect and organize important economic data that support the process of economic impact assessment.*

**Keywords:** *Manufacturing Industry Economic Impact*

# CHAPTER ONE

## INTRODUCTION

### 1.1. Background of the Study

Manufacturing industries have a great roll in the development of overall economy of the country. In many countries manufacturing industries are the main source of employment for the town. Manufacturing industry is the main sector in most developed countries and the main pushing factors of fast growth (Marcel Behunet al., 2018; Nobuya Haraguchi, 2016).

Economic impact assessment is employed to assess the direct, indirect and induced economic impact. Manufacturing industries have divide in their size small, medium and large manufacturing industries. The direct impacts are the jobs that created by new facility, its expenditure in to employee, expenditure to supplier and its tax payment. The secondary impacts are the job that created in other business area of the economy, sales and services of the firm (F. Larry Leistritz, 1996).

In Ethiopia, unemployment is the main problem of the country economic, political and social growth. In addition to this the fastest growth of rural urban migration is another factor for the growth of urban unemployment. The manufacturing industries were not well developed to create employment opportunity to those who migrate from rural area of the country. The main cause of rural urban migration in Ethiopia is economic. The economy of Ethiopia is more depending on agriculture and more than 80% of the population is lived in rural area. In fact, the rural urban migration is important and lead to industrialization. But in Ethiopia, the industries are not well growing specially the manufacturing industries. If the manufacturing industries grow as needed, it can create employment opportunities for those who migrated from the rural part of the country (Beneberu Assefa, 2012).

According (Birch 1987) find out that newly established small scale business which have been share a large number of job creation than large firms. But in the case of Ethiopian manufacturing

Another study suggest that small firms have increased their share in job creation than large firms, but when we see the total share of small firms not greater than the larger firms (F. Larry Leistritz, 1996).

The main purpose of this research is to assess the direct and induced economic impact of small and large scale manufacturing industries on the economy of Woliso town.

## **1.2. Statement of the Problem**

Small medium and large scale manufacturing industries have significant impact on the economic development of many countries. Manufacturing Industries have provided a good opportunity to reduce unemployment rate in the country especially to the urban cities. In many developed countries manufacturing industries have a great leading role in the overall growth of Gross Domestic Product (GDP).

Manufacturing broadly defined accounts for a relatively small share of GDP in the Eastern African countries (AfDB, 2014). In Ethiopia, the history of manufacturing industrial development was gone back to 1940s with a ten year plan to lay foundations on manufacturing capabilities. Ethiopian manufacturing sector however emerged during the First Five Year Development Plan of the emperor Haile Selassie Government of Ethiopia which was launched in 1957 (UNDP, 2017). But still Ethiopian manufacturing growth was not emerged as expected and the manufacturing sector is underdeveloped in Ethiopia even by African standards with the exclusion of a few successes in some areas such as leather and textiles and the sector is small and highly depends on import (Tekabe, 2018). Even though the country is blessed with natural and human resources and, Ethiopian manufacturing sector hasn't contributed more than 5 percent to the total GDP.

Unemployment is the main challenge for the social political and economic development of Ethiopia. The population growth of the country is increased by 2.3 % but Ethiopian economy is not well creating enough jobs for the people especially for those who are young population. To solve such kind of unemployment problem, the growth of manufacturing industries was significantly important.

According (Birch 1987) study find out that newly established small scale business which have been share a large number of job creation than large firms. But in the case of Ethiopian manufacturing sector the share of economic impacts of large and small manufacturing industries in job creation was not well studied.

In Ethiopia, some research had been conducted in economic impacts of private manufacturing investment on the local economy (Getu Hailu, 2014). In addition to this, some literature was published in socio- economic impact of small and micro enterprises (Bereket Teklehimanot, 2012).

Economic impact assessment is an important instrument to understand the manufacturing industry overall capacity and position in Value Added, creation of employment opportunities, income generation of the industry and tax revenue.

It is apparent that manufacturing industry has sizeable economic impacts in Woliso town. However, this industry's economic impacts have never been comprehensively measured. Therefore, the extent of the industry's effects are yet unknown. The extent that direct and induced economic impact of manufacturing industries on the economy of town is not well studied in Ethiopia especially middle level Town. To fill this gap of research which access the economic impact of small and large-scale manufacturing industries in terms of employment opportunities, income generation and tax revenue in Woliso town, this research will be conducted.

### **1.3. Research Question**

The research will provide answers to the following research questions:

1. What extent small and large manufacturing industry creating employment opportunities as direct economic impact?
2. What extent small and large manufacturing industries generate income?
3. What extent small and large manufacturing industries generate tax revenue for local government?

4. Is the manufacturing industry have create induced impact in household?
5. Which small or large manufacturing industry has more impact on the economy of Woliso town?

## **1.4. Objectives of the Study**

### **1.4.1. General Objective**

The general objective of the study is to assess the economic impact of manufacturing industries on local economy in Woliso Town.

### **1.4.2. Specific objectives**

The study is intended to achieve the following specific objectives:

1. To measure and describe the direct impacts of the Manufacturing industry, focusing on employment opportunities directly generated through manufacturing industries itself.
2. To measure and describe the direct impacts of the manufacturing industry, focusing on income generation directly generated through manufacturing industries
3. To measure and describe the direct impacts of the manufacturing industry, focusing on income tax revenue directly generated through manufacturing industries
4. To measure and describe the induced economic impacts, defined as those direct economic impacts resulting from rounds of spending of incomes and profits caused by the direct impacts.
5. To investigate which small or large manufacturing industries have more economic impact on the economy of Woliso town

## **1.5. Significance of the Study**

The development of manufacturing industry is the main concern agenda for many developed and developing countries. Ethiopian government had focus on manufacturing industry for more than half a century but the sector still under developed. This study provides important information to understand the economic impact of small and large scale manufacturing industries in middle

level town. It is provide detail information about the weakness and strength of the manufacturing sector in creation of job opportunity, generation of income, the tax generated from the industry and induced impacts on other areas like service sector. This study adds some knowledge about Ethiopian manufacturing industries economic impact for the existing literature. The local government of Woliso town gets well organized analysis about Woliso town manufacturing industry economic impact, status of the industry, strength and weakness. Furthermore the research provides important insight for policy makers in the area of manufacturing industry.

## **1.6. Scope of the Study**

This research basically focuses on the economic impact of small and large manufacturing industries on the local economy of Woliso town. In this study assess the direct and induced economic impact of manufacturing sector in Woliso town. The indirect impact of manufacturing sector was not including in this research. The study basically takes, 2 large manufacturing industry, and 12 (48%) out of 29 small and large scale industries. The respondent of this study was 14 manufacturing industry owners and 180 employees of manufacturing firm. The geographical boundary of this research is Woliso town that located in south west Shoa zone, Oromia region. The data that takes to this research was the base year of 2019.

## **1.7. Organization of the Study**

This study organized in five chapters. The first chapter was deals with the introduction part of the study which contains back ground of the study, statement of the problem, research questions, and objectives of the study, significance of the study and scope of the Study. The second chapter focuses on the details of related literature of theoretical and empirical study. The third chapter discusses the details of research methodology which was research design, population and sampling techniques, types of data and tools/ Instruments of data collection, methods of data collection and methods of data analysis. The fourth chapter mainly focuses on findings of the study and discussion on the major findings. Finally, chapter five presents the summary of the findings, conclusions and recommendations.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1. Review of Theoretical Literature

Kaldor's law as cited in Abraham (2018) that manufacturing is the main engine of the development for the country. Manufacturing inspire growth and development in the overall economy of the state. According to the above mentioned author, manufacturing is subject to rising returns, both dynamic and static whereas petty services and land based activities are subject to diminishing returns. Similarly, the author argued that manufacturing sector tends to expands by drawing labor from other sectors of the economy in which diminishing returns exists. In this case, productivity automatically rises due to the fact that the average product of labor exceeds the marginal product. Hence, the more the output of the manufacturing sector grows, the more the productivity growth grows faster in the economy, which in turn serves as the key determinants of gross domestic product and standard of living of people (Pacheco-López and Thirlwall (2013).

According to Thomas (2003) the three main themes of any manufacturing sector, which they identified to include that manufacturing grew into solution base- high innovation; it is also committed to technology and innovation, which is the key for sustaining competitiveness and growth in the level of productivity. Similarly, manufacturing sector accelerate productivity and innovation in which the spillover effects spread to other sectors of the economy. In other words, manufacturing sector is a growth-led sector as it leads to increase in economic growth via increasing returns, which is a macroeconomic phenomenon because it resulted from increasing returns to scale.

Kaldor (1966) stated three laws, which expresses how economic growth is affected by the manufacturing sector in an economy. The author identified that a rise in the output of manufacturing sector leads to improved national output of a country; similarly, economic growth is a manufacturing-base and finally, he postulated that the developed and fastest growing economies in the world today are the industrializing nations in which the contribution of the



manufacturing output to gross domestic product (GDP) is expanding rapidly. Kaldor's law as cited in Teshome (2014) also postulated that increase in the productivity of labor is based on the output of the manufacturing production.

According to Pons-Novell and Viladecans-Marsal (1998) manufacturing output growth has positive nexus with gross domestic product (GDP) growth rate, which means that industrial sector leads to higher productivity than other productive sectors of the economy. This is because, industrial sector incorporate technology progress that promote growth in the economy as a whole.

According to neoclassical proposition of Solow (1956), the relationship between manufacturing and growth is discussed under the diminishing marginal productivity of capital, constant returns to scale, technical progress that are exogenously determined and substitutability between labor and capital. Solow argued that investment and savings are very important factors responsible for immediate growth in economy. In the long run, Solow identified progress and sophisticated technology as the key factor responsible for growth and development in an economy, even though technology was treated as exogenous to the economy. The approach of the neoclassical growth even though favors capital-labor as indexes of growth in the economy, the growth in technology considered exogenous remained unexplored (Olorunfemi et al., 2013). Banjoko, Iwuji and Bagshaw (2012) revealed that manufacturing sector had since its emergence with industrial revolution been transformative for all economies via its spillover effects to other sectors. Oyati (2010) stated that developed countries that could harness its powers attained higher profitability, prosperity significant growth in their economies. For example, the experiences of the developed countries and emerging economies of India, Singapore, China, Malaysia and North Korea showed the positive nexus between economic growth and manufacturing sector (Banjoko et al., 2012). Similarly, developing nations who are oriented agrarian and services in the past also formulated several initiatives to sustain growth and development of the manufacturing sectors.

According to Kaldor who was the first to theorize about stylized facts regarding the benefits of the manufacturing sector for the overall economy, Kaldor (1960) defined the benefits of industrialization, when the industrial sector develops and grows, it soak up the surplus

production which produced outside the manufacturing sector, these may be the goods of mining or agriculture, more manufacturing growth creates demand for a lot of types of services, as banking, insurance and professional services of a range of types and thus to some extent responsible for a rapid growth of the non-manufacturing sectors (Kaldor, 1960).

Kaldor's first law states: *the growth rate of an economy is positively related to the growth rate of its manufacturing sector* i.e. "manufacturing is the engine of growth," The second law (Kaldor-Verdoorn law) states: *an increase in the rate of growth of manufacturing output leads to increases in labor productivity in that sector*. This is due because of existence of increasing returns to scale in the sector due to learning by doing and efficiency changes. The Third law states: *productivity in the non-manufacturing sector increases as the rate of manufacturing output increases*. The growth of manufacturing sector increases productivity in nonmanufacturing sector of agriculture and informal sectors by drawing surplus labor in these sectors reducing disguised unemployment (Martin, 2014).

A key feature in Kaldor's traditional model of circular and cumulative causation is the existence of increasing returns within the industry provided in his second law (Verdoorn's law) (Kaldor 1970, Dixon and Thirwall, 1975). According to this law, initial growth output stimulate gains in productivity that permit decline of unit labor costs rate leading to fall in prices, and given the make-up pricing rule, this increases a country or region's competitiveness. These gains, sequentially allow further output expansion through increasing exports which in turn re-initiates the cycle (Martin, 2014).

Kaldor's theory is a plausible one, but there are at least three major issues that need discussion. First, what drives manufacturing output growth in the first place? Second, where is the demand for output in the story? Third, the model is essentially "closed-economy". There is no foreign trade; there is no balance of payments or foreign exchange constraint. There is a fairly easy answer to the first question which Kaldor (1996) himself discusses, namely that in the early stages of development, the major source of demand for manufacturing output must be the dominant agricultural sector, but in the later stages of development, export growth will take over. But the two other issues remain.

Kaldor proposed that the economic growth is caused by manufacturing sector induced by demand-driven for numerous causes: primary, it is in industrial sector where growing and increasing returns exist. Next, the growth of industrial output is considered the net rise to the growth in economy as whole. Based on Kaldorian thinking, any raise in demand for manufacturing goods leads to an increase in productivity through increase of investment which leads to the improvement of technology. On the other hand, the growth of output creates technical progress through interactions between activities. (Kholoud, 2017)

According to Kholoud (2017) the first law the economic growth (GDP) is significantly correlated to the growth of the manufacturing sector in the economy (positive relationship). And, the causal relation is proposed to move from growth of the industrial sector to growth of gross domestic product (GDP). For the reason of this positive relationship amongst the growth of GDP and industrialized growth, this law is known as “the engine of growth hypothesis”.

As the third law: the growth of GDP productivity is positively correlated to the growth of the manufacturing sector. And, the causality is proposed to run from growth of the industrial sector to the growth of GDP productivity throughout the labor reallocation to manufacturing sector from other sectors such as agriculture and services sectors. Due to: wage differential between low productivity sectors that characterized with surplus labor and high productivity sectors that characterized with shortage in demand for labor, consequently, the surplus labor in low productive sectors will transferred to manufacturing sector ( high productive sector ) without any reduction in output in low productive sectors. The other sectors (agriculture and services) have diminishing returns to scale so the workers shift to manufacturing sector, so the productivity for the reminder labor will rise. And according to the Kaldors –Verdoorn law, the productivity of industrial sector will also increase as it attracted more labor to make additional products. All in all, it is the degree at which the surplus workers in low productive sectors are relocated to the high productive sector (manufacturing sector) that leads to increase the growing rate of productivity to all economy. (Kaldor, 1968).

Kaldor premised the explanation for the correlation between the growth rate of manufacturing output and the aggregate economic performance on two possible reasons. The first relates to the fact that the expansion of manufacturing output leads to the transfer of labor to the manufacturing sector from the low productivity non-manufacturing sector. The result is an

increasing economy-wide productivity with little or no negative impact on the output of the non-manufacturing sector, given the existence of surplus labor. The second reason relates to the existence of static and dynamic increasing returns in the manufacturing sector. While static returns relate essentially to economies of scale internal to the firm, dynamic returns refer to increasing productivity derived from learning by doing, ‘induced’ technological change, and external economies in production. (Olumuyiwa and Oluwasola, 2016)

## **2.2. Review of Empirical Literature**

### **2.2.1. Manufacturing Industry**

According to the United Nations Department of economic and Social Affairs (DeSA) define manufacturing as the physical or chemical conversion of materials, materials or components into new type of products. The materials, substances or components transformed are raw materials that are products of agriculture, forestry, fishing, mining or quarrying or products of other manufacturing activities. Substantial alteration, renovation or reconstruction of goods is generally considered to be manufacturing.

According to Jovane et al., (2008).Manufacturing is the base of industrial society. Manufacturing create significant job opportunities in industrialized countries. Industrialization of countries, since the beginning of the industrial revolution, has taken place through manufacturing. At the start of the industrial revolution, it was based on “small” networks within limited geographical domains and later on, on networks that exceeded first regional and, hence, national boundaries.

Industrialization In the past two centuries has spread from Europe, to the USA, to East Asia, to other part of the world areas and it is still spread across the world (Jovane et al., 2008).

### **2.2.2. Impacts of Manufacturing Sector on Economic Growth**

Kuznets (1966) described long-term development patterns of countries based on empirical analyses of national accounts and argued that industrialization—or increases in the share of manufacturing in GDP—is a key feature of modern economic growth, which is markedly different from the much lower growth rates observed in the world before the onset of the industrial revolution. Kaldor examined the relationship between industrial development and

economic growth, and based on empirical results, characterized the manufacturing sector as “the main engine of fast growth” (Kaldor, 1967). There is a strong causal relation between the growth of manufacturing output and the growth of GDP. The link between the growth of manufacturing output and the growth of GDP is sometimes referred to as Kaldor’s first growth law. (Pacheco-López and Thirlwall, 2013)

### **2.2.3. Manufacturing in Least Developed Countries**

According to the general assembly of UN that held in 1971 approved, Least Developed Countries are they have low economic development, institutional and human resources often compounded by geophysical challenges. (UNIDO, 2013)

The revised criteria of the UN in 2003 classify LDC by the Committee for Development Policy (CDP) to the Economic and Social Council of the United Nations, incorporated:

- ☞ *“A low income criterion based on a three-year average estimate of the country’s gross national income (GNI) per capita (under US\$ 905 for inclusion, above US\$ 1086 for graduation);*
- ☞ *A human resource weakness criterion including a composite Human Assets Index (HAI) based on the indicators: (a) nutrition; (b) health; (c) education; and (d) adult literacy; and*
- ☞ *An economic vulnerability criterion entailing a composite Economic Vulnerability Index (EVI) based on the indicators: (a) population size; (b) remoteness; (c) merchandise export concentration; (d) share of agriculture, forestry and fisheries in gross domestic product; (e) homelessness owing to natural disasters; (f) instability of agricultural production; and (g) instability of exports of goods and services (UNIDO, 2013)”*

From 2000 to 2010, the share of LDCs in world population grew from 11.1 to 12.5 percent, while their share in world Manufacturing Value Added (MVA) remained below 0.5 percent, advancing from 0.3 per cent to 0.5 percent. Low MVA levels combined with fast growing populations may explain the low level of MVA per capita in LDCs, at US \$37 in 2009 (constant 2000 dollars). This is almost 28 times less than world average MVA and 212 times less than that

of Japan's, the country with the highest MVA per capita in the world. Industrialized countries with a combined population of about 17 percent held nearly 70 percent of global industrial production in 2009. (UNIDO, 2013)

Manufacturing value added declines in developed and rises in developing countries but the bulk of manufacturing value added remains in developed countries. According to (Jörg Mayer, 2004) (i) manufactured exports have grown more rapidly in developing than in developed countries, (ii) manufacturing value added has declined in developed and risen in developing countries but the bulk of manufacturing value added has remained in developed countries, and (iii) manufactured exports in developing countries have grown much more rapidly than manufacturing value added.

LDCs have recorded a significant MVA growth rate over the last decade. In the periods 2001-2005 and 2006-2010, LDCs' MVA grew at a rate above 6 percent, being second only to China. While such growth rates are encouraging, they should be put into perspective, given the small industrial base of LDCs. For example, in 2006-2007, 5.2 percent growth in MVA per capita in LDCs translated into an increase of US\$ 2 (constant 2000 dollars), while per capita world MVA grew 2.7 percent, but increased by US\$ 42 (constant 2000 dollars). (UNIDO, 2013)

The manufacturing sector in LDCs, albeit at an early stage of development, grew faster than the GDP in 2001-2010, which has resulted in a higher level of industrialization, measured by the growing share of MVA in GDP. (UNIDO, 2013) in his publication, this is in line with classical structural change theory which, given LDCs' level of development, predicts a shift from agriculture to industry. However, while several countries have embarked on the path towards industrialization, others, in contrast, are facing deindustrialization.

James R. Tybout, (2000) reveal that manufacturing sector is often the darling of policy makers in less developed countries (LDCs). It is viewed as the leading edge of modernization and skilled job creation, as well as a fundamental source of various positive spillovers. Accordingly, although many LDCs have scaled back trade barriers over the past twenty years the industrial sector remains relatively protected in the typical country. Governments also promote manufacturing with special tax concessions and relatively low tariff rates for importers of manufacturing machinery and equipment.

## **2.3. Synthesis of the Reviewed Literature**

### **2.3.1. Manufacturing in East Africa**

The share of Africa's global manufacturing was below 1 percent, while Asia and other developing economies accounted for 25 percent and 23.7 percent respectively in 2008 (UNCTAD-UNIDO, 2011). Africa's manufacturing value added (MVA) share of GDP was only 14 percent in 2003, with a decrease of 2 percent from 1965, the result of almost four decades of sluggish growth. Moreover, the sector has been conquered by low-value, labor-intensive, resource-based activities and by small firms and the informal sector (Dinh, Palade, Chandra, and Cossar (2012).

Manufacturing broadly defined accounts for a relatively small share of GDP in the study countries of East Africa (ranging from 3.8% to 11%) compared to the levels of manufacturing typically associated with industrializing countries (which range as high as 30% to 40%). Manufacturing value-added (MVA) per capita is highly disparate across the study countries: The Seychelles has seen MVA per capita decline by almost half in the last ten years – from over USD 1,500 per capita in 2002 to an average of only USD 831 since the global crisis of 2008. Kenya, which ranks second highest in the region in MVA per capita, registered strong growth in this indicator up to 2008, more than doubling from USD 39 in 2002 to USD 85, but then experienced a decline with the crisis, from which it has yet to recover. Several countries in the region (Rwanda, Tanzania and Uganda) have managed to sustain relatively strong growth in this indicator since the mid-2000s, from very low levels, while Burundi and Ethiopia have lagged. Not only are the trends divergent but also the levels are highly disparate, ranging from below USD 20 in Ethiopia to some 75 times higher in the Seychelles. The regional weighted MVA average of the study countries of about USD 36 per capita is substantially smaller than in Vietnam (USD 301) and very far behind BRICS countries like South Africa or China, which are at USD 835 and USD 1,300 respectively. (AfDB, 2014)

Based on available data, the level of productivity (MVA per worker) across the study countries of East Africa is low, productivity growth is slow, and the scale of plants is also generally small.

In terms of sub-sectors, manufacturing in the study countries is dominated by food and beverages, largely basic processing of agricultural output. The percentage varies by economy: for the study countries except Seychelles, cotton-based textiles and clothing, the production of leather (driving off the regional availability of animal hides), and wood-based products (including furniture, paper and printing) also figure prominently in the regional production mix. The Seychelles' manufacturing sector, in contrast, is largely based on tuna. The region also has some capability in the production of more refined consumer products based on agricultural inputs, including soaps, perfumes, cosmetics etc.

According to AfDB (2014) there is some nascent industrial development of more advanced products for local or regional consumption. Ethiopia, Kenya and Tanzania have small industries producing more complex products like vehicles, electronics (e.g., cell phone assembly) or machinery and equipment. The same is true for industrial products (chemicals, rubber and plastics, and basic metal products). Based on available statistics, imported components constitute up to 90% of the value of goods in these latter categories; this highlights the absence of well-developed local basic industries.

The study countries of East Africa – with the exception of the Seychelles which is a special case – have a revealed comparative disadvantage in manufacturing overall, although most countries have particular subsectors in which they do have some degree of comparative advantage – for example, Kenya in food and beverages, leather products, textiles and clothing, and in non-metallic mineral products including cement and ceramics; Rwanda in processed tea; Tanzania in textiles; and Uganda in cement, clay and ceramics. The Seychelles' processed fish products give it a comparative advantage in that sector and in manufacturing overall. (AfDB, 2014)

### **2.3.2. Manufacturing Share of GDP in East Africa**

According to AfDB (2014) with this general caveat in mind, while there is a considerable difference across the study countries in the share of GDP accounted for manufacturing, as a broad generalization, the sector accounts for a small share of GDP. However, this statistic alone says very little about the actual degree of industrialization of a country; by comparison, Kenya and Tanzania have manufacturing shares of GDP in the same range as the United States (12%) and the UK (10%). The shares are, however, low compared to the levels of manufacturing



typically associated with industrializing countries, which typically have manufacturing shares of GDP ranging as high as 30 to 40%.

Manufacturing value-added (MVA) per capita is a somewhat better indicator of industrialization. In the study countries, this indicator has shown mixed trends across the various countries in the region. The Seychelles, which in 2000 had the biggest manufacturing sector in relative terms, has seen MVA per capita decline by almost half in the last ten years – from over USD 1,500 per capita in 2002 to an average of only USD 831 since the global crisis of 2008. Kenya, which ranks second highest in the region in MVA per capita, registered strong growth in this indicator up to 2008, more than doubling from USD 39 in 2002 to USD 85, but then experienced a decline with the crisis, from which it has yet to recover. Several countries in the region (Rwanda, Tanzania and Uganda) have managed to sustain relatively strong growth in this indicator since the mid-2000s, from very low levels, while Burundi and Ethiopia have seen limited growth. Not only are the trends divergent but also the levels are highly disparate, ranging from below USD 20 in Ethiopia some 75 times higher in the Seychelles. The regional weighted average of about USD 36 per capita is an order of magnitude smaller than Vietnam (USD 301) and very far behind BRICS countries like South Africa or China, which are at USD 835 and 1,300 respectively.

In absolute size, the combined manufacturing sector in the seven study countries as a whole is only about one-third the size of the manufacturing sector in Vietnam, which has a population one-third the size of the study countries. Given the latitude for very strong catch-up growth in manufacturing in the study region, especially with the increase in regional incomes from the rebound in resource prices in recent years, the inconsistent and overall weak dynamic indicates that economic conditions and policies in force are not conducive to rapid industrialization. (AfDB, 2014)

### **2.3.3. Manufacturing Share of Exports in East Africa**

The manufacturing share of goods exports varies widely across the study countries, as do the trends. For the study countries combined, manufacture broadly defined comprise about 50% of total goods exports and have been on a flat trend. However, because of the broad definition accorded to manufacturing, these statistics, like those of share of GDP, afford little insight into the state of manufacturing for policy purposes. For example, in the case of the Seychelles,

exports of processed or preserved fish or fish products – in particular canned tuna – represent the bulk of “manufactured” exports. Thus, if a narrower definition of “manufactures” is applied, the story is completely different, and the most recent share of manufactured goods in merchandise exports in no case exceeds 35% of goods exports. Specifically, given that Seychelles’ exports largely consist of products not included in the narrow definition, its share of manufactures in exports drops to less than 5%. Only three countries, Kenya, Uganda and Tanzania, have shares of 20% and above. The regional average, heavily influenced by Kenya’s performance, increased until 2008 to a peak of 28% and has since dropped again. (AfDB, 2014)

#### **2.3.4. Public versus Private Ownership Manufacturing in East Africa**

Eastern Africa has a history of significant levels of state ownership of enterprise. However through extensive privatization, today manufacturing enterprise is generally in private ownership in the study countries. Uganda largely privatized in the 1990s, Rwanda since 2006, and Kenya is in the midst of its third wave of privatization with significant remaining state-holdings on the auction block, including several manufacturing establishments. Burundi recently privatized its coffee industry and is attempting to private other state-owned enterprises. Ethiopia (26%) and Tanzania (8%) have relatively high shares of total manufacturing employment accounted for by publicly owned firms. The Seychelles features a unique situation: one firm, IOT, which is 40% owned by the Government of Seychelles, is the main industrial employer. IOT cans tuna and produces fishmeal as well as fish oil through a subsidiary. It is the second largest tuna-canning factory in the world and, with more than 2,000 employees, is by far the largest single employer in the Seychelles.

There is no general pattern in terms of policy direction. Uganda is moving away from narrow incentives to promote general activity by supporting the development of industrial parts. The Seychelles is also moving in the direction of greater *laissez faire*, in part because of the reforms agreed as a result of its debt crisis in 2008-09. Tanzania, meanwhile, has reverted to using an economic plan and Ethiopia has even nationalized its logistics industry, which suggests there is at least some discontent with the results of the heavy reliance on private sector dynamics to generate the desired catch-up growth. (AfDB, 2014)

## **2.4. Manufacturing in Ethiopia**

Ethiopia sought industrialization as early as 1940s with a ten – year plan to lay foundations on manufacturing capabilities. Features of entrepreneurial tendencies towards the manufacturing sector however emerged during the First Five – Year Development Plan of the Imperial Government of Ethiopia which was launched in 1957. The evaluation of the plan revealed that the private sector could not invest in the manufacturing industry as much as expected. About 60 per cent of the loans advanced to the private sector financed investment projects in the construction and housing sector. The apparent lack of enough investment in the manufacturing sector was blamed on low entrepreneurial capability of the indigenous people and behavior of seeking short term returns in the construction bubble. (UNDP, 2017)

The Imperial Government made industrialization in general and manufacturing sector in particular a priority in the Second Five – Year Development Plan with active intervention by the government. Public investments in key sectors such as cement, refinery, brewery and textile industries were made. Following the momentum, foreign private firms began to emerge. As a result, value added in the manufacturing sector grew by 16 per cent pushing the share of the industrial sector in the GDP from 9 per cent to 13 per cent over the plan period. With low productivity in the agriculture sector and rural majority almost self – sufficient in consumption, lack of raw material and demand became major challenges to the manufacturing sector. The Third Five – Year Development Plan that was launched in 1961 gave emphasis to commercial agriculture and agro-processing industries. The process was aborted with the deposition of the Imperial regime only to be replaced with socialist modes of production.

Based on the Soviet model, the Ethiopian government nationalized the few private firms and focused on expansion of heavy industries in principle be financed by surplus generated in the form of quota delivery from the peasant cooperatives in the agricultural sector. Productivity both in the cooperative farms and the manufacturing sector was too low to strive for the ambitious industrialization. The government also had to finance major civil and regional wars. In particular, the “employment for all” principle of the socialist system led to inefficiency in the manufacturing sector. The rate of capacity utilization in major manufacturing firms was not more

than 50 per cent. Under such a system, the private sector was not allowed to invest in businesses that require capital of more than Birr 500,000 (about \$250,000).

To align with global changes with the collapse of Soviet Union and to heed to domestic challenges, in 1989 the Government announced mixed economic policy thus inviting the private sector to play a role in the manufacturing and other sectors. In 1991, the newly inaugurated EPRDF government took over power and inherited manufacturing firms either operating at very low capacity or those that ceased operation altogether due to obsolete machinery and lack of spare parts. (UNDP, 2017)

The EPRDF made agriculture and rural development its priority under ADLI thus giving less attention to the manufacturing sector. In 2004, the share of the manufacturing sector in the GDP was 4.2 per cent. Even at the end of PASDEP the share of the manufacturing sector in the GDP stood at a mere 4 per cent.

The launching of GTP in 2010/11 was a result of the recognition that the high growth episode that was observed during PASDEP cannot be sustainable without structural change that involves a shift of economic activity to the manufacturing sector. Government is fully convinced that there is no alternative to industrialization in order to claim the future as equal citizen of the world and display assertiveness in the ever changing competitive international arena. (UNDP, 2017)

With the close supervision of the Ministry of Industry and overall follow up of the Office of the Prime Minister, the government pledged a direct public investment in the manufacturing sector at an investment outlay of \$11.4 billion in the sugar, chemical, pharmaceutical, cement, and metal, textile, and fertilizer industries. Ten sugar factories and a fertilizer complex were to be erected in different regions of the country.

Value added in the sector grew during the first phase of GTP at a rate of 14.6 per cent pushing its share in the GDP to 4.8 per cent. This falls short of the high expectations. In particular, the growth came mainly from either FDI or private investments in the sector. The highly expected sugar factories and the fertilizer complex were delayed. This has tested the domestic capacity of the country to accomplish industrial projects.

Overall, some important milestones have been achieved to base industrialization on a strong foundation during the first phase of GTP. Even More importantly, lessons were learnt from the pitfalls and gaps that emerged during the implementation of GTP – I. The second phase of GTP focuses on further engagements in the manufacturing sector by a dressing gaps observed during the first phase. New directions include addressing major bottlenecks in energy, raw materials, and technology gaps. (UNDP, 2017)

According to Teshome (2014) Trends of manufacturing sector in Ethiopia Trends refer to the change in the number of manufacturing establishment in the country. The number of manufacturing establishment in Ethiopia showed an increasing trend. In 1980, the number of manufacturing was only 408. After ten years, in 1990, the number of manufacturing sector declined to 288. Due to economic policy change and lack of market incentive the number of manufacturing sector declined by 41 percent between 1980 and Around 120 manufacturing sector became out of the market within ten years. In 2000, the new number of manufacturing sector joined the sub-sector which was around 500. In 2009, the total of manufacturing sector in the country reached 2,179. As compared to before three decades the numbers of manufacturing sector change by more than 1,700. But the change was irregular. During the 1980 and 1991 the manufacturing sector experienced a declined trend. After economic reform program introduced in the country, the growth rate of manufacturing growth was at a slow pace till The growth of manufacturing sector was faster and sustainable in the country since 2000 which showed annual growth rate of 19 percent as compare to 3.2 percent of an annual growth rate before The more involvement of the private manufacturers in the economy contributed for fast growth of the number of manufacturing sector in the country.

During the command economic system the number of private manufacturers was restricted or limited in the sector. Due to these conditions the number of manufacturing sector declined to a lower level. The absence of private manufacturing sector affected the domestic and international competitiveness of the sector during 1980 and 1990, respectively. During the neoliberal reform period between 1991 and 2002, the number of manufacturing sector started to show a positive trend. But the improvement was not stable and sustainable. The lack of infrastructure, poor business environment and market failure mainly hindered the performance of the sector. However, since 2002, when the country experienced social and infrastructural development, the

manufacturing sector also has shown increasing trends. During this period the government had various incentives that attracted the private manufacturing sector and at the same time that improved the efficiency and effectiveness of the public manufacturing sector. The distribution of manufacturing sector in Ethiopia The structure of the manufacturing sector can be seen by the distribution of manufacturing sector in the country. The distribution of manufacturing sector affects the sustainable economic development in the country. Even if the availability of resources determine the distribution of manufacturing sector, the nature of the manufacturing concentration affect the income distribution and efficient utilization of national resources. The study used the available data which showed the distribution of manufacturing sector in Ethiopia. In 1995 the number of manufacturing sector in Addis Ababa the capital of Ethiopia was 438. This is around 68 percent of the total manufacturing sector in the country. Following Addis Ababa, Oromia (11 Percent) and Amhara national regional State (6 percent) taking the second and third. The four regions (Addis Ababa, Amhara, Oromia and SNNRS) taking around 90 percent of the total. (Teshome, 2014)

During the last fifteen years up to 2014 the numbers of manufacturing sector increased. Addis Ababa administration number of manufacturing sector reached 875 which are 40 percent of the total manufacturing sector. As compared to 1995, the share of Addis Ababa, declined by 20 percent. The number of manufacturing sector in Oromia National Reional State was increased to 451 in the share of Oromia national regional state increased to 21 percent. SNNRS took the third place in 2009 with 292 number of manufacturing sector. In this year the share of SNNRS reached 18 percent. There is slight change on the distribution of manufacturing sector during the study period due to various incentives given by the government for private sector to invest in each regional state. But still in 2009, the share of the manufacturing sector taken only by four regions (Amhara, Oromia, Addis Ababa and SNNRS). These four regions took 90 percent of the number of manufacturing sector in Ethiopia.

Types of manufacturing output the last indicator that was used to see the structure of manufacturing sector in Ethiopia is the types of output produced by the manufacturing sector in the area. There are four major categories of manufacturing output in Ethiopia: Consumer goods, Metal, Non-metal and chemical. The share of the types of output produced by manufacturing sector indicates the development of manufacturing sector in the country.

The types of manufacturing output in 1995 and In 1995 the total number of manufacturers which produced consumer goods product was 293 which is 46 percent of the total manufacturing output. In the same year, the Non-metal and metal manufacturing output took 38 and 11 percent of total manufacturing sector output respectively. During this period the manufacturing sector output was dominated by the consumer goods industry such as beverage, textile and cloth. In 2009 the number of consumer goods industries increased to 778. It was increased by 485 between 1995 and in the same way the number of non-metal and metal manufacturing output reached to 1079 and 219. The non-metal manufacturing sector showed more than threefold improvement during the study year. While in 2009, the share of the non-metal industry reached 50 percent of the total manufacturing sector output in the country. There were slight changes in the types of manufacturing output in the economy. But still the structure of the manufacturing sector intermesh of manufacturing sector output indicates the lower level of manufacturing sector development in the country. The experience of many emerging countries indicates the structure of the manufacturing sector changed from the consumer goods industries to the micro-electronics industries. Such changes in the composition of manufacturing sector improve the competitiveness capacity of the country in the world market as well as in providing high contribution for the national economy. The manufacturing sector in Ethiopia dominated by consumer and non-metal goods industry can be competitive in the world economy due to the low productivity and demand of the types of manufacturing output. In the same way the degree of innovation in consumer goods industries is lower than the micro-electronics industry. Therefore, the annual growth rate of manufacturing, agricultural and national economy between 1998 and

Source: Central Statistical Agency Abstract, structural transformation of the national economy depends on the types of manufacturing output. The more consumer goods produced by manufacturing sector in the economy may not achieve the fast and efficient structural transformation in the economy. This was what was observed in the stagnant nature of the manufacturing sector in the country. Even sometimes the country was experiencing the decline share of the manufacturing sector from the national economy. As can be seen in the next section, the manufacturing sector experienced a decline share despite its growth rate during the study period. The growth of Manufacturing sector and National economy manufacturing sector and economic growth have positive relationship in the economy. In most developed countries the

increases in the share of the manufacturing sector enable them in their national economy to grow at a faster rate. (Teshome, 2014)

#### **2.4.1. Size of Ethiopian Manufacturing Firms**

According to Arkebe (2018) In 2014/15, 29 percent of medium and large manufacturing firms accounted for more than 90 percent of employment in manufacturing. Moreover, these medium and large firms accounted for 75 percent of manufactured value-added output. The economic history of advanced economies and East Asian latecomers approves the prominent role of internationally competitive large firms and the significance of policies that focus on developing ‘national champions’. China is also following a similar industrial policy by building globally competitive firms. Larger firms play an essential role because of their typically higher productivity and exploitation of economies of scale, their tendency to create high-paying stable jobs, their technological capability, and their ability to compete in the export sector.

One of the key characteristics of the Ethiopian manufacturing sector remains the numerical dominance of small firms (Dinh et al. 2012). This is in part the result of the conventional policy prescription that African countries should focus on the ‘dynamism’ of micro and small enterprises and the informal sector. This approach is reinforced by a ‘small is beautiful’ romanticisation and the inflated valuation of the role of ‘individual entrepreneurship’ and self-employment in economic development. Another aspect of this confusion is the ill-defined concept of ‘the missing middle’, which is supported by neither theoretical nor empirical evidence (Hsieh and Olken, 2014). Ethiopian medium and large firms accounted for three-quarters of manufacturing output. The lesson is that Ethiopia needs to develop larger firms and national champions that reinforce and complement the development of vibrant smaller enterprises, which are linked to large firms and global markets through sub-contracting and spin-offs, thereby harnessing inter-firm learning.

#### **2.4.2. Manufacturing and Job Creation in Ethiopia**

According to Tadele et al. cited in Tekabe (2018) in Ethiopia the proportion of the employed population in the working age population has increased by 0.5 percentage points between 2005 and 2013. The sectorial structure of employment reveals that the share of employment in



agriculture has declined significantly from 80.3 percent in 2005 to 72.7 percent in 2013, declined by about 7.6 percentage points which indicated some sort of structural transformation. The service sector has assumed a great role in employment generation, where its employment share increased from 13.1 percent in 2005 to 19.9 percent in 2013.

Labor productivity growth in Ethiopian service sector is relatively high conversely; labor productivity growth in manufacturing sector is relatively low. However, employment in large and medium manufacturing sector increased from 93,737 in 2000/01 to 173,397 in 2010/11, grew at an annual average rate of 6.3%. Similarly, the number of manufacturing establishments also grew on average by 10.5% per year over the same period. Both manufacturing value added per employee and per establishment fell over the period as the number of establishments grew, indicating that large and medium manufacturing enterprises have become less labor intensive (DAB, 2015). On the other hand, the employment share of private manufacturing industries in total manufacturing employment within large and medium-sized group increased from 41.9% in 2000/01 to 73.9% in 2010/11. On the contrary, the share of public manufacturing industries shrunk from 58.1% to 26.1% which indicated that public investment in the sector is increasing. The employment distribution of the different firm size within the manufacturing sector indicated that micro enterprises employ 138,951 (51%); small enterprises employ 10,960 (3.9%); medium enterprises employ 14,757 (5.4%) and large enterprises employ 108,226 (39.7%) in 2007/08 alone. (Tekeba, 2018)

Another recent study suggests that (Arkebe, 2018) Ethiopian Manufacturing employed 4.5 percent of the total workforce in 2013. Employment by the sector grew at an annual rate of 4.8 percent (similar to the 4.7 percent growth for total employment) between 2005 and 2013 (NPC 2018).<sup>6</sup> Jobs in the construction industry tripled from 229,000 to 825,000. This has doubled the construction industry's share of total employment from 0.9 to 1.9 percent. Meanwhile, stimulated by expansion of public infrastructure and favorable policies, value added in the construction industry increased from 11.1 to 27.7 percent between 2010/11 and 2014/15 and then slightly dipped to 22.85 percent in 2015/16–2016/17.<sup>7</sup> Manufacturing industries related to the construction sector (such as the cement industry and other building materials) have also shown rapid growth and shifts in industrial structure (Oqubay, 2015).

### **2.4.3. Production and Value Addition of the Manufacturing Sector in Ethiopia**

Gross value of production by manufacturing sector worth about 113 billion Birr in 2012/13 and value added generated is estimated to reach 32 billion Birr in the same year, which was about 4% of the value addition to the entire economy in the same year. This report also indicated that, the largest value addition was come from the food and beverage subsector, which was around 8 billion Birr in 2012/13, followed by non-metallic mineral subsector (4.3 billion Birr) and metal and engineering subsector (3.9 billion Birr) while the smallest contribution came from textile and apparel industry (396 million Birr). The Ethiopian large and medium size manufacturing sector is dominated by food and beverages. It accounted for the largest proportion of the overall large and medium manufacturing value added between 2000/01 and 2010/11. However, according to this author, the value-added share of the food and beverage industries declined by about 3.6 percentage points between 2000/01 and 2010/11. (ADB, 2014)

According to DAB 2015, the manufacturing sector accounts for 70% of the industrial sector in Ethiopia. Within the manufacturing sector, the agro-processing subsector (food and beverage subsector) is the largest subsector, accounting for 36% of the total gross value of production (GVP) and 38% of the value added. The sector employs 60,110 people, both SMEs and publicly and privately owned larger companies. The strong linkages to the rest of the economy and the use of abundant agricultural products as inputs create a positive climate for the development of agribusiness in Ethiopia. The contribution of the major sectors to export findings including some manufacturing subsectors between, 2011-2014. The figure indicated that, Ethiopia is exporting more as primary products than value added products which in turn affect employment opportunity, better price and long term competency. As the graph indicated, the contribution of coffee, live animals and gold to export is in a decline state where as oilseeds, chat and pulses export is growing and meat and meat products and fruits and vegetables remain flat.

According to National Planning Commission Report, within the industry sector, medium and large scale manufacturing industries value added registered average growth rates of 19.2 % per annum and micro and small industries registered an average growth rate of 4.1% per annum during the first Growth and Transformation Plan period. The growth performance of the manufacturing industry which is the key indicator of the degree of structural transformation in

the economy was lower than the target for the plan period. The poor growth performance of the micro and small scale manufacturing industries and delay in the implementation of large manufacturing projects were the major contributors to the slow growth in the overall manufacturing sector. Therefore, proper implementation and consolidation of the micro and small scale enterprises development strategies is very important to unleash the potential of the sector in revitalizing local economic development, nurturing entrepreneurship and addressing unemployment and poverty. On the other hand, the National Planning Commission Report [9] indicated that, the major factor for low performance of the medium and large scale manufacturing sector in Ethiopia during the first growth and transformation plan is a short fall which is witnessed in attracting a large number of new and quality export oriented private investments in the manufacturing sector. The Ethiopian government believes that establishment of industrial zones and integrated agro-industrial parks can transform Ethiopian agricultural production from being fragmented and supply driven to becoming organized, safe, demand-led, quality oriented and means to address many of the challenges identified with respect to the development of the industrial sector. The trends of the contribution of the manufacturing export findings to the total export in Ethiopia is not consistent even declining after 2006.

The other major factor responsible for low performance of the manufacturing sector as per UNIDO report is export products were of lower value added, while others were less diversified both in terms of products type and market destination. Still some other manufacturing exports were found to be very basic and of lower quality, fetching with lower prices and becoming more vulnerable to global economic shocks as well as bargaining power of the buyers. In addition to export-oriented industrial development strategy, significant emphasis was also given to promoting efficient import substitution industrialization; however the country is still dependent on foreign import as indicated in Figure 5 for meat sector which also applies to other imported livestock products. The unit price of a kilo of fresh beef exported from Ethiopia mainly to the Middle East countries is a maximum of 4 USD whereas the importing price from South Africa for fresh beef it goes up to 10.33 USD which needs a study at the end market and the whole value chain. (Tekeba Eshetie, 2018)

According to Arkebe (2018) in the Year 2016/17 the net contribution of the manufacturing and industrial sectors to the 10.9 percent annual GDP growth rate rose to 1.1 and 4.4 percent

respectively. This is much higher than the 0.4 and 1.1 percent that these sectors had respectively contributed to overall growth during the PASDEP period (2005/06–2009/10). By contrast, the net contribution of agriculture remained the same (at 2.5 percent), while that of the service sector dropped from 5.6 percent in 2006–10 to 4 percent of the GDP in 2016/17. This suggests that the industrial sector may be evolving to become the primary driver of the economy for the first time in Ethiopia.

Despite the increase in manufacturing output, there has been no comparable growth in manufactured exports and employment. The share of manufactured exports in total exports remained less than 13 percent while total exports decreased from 12.7 to 7.7 percent of GDP during 2001 and 2016/17. Manufactured exports were characterized by low-value products, which were generated in the leather and leather goods, textiles and apparel, and meat industries, and which generally went to other low/middle-income markets. This may be compared to the traditional coffee and the new cut-flower exports, which accounted for 25 and 7.5 percent of total merchandise exports respectively in 2014–17, and a greater share of these exports, were destined for higher income markets. The failure to increase manufactured exports as a share of total exports suggests limited structural transformation and the significance of the balance of payments constraint on growth through industrialization (Cramer, Sender, and Oqubay 2019; Thirlwall 2013).

Manufacturing activities more associated with exporting—like textiles and apparel and leather and leather goods—have declined in significance within the manufacturing sector in terms of employment share, share of gross value of production, and share of manufacturing value added. At the same time, domestically oriented activities—above all, cement and related products—have increased their contribution to output, value added, and employment. This emphasizes the weakness of industrial policy in generating dynamic growth in export-oriented industries.

In sum, the industrial structure of Ethiopian manufacturing has not changed dramatically. This may appear disappointing given the commitment by the Ethiopian government to an active industrial policy. Nonetheless, there are important departures and emerging shifts in terms of the contribution of the manufacturing and industrial sector. For instance, in the apparel and textiles industry the economic drivers (for instance, the role of FDI), and employment (with very fast

growth since 2015) have been changing. The cement industry has undergone fundamental shifts during 2005–15. Driven by a strong domestic market, the brewery industry has also undergone considerable expansion (Arkebe, 2018).

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1. Research Design**

The selection of the research design is based on the objectives of the study; the accessible data, the availability of time and the cost that paid for get the data. The main purpose of this study is to assess the economic impact of manufacturing industries on local economy in Woliso Town. To achieve the purpose of this research the researcher use quantitative research design.

Therefore, the researcher has employed quantitative method. The researcher believe that this kind of research method is fit with the above mentioned research objective. It is comparatively easy to explain and understand the economic impact of manufacturing industry.

#### **3.2. Population and Sampling Techniques**

The Target population of this study is Woliso's town small and large manufacturing industry. Woliso town is located in Ethiopia, Oromia regional state south west Shoa. In the Oromia region, the numbers of registered manufacturing industries as investment are 3020. Out of this 1603 industries are functional.

In woliso town there is 29 manufacturing industries from this industries all are operational. For the purpose of this study all 14 (48%) functional manufacturing industries are taken as a simple random sample using lottery method. From these manufacturing industries 2, large manufacturing and all the remaining are small manufacturing industries.

There are 1051 employees worked in Woliso town manufacturing industries. The sample size of manufacturing employees was determined using the following formula as it stated by Yamane (1967).

Sample size obtained as;

$$n = \frac{N}{1+N(e)^2}$$

$$n = \frac{1051}{1+1051(0.05)^2} = 290 \text{ employee}$$

Where, n – designates the sample size the research uses.

N - Designates the total number of manufacturing employees

e – Designates maximum variability or margin of error 5% (0.05).

1 – Designates the probability of the event occurring.

**Table 3.1.**Status of Questionnaires Distributed to large and small manufacturing industries

No	Types of manufacturing	No of employees	Proportion	Questionnaire distributed
1	Large manufacturing industries	942	90%	205
2	Small manufacturing industries	109	10%	85
	Total	1051	100%	290

Both owners of manufacturing and workers of the industries would be asked to their benefits from the investment of manufacturing in terms of employment and income generation through data collection instruments such as questionnaire.

### 3.3. Types of Data and Instruments of Data Collection

To achieve the objectives of this research, both primary and secondary data were collected. The questionnaires were designed and distributed to manufacturing industries owners or managers and employees. Some questionnaires were designed in accordance with to 5 point Likert scale type that respondents have to indicate whether they strongly agree, agree, neutral, disagree, and strongly disagree for each statement. The secondary data was collected from various reports of

office of Woliso town labor and social affairs, office of Woliso town investment and office of micro and small enterprises by using document review.

### **3.4. Methods of Data Collection**

#### **3.4.1. Source of Data**

This study was entirely based on primary and secondary data. The data sources were office of Woliso town labor and social affairs, office of Woliso town investment and office of micro and small enterprises, owners of manufacturing industries who are found in Woliso town and the workers of manufacturing firms. The primary data was collected from manufacturing owners and workers of manufacturing firms while the secondary data was collected from Woliso Town labor and social affairs office and Woliso town enterprise and industry office.

#### **3.4.2. Questionnaire**

The study designed the survey questionnaire in order to assess the economic impact of manufacturing industry on the local economy. The questionnaire divided in to two parts. The first part “I” was for the manufacturing owners. The second part “II” was for the workers of manufacturing industries. All the two parts were focused on the economic impact of manufacturing investment on the local economy in terms of creating employment opportunities, income generation and tax generation to the local administration.

#### **3.4.3. Document Review**

Document review is a way of collecting data by reviewing existing documents. Document review is a systematic collection, documentation, analysis and interpretation, and organization of data as a data collection method. In document review documents are interpreted to give voice and meaning around an assessment topic (Bowen, 2009). In this research document review was used to collect the secondary data which was collected from Woliso Town labor and social affairs office and Woliso town enterprise and industry office. The document review was focused on government support and incentives for private manufacturing investment and infrastructure facilities.



### **3.5. Methods of Data Analysis**

In achieving the objective of the research, the study employed quantitative data analysis. So the data obtained from the sample of large and small scale manufacturing industries, owners of the industries, workers of the manufacturing sector, and from Woliso town labor and social affairs office and Woliso town enterprise and industry office was analyzed on these techniques.

#### **3.5.1. Quantitative Analysis**

Quantitative data analysis used more to measure to the direct economic impact which the income, employment and tax generation to the local administration which the information both from the survey and secondary data. The collected data presented using, frequency counts, and the number of respondents and percentage supported by graphical presentations.

#### **3.5.2. Descriptive Analysis**

The descriptive analysis was performed to explain the socio-economic characteristics of the sample manufacturing owners and workers of different manufacturing firms. The descriptive statistics used in this study include percentages and frequency of occurrence. To analyze descriptive data which Microsoft excel 2010 was employed.

### **3.6. Validity**

According to Saunders, et al. (2009), Validity is soundness or rationality; whether the findings are really about what they appear to be or the degree to which results obtained from the analysis of the data actually represents the phenomena under study. The validity of data gathering instrument is confirmed by the ability and willingness of the respondents to provide the information requested.

In order to make the questionnaire valid, relevant and objective to problem, it was properly commented by the advisor, and it also tested on available respondents, and based on the issues which were not properly clear by the respondents were corrected and refined.

### 3.7. Reliability

Reliability of the instrument was also tested to check on its internal consistency using Cronbach's alpha result for all the five categories of the questionnaire. The Cronbach's Alpha result shows that Induced economic impact and Challenges for manufacturing are good, Increment of manufacturing employee's income and Opportunities in labor force are very good, the remaining Government supports for manufacturing is excellent.

In which, according to Robert B. et al (2008), the acceptable levels of Cronbach's Alpha for attitude scales (like Likert scale) is 0.7 and above and the strength of association is said to be poor if alpha is  $< 0.6$ , moderate if its  $0.6 - < 0.7$ , good if it is between  $0.7 - < 0.8$ , very good if it is  $0.8 - < 0.9$  and excellent if it is above 0.9. The table below further illustrates the result of the reliability test.

**Table 3.2.** Cronbach's alpha, coefficient of reliability

Items	No of Items	Cronbach's Alpha
Increment of manufacturing employee's income	2	.847
Induced economic impact of manufacturing	2	.759
Government supports for manufacturing	7	.912
Opportunities in labor force	4	.812
Challenges for manufacturing firm in Woliso town	2	.762

### **3.8. Ethical Consideration**

The researcher was conducted the study by taking all ethical standards of a research in to consideration. First, respondents of the study were briefed about the purpose of the study and were ask for their informed consent to be involved in the study. The issue of confidentiality was also assured to them and will implement accordingly. The names of the respondents were not being asked to make them comfortable and to make their information secret. Respondents were also informed that they can disagree to participate in the study if they choose to do so and/ or stop or leave at any time if they feel not good. They were also informed that any question which will not comfortable to them can be left or can say disagree.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.1. Descriptive Analysis

##### 4.1.1. Demographic Characteristics of Respondent

Demographic factors are age, gender, education, marital status, number of children, experience and etc.

##### 4.1.1.1. Demographic Characteristics of Manufacturing Owners

Table 4.1. Respondent profile

Gender	Frequency	Percentage %	Cumulative percentage
Male	13	93%	93%
Female	1	7%	100%
Total	14	100%	
<b>Age</b>			
18-30	5	36%	36%
31-40	4	28%	64%
Above 40	5	36%	100%
Total	14	100%	
<b>Educational qualification</b>			
Grades 10 complete	8	57%	57%
10+3 /diploma	2	14%	71%
BA/BSC & above	4	29%	100%
Total	14	100%	
<b>Marital status</b>			
Married	9	64%	64%
Single	5	36%	100%
Total	14	100%	

Source: Owen Survey, (2020)

The data show that manufacturing owners were 13 (93%) out of 14 male and 1 (7%) out of 14 female. Most of the manufacturing industry in Woliso Town is dominated by male.

Age of manufacturing owners was categorized in three groups. From those who manufacturing owners 5 (36%) were between 18-30 years old. In the age categories of between 31- 40 were 4 (28%) years old and above 40 years old were 5 (36%). When the size of manufacturing industry was increase, the owner's age is increase.to conclude that the large manufacturing industries were occupied by above 40 years old. Most small manufacturing enterprise was dominated by young owners.

Another demographic factor is educational qualification of manufacturing owners. As shown on the above table 1 (57 %) out of 14 sample respondents have completed secondary level. Out of 14 manufacturing owners 2 (14%) have 10+3 diploma and the remaining 4 (29%) have BA degree. In General the table shows that all the respondents (100%) attended from secondary up to Diploma or degree level education. When we come to large manufacturing industry owners all have degree holders.

The marital status of the respondents presented in (Table 1) was only two categories, single and married. A large percentage of the respondents were married that covered 9 (64%) respondents while the rest of 5 (36%) out of 14 were single. The fact that marriage have contributes to the economic well-being of children and families. Most of manufacturing owners have a family.

#### 4.1.1.2. Demographic Characteristics of Manufacturing Workers

**Table 4.2.** Gender, age, distribution of Manufacturing Workers

<b>Gender</b>	<b>Frequency</b>	<b>Percentage %</b>	<b>Cumulative percentage</b>
Male	150	83%	83%
Female	30	17%	100%
Total	180	100%	
<b>Age</b>			
18-30	120	67%	67%
31-40	40	22%	89%
Above 40	20	11%	100%
Total	180	100%	
<b>Educational qualification</b>			
Grades 1-4	20	11%	11%
Grade 5-8	25	14%	25%
Grades 10 complete	90	50%	75%
10+1 &10+2	15	8%	83%
10+3 /diploma	20	11%	94%
BA/BSC & above	10	6%	100%
Total	180	100%	
<b>Marital status</b>			
Married	55	31%	31%
Single	125	69%	100%
Total	180	100%	

Source: Owen Survey, (2020)

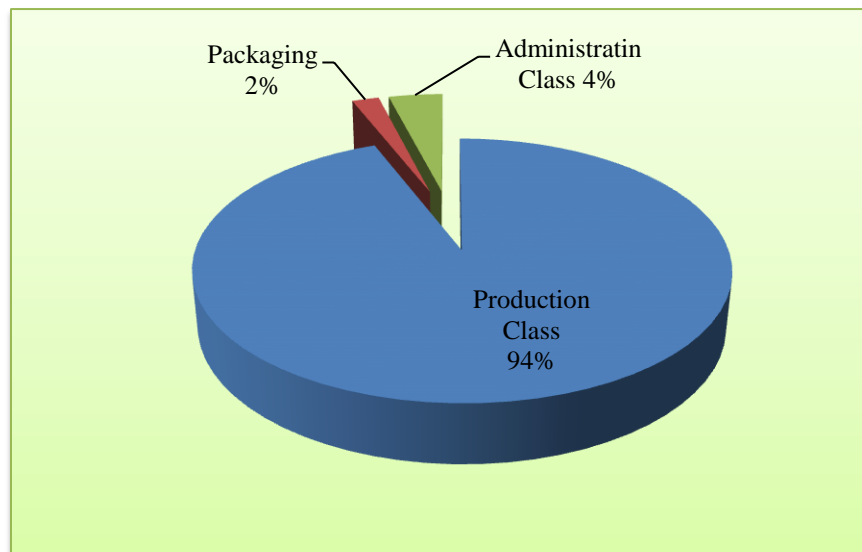
Another respondent of this study were manufacturing workers. The gender distribution of manufacturing workers were 150 (83.33%) male and 30 (16.67%) out of 180 female. The proportion of female had increased in the manufacturing workers in the large manufacturing industries.

Age composition of manufacturing workers indicate that most of them were young and between 18-30 years old. The rest of them were between 31-40 years old 40 (22%) and above 40 were 20 (11%) out of 180. The manufacturing industries were creating job opportunities for young population.

Educational qualifications of manufacturing employee were grade 1-4 (11%), Grade 5-8 25 (14%), Grades 10 complete 90 (50%), 10+1 & 10+2 15 (8%), 10+3 /diploma 20(11%) and BA/BSC & above 10 (6%). All the manufacturing workers were educational background, especially those who were young have completed grade 10 or advanced.

Marital status of the respondent 55 (31%) were married and 125 (69%) single. Most of the manufacturing workers were single. It needs some social science research to know why many manufacturing industries workers were single.

**Figure 1.** Divisional Distribution of Respondents of manufacturing employees

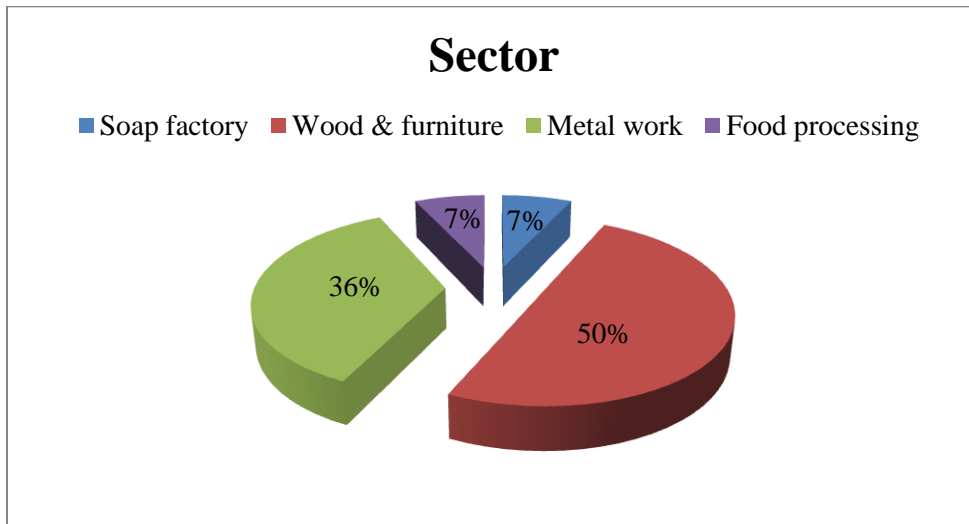


Source: Owen Survey, (2020)

Figure 2. Shows that out of 100% responses received, 170 (94%) of the respondents were working in production class, 7 (4%) of the respondents and 3 (2%) employees working in administration and packaging class respectively. According to the above data most of manufacturing workers are working in production section.

#### 4.1.2. Sector of manufacturing

**Figure 2.** Kind of manufacturing sector



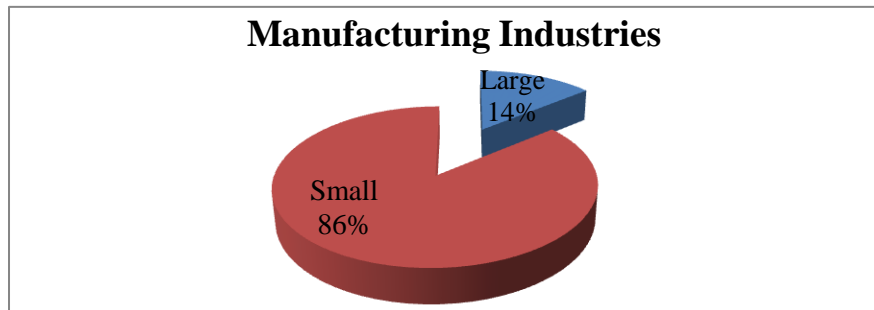
Source: Owen Survey, (2020)

As shown in figure 2 out of the respondent 7 representing 50% were wood and furniture manufacturing owners, 5 representing 36% were metal work owners, 1 representing 7% was owner of soap factory and 1 representing 7% was food processing owner. The above table shows that manufacturing industry owners in Woliso town are engaged in limited kind of manufacturing industries. The sector going in this way finally affected the growth of manufacturing industries. This indicates that the manufacturing sector needs improvement to expand and increase the variety of industries.



### 4.1.3. Categories of Manufacturing Scale

**Figure 3.** Manufacturing industries Scale



Source: Woliso town enterprise and industry office annual report, (2019)

As shown in Figure 1. The scales of operational manufacturing firm were small scale manufacturing industries and large scale manufacturing industries. Out of all small and large manufacturing firms most of them were engaged in small scale manufacturing industries representing (86%) the remaining (14%) operating in large scale manufacturing industries. The main importance of classifying manufacturing industries in their size small and large was which important to know what extent their direct and induced economic impact. In the above mention data there was a big difference by number between large and small manufacturing industries. In fact this difference is not a problem but to the healthy development of manufacturing sector in Woliso town additional large manufacturing industries are needed.

## 4.2. Quantitative Data Analysis

### 4.2.1. Direct Economic Impact of Manufacturing

Direct economic impacts are defined as the value of industrial output, the employment, and the total income generated by a particular sector. Data on these impacts is often generated through direct observation and can be obtained through measuring an industry's expenditures, profits, and payroll. Data are often reported in terms of sales, employment, or value-added. Quantifying the direct impacts is the first step in this analysis. In this research the direct economic impact was include employment, income and tax.

### 4.2.1.1. Employment

Employment is a straightforward measure of the number of person-years of employment (full-time job equivalents) that are generated by the manufacturing industry, including direct employment, indirect employment with suppliers to the main project, and induced employment that is associated with the extra spending by households. A Person-year is defined as one person being fully employed for one year. Direct employment is on-site direct employment of Woliso town small and large manufacturing industry, which is directly generated by the industry; and induced employment is the employment of people as a result of the spending and subsequent re-spending of the direct income generated by the project.

**Table 4.3.** Direct employment of large and small manufacturing

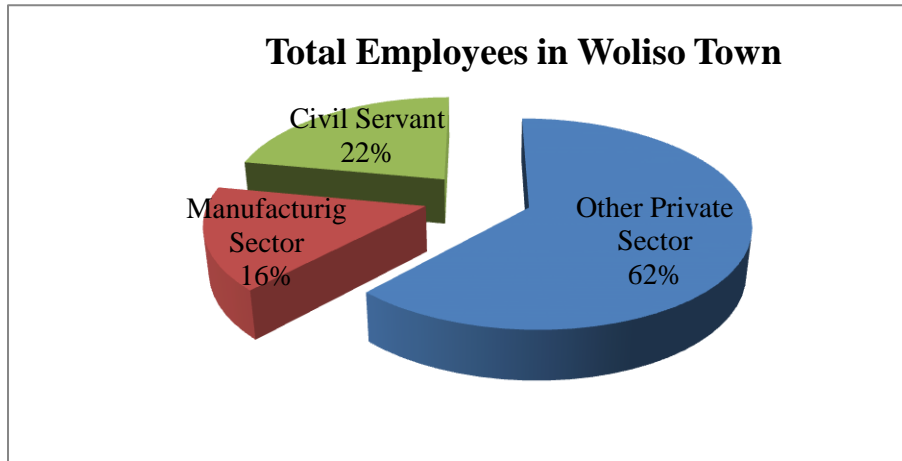
Employment	No. of Direct Jobs	Percentage %
Large manufacturing industry	942	90%
Small manufacturing industry	109	10%
Total	1,051	100%

Source: Owen Survey, (2020)

As shown in Table 3. The direct employment opportunities of large manufacturing industry were 942 employees. It covers 90% of the total number employment opportunities of Woliso town manufacturing industry. The coverage of employment opportunities of small scale manufacturing industry of Woliso town were 109 out of 1051 employee. The total coverage of small scale manufacturing industry was 10%. To conclude that in Woliso town there was 1051 employment opportunity that created by manufacturing industry. The large share of total employment was covered by large manufacturing industry. The share of small scale manufacturing industry in creation of direct employment opportunity was cover little than large scale manufacturing industry. It also indicates that large manufacturing industries well developed more than small manufacturing industries in terms of employment opportunities. This has negative impact to the

economy of Woliso town in terms of creating employment opportunities because small manufacturing industries has irreplaceable role in developing countries.

**Figure 4.** Share of total manufacturing employee



Source: Woliso town labor and social affairs office annual report, (2019)

Figure 4 show indicate, according to the data that get from Woliso town labor and social affairs office, in Woliso town there is 6,757 employees worked in government and private sector. The shares of large and small manufacturing industries were 1,051 (16%). The data show that, the share of manufacturing industry employment opportunity was little than civil service and other private sectors. Manufacturing sector has potential employment opportunity in Woliso town. But this data indicate that manufacturing sector in Woliso town still under development in terms of employment opportunities and it need improvement. If the manufacturing sector is going in this minimum development situation it can't generate more employment opportunities for those who highly increase unemployed.

#### **4.2.1.2. Labor Income**

Labor income is the additional income earned by workers as a result of the manufacturing. Labor income is an important contributor to economic growth and is a large component of GDP. Availability of labor income enables consumers to buy products and services to support and expand local industry. Total Labor Income represents the sum of wages, supplementary labor income, and net income of unincorporated business.

**Table 4.5.** Direct income of large and small manufacturing

Income	Labor income in birr	Percentage %
Large manufacturing industry	22,608,000	85%
Small manufacturing industry	3,924,000	15%
Total	26,532,000	100%

Source: Owen Survey, (2020)

The direct labor income of large manufacturing industry as shown in Table 4 was 22,608,000 and which cover 85% of the total of 26,532,000 birr that created by Woliso manufacturing industry. The share of Small manufacturing industry income was 3,924,000 birr which cover 15% of the total income that generated from direct economic impacts of small and large manufacturing industry. The share of large manufacturing industry in income generation was significantly greater than small manufacturing industry. In many developing countries small manufacturing industries have generate significant income for their employee. When we see in Woliso town, the share of small manufacturing industry in income generation was very little and it needs highly attention because if the sector can't generate sufficient income for their employee the workers desperate by the sector and finally the turnover are increase.

**Table 4.6.** Increment of manufacturing employee's income

Characteristics	Frequency	Percentage
There is increment of income when you compare initial and actual income		
☞ Strongly disagree	20	11%
☞ Disagree		
☞ Neutral		
☞ Agree	20	11%
☞ Strongly agree	140	78%

If your response for the above question is agree or strongly agree how much you increase your income?		
☞ Less than 10%		
☞ 11%--20%	12	8%
☞ 21%--30%	138	86%
☞ More than 31%	10	6%

Source: Owen Survey, (2020)

The above table 5 shows that out of total respondents who answered for this likert scale question “There is increment of income when you compare initial and actual income” Posed to them, 160 (89%) responded that they answer agree there is increments of income and the remaining 20 respondent (employees) represents 11% they answer is disagree and there is no increment of income.

The increment of income was 12 respondents representing 8% say there was increase their income between 11% - 20%, the majority 138 respondent representing 86% increase their income 21% - 30% and the remaining 10 respondent equal to 6% increase their income more than 31%.

According to the above data 89% of manufacturing employees were increase their income when increase their working experience in the industry. The data show that in Woliso town manufacturing industry employees has opportunity to increase their income. The increment of manufacturing employee income has positive impact to manufacturing sector which retain their employee.

#### **4.2.1.3. Tax Revenue**

Tax revenue is calculated for all three levels of government – federal, provincial, and local. These government revenues do not include capital tax, water rentals and any greenhouse gas taxes associated with the manufacturing. The base year of tax was 2018/19 (2011 E.C)

**Table 4.7.** Tax revenue of large and small manufacturing

Tax	Tax in ETH birr	Percentage %
Large manufacturing industry	5,500,000	94%
Small manufacturing industry	350,000	6%
Total	5,850,000	100%

Source: Owen Survey, (2020)

The tax was that calculated only at town level. It's not includes provincial and federal level tax revenue. The above Table 5 shows that the larger share of tax revenue was by large manufacturing industry with 5,500,000 birr which cover 94 % of the total. Small manufacturing industry was cover 350,000 birr which share 6% of the total share of manufacturing sector in Woliso town. The tax revenue share of small scale manufacturing industry was smaller than large manufacturing industry.

According to the above mention data there is a large difference share of tax between large and small manufacturing industries. The large manufacturing industry is contributed 5,500,000 birr and the small manufacturing industry is contributed 350,000 birr it means large manufacturing industry is contributed 5,150,000 birr greater than small manufacturing industry.

Tax revenue is very important for the development of any country. The government has collect small amount of tax from small scale manufacturing industries. This is affected the development of Woliso town.

#### **4.2.2. Induced Economic Impact of Manufacturing**

Induced impacts is a result of the spending and subsequent re-spending of the direct and indirect income generated by the project, there will be induced impacts /effects upon the consumer goods industries as well as the industries which supply them. This leads to more spending on food, housing, entertainment, transportation, and all of the other expenses that make up a typical household budget.

In this research induced impacts was focus on re-spending of direct income effects on food and housing.

**Table 4.8.** Induced economic impact of manufacturing

Characteristics	Frequency	Percentage
How much of your income do you spend for household?		
☞ Less than 25%	25	14%
☞ 26%—50%	135	75%
☞ 51%—75%	20	11%
☞ 76%---100%		
How much of your income do you pay for house rent?		
☞ No	45	25%
☞ Less than 25%		
☞ 26%—50%	115	64%
☞ 51%—75%	20	11%
☞ 76%---100%		

Source: Owen Survey, (2020)

The data in table 6 shown that, 25 respondents representing 14% spend their income less than 25% for household its represent the amount of between 1 - 927735.37 birr, 135 respondents comprising 75% indicated that they pay 26% - 50% for household its covers between 5172093.2 – 9946333 birr while 20 (11%) spend their income 51%-75% for household the amount that going in to the Woliso town economy is between 1488314.6 – 2188698 birr.

The results point out that, 45 employees which equals to 25% of the respondents answered that from their income they don't pay anything for house rent and 115 respondents cover to 64% indicated that they pay 26% - 50% of their income for house rent that the amount its covers between 5172093.2 - 8489725.36 birr and the remaining 20 employees who cover 11% of the total sample employee they pay 51% - 75% of their income for house rent that cover between

1488314.64 – 2188698 birr. The average income of one manufacturing employee was 25,244.5 birr per year.

According to the above data 75% of manufacturing industry employees lives in rented house. They spend more their income for house rent. The major expenditure of manufacturing employees was house rent. We have concluded that the majority of manufacturing industry employees spends their income for house rent and household. Therefor manufacturing industry creates significant employment opportunities but the salary is not sufficient more than house rent and household. It is not change permanently the life of manufacturing employees.

The result show that manufacturing industries in Woliso town have induced economic impacts in house rent and house hold. The implication of induced economic impacts on the economy of Woliso town is which creates employment opportunities, income generation, and tax revenue in other sectors.

### 4.3. Manufacturing Industry and Opportunities in Woliso Town

#### 4.3.1. Opportunities in Government Support

**Table 4.10** Government supports for manufacturing

Characteristics	Frequency	Percentage
There is no problem when you take the manufacturing license		
☞ Strongly disagree	9	64.3%
☞ Disagree	2	14.3%
☞ Neutral		
☞ Agree		
☞ Strongly agree	3	21.4%
If your response for the above question is agree or strongly agree which is the problem?		
☞ There is long and bulky chain	6	55%
☞ The investors have not enough awareness	4	36%
☞ Other	1	9%



There are opportunities for manufacturing investment in Woliso town.		
☞ Strongly disagree	3	21.4%
☞ Disagree	1	7.1%
☞ Neutral		
☞ Agree	2	14.3%
☞ Strongly agree	8	57.1%
If your answer for the above question is agree, on what is the opportunity?		
☞ Taking the working place easily	8	80%
☞ The presence of higher educational institutions		
☞ Good and attractive temperature	2	20%
There are incentives for your manufacturing firm from government.		
☞ Strongly disagree	3	21.4%
☞ Disagree	1	7.1%
☞ Neutral		
☞ Agree	2	14.3%
☞ Strongly agree	8	57.1%
There is an opportunity to get a loan from bank for your manufacturing firm.		
☞ Strongly disagree	3	21.4%
☞ Disagree	2	14.3%
☞ Neutral		
☞ Agree	2	14.3%
☞ Strongly agree	7	50%
There is a market opportunity out of Woliso town		
☞ Strongly disagree	7	50%
☞ Disagree	3	21.4%
☞ Neutral		
☞ Agree	1	7.1%
☞ Strongly agree	3	21.4%

Source: Owen Survey, (2020)

There was different questions pose on manufacturing owners to assess manufacturing opportunities in Woliso town. Out of 14 respondent representing 79% of them agree that there is

a problem when they take manufacturing license. The respondent mention that out of them 55% say there is long and bulky chain, 36% of them say the investors have not enough awareness and the remaining 9% mention other problems. The respondent representing 3(21.4%) say and agree there was problem when they take manufacturing license. Another question pose on manufacturing owners to assess the opportunities in the town was “Are there opportunities for manufacturing investment in your town?” the answer was 64% yes and 36% no. Among those who answer yes there is a good opportunity for manufacturing industry was 89% say taking the working place easily and 11% was say that good and attractive temperature. Working place is very important issue to establish manufacturing firm.

The incentive that the government provides for the manufacturing owners were 10 which equals to 71.4% agree that the government provide incentive for manufacturing owners and the remaining 4 which equal to 28.5% believe that the government doesn't provide any kind of incentive for their firm.

The manufacturing owners were asked do they have an opportunity of getting loan/credit from Bank for the purpose of their manufacturing firm. They answer that out of the respondent 9 which equal to 64.3% getting loan and 5 respondents representing 35.7% responded no there wasn't getting loan from bank.

For the existence of any kind of firm which market opportunities is an important thing for entrepreneurs. Table 7 indicated that, 4 respondents representing 28.5% responded agree for the question that “do you have market opportunities out of Woliso?” and the remaining 10 respondent representing 71.4% answer were disagree, they don't have any kind of market opportunities out of Woliso town.

The government support is very important for the development of manufacturing industry in developing countries. The above data indicate that there is lack of government support for Woliso town manufacturing industries. Lack of government support is one obstacle to improve manufacturing productivity and development in Woliso town.

### 4.3.2. Opportunities in Labor Force

**Table 4.11** Opportunities in labor force

Characteristics	Frequency	Percentage
There are opportunities of getting easily trainable labor forces.		
☞ Strongly disagree	2	14.3%
☞ Disagree	1	7.1%
☞ Neutral		
☞ Agree	2	14.3%
☞ Strongly agree	9	64.3%
The number of workers initially and now there is increment in your firm.		
☞ Strongly disagree	4	28.6%
☞ Disagree	1	7.1%
☞ Neutral		
☞ Agree	2	14.3%
☞ Strongly agree	7	50%
If your response for the above question is yes, by how much you increase your number of workers?		
☞ Less than 30%	8	89%
☞ 31%—50%		
☞ 51%—70%		
☞ 71%---100%	1	11%
Your manufacturing firm recruits skilled manpower that is certified from higher educational institutions.		
☞ Strongly disagree	8	57.1%
☞ Disagree	3	21.4%
☞ Neutral		
☞ Agree	1	7.1%
☞ Strongly agree	2	14.3%

Source: Owen Survey, (2020)

Ethiopian Manufacturing industry is mainly depends on labor force. Many Ethiopian manufacturing industries don't have latest technology to produce mass production. So many small and large industries mainly have used labor force (Arkebe, 2018).

As indicated in table 8 to assess opportunities of the labor force which different questions were posing to manufacturing owners. Out of the respondent 11 which equal to 78.6% believe and agree that there is opportunity of getting easily trainable labor force for the manufacturing firm. The remaining 3 which equal to 21.4% believe that they can't get easily trainable labor force for their manufacturing firm.

Table 8 the above depicts that, 9 respondents representing 64.3% indicated the number of workers that initially and now which there was increment. Out of the respondent 5 which equal to 35.7% answer that there was no increment of workers initially and now. Most of large manufacturing firms were increase their number of workers between initially and now. The numbers of workers that 8 firms equal to 89% increase their workers less than 30% and the remaining 1 equal to 11% was increase their workers by 71% - 100%.

In this section the last question poses to manufacturing owners to assess recruitment of skilled workers who certified from higher educational institutions were 3 (21.4%) owner recruit skilled manpower that certified from higher educational institution and 11 (78.5%) does not recruit certified workers. Most large manufacturing firms agree that they were recruit skilled manpower that certified from higher educational institution.

The manufacturing sector creates employment opportunities for those who are unemployed. But the sector can't employ more than few skilled employees especially small scale manufacturing industries. If the sector can't employ skilled manpower the overall development of manufacturing industry is in rescue. Because today more manufacturing equipment is need skill man power to operate effectively.

### 4.3.3. Challenges That Hinder for the Success of Manufacturing Firm

**Table 4.12.** Challenges for manufacturing firm in Woliso town

Characteristics	Frequency	Percentage
There is enough electric power in your manufacturing firm.		
☞ Strongly disagree	8	57.1%
☞ Disagree	3	21.4%
☞ Neutral		
☞ Agree	1	7.1%
☞ Strongly agree	2	14.3%
During your production process, what kind of shortages your firm faced?		
☞ Raw materials	12	86%
☞ Skilled man power	1	7%
☞ Transportation		
☞ Foreign currency	1	7%
☞ Other		

Source: Owen Survey, (2020)

Infrastructure is the main important issue in manufacturing industries development. As indicated in table 9 above that the manufacturing owners answer for the question that do you have enough electric power in your project? The answers were from those 14 respondents who manufacturing owners a total of 3 respondents representing 21.4% answer they get enough electric power for their manufacturing firm and 11 respondents representing 78.5% can't get enough electric power for their project. Based on the above data most of manufacturing firms were can't get enough electric power for their firm.

Table 9 above depicts that, 12 respondents representing 86% indicated that there was shortage of raw materials during production, 1 respondent representing 7% was get shortage of skilled man

power when during production process and the remaining 1 respondent representing 7% was faced foreign currency during production process.

According to the above data there is lack of infrastructure development in Woliso town for manufacturing industry. Electricity is the major important infrastructure for manufacturing industry but in Woliso town there is a shortage and consistency of electric power. This shortage of electricity and power disruptions has negative implication on the development of manufacturing industries in Woliso town.

## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

#### 5.1. Conclusions

Manufacturing industry is an important sector in the economic community of Woliso town, and it continues to grow at minimum rate. It can improve with this continuing growth and expansion, the industry promises to continue its contributions to the town and state's economy, creating additional jobs, incomes, and adding to the overall GDP of the country. Although this report focused on the economic impacts of the manufacturing industry, the contributions impact the economy in many other positive ways.

This research was intended to assess the economic impacts of small and large manufacturing industries in the economy of Woliso town. The study found out that manufacturing industry in Woliso town has a strong economic impact in different aspects.

In this study the researcher used quantitative data with primary and secondary data. The primary data collected from the manufacturing firm owners and workers of different large and small manufacturing firms by using structured questionnaire. Secondary data was collected from different sectors of government office. The study was more focus on direct and induced economic impacts of manufacturing industries. In direct economic impacts it's include employment opportunities, income generation, tax generation and induced economic impacts include the re-spending of the direct income generated by the project for households and house rent.

From the findings, this study came out with the following conclusion: in Woliso town small and large manufacturing industries were create 1051 employment opportunities from those opportunities small manufacturing industries were create 109 (10%) employment and large manufacturing industries creates 942 which equal to (90%).

The total income of employees that generated from large and small manufacturing industries were 26,532,000 birr. From this income large manufacturing industries generate 85% which

equal to 22,608,000 and the share of Small manufacturing industry income generation was 3,924,000 birr which cover 15% of the total income that generated from direct economic impact.

Woliso town administration was collect 5,850,000 birr tax from large and small manufacturing industries. The share of large manufacturing industries is 5,500,000 birr which cover 94 % of the total and Small manufacturing industry was cover 350,000 birr which equal to 6%. We conclude that in Woliso town manufacturing industries have created direct economic impact in terms of tax revenue.

In Woliso town manufacturing industries are generating income for their employee. The employees of Woliso town manufacturing industries are spending 50%-75% of their income for household and house rent. Therefor in Woliso town, the direct economic impact creates induced economic impact in other sectors.

The numbers of large manufacturing industries in Woliso town are few but their share in employment opportunities are 90%, the share in income generation is 85% and the share of tax contribution is 94%. Accordingly, when compared to small and large manufacturing industries, large industries are significantly greater contribution direct economic impact in terms of job creation, income, and tax revenue in the economy of Woliso town.

Woliso town administration was support manufacturing industries by providing land and build infrastructure. But most of manufacturing owners have believed that the government support is not sufficient. The financial institutions are providing loan for some manufacturing firms but other manufacturing owners don't get loan to improve and expand their business.

From manufacturing industry 71.4% don't have access of market opportunities out of Woliso town especially small scale manufacturing industries. For the sustainable development and effective economic impact of manufacturing industry which market opportunities are very important. The main problem for manufacturing industries during their production process was shortage of raw materials.



## **5.2. Limitations of the Study**

The basic aim of this study is to assess the economic impact of manufacturing industries in Woliso town. This kind of economic impact assessment use input output model IMPLAN to find out the right finding of the research. In this research IMPLAN technique is not employ because of lack of organized data that collected and organized by the government and other institution. In many developed countries such kind of data is collected by the government. For example, in USA such kind of IMPLAN data systematically collected and organized by Bureau of Labor Statistics – (BLS) (Census of Employment and Wages), Bureau of Economic Analysis – BEA (REA: Regional Economic Accounts), Census Bureau (CBP: County Business Patterns) and Bureau of Economic Analysis – BEA (NIPA: National Income and Product Accounts)

This is the major limitation of this paper. But to fill this limitation quantitative technique is employ. Another limitation on this research is lack of organized data that can't get from the manufacturing industries.

The final limitation of this paper was which not fully describe the total economic impact of manufacturing industry. Because the total economic impact is calculated as direct impact + indirect impact + induced impact /direct impact but, in this study the indirect impact is excluded because of lack of IMPLAN data.

Meanwhile, the impact of the above mentioned limitation should be minimizing by deep interview with owners of manufacturing industry, workers of manufacturing industry and by collecting secondary information from the government institution.

## **5.3. Recommendations**

This study tries to assess the economic impacts of small and large manufacturing industries in the economy of Woliso town. According to the major findings the researcher tries to indicate some recommendation.

As shown in this study, there is a big difference of proportions between large and small manufacturing industries in employment opportunities, income generation and tax revenue. The share of large manufacturing industry was significantly greater than small

manufacturing firms. Woliso town has more focuses on the development of small manufacturing industries. In country level Ethiopian government provides different policy alternatives especially develop one government owned financial institution that support manufacturing industries financial needs and introduces advanced technologies to increase the share of small manufacturing industries.

There is no linkage between small and large manufacturing firms. To develop and increase manufacturing opportunities both small and large manufacturing industries would be consistent with each other. In this regard the government must provide different policy that support linkage between large and small manufacturing industries.

Economic data is an important tool to assess direct indirect and induced economic impact. So, the Ethiopian government must regard to establish strong economic data collection center and developed economic impact assessment software like USA IMPLAN because it's vital to evaluate the overall economic development of the country.

The growths of Small manufacturing industries into medium and large manufacturing industries are important to the growth of overall industries. In Woliso town the growth of small manufacturing industries were limited, therefore, the government should support small manufacturing industries to develop their capacity by providing different training with collaborating with TVET colleges.

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# Appendix 'A': Questionnaire

## PART I: Manufacturing Owners Survey Questionnaire

### St. Mary's University School of Graduate studies

This survey will be conducted by student of St. Mary's University as a partial fulfillment for the award of Masters of Business Administration. It will be used to learn the performance of manufacturing owners' investment and its impact on the local economy. Your response will be used for academic purpose only and be sure that it will not be transferred to third person and will be kept confidentially.

**Note; that the respondent must be the owner or manager of the firm.**

Please, thick the X mark in the box and give your opinion on the blank space where necessary.

Thank you!

### General Description

Sector \_\_\_\_\_

☞ Soap factory

☞ Wood and furniture

☞ Metal work

☞ Food processing

☞ Agro processing

☞ Chemical

☞ Textile

Size of manufacturing \_\_\_\_\_

☞ Small manufacturing

☞ Large manufacturing

1. Gender

☞ Male

☞ Female

2. Age

Below 18

18-30

31-40

Above 40

3. Marital status

Married

Single

Widowed

Divorce

4. Educational level

Can't read and write

Grades 1-4

Grades 5-8

Grades 10 complete

10+1 & 10+2

10+3 /diploma

BA/BSC & above

5. When you take the manufacturing license, is there any problem to take it?

Yes

No

6. If your response for question no 5.is yes which is the problem?

There is long and bulky chain

The investors have not enough awareness

Other \_\_\_\_\_

7. There are opportunities for manufacturing investment in Woliso town.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree



8. If your answer for question no 7 is agree or strongly agree, on what is the opportunity?
- ☞ Taking the working place easily
  - ☞ The presence of higher educational institutions
  - ☞ Good and attractive temperature
9. There are opportunities of getting easily trainable labor forces.
- ☞ Strongly disagree
  - ☞ Disagree
  - ☞ Neutral
  - ☞ Agree
  - ☞ Strongly agree
10. There are incentives for your manufacturing firm from government.
- ☞ Strongly disagree
  - ☞ Disagree
  - ☞ Neutral
  - ☞ Agree
  - ☞ Strongly agree
11. If your response for question no 10 is agrees or strongly agrees, which incentive is you get?
- ☞ Tax exemption and due to free for machineries
  - ☞ Only tax exemption
  - ☞ Only due to free for machineries
12. Enough electric power in your manufacturing firm.
- ☞ Strongly disagree
  - ☞ Disagree
  - ☞ Neutral
  - ☞ Agree
  - ☞ Strongly agree
13. The manufacturing industry has a positive impact on the local economy.
- ☞ Strongly disagree
  - ☞ Disagree
  - ☞ Neutral
  - ☞ Agree

Strongly agree

14. When you started your project, how many worker you employed? \_\_\_\_\_

15. How much the firm pays for all employees? \_\_\_\_\_

16. How much tax you pay to the government?

Municipal \_\_\_\_\_

Federal \_\_\_\_\_

17. The number of workers initially and now there is increment in your firm.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

18. If your response for question no 17, is agree or strongly agree, by how much you increase your number of workers?

Less than 30%

31%—50%

51%—70%

71%---100%

19. Your manufacturing firm recruits skilled manpower that is certified from higher educational institutions.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

20. There is a market opportunity out of Woliso town?

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

21. During your production process, what kind of shortages your firm faced?

- ☞ Raw materials
- ☞ Skilled man power
- ☞ Transportation
- ☞ Foreign currency
- ☞ Other

22. There is an opportunity to get a loan from bank for your manufacturing firm.

- ☞ Strongly disagree
- ☞ Disagree
- ☞ Neutral
- ☞ Agree
- ☞ Strongly agree

## **PART II: Workers of Manufacturing Survey questionnaire**

### **St. Mary's University School of Graduate studies**

This survey will be conducted by student of St. Mary's University as a partial fulfillment for the award of Masters of Business Administration. It will be used to learn the performance of manufacturing owners' investment and its impact on the local economy. Your response will be used for academic purpose only and be sure that it will not be transferred to third person and will be kept confidentially.

### **General Description**

**Note; that the respondent must be workers of manufacturing**

Please, thick the **X** mark in the box and give your opinion on the blank space where necessary.

Thank you!

Sector \_\_\_\_\_

- ☞ Soap factory
- ☞ Wood and furniture
- ☞ Metal work

☞ Food processing

☞ Agro processing

☞ Chemical

☞ Textile

Size of manufacturing \_\_\_\_\_

☞ Small manufacturing

☞ Large manufacturing

1. What is your sex?

☞ Male

☞ Female

2. What is your age?

☞ Below 18

☞ 18-30

☞ 31-40

☞ Above 40

3. What is your marital status?

☞ Married

☞ Single

☞ Widowed

☞ Divorce

4. What is your academic level?

☞ Can't read and write

☞ Grades 1-4

☞ Grade 5-8

☞ Grades 10 complete

☞ 10+1 & 10+2

☞ 10+3 /diploma

☞ BA/BSC & above

5. On what you work in the firm?

☞ Production class

☞ Packaging class

☞ Administration class

☞ Marketing class

6. How many years you have been working in this firm?

☞ Less than two years

☞ 2—4 years

☞ 4—6 years

☞ More than 6 years

7. When you compare your initial and actual income, is there increment?

☞ Yes

☞ No

8. If your response for question no 7, is yes, how much you increase your income?

☞ Less than 10%

☞ 11%--20%

☞ 21%--30%

☞ More than 31%

9. How much of your income do you spend for household?

☞ Less than 25%

☞ 26%—50%

☞ 51%—75%

☞ 76%---100%

10. How much of your income do you pay for house rent?

☞ Less than 25%

☞ 26%—50%

☞ 51%—75%

☞ 76%---100%

11. Manufacturing investment create employment opportunity.

☞ Strongly disagree

☞ Disagree

☞ Neutral

☞ Agree

Strongly agree

12. Depending on the social affairs, are you insured in the firm during working time?

Yes

No

13. If your response for question no 14. Is yes, on what way you insured in the firm?

In the way of pension

In the way of provident fund

14. What is your incentive in addition to your monthly salary in your working place?

Additional payment for part-time

Sometimes there is bonus for us

There is no incentive out of our salary

15. There is opportunity to buy the firm's product in discount price relatively with the market price.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

## DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Tiruneh Legesse (Assistant Professor). All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

\_\_\_\_\_  
Barock W/tensay

Name

**St. Mary's University, Addis Ababa**

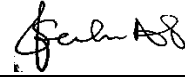
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Signature

Date

## ENDORSEMENT

This thesis has been submitted to St. Mary's University for examination with my approval as a university advisor.

Tiruneh Legesse (Assistant Professor)



**Advisor**

**Signature**

**St. Mary's University, Addis Ababa**

**Date**