Ministry of Industry Trade and Marketing

National Bureau of Statistics

Confederation of Tanzania Industries

Annual Survey of Industrial Production and Performance, 2008

Analytical Report

United Nations Industrial Development Organisation

November, 2010

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ABBREVIATIONS

AGOA	African Growth Opportunity Act
AVGM	Average Gross Margin
BIS	Basic Industrial Strategy
BOP	Balance of Payments
BoT	Bank of Tanzania
BRELA	Business Registrations and Licensing Agency
CAMARTEC	Centre for Agriculture Mechanisation and Rural Technology
CCM	Chama Cha Mapinduzi
CDR	Commercial Dispute Resolutions
CSPro	Census and Survey Processing System
CSR	Corporate Social Responsibility
CTI	Confederation of Tanzania Industries
E.U	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GM	Gross Margin
GNI	Gross National Income
IIDSMP	Integrated Industrial Development Strategy and Master Plan
ISI	Import Substitution Industries
MITM	Ministry of Industry, Trade and Marketing
MKUKUTA	Mkakati wa Kukuza Uchumi na Kupunguza Umasikini Tanzania
MoFEA	Ministry of Finance and Economic Affairs
MVA	Manufacturing Value Added
NBS	National Bureau of Statistics
NSGRP	National Strategy for Growth and Reduction of Poverty
PPP	Public-Private Partnership
SIDO	Small Industries Development Organisation
SIDP (1996-2020)	Sustainable Industrial Development Policy (1996-2020)
SIDP 2025	Strategic Industrial Development Process
SME	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences
TCCIA	Tanzania Chamber of Commerce, Industry and Agriculture
TDV 2025	Tanzania Development Vision 2025
TIC	Tanzania Investment Centre
TR	Total Revenue
TRA	Tanzania Revenue Authority
TVC	Total Variable Costs
TZS	Tanzanian Shilling
UNIDO	United Nations Industrial Development Organisation
URT	United Republic of Tanzania
US	United States
US$	United States Dollar
VAT	Value Added Tax

FOREWORD

Over the years, Tanzania has successfully undertaken various macroeconomic policy reforms aimed at restoring the economy and manufacturing is one of the sectors that has benefited significantly from these reforms, which have led to increased industrial growth rate from 8.9 percent in 2005 to 9.9 percent in 2008. The growth of the sector is also evidenced by growing interest in the industrial sector and by increased number of new private sector industries in different sub-sectors of the economy.

In order to achieve sustainable growth in the industrial sector, more information needs to be collected and analyzed for use in planning. Reliable and current statistics are among the essential tools for industrial promotion and development. Such statistics show the performance and prospects of the sector, and can only be obtained through regular industrial surveys. Accurate data are important for public and private sectors, as they guide proper planning, making informed decision on investments and effective monitoring and evaluation. In this cognisance the Ministry of Industry, Trade and Marketing, National Bureau of Statistics and Confederation of Tanzania Industries collaborated in the conduct of a countrywide industrial survey to evaluate the performance of the industrial sector for the year 2008. In this undertaking UNIDO played a critical role in improving the Industrial Statistical System in Tanzania Mainland in order to provide coherent, relevant, timely and reliable industrial statistics for knowledge-based industrial policy making.

This survey covered all the 21 regions on Tanzania Mainland and has resulted in the preparation of a very informative report on industrial performance in Tanzania that covers both the demand and supply sides of the industrial sector. Recognising the importance of this type of survey, the "Parties" will continue to carry-out regular annual surveys that will update the information contained in this survey report.

The government urges all beneficiaries including policy makers, the business community, development partners, the academia, local and foreign investors, non-state actors, and other stakeholders in the industrial sector to use this detailed and informative report for different purposes including using it as an important tool in promoting and building a competitive and vibrant industrial sector in Tanzania.

Hon. Dr. Mary M. Nagu (MP)
Minister for Industry, Trade and Marketing
September, 2010

ACKNOWLEDGEMENTS

This Analytical report on the performance of the industrial sector is based on an industrial survey that was undertaken jointly by the Ministry of Industry, Trade and Marketing (MITM), National Bureau of Statistics (NBS) and the Confederation of Tanzania Industries (CTI). The report is being issued together with a Statistical report. The statistics presented reflect the contribution of the industrial sector to the economy.

The Survey Executive Committee was comprised of Ms. Joyce K. G. Mapunjo, the Permanent Secretary, (MITM), Dr. Albina A. Chuwa, the Director General (NBS) and Ms. Christine Kilindu, the Executive Director (CTI). The survey management team was comprised of Ms. E.S. Sikazwe, Director of Industry Development (MITM), Mr. M. Oyuke, Director of Economic Statistics Directorate (NBS) and Mr. H. S. Kamote, Director of Policy (CTI). Others were Eng. E. N. Pallangyo, Assistant Director Industrial Research and Investment (MITM), Eng. P. B. Marwa, Assistant Director Industrial Support and Promotion (MITM), Mr. S. Mbaruku, the former Director of Economic Statistics Directorate (NBS) and Ms. J. Sawe, Industrial and Construction Statistics Manager (NBS). The core field research team was composed of Mr. F. Khalfani, Mr. A. M. Mnyenyelwa, Mr. J. K. Mwambeso, Ms. M. Warioba, Ms. A. V. Kamara, Ms. Veronica C. Mwangoka, Mr. G. Mockray and Mr. E. D. Kitundu. Other members of the Survey Team from MITM, NBS, and CTI included Mr. W. Ndossi, Mr. F. Kilele, Mr. Childa Hamis, Ms. M. Ikongwe, Ms. N. Ngali, Mr. G. Mrimi, Ms. N. Mjema, Ms. S. Lugongo, Ms. F. Zimamoto and Mr. G. Mackanja. Likewise special thanks are extended to UNIDO Tanzania for the assistance to improve the Industrial Statistical System in Tanzania Mainland, Dr. Haji Semboja and Mr. G. G. Mshana from Univerty of Dar es Salaam, Mr. Yoshiyasu Mizuno, Mr. E. P. Mhede and Mr. F. Roman for their technical comments and inputs on the drafts of this report.

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As we cannot mention everyone who supported the success of the survey and preparation of the report we thank all others who contributed in one way or another in this report.

Joyce K. G. Mapunjo
Permanent Secretary: Ministry of Industry, Trade and Marketing
November, 2010

EXECUTIVE SUMMARY

Tanzania's development agenda, especially the role of the manufacturing sector in the realisation of *National Development Vision 2025* is identified. Transformation of Tanzanian economy from a low productivity agricultural economy to a semi-industrialised one has been discussed therein, as a necessary condition for achieving high level of human development. The industrial sector has a role to play in wealth and employment creation, supply of basic necessities and building a competitive manufacturing country that are necessary in bringing about sustained and shared growth and in improving the livelihoods of the majority of the people. The importance of the industrial sector calls for an effective monitoring and evaluation system for the sector's performance. This report shows the performance of industrial sector based on an annual industrial survey that was jointly conducted by the Ministry of Industry, Trade and Marketing (MITM), National Bureau of Statistics (NBS) and Confederation of Tanzania Industries (CTI) in all twenty one (21) regions of Tanzania Mainland. The overall objective was to assess the performance of industrial sector for 2008/09 whereas the specific objective was to explore information on the economic characteristics of Tanzania's industrial sector for management, policy makers and the private sector in planning, policy formulation/review, monitoring and evaluation of Government programmes aimed at improving the sector. The report is being issued together with the Statistical report.

The survey findings indicate that the industry sector of Tanzania grew by 9.9 percent, at 2001 constant price, in 2008 compared to the growth of 8.7 percent recorded in 2007. It contributed 8.5 percent to GDP as it was in 2007. Tanzania's manufacturing sector has now shown the signs of overcoming the difficult years of 1980's and 90's and has been accelerating the growth during the last five years. This implies that the sector has even a greater potential via linkages with the rest of the economy, including agriculture and the country's natural resource base.

The industrial sector is currently dominated by labour-intensive simple, single and independent production units, operating in a competitive product markets. Very few are complex and organized as interlinked business entities. Both mining and manufacturing sectors are largely dominated by single establishments. On the other hand, the study confirms that industrial sector in Tanzania is dominated by agroprocessing sub-sectors such as food processing, beverage and tobacco. The agroprocessing sub-sector constituted about 70 percent of industrial production in Tanzania reflecting the role of agriculture as the mainstay of the Tanzanian economy. The survey results present 62.4 percent of manufacturing firms being established during the last fifteen years (i.e, between 1995/6 and 2009/10). More interesting is the 21 percent of the manufacturing firms that were established during the last five years. These are new with increased manufacturing capacities and export capabilities.

In terms of ownership, findings revealed that most large scale operators in both mining and manufacturing sectors have private ownership form with different scales of capacities. Most micro and small scale private manufacturing firms are owned, managed and operated by local indigenous population. This shows that locals are now actively participating in the manufacturing sector as result of improvement in indigenous entrepreneurial class. The implementation of post-reform industrial policies (i.e., the Sustainable Industrial Development Policy, Small and Medium Enterprises Development Policy, National Trade Policy, among others) that promotes private sector-led industrialisation could be among the additional grounds

for increasing participation of local private manufacturing enterprises. Improved access to short term bank loans and facilities by many surveyed firms was also reported to accelerate micro and small firms to take part in the manufacturing activities. Nevertheless, these industry firms have limited access to formal long-term credit probably due to non-competitive financial market system.

Average capacity utilization rate for the total industry sector has been low at about 42 percent during 2008. However, this is an improvement compared to 1980s and 1990s. Failure or inability to utilize installed capacity due to machinery failure was reported to result in a considerable loss of manufacturing production. Infrastructure constraints (e.g., irregular supply of electricity and water forcing factories to run at sub-optimal levels and/or incur additional costs for drilling of water and the purchase of water pumps and electricity generators), poor technology and high costs of transportation (due to poor roads) and cargo handling drawbacks were among the major factors behind the low capacity utilization.

The study found that manufacturers of food products are leading in terms of export values as 42.9 percent of the total sub-sector sales values was realised in 2008. The manufacturers of basic metals, textiles and basic pharmaceutical products and pharmaceutical preparations are the second export leading manufacturing sectors. The decision to participate actively in the foreign market is thought to expose enterprises both to greater competition and to options for increased output and efficiency.

The survey statistics shows that industry is one of major social economic sector for formal and modern employment. The results show that a total of 110,839 persons were engaged by 729 industrial firms, which offered information about their employment situation as of 30th June 2008. Furthermore, the survey shows that 98.9 percent (i.e., 109,582 workers) of the total employees were Tanzanians whereas 1.1 percent (1,257 workers) were foreigners. The number is less than that reported in 31st December 2008 whereby about 111,073 persons were employed within which 109,831 workers (98.1%) and 1,242 workers (1.1%) were Tanzanians and foreigners respectively. Analysis of gender participation in the manufacturing employment revealed that about 30 percent of workers to constitute female gender workers in year 2008. However, there are wide variations in female gender employment between and within sub-industry sectors. The female gender employment is high in manufacturing of tobacco, textile and plastic products. As expected, the share of females employed in formal and large scale basic metals, mining and metal products sectors was low.

Industrial sub-sectors such as beverages, tobacco and cigarette and manufacturing of non-metallic products recorded relatively high levels of labour productivity. Large scale industries have higher labour productivity than medium, small, and micro industries due to the fact that large industries employ advanced technology that significantly reduces human labour. However, large scale manufacturing industries that use poor technological techniques to recorded low level of labour productivity.

Tanzanian manufacturing firms consume different types of inputs. These include material, intermediate goods, energy, industry services, non-industry services and other inputs. The study found that cost of material and supplies accounted for about 64.8 percent, followed by other expenses (11.04 percent), non-industrial services (10.2 percent) and energy (10.2 percent). This

suggests that the Tanzanian manufacturing industry is material intensive. Electricity costs are about 61.9 percent of the total energy costs. It is noted that one of the major challenges facing manufacturing activities is cost of power as well as poor quality of power supply. The major material inputs were dominantly sourced locally as 81.3 percent of material inputs were sourced domestically whilst the remaining 18.7 percent were imported as intermediate inputs in 2008. Natural and raw agricultural inputs produced are two major types of domestic materials sourced locally. Apart from costs of material inputs, industry sector captured other costs including payment of interests and dividends, insurance, income taxes; value added other taxes on production and other expenses. The study indicates that the total tax paid was about 56.2 percent of total other expenses. Moreover, materials constituted about 64 percent, 59 percent and 32 percent in mining, manufacturing and utility industry sectors of the total inventories respectively. Finished goods are the second largest inventories in the manufacturing sector accounting for about 30 percent of the total values of inventories as the opening balances for year 2008. The analysis implies the complex relationship between modern industry and its market thereby presenting a real challenge in the size of inventories that should be maintained. Large inventories in the face of declining sales mean lower profits. Small and inadequate inventories in the face of an increasing market demand may result in- the loss of sales to competitors and a decreased profit.

Most of fixed assets from the sampled firms were in the form of machinery and equipment. Consultations with respondents revealed that expenditures or investment in fixed assets is a necessary tool for social reproduction of fixed assets. On the other hand, expenditures on depreciation have been high in mining, electricity and water industry sectors, this ties and goes together with capital allowances offered in these sectors. The capital allowances are critically important to manufacturers who need to invest regularly in top end equipment to stay at competitive edge.

The study found that about 46.5 percent of surveyed firms were registered to be members of different business support associations whereas 53.5 percent were not registered in any membership of private sector association. Based on these statistics, many industries are operating without being member(s) of any association. Lack of awareness on the existence of these associations was reported to be the major reason.

Tanzania has several constraints and challenges hampering industry development. These challenges have contributed to low productivity of the manufacturing sector as a result most of the existing firms operate below capacity, have limited technological capacity, slow rate of growth, and the industrial sector has remained largely agricultural with a low level of the value addition to primary products. As the way forward, the study proposes simultaneous, effective and efficient implementation of major national industrial development policies to achieve the economic transformation objectives as stipulated in Tanzania Development Vision 2025 and in a number of government policy documents. These major National Industry Policies include Sustainable Industrial Development Policy (SIDP), SME Policy, Agriculture, Investment, Trade, Export Promotion, Infrastructure, Energy and Mining Development Policy.

The diversification of the economy must be based on a dynamic industrialization programme focused on rising resource-based industries (agro-industries) and capable of meeting the needs of other sectors whilst continuously developing activities that have dynamic comparative

advantages. According to the underlying theory of comparative advantage, Tanzania must industrialize in order to advance modern economy. Industrialization is a crucial issue in agriculture sector development and poverty reduction. A healthy and competitive manufacturing sector is needed to generate resources, optimize use of human, natural resources, sustain employment and export growth and contribute to the modernization and diversification of developing countries' economic base and their integration in the regional and global economies. To catalyze growth and industrial development in EAC economies, it will be necessary to reconsider the strategy currently pursued while paying due attention to strengthening technological and industrial capabilities.

CHAPTER ONE: INTRODUCTION

1.1 The Tanzanian Economy

The global financial crisis of 2008-2009 brought a period of relatively high economic growth in Africa to a sudden end. The Africa's Gross Domestic Product (GDP) was slashed from an average of about 6 percent in 2006-2008 to 2.5 percent in 2009. Given the pace of population growth this means that growth of per capita GDP came to a near standstill. Average growth is projected to rebound to 4.5 percent in 2010 and 5.2 percent in 2011, although the recession will leave its mark.

There is an uneven recovery across the continent. Southern Africa, which was hardest hit in 2009, will recover more slowly than other regions with an average growth of almost 4 percent in 2010/2011. North and West Africa should both grow at around 5 percent and Central Africa at 4 percent during the same period. East Africa, which best weathered the global crisis, is projected to again achieve the highest growth of more than 6 percent on average in 2010/2011.

Given the impact of the global economic recession from early 2008, Tanzania real GDP growth in 2009 was estimated to reach about 5.5 percent, slightly above the initial projection of 5.0 percent but below 7.4 percent recorded in the past year, (BOT, Economic and Operation Reports (*various issues*)). The Tanzania economy is forecasted to grow at 6.2 percent in 2010 partly driven by the progressive recovery of the world economy from the global financial crisis of which has signalled slightly improvement of exports demand in the past few months (URT, Budget Speech 2010/2011). The economic recovery is strongly attributed by ongoing government efforts to optimize domestic resources, increased private sector participation and slight changes in global oil prices in the world market. In specific, the relative good economic outturn emanated from strong performance in agriculture, construction, manufacturing, transport and communication, fishing and real-estate.

The rate of expansion of agricultural activity increased moderately, and hydropower generation stabilized, with attendant increase in power dependent activities especially in manufacturing which has among other things attributed to slight increase of economic growth to 5.5 percent in 2009. Progressive stability of global economy and the continuing rainfall in most of regions of the country is likely to increase food production in the end thus ease food demand pressure (hence inflationary pressure) and power stability establishing the base for further increase of real GDP to 6.2 percent in 2010.

Table 1 shows that in terms of contribution to real GDP, agriculture remained dominant accounting for 24 percent in 2008. This is largely because of the availability of enough rains in most parts of the country. However, high cost of production still poses a significant drawback for sector development. Manufacturing and construction sectors have been persistently increasing over the past three years and thus increased their contribution in real GDP. However, global economic recession is expected to reduce growth pace of the sector in 2009 and subsequent years.

Table 1: Tanzania Real output performance

Item	2005	2006	2007	2008
Real GDP growth by economic activity (percent)				
Agriculture	4.3	3.8	4	4.6
Mining and Quarrying	16.1	15.6	10.7	2.5
Manufacturing	9.6	8.5	8.6	8.7
Electricity and Water	6.8	2.2	8.7	5.4
Construction	10.1	9.5	9.7	10.5
Trade, Hotel and Restaurants	6.2	6.9	7.1	10
Transport and Communication	12.7	12.3	13.3	6.9
Financial and Business Services	9.2	9.3	8.6	11.9
Public Administration and Other Services	6.5	11.8	6	7
GDP at market price	7.4	6.7	7.1	7.4
Contribution to Real GDP by economic activity (percent)				
Agriculture	27.7	26.2	25.8	24
Mining and Quarrying	2.9	3.2	3.5	2.6
Manufacturing	**8.9**	**9**	**7.8**	**7.8**
Electricity and Water	2	2.4	2.5	2
Construction	6.2	7.8	7.8	6.7
Trade, Hotel and Restaurants	15.6	15.9	14.2	14.1
Transport and Communication	6.1	6.4	6.5	6.6
Financial and Business Services	11.2	11.3	11.1	10.9
Public Administration and Other Services	12	12	11.7	11.5

Source: URT (Economic Surveys (several issues))

1.2 The Industrial Sector

Although the manufacturing sector of Tanzania has been one of the least developed in Africa, the industrial sector grew by 9.9 percent, at 2001 constant price, in 2008 compared to the growth of 8.7 percent recorded in 2007. It contributed 8.5 percent to GDP as it was in 2007. The sector shows some bright signs of recovery and growth in last several years and its sector export performance has been encouraging among the East African countries.

Table 2 shows the gap of Tanzania and some preceding Asian economies on the sector GDP contribution and Per Capita Manufacturing Value Addition (MVA). Tanzanian figures are far less than those of Asian economies. When we see the figures in Africa, all of East African Community member countries stay at the lowest level even among African countries. However, the absolute value of per capita manufacturing value addition of Tanzania counts just a half of Kenya, (EAC, 2000 and ESRF-EAC, 2000). Nevertheless, as argued, Tanzania's manufacturing sector shows the signs of overcoming the difficult years of 1980's and 90's and has been accelerating the growth since 2003 and will become key to economic development, (Do Duc Dinh, 2002).

Table 3 shows the growth rate of the manufacturing sector of East African Countries for last 6 years. Table 3 shows the industrial growth of Tanzania is remarkable both in growth and stability.

Table 2: Contribution of the manufacturing sector to GDP and per capita MVA for 2008

Country	Share of GDP	MVA per capita
Tanzania Mainland	8.50%	$39
Myanmar	10.50%	$60
India	16.10%	$159
Vietnam	21.10%	$219
Philippine	22.60%	$422
China	42.80%	$1,365
Burundi	13.30%	$16
Rwanda	6.20%	$27
Uganda	7.40%	$34
Kenya	11.30%	$80
Zambia	10.50%	$116
Republic of South Africa	18.80%	$940

Source: UN Statistics Division, 2010

Table 3: The growth of the manufacturing sector gross value added (at constant price)

Growth Rate	2003	2004	2005	2006	2007	2008
Tanzania	9.0%	9.4%	9.6%	8.5%	8.7%	9.9%
Kenya	1.4%	4.5%	5.0%	6.3%	6.5%	3.8%
Uganda	8.5%	9.5%	7.3%	5.6%	7.6%	7.2%

Source: Respective National Bureau of Statistics

Moreover, the recent statistics released by Bank of Tanzania and Ministry of Finance and Economic Affairs report a hyper growth of the manufactured goods export [(BOT, Economic and Operation Reports (*various issues*)]. In Tanzania, manufactured goods exports include processed primary products such as processed cashew, canned coffee, cotton seed cake and sisal products. Table 4 shows that the manufactured goods export, which had been kept at minor positions, increased from US$ 83.8 million in 2003 to US$ 195.8 million in 2006, and in 2007 at the first time in the history of Tanzania exceeded the value of the traditional exports at US$ 309.8 million. Momentum of the growth did not stop there, and recorded 113% increase to US$ 662.3 million in 2008 [Economic Survey (*various issues*)].

Table 4: Tanzania Exports of manufactured products

Item	2003	2004	2005	2006	2007	2008
Value (US$)	83.8 mil	110.1 mil	156.1 mil	195.8 mil	309.8 mil	662.3 mil
Growth Rate	27.2%	31.3%	41.8%	25.4%	58.2%	113.8%
Share of Total Export	6.9 %	7.5 %	11.2 %	11.3 %	15.4 %	24.6 %

Source: Bank of Tanzania

1.3 National Development Policies, Strategies and Goals for the Industrial Sector

The Government of the United Republic of Tanzania has finalized the National Strategy for Growth and Reduction of Poverty (NSGRP II or MKUKUTA II) as an organizing framework to rally national efforts in accelerating poverty-reducing growth. MKUKUTA II will be implemented for five years (2010/11 – 2014/15). MKUKUTA II is informed by the aspirations of Tanzania Development Vision 2025 for high and shared growth, high quality livelihood, peace, stability and unity, good governance, high quality education and international

competitiveness. MKUKUTA II therefore implements the first 5-years of the Long Term Growth and Development Plan. The Government is in the process of preparing the Long Term Growth and Development Plan, which is the Government implementation framework for the remaining 15 years of the Tanzania Development Vision 2025. The Ministry of Industry, Trade and Marketing is also in the process of preparing the Integrated Industrial Development Strategy and Master Plan, (IIDS & MP) as an implementing policy instrument of Sustainable Industrial Development Policy (SIDP).

Both current MKUKUTA II and proposed Integrated Industrial Development Strategy (IIDS) consider the manufacturing sector has a key role of transforming the economy. Robust growth of manufacturing sector lead to the creation of new spin-off companies catalyzing product diversifications, and enhanced productivity. Its forward and backward linkages are essential for improvements in a number of other sectors such as agriculture and livestock. As such, the sector stands as an important node of growth in the input and output lines of critical value chains identified in Kilimo Kwanza. Hence, manufacturing has been identified as a growth driver. In playing that role, the role of Research and Development (R&D); Science and Technology (S&T) and Information and Communication Technology (ICT) is vital. Coordinated industrial researches carried out by the R&D institutions, universities and technical institutions will have to focus on availing technological solutions to local manufacturers and promoting new innovations with the view of solving day to day problems, enhancing efficiency, competitiveness and high value products.

In this medium term, selective interventions are needed to ensure that there is provision of at least 10 industrial parks served with adequate supportive infrastructure for efficient and productive manufacturing sector. In the medium term, manufacturing will prioritize agro-processing for value addition, promotion of SMEs, use of environmental friendly technologies, development of basic industry and harnessing the competitive and comparative advantages associated with the Economic Development Zones (EDZs). This will ensure that manufacturing sector produce products which are competitive in the domestic, regional markets, particularly the EAC Common Markets and the SADC, as well as in the global markets.

Interventions that will transform the manufacturing sector include: [1] improving the business environment further in order to reduce the cost of doing business for both large scale manufacturers and MSMEs; [2] improving supporting systems such as reliable supply of energy and water, supportive physical infrastructure (road and railway transportation systems, ports and harbors), marketing infrastructure; [3] availing capital, credit guarantees to the private sector, and other supporting services, especially for MSMEs, through implementation of various empowerment policies, such as the National Empowerment Policy of 2004; [4] promote selective (based on comparative and competitive advantages) manufactured exports to regional and global markets, [5], supporting complete value chains in agriculture, [6], promoting branding of manufactured products in domestic, regional, and international markets. [(Do Duc, 2002 and Bekefi, 2006)]

1.4 Rationale for Annual Survey of Industrial Sector Performance

The performance of the industrial sector has a major impact on the achievement of national goals, (Yves and Jebamalai, 2002). Since the Government's role has been redefined to that of a regulator, promoter and facilitator, the performance of this sector should periodically be monitored and evaluated to ensure that the pace of industrial development conforms to the objectives and targets of national development goals. Survey of the industrial performance include the following: assessment of the impact of the SIDP 1996-2020, identification of new priority areas in which the nation can build requisite competitive advantages and identification of the areas in the value chains that could be targeted as entry points for Tanzania to the national, regional and global markets for industrial products.

As part of its core portfolio, in 2009/2010, the Ministry of Industry, Trade and Marketing (MITM) undertook the survey exercise in order to facilitate performance improvement, design policy interventions and provide advice to the private sector to achieve sustainable higher levels of productivity and quality products for enhanced sector-competitiveness. The exercise improved MITM in establishing and improving the data which had been established in the first survey conducted in 2006/2007 on the status, structure and performance of the industrial sector in Tanzania.

1.5 Objective

1.5.1 General objective

The survey aimed at providing information on the economic characteristics of Tanzania's industrial sector to management, policy makers and the private sector for uses in planning, policy formulation/review and monitoring and evaluation of Government programmes aimed at improving the sector.

1.5.2 Specific objectives

(i) To analyse the current status of the industrial sector in the country;
(ii) To identify conditions that affect firm-level productivity and competitiveness;
(iii) To secure inputs to be used by the government develop/review policies, programmes and strategies that support sector-productivity growth;
(iv) To provide the Private Sector with facts to support dialogue with government and other partners to enhance public-private sector partnership; and
(v) To update existing data at the level of industrial establishments[1] .

[1] Establishments in the manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment. However, establishments that transform materials or substances into new products by hand or in the worker's home and those engaged in selling to the general public products made on the same premises from which they are sold, such as bakeries, candy stores, and custom tailors, may also be included in this sector. Manufacturing establishments may process materials or may contract with other establishments to process their materials for them. Both types of establishments are included in manufacturing.

CHAPTER 2: SURVEY METHODOLOGY

The survey methodology adopted in this study intended to collect data that would facilitate a better understanding of the status of the industrial sector and to provide instrument that will enable an appropriate follow up.

2.1 Reference Period

Data on fixed assets and working capital were requested for and supplied on financial year basis, while the rest of the data was requested for and in many cases supplied on a 2008 calendar year basis. Those establishments that could not supply data according to calendar year due to allocation problems were advised to supply the data according to the financial years that covered larger part of the reference calendar year.

2.2 Industrial Classification

Establishments were classified into industries on the basis of major activity in conformity with the International Standard Industrial Classification (ISIC) Revision 4. Each industry is basically defined in terms of its principal products or services, these being similar in nature or commonly associated in production.

2.3 Unit of Enquiry

The statistical unit used for the survey. In principle this is an establishment defined as an economic unit, which engages under a single ownership or control in one, or predominantly one kind of economic activity at a single physical location i.e. an individual firm, mine, factory or workshop. However, for certain firms which could not furnish separate data on an establishment basis, the enterprise was used as the unit of enquiry. It should be noted here that due to record keeping practices of some firms, it has not been possible in every case to strictly follow the definition of an establishment as stated above. Therefore in a few cases, the restrictions especially on location were relaxed.

2.4 Scope and Coverage of The Survey

The survey covered all industrial establishments with ten or more workers. The survey coverage comprised of 729 establishments. According to the latest UN International recommendations, the industrial sector is comprised of establishments engaged in “Mining and quarrying” (ISIC Revision 4, Section B), “Manufacturing” (Section C), “Electric power generation, transmission and distribution” (Section D) and “Water collection, treatment and supply” (Section E). Manufacturing, according to international recommendations, is defined as the physical or chemical transformation of materials or components into new products, whether the work is performed by power-driven machines or by hand, whether it is done in a factory or in the worker’s home, and whether the products are sold at wholesale or retail prices.

2.5 The Questionnaire

The questionnaire was designed according to "The International Recommendations for Industrial Statistics" of the United Nations and took into consideration the requirements of the stakeholders. The information collected satisfies the needs of national accounts and are considered to be useful to the Government, researchers and the business community.

The following, was the information collected through the questionnaire

2.5.1 General information

This includes name of the establishment, physical address, telephone number, principal activity, type of ownership and related information.

2.5.2 Employment

Persons engaged refer to average number of employees (operatives and other employees), working proprietors and unpaid family workers.

2.5.3 Labour costs

Wages, salaries, benefits in kind and employers contribution to social security schemes.

2.5.4 Inputs/Purchases

Value of raw materials, packaging and chemical materials consumed, cost of re-sale, services received and other costs.

2.5.5 Output

Quantity and value of principal products manufactured, sales and service rendered to other firms, value of capital goods constructed by the establishment for own use and the value of subsidies received.

2.5.6 Inventory of working capital

This includes value of stock of materials and stores, finished products and work in progress at the beginning and end of the accounting year.

2.5.7 Expenditure on fixed assets and depreciation

This includes capital expenditure on land, buildings and structures, machinery/equipment, vehicles and other fixed assets during the accounting year. Depreciation and disposals made on the respective fixed assets.

2.6 Response Rate

Of the 874 surveyed establishments, 39 were found to be either closed or engaged in non-industrial activities. Out of the remaining 835 establishments 106 were small as they engaged less than ten workers. The number of potential respondents therefore stood at 729. However, of these 52 did not respond to the survey despite all effort made by the fieldworkers. For these establishments, production estimates were worked out based on their previous responses to the NBS surveys. The production data presented in this report therefore refer to the 729 industrial establishments.

2.7 Data Collection

Data collection was undertaken by a trained team of 33 enumerators under the supervision of 16 supervisors. Training of field-staff took place from 28th September to 6th October 2009. The NBS was responsible for the training of supervisors which was held in Dar es Salaam for 3 days. The Supervisors were then responsible for the training of enumerators in their respective regions.

Fieldwork started on the 7 October 2009 and was completed by the end of March 2010. The field-staff recruited in the 21 regions visited all establishments and helped in filling in the questionnaires. Respondents were asked to provide the data from their accounting records for calendar year 2008

2.8 Data Processing

Completed questionnaires were sent to the NBS headquarters in Dar es Salaam where they were edited and coded by MITM, NBS and CTI staff. The data entry system used was CSPro after which the data were transferred to Microsoft Access for generation of tables. The editing exercise was carried out on all questionnaires and estimates were made for the 52 establishments by means of substitutions using their 2007 responses. The cleaned dataset was then used to generate the preliminary tables as per tabulation plan.

2.9 Organisation of the Report

The report presents the industrial statistics according to the latest UN recommendations (2008). It includes establishments with 10 or more workers. In total, there were 729 such establishments operating at the time of the survey.

The report also presents the main results relating to qualitative information that was collected through the survey. Tables referring to such information are integrated within the section giving the major findings.

2.10 Limitations of the Statistics Presented

This survey was jointly conducted by collaborating parties. The survey results comprised a comprehensive data set, which the parties as well as other users can make best use of. However, the users are cautioned that the survey had the following limitations:

i. The survey was conducted according to the international recommendations for industrial statistics. The tendency among establishments to hide information relating mainly to outputs and to over-report on inputs due to the belief that information supplied would be

transmitted to the tax authorities were apparent and dealt with in this exercise. The regular conduct of such surveys together with sensitisation exercises would help in dissipating this fear and at the same time improve the quality and reliability of the information supplied.

ii. A number of establishments were engaged in several equally important but dissimilar activities. Because of non-availability of separate records, these establishments have been classified according to the activity with the highest output. Figures relating to a particular ISIC group might, therefore, include data for other secondary activities as well.

iii. Some establishments could not provide detailed information for certain items such as:
    a. Consumption of electricity, water and fuels separately
    b. Purchase of raw materials and sales from own production by main product,
    c. Values of stocks as well as values of fixed assets by type.

Other establishments especially those with less than 20 employees did not provide information on the level of stocks and assets. These and other missing data had to be estimated. The report includes tables on sales and purchases by product category. These should, however, be used with caution since many establishments did not report such details.

Statistics presented in this report reflect the current status and structure of the 10+ persons engaged establishments in the Tanzania Mainland Industrial Sector. The Government, business community and other users can make very good use of these results, which constitute the only available set of information based on international recommendations for industrial statistics.

2.11 Outline and Format of Annual Survey, 2008

The Annual Survey report is presented in chapters. Chapter one covers the introduction while Chapters Two tells us about the Methodology used in this report. Chapter Three presents important basic characteristics of industry firms in Tanzania in year 2008. Chapter Four examines output related manufacturing sector performances during year 2008. Main variables to be investigated include production capacity utilization rate, sales from own production, industrial services, non industrial services and other receipts during year 2008.

Chapters Five, Six, Seven and Eight identify conditions that affect firm-level productivity and competitiveness. Chapter Five examines employment performance as another important measure of the manufacturing industry performances in year 2008 and factors determining firm-level productivity and competitiveness. Chapter Six examines performance of material input utilization in the Tanzanian industry sector for the year 2008 as important factors determining firm's performances, firm-level productivity and competitiveness. Chapter Seven presents performances of inventories and fixed assets in the Tanzanian industry sector in year 2008. Inventories are assets that are intended for sale, are in process of being produced for sale or to be used in producing goods. Chapter Eight presents main business environment issues as perceived by stakeholders in the Tanzanian industry sector in year 2008. Industry enterprises considering locating or relocating in a country will generally undertake a careful study of the cost of doing business there, and the overall business and policy environment.

Above chapters provide basic industry data and information to be used by the MITM develop/review policies, programmes and strategies that support sector-productivity growth. This will also provide the Private Sector with facts to support dialogue with government and other partners to enhance public-private sector partnership. Chapter Nine presents a conclusion consisting of major research survey findings and policy recommendations.

Part Three of this report presents data and information summaries needed in updating Monitoring and Evaluation (M&E) data at the level of industrial establishments at the Ministry's headquarters.

CHAPTER THREE: MAIN INDUSTRIAL CHARACTERISTICS

The chapter presents important basic characteristics of industry firms in Tanzania in year 2008 for monitoring purposes with the objective of getting the partial screening of the industry firms in terms of their current structures and future perspectives and to assess the firms' general background such as legal status, ownership, the management business model of manufacturing firms, and the role and responsibility of foreign ownership. The data set allows evaluating performance indicators of different firms, relating them to characteristics of the firms and entrepreneurs and the business environment, (CIBR, 1995 and Yves and Jebamalai, 2002). In this survey, industry according to ISIC Rev 4 refers to manufacturing, mining and quarrying, generations and distribution of electrical energy, gas and water.

3.1 Economic Organization of Firms

An industrial organizational structure is mainly hierarchical concept of subordination of entities that collaborate and contribute to serve one common industry objective. Tanzania has established different forms of industrial organizations with variation of clustered economic entities. An economic organization can be structured in many different ways and styles, depending on their objectives, ambience, policies, laws, regulations and institutional frameworks in a country. The structure of an organization determines the modes in which it operates and performs. Different organizational structures allow the expressed allocation of responsibilities for different functions and manufacturing processes to different entities such as the branch, department and single establishment, (Grenier, *et al* 1999).

The first and simple is the single and independent industry establishments operating in one location. Table 5 shows the types of economic organizations in the Tanzania industrial sector in the year 2008. This shows that about 72.9 percent of industries are categorized as *single owned.* About 20.5 percent of total establishment are owned and controlled by another establishment (subsidiary firms), while about 6.6 percent are head offices which own or control other establishment, (parent companies). Both mining and manufacturing industry sectors are largely dominated by single establishments which account about 90.9 percent and 87.4 percent respectively. Single establishment have inward operational model and limited business linkages. The electricity and water industry sectors portray an interesting organization arrangement.

The second and complex establishment is a parent company. The parent companies or head offices are business companies which own enough voting stock in another industry firms to control management and operations by influencing or electing its board of directors, (ESRF-CTI 2000). About 47.6 percent are establishment owned and controlled by other establishments and about 40.5 percent are single establishments. Table 5 suggests that parent companies were about 6.6 percent of the total industry sector in the year 2008. The daughter companies being deemed as subsidiaries of the parent company. The definition of a parent company differs from jurisdiction to jurisdiction, with the definition normally being defined by way of laws dealing with companies in that jurisdiction. Table 5 suggests that subsidiary firms were about 20.5 percent of the total industry firms. Many of these were found in the electricity and water industry sector. The subsidiary, in business matters, is an entity that is controlled by a separate higher entity.

Above suggests that Tanzanian industry sector is largely dominated by simple, single and independent economic units, operating in competitive product markets. Very few are complex and organized as interlinked business entities. Some parents are larger than daughter companies. However, contrary to popular belief, some parent companies are not larger or "more powerful" entities, (Grenier, *et al* 1999). Also, in many cases, because a parent company and a subsidiary are separate entities, it is entirely possible for one of them to be involved in legal proceedings, bankruptcy, tax delinquency, indictment and/or under investigation, while the other is not.

Table 5: Organization of the industrial establishments in percentage

Sub-sector	Single establishments	Head offices	Establishment Owned and controlled by other establishments	Total
Mining	90.9	0.0	9.1	100.0
Manufacturing	87.4	7.9	4.7	100.0
Electricity and Water Industry	40.5	11.9	47.6	100.0
Total Industry	**72.9**	**6.6**	**20.5**	**100.0**

Source: Annual Survey of Industrial Production and Performance, 2008

3.2 Main Industrial Activities

Earlier findings published by UNIDO (2001) indicated that industrial sector in Tanzania was dominated by agro processing industries such as food processing industries, beverage and tobacco industries. This agro processing industrial sub sector constituted about 70 percent of industrial production in Tanzania reflecting the role of agriculture as the mainstay of the Tanzanian economy. Other agro-based industries include textile, clothing, leather and footwear. Chemical industries such as petroleum, rubber and plastic also constituted a large share of Tanzania's industrial sector. It has been revealed that processing industries constitute 43 percent whereas manufacturing industries constitute 53 percent of all industries in Tanzania. The remainder 4 percent is assembling industries.

Table 6 shows that, 680 of the surveyed firms were dealing with manufacturing activities (*Group C of ISIC Classification*) in year 2008. The table indicates that production, processing and preservation of meat, fish, fruits, oil and fats constitute the largest share of the main products of the surveyed manufacturing firms in 2008. The share of these products was about 24.9 percent in 2008. Manufacture of grain mill products, starches products and prepared animal feeds also constitute a second large share of main products of manufacturing industry in Tanzania, at about 9 percent in 2008. Other products include manufacture of food products, manufacture of beverage, manufacture of plastic products, manufacture of paper and paper products, and manufacture of chemical products. Manufacture of basic iron and steel products registered a share of 5.6 percent in year 2008.

Table 6: Activities of the manufacturing establishments

ISIC R4	Activity	No of establishments	Percent
10	Manufacture of food products	203	29.9
11,12	Manufacture of beverages and tobacco products	37	5.4
13,14,15	Man. of textiles, wearing apparel and leather products	47	6.9
16,17	Man. of wood, paper and similar products exc. furniture	21	3.1
18	Printing and reproduction of recorded media	54	7.9
20, 21	Man. of chemicals including pharmaceutical products	37	5.4
22, 23	Man. of rubber, plastics and non-mineral products	41	6.0
24. 25	Man. of basic metals and fabricated metal products	38	5.6
27,28,29,30	Man. of electrical, transport and other machinery & equip.	19	2.8
31	Manufacture of furniture	96	14.1
32, 33	Other manufacturing	87	12.8
	Total Manufacturing Industry	**680**	100.0

Source: Annual Survey of Industrial Production and Performance, 2008

The most significant changes in composition of manufacturing industry in Tanzania in the last 10 years has been the decline in some of traditional industries such as spinning, weaving, clothing, and textile sub-sector. A significant reason for a decline in this sub-sector has been that its exposure to international market competition has been increased, (Grenier, *et al,* 1999). This is in part because restrictions to imports have been relaxed. Activities in the food, beverage, and tobacco products has proved a resilient and has exhibited little amount of volatility over time. The positive impact economic regional integration and increased globalization seems to have contributed to recent manufacturing impressive trend. Some of industrial products have improved their market competitiveness. Products with remarkable sales performance include beer, cigarettes, soft drinks, and bottled water. The increase in sales is mainly due to increase in product quality, efficient distribution system, and rigorous promotion and advertisement.

3.3 Structure of the Manufacturing Sector

Based on the Business Survey 2007/08 NBS, noted that manufacturing enterprise operating in Tanzania with permanent premises were 9,354 in Dar es Salaam and 15,625 in other regions. Among the 24,979 manufacturing enterprises, as much as 88.0 percent are categorized as Micro Manufacturing Enterprises (MMEs) with less than 5 workers. Table 7 shows that the ratio reaches as high as 96.9 percent when small scale manufactures with less than 10 workers are included. On the other hand, only 5,520 enterprises had been registered by BRELA as of June 2008 for the manufacturing activities. In other words, the majority of the manufacturing industry enterprises of Tanzania are MMEs operating in the informal sector.

Studies suggest that there is very few medium scale manufacturing enterprises which are to support, challenge and replace the large manufacturers. On the other hand, there are huge numbers of micro scale enterprises which have been under difficult conditions to grow. This is one of an issue that spoils the dynamism of the sector and therefore the Government has to tackle the problem in order to allow the sector to grow.

Table 7: Number and percentage of enterprises by size (number of workers)

Item	1-2	3-4	5-9	10-19	20-49	50-99	100-499	500+	Total
No. of Enterprises	15,066	6,921	2,216	411	215	62	70	18	24,979
Percentage	60.3%	27.7%	8.9%	1.6%	0.8%	0.2%	0.3%	0.1%	100%
	Micro scale			**Small scale**		**Medium**	**Large Scale**		

Source: Business Survey 2007-08, NBS

However most of the SME promotion measures undertaken in Tanzania excludes the informal enterprises from the target, which means 88 percent of the manufacturing enterprises in the country has been kept out-side of the public support while the SME Policy was formulated so as to address the constrains and to tap the full potential of the sector. Micro Manufacturing Enterprises (MMEs) are the bottom line of the industries of the country owned, managed and operated by indigenous population, (UNIDO 2002 and Bekefi, 2006). It is a labour intensive and employs many in the informal sector. KILIMO KWANZA would certainly bring abundant labour force together with improved yields. This fresh and unskilled labour force need to be absorbed and transformed so as to contribute to the rural industrialization which is vital to attain the balanced growth of the country as well as to forestall the effects of urban slum.

3.4 Ownership by Origin

Ownership is the state or fact of exclusive rights and control over property, which may be industry firm. Ownership involves multiple rights, collectively referred to as title, which may be separated and held by different parties. The process and mechanics of ownership are fairly complex since one can gain, transfer or lose ownership of property in a number of ways. Table 8 summarizes ownership by origin in the Tanzanian industry in year 2008. Origin of ownership is determined by origin of shareholders whether it is national, foreign or joint**.** The table indicates that, about 75.3 percent of the firms were owned by nationals, about 16.6 percent were foreign owned and about 8.2 percent were jointly owned by both foreign and national entities. The table indicates that the largest share i.e., about 74.8 percent of Tanzania's manufacturing industries are owned by Tanzanian nationals.

Other surveys suggest that majority of these business entities owned by nationals are small scale and single establishments. These are not very strong and effective in business linkages. However, they are potentials in attracting large scale foreign direct investments given good social economic policies, laws, regulation and supporting government institutions. In most cases these are dynamic, innovative and ready to participate into regional input and output markets. Many foreign investors prefer to join hands with nationals for the purpose of sustainable ownership, operations, security and development.

Table 8: Origin of ownership by sub-sector, 2008

Activity	National	Foreign	Joint	Total
Mining	58.3	16.7	25.0	100.0
Manufacturing	74.8	17.1	8.1	100.0
Electricity and Water	89.2	8.1	2.7	100.0
Total	**75.3**	**16.6**	**8.1**	**100.0**

Source: Annual Survey of Industrial Production and Performance, 2008

Other findings suggest that, the share of foreign ownership has been increasing, mainly due to liberalization and privatization in many social economic activities in Tanzania. Foreign ownership is high in the mining industry sector. Foreign involvement is limited but seems to be a factor in manufacturing for exports.

There are indications that have partial foreign ownership and that having owners of foreign nationality are related to exports. Parker *et al*. (1995) also found that a majority of Tanzanian firms were of indigenous ownership; average foreign ownership was only 2 percent. Bigsten *et al*. (1999) found that foreign ownership had a positive and significant impact on a decision to exports in Kenya and Zimbabwe but not in Cameroon and Ghana. They found no evidence of foreign ownership affecting the percentage of output exported.

3.5 Forms of Ownership

There are several forms or typologies of ownership. These are public, private and mixed forms of ownership. Table 9 summarizes three main forms of ownership in the Tanzanian industrial sector in year 2008. The figure shows that 67.2 percent are privately owned firms, 29.4 percent are publicly owned, and about 3.4 percent are mixed. The mining and manufacturing sectors portray ownership structure with 83.3 percent and 92 percent as privately owned industries, 8.3 percent and 5.9 percent as publicly owned, and about 8.34 percent and 1.9 percent as mixed ownership respectively. These are results of economic reforms which resulted in redefining the role of the public sector in production and commercial activities.

Before 1990s Tanzania used to have dominance of public owned enterprises, (CIBR, 1995 and EAC 2000). Public ownership referred to state ownership or control of any asset, industry or enterprise at any level, national, regional with objective of optimal utilization of national resources for public interest.

Table 9: Form of ownership by sub-sector

Description	Public	Private	Mixed	Total
Mining	8.3	83.3	8.3	100.0
Manufacturing	5.9	92.1	1.9	100.0
Electricity and Water	73.8	26.2	0.0	100.0
Total	**29.4**	**67.2**	**3.4**	**100.0**

Source: Annual Survey of Industrial Production and Performance, 2008

Tanzania still has state owned firms in the electricity and water industry sectors. In the currently market-based economies, government-owned assets are often managed and run like joint-stock corporations with the government owning a controlling stake of the shares, (URT, 2008). This model is often referred to as state owned enterprises (SOE). The governments used to operate public enterprises as corporate entities and managed to support the general budget in the form of non-tax revenues. These SOE's were operated in a generic commercial manner and many had been monopolies in their areas of activity.

Most large scale operators in both mining and manufacturing sectors have private ownership form with different legal statuses and scales of capacities. Most micro and small scale private manufacturing firms are owned, managed and operated by local indigenous population. It has been argued that most large scale manufacturing firms are in tax network and good tax payers

(Semboja 2008). Many micro and small scale business enterprises are informal sector and have difficulties in paying taxes and access financial credits.

Table 9 shows that about 3.4 percent are joint ownership. This is a mixed ownership, that is, where the public own an economic entity in collaboration with the private sector whereby management and operation are mainly vested on the private sector. Before changes of various policies under the ongoing socio-economic reforms, the government owned more than 90 percent of total manufacturing industries. However, after the policy changes, the ownership of the manufacturing industries has shifted from the Government to the private sector which currently owns more than 88 percent of the manufacturing firms. The pure state-owned firms are out of the picture. There are few manufacturing firms, which the state has minimum shares. Many of these privatized and new large scale private firms are partially owned and managed by foreign of multi-national corporations (URT, 2009). These tend to be outward oriented and likely to take advantage of regional as well as globalization effects. These new industry structures however, seem to be due to the combined effects of privatization, increased private sector participation, trade liberalization, and increased competitive market systems

3.6 Type of Legal Organization

Table 10 presents types of legal organisation in the Tanzanian manufacturing industry in year 2008. The table shows that about 41.9 percent industries are private business entities where the shares are held privately and with liabilities (*privately limited company*). These private limited companies have a flexible form of business model that blends elements of partnership and corporate structure. Table 10 shows that 17.2 percent are private company where the shares are held privately and with unlimited liabilities. Many of these firms do not qualify for trading in stock market.

The table indicates that about 4.3 percent are sole proprietorship establishment owned by an individual. These sole proprietorships are in most cases micro or small scale businesses operated by households. It is indicated that about 4 percent industries are partnership establishments whereby two or more individuals put their capital together set up their business and share the profits. Partnership – is a type of business entity in which partners (owners) share with each other the profits or losses of the business. Table 10 suggests that, parastatals and public ownership still dominate the electricity and water industrial sectors. About 14.6 percent and 14.7 percent firms owned by the government. It is not surprising to note that the survey did not capture any state owned enterprises in the mining industry sector, URT, Economic Surveys, (*various issues*).

Table 10: Type of legal organization in the Industrial Sector, by Subsector

Activity	Sole proprietorship	Partnership	Public	Parastatal	Cooperative	Private company	Private limited company	Other	Total
Mining	0	8.3	8.3	0	0	16.7	66.7	0	100
Manufacturing	**10.4**	**4.1**	**2.2**	**1.3**	**3.7**	**27.9**	**49.6**	**0.7**	**100**
Electricity and Water	2.4	0	33.3	42.9	2.4	7.1	9.5	2.4	100
Total	**4.3**	**4.2**	**14.6**	**14.7**	**2**	**17.2**	**41.9**	**1**	**100**

Source: Annual Survey of Industrial Production and Performance, 2008

3.7 Source of Finance

The Tanzania financial markets can be divided into two major types. The first type is the capital market. The capital markets consists of [1] stock markets, which facilitate equity investment and buying and selling of shares of stock, and [2] bond markets, which provide financing through the issue of debts contracts and the buying and selling of bonds and debentures. The second type is other financial markets. These include [1] money market, which provides short term debt financing and investment, [2], derivative markets, which provides instruments for handling of financial risks, [3] futures markets, which provide standardized contracts for trading assets at some forward date; [4] insurance markets, which facilitates handling of various risks and [5] foreign exchange markets, (BOT, Economic and Operation Reports (*various issues*)).

The financial system covering the industry sector in Tanzania is small and remains dominated by the banking sector despite these reforms. Tanzania has few new merchant banks, commercial banks, bureau de change, insurance companies, stock exchange and related financial units established. The entry of new banks and non-bank financial institutions has enhanced the competition and improved the quality and type of financial products and services provided. Financial markets in Tanzania consist of markets for money, bonds, equities, foreign exchange, and collective investment schemes, (BOT, Economic and Operation Reports (*various issues*)). The Bank of Tanzania is involved in money, bonds and foreign exchange markets geared towards implementation of monetary policy, ensuring that government financing needs are met and facilitating stability and efficiency of the markets. Domestic financial markets are comparatively still at a nascent stage.

Table 11 shows main sources of financing for the industry sector in year 2008. It further shows that about 53 percent of industry firms depend on the bank loans as major source of financing whereas about 7 percent rely on their own finances. About 95 percent of mining industry firms depends on bank financing system. The mining industry sector has no access to government financing. About 5 percent depend on own, family and friend sources of finances.

Significant number (about 29 percent) of electricity and water industry firms depend on government financing. However, the sector has other ways of financing, including funds from development partners. Table 10 shows that about 59 percent of manufacturing firms have access to short term bank loans, facilities and services. However, these manufacturing firms in Tanzania have very limited access to formal long-term credit due to weak and non-competitive financial system, (Semboja 2004 and 2005).

Table 11: Sources of financing in the industrial sub-sector 2008

Activity	Personal / Relatives	Loan From Bank	Government	Other	Total
Mining	5	95	0	0	100
Manufacturing	**15**	**59**	**9**	**17**	**100**
Electricity and Water	1	5	29	66	100
Total	**7**	**53**	**13**	**28**	**100**

Source: Annual Survey of Industrial Production and Performance, 2008

The financial system is very costly (in terms of high interest rates), too complex and has a lengthy loan application process and too short maturity for the specific case of bank loans. However, it is important to note that the credit access situation in the year 2008 is much better

than in the last five years, starting in 2003. The improvement is due to increased regional integration, liberalization, globalization, sector reforms, and private sector participation in the financial sector, (ESRF-EAC, 2000). The new private financial banks are willing to offer short-term credit at a significant cost. Due to the general credit limitations in the financial institutions, especially the banking sector, manufacturing firms face problems of inadequate investment and working capital.

3.8 Year of Establishment

Year of establishment or starting operation is a good indicator determining age and technological capacities of a manufacturing firm. Table 11 shows year of establishment by main industry sectors. The report divides years of establishment in terms of political regimes. We consider new and rising industry firms as those established during the last five years. An important characteristic of the rising firms covered by this survey is that there are about 19.8 percent new or young firms which, were established between 2005 and 2008, (URT, 2009).

Overall, about 69.3 percent of manufacturing firms were established during the last fifteen years. In specific, table 12 indicates that about 40.4 percent of the surveyed firms were established during third political regime. More interesting is to note that about 21 percent of the manufacturing firms were established during the last five years. These are new with increased manufacturing capacities and export capabilities. Table 12 suggests that, it is very unfortunate that there has been no new established large scale mining establishment during the last five years. Since the start of economic reform, in 1986, the manufacturing sector made an absolute, though not relative recovery. Manufacturing output grew at an average rate of 3.7 percent per annum over the 1986-94 periods, (Centre for International Business Research, 1995 and Grenier *et al.,* 1999). Established new food products, rubber products, and emerged new industries such as motor vehicle parts and engines, and furniture industries increased manufacturing outputs, (Semboja, 2009). However, by the 1994 the manufacturing sector accounted for only 7.6 percent of GDP.

Table 12: Year of Establishments by sub-sector

Activity	<1990	1990-1994	1995-1999	2000-2004	>=2005	Total
Mining	25.0	0.0	41.7	25.0	1.3	100.0
Manufacturing	***29.3***	***8.6***	***17.6***	***23.7***	***21.0***	***100.0***
Electricity and Water	59.5	0	29.7	8.1	2.7	100.0
Total	**30.7**	**8.1**	**18.5**	**22.9**	**19.8**	**100**

Source: Annual Survey of Industrial Production and Performance, 2008

3.9 Classification of Manufactured Products by Technological Intensity

This chapter allowed us to classify the Tanzanian manufactured products into two major forms of technologies. *The first classification is the resource-based manufactures*: These are mainly agriculture products such as coffee, tea, tobacco, cotton and food products. The products can be simple and labour intensive (simple food or leather processing) or intensive in capital, scale and skills (some firms use modern processed foods, e.g. AZAM). Competitive advantage in these products generally, but not always, arises from the local availability of agriculture and natural resources.

The second classification is the low technology manufactures: mainly textiles, garments, footwear, other leather products, simple metal and plastic products and furniture. These products tend to have stable, well-diffused technologies largely embodied in capital equipment, with low Research and Development (R&D) expenditures and skills requirements, and low economies of scale. Labour costs tend to be a major element of cost, and the products tend to be undifferentiated, at least at the mass-produced (non-fashion) end of the scale. Barriers to entry are relatively low; competitive advantages in these products, of interest to neighbouring EAC countries, come from price rather than quality or brand names.

CHAPTER FOUR: THE PERFORMANCE OF MANUFACTURING INDUSTRY

This chapter examines output related manufacturing sector performances during year 2008. Main variables to be investigated include production capacity utilization rate, sales from own production, industrial services, non industrial services and other receipts during year 2008. It has been noted that the Tanzanian manufacturing sector is one of the least developed in Sub Saharan Africa, far behind from Asians and just a half of Kenya in size. However, in the 2000s, manufacturing activities in Tanzania have exemplified a steady growth, registering average annual growth of 7.2 percent between 2000 and 2008. Nevertheless, manufacturing activities in Tanzania are relatively small and at an infancy stage. Its contribution to GDP has averaged 8.8 percent over the 2000-08 period, with most activities concentrated on manufacture of simple consumer goods such as food, beverages, tobacco, textiles and furniture and wood allied products, (URT, Economic Surveys, (*various issues*)).

Most of the present industries were established in the light of import substitution strategy, whereas production focused in substituting previously imported goods in view of saving. Studies suggest that the contribution of manufacturing industry to the economy has been steady during the last 5 years (Semboja 2007 and 2008 and MITM, 2007 and 2008). The share of manufacturing industry in GDP increased from 8.5 percent during the 2000-04 periods to 9.4 percent in 2008. The recent increase in production has been mainly a result of either expanding divested or privatized enterprises and establishment of new private sector industries, (Semboja, 2009). The government starting in the early 1990s launched a deliberate programme to restructure and privatize publicly owned manufacturing firms.

4.1 Production Capacity Utilization Rate

The first important measure of output performance is the production capacity utilization rate. Capacity is an output-based measure; the capacity output is a potential output, which may be equated to a maximal output or an economically derived output given the stock of capital and state of technology. One of the main concerns in the Tanzanian industry in the 1980s-1990s has been low production capacity utilization, (URT, 2008).

Table 13 indicates that the average capacity utilization rate for the industry sector was about 42 percent during 2008. This is still low. However, this is an improvement compared to 1980s and 1990s, (MITM, 2008 and Semboja, 2008). Recent studies revealed that capacity utilization in Tanzania's industry falls short of the installed capacity to a very great extent, (URT, 2007 and 2008). Average capacity utilization was 36.6 percent in 2005 and 42.6 percent in 2006. Failure or inability to utilize installed capacity because of, for example, machinery failure results in a considerable loss of manufacturing production in the industry

There are good manufacturing industry sector performers. These include manufacturers of basic pharmaceutical products and pharmaceutical preparations, (about 90 percent), manufacturers of wearing apparel at about 68 percent and manufacturers of beverages at about 66 percent capacity utilization. There are worst performers. These are manufacturers of other transport equipment (at about 15 percent), manufacturers of fabricated metal products, except machinery and equipment at about 23 percent and manufacturers of electrical and tobacco products at about 25 percent capacity utilization rates.

Table 13: Utilization of Production Capacity by Activity in Percent

ISIC	Activity	Capacity Utilization
05	Mining of coal and lignite	0
06	Extraction of crude petroleum and natural gas	0
07	Mining of metal ores	0
08	Other mining and quarrying	29
10	Manufacture of food products	44
11	Manufacture of beverages	66
12	Manufacture of tobacco products	25
13	Manufacture of textiles	34
14	Manufacture of wearing apparel	68
15	Manufacture of leather and related products	36
16	Manufacture of wood and products of wood and cork, except furniture	31
17	Manufacture of paper and paper products	36
18	Printing and reproduction of recorded media	41
20	Manufacture of chemicals and chemical products	33
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	90
22	Manufacture of rubber and plastics products	48
23	Manufacture of other non-metallic mineral products	56
24	Manufacture of basic metals	37
25	Manufacture of fabricated metal products, except machinery and equipment	23
27	Manufacture of electrical equipment	25
28	Manufacture of machinery and equipment n.e.c.	42
29	Manufacture of motor vehicles, trailers and semi-trailers	43
30	Manufacture of other transport equipment	15
31	Manufacture of furniture	55
32	Other manufacturing	41
	Average Capacity Utilization	***42***

Source: Annual Survey of Industrial Production and Performance, 2008

Having the above-mentioned improvements in capacity utilization in manufacturing sector, table 13 indicates that poor performance in the mining, crude oil extraction and natural gas, mining of metal ore and other mining activities. The table shows zero percent performance that may be caused by not having processing activities at all. However, other mining activities like quarrying had 29 percent performance in utilizing the production capacity which is still very low.

In principle, low capacity utilization in the manufacturing indicates a gross underutilization of resources, (Allan and Francis 2000 and MITM, 2008). This has been blamed largely on power outages, fallen demand for manufactures due to increased illegal imports of imitated and poor quality products and global financial crisis affecting both input and output markets. However, it could be argued that uncertain business environment may also have left some firms continuing to operate at below their productive potential. The current study reveals that some of the good performing manufacturing firms have managed to replace their old machinery, which led to expansion of production capacity and utilization.

4.2 Value Added by Industrial Activity

In economics, *Value Added* is the difference between the sale price of a product and the cost of materials to produce. In national accounts used in macroeconomics, it refers to the contribution of the factors of production, i.e., land, labour, and capital goods, to raising the value of a product and corresponds to the incomes received by the owners of these factors. The national value added is shared between capital and labour (as the factors of production), and this sharing gives rise to issues of distribution.

The measure of manufacturing value added indicates the contribution of manufacturing establishments to the value of finished manufactured products. Net Value added is computed by subtracting the sum of the total cost of production and depreciation from the Gross output.

As expected, manufacturing sector presented in Table 14 recorded significant value added performance of 85.66 percent, followed by Electricity and Water sector by 8.26 percent and lastly Mining and Quarrying sector by 6.07 percent. The large performance of manufacturing sector attributed to the increased good performance of its sub sectors of manufacture of food and food products, (333,781.51 mil), beverage (265,077.54 mil), plastic products (121,922.78 mil), non metallic mineral products (94,659.86 mil) and other chemical products sub-sectors (80,566.57 mil). However, there are some sub-sectors which recorded less Net Value added of only 38.16 millions. This was reported by industrialists during the field survey to be caused by high costs of doing business including increased price of industrial fuels in the same period.

Table 14: Value Added by Industrial Activity (000 Tshs)

ISIC	Activity	Gross Output	Total Production Costs	Value Added	Depreciation	Net Value Added
051	Mining of hard coal	6,487,417	4,694,265	1,793,152	221,260	1,571,892
062	Extraction of natural gas	114,788,310	66,737,158	48,051,152	34,365,870	13,685,282
072	Mining of non-ferrous metal ores	17,613,657	11,480,344	6,133,313	1,155,228	4,978,085
081	Quarrying of stone, sand and clay	175,179,742	92,185,718	82,994,024	3,611,235	79,382,789
089	Mining and quarrying n.e.c.	43,907,650	25,907,516	18,000,134	4,343,511	13,656,623
	MINING AND QUARRYING	**357,976,776**	**201,005,001**	**156,971,775**	**43,697,104**	**113,274,671**
101	Processing and preserving of meat	3,397,822	992,791	2,405,031	103,743	2,301,288
102	Processing and preserving of fish, crustaceans and molluscs	274,670,442	202,461,009	72,209,433	6,639,355	65,570,078
103	Processing and preserving of fruit and vegetables	5,179,502	2,889,984	2,289,518	963,672	1,325,846
104	Manufacture of vegetable and animal oils and fats	73,827,622	41,097,419	32,730,203	17,523,434	15,206,769
106	Manufacture of grain mill products, starches and starch products	104,473,480	69,963,244	34,510,236	4,570,664	29,939,572
107	Manufacture of other food products	647,068,810	312,338,023	334,730,787	949,277	333,781,510
108	Manufacture of prepared animal feeds	1,083,387	713,893	369,494	18,651	350,843
110	Manufacture of beverages	842,391,692	536,900,084	305,491,608	40,414,054	265,077,554
120	Manufacture of tobacco products	262,119,770	163,175,189	98,944,581	19,730,661	79,213,920
131	Spinning, weaving and finishing of textiles	74,470,609	51,902,922	22,567,687	10,420,617	12,147,070
139	Manufacture of other textiles	114,419,871	56,513,584	57,906,287	10,127,399	47,778,888
141	Manufacture of wearing apparel, except fur apparel	798,181	306,419	491,762	205,544	286,218
151	Tanning and dressing of leather; manufacture of luggage, handbags, saddler and harness; dressing and dyeing of fur	8,771,873	5,948,904	2,822,969	277,375	2,545,594
152	Manufacture of footwear	8,133,738	4,951,596	3,182,142	603,369	2,578,773
161	Sawmilling and planing of wood	5,479,551	2,591,879	2,887,672	87,503	2,800,169
162	Manufacture of products of wood, cork, straw and plaiting materials	6,597,921	3,583,128	3,014,793	360,850	2,653,943
170	Manufacture of paper and paper products	21,148,916	12,614,456	8,534,460	7,852,244	682,216
181	Printing and service activities related to printing	160,807,938	89,724,519	71,083,419	215,872	70,867,547
201	Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics and synthetic rubber in	149,156,155	77,615,956	71,540,199	2,163,405	69,376,794

ISIC	Activity	Gross Output	Total	Value Added	Depreciation	Net Value Added
	primary forms					
202	Manufacture of other chemical products	193,797,529	108,802,771	84,994,758	4,428,180	80,566,578
203	Manufacture of man-made fibres	15,246,504	12,433,882	2,812,622	984,097	1,828,525
210	Manufacture of pharmaceuticals, medicinal chemical and botanical products	68,945,227	43,677,115	25,268,112	2,763,097	22,505,015
222	Manufacture of plastics products	427,973,721	297,107,413	130,866,308	8,943,526	121,922,782
231	Manufacture of glass and glass products	1,022,250	498,202	524,048	3,210	520,838
239	Manufacture of non-metallic mineral products n.e.c.	344,234,103	220,977,277	123,256,826	28,597,046	94,659,780
241	Manufacture of basic iron and steel	26,589,004	18,362,148	8,226,856	531,739	7,695,117
243	Casting of metals	12,076,805	6,734,517	5,342,288	856,727	4,485,561
251	Manufacture of structural metal products, tanks, reservoirs and steam generators	14,117,743	10,473,470	3,644,273	1,257,282	2,386,991
259	Manufacture of other fabricated metal products; metalworking service activities	169,455,039	137,826,084	31,628,955	3,666,354	27,962,601
272	Manufacture of batteries and accumulators	15,205,884	13,746,865	1,459,019	387,395	1,071,624
273	Manufacture of wiring and wiring devices	32,125,071	23,298,208	8,826,863	314,615	8,512,248
274	Manufacture of electric lighting equipment	3,230,952	2,778,923	452,029	60,498	391,531
279	Manufacture of other electrical equipment	77,989	34,262	43,727	5,562	38,165
281	Manufacture of general-purpose machinery	10,533,186	8,381,135	2,152,051	409,636	1,742,415
282	Manufacture of special-purpose machinery	3,267,053	2,193,907	1,073,146	206,127	867,019
292	Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers	1,627,081	1,248,950	378,131	69,637	308,494
293	Manufacture of parts and accessories for motor vehicles	138,195	61,369	76,826	3,484	73,342
301	Building of ships and boats	460,171	251,223	208,948	9,409	199,539
309	Manufacture of transport equipment n.e.c.	463,698	335,592	128,106	650	127,456
310	Manufacture of furniture	25,721,972	17,188,708	8,533,264	3,034,583	5,498,681
321	Manufacture of jewellery, bijouterie and related articles	349,677	144,908	204,769	2,860	201,909
325	Manufacture of medical and dental instruments and supplies	474,380	161,813	312,567	14,605	297,962
329	Other manufacturing n.e.c.	578,092,463	350,070,495	228,021,968	20,059,101	207,962,867
331	Repair of fabricated metal products, machinery and equipment	2,153,481	918,985	1,234,496	86,414	1,148,082
	TOTAL MANUFACTURING	**4,711,376,458**	**2,913,993,221**	**1,797,383,237**	**199,923,523**	**1,597,459,714**
351	Electric power generation, transmission and distribution	756,900,913	602,844,574	154,056,339	13,301,693	140,754,646
360	Water collection, treatment and supply	33,607,828	17,555,264	16,052,564	2,713,469	13,339,095
	ELECTRICITY AND WATER SUPPLY	**790,508,741**	**620,399,838**	**170,108,903**	**16,015,162**	**154,093,741**
	TOTAL INDUSTRY	**5,859,861,975**	**3,735,398,060**	**2,124,463,915**	**259,635,789**	**1,864,828,126**

Source: Annual Survey of Industrial Production and Performance, 2008

4.3 Sales From Own Production

The second important measure of output performance is the sale from own production. Sales are defined as output quantity multiplied by unit producer market prices. This entails quantity and

value of main products and by-products produced and sold by industries. Sales are evaluated at producer's prices. They include all duties and other taxes imposed on the product except value added tax.

4.3.1 Domestic market

The Tanzanian manufacturing industries have two outlets or product markets. These are domestic and export product markets. Table 15 shows that the sales from own production entering the domestic market, that is domestic sales constituted 85.9 percent of their total sales in 2008 while export sales constituted 14.1 percent in the same year. This implies that manufacturing firms in Tanzania are targeting or focusing on the domestic markets. That is, what is produced by the industrial sector is mostly consumed within the country, (MITM, 2008). However, there are concerns about increasing domestic product market competition due to both increasing domestic production and import competition. This is largely due to increasing number of new, competent and efficient domestic production and foreign suppliers of the same or better quality products.

Import competition is also attributed to increasing counterfeiting, illicit trade and contraband activities, (Semboja, 2007 and 2009). The c*ounterfeiting* may be defined as 'manufacturing a product which so closely imitates the appearance of the product of another to mislead a consumer that it is the product of another'. Counterfeiting can be classified as both 'Deceptive', when both the counterfeit and the original product appear very similar to deliberately mislead a consumer and 'Non-deceptive', where the consumer recognizes that the product is not authentic and so pays an adjusted price for it. The *illicit Trade* is defined as an illegal diversion of genuine products or the illegal manufacture and sale of counterfeit products. Illicit trade is more common in cigarettes and alcohol, which face high custom duties and taxes in Tanzania. The *contraband activities* are goods that enter into the country without the payment of applicable taxes. These are included in the category of illicit trade.

Table 15: Value and Percentage of Sales from own production

	Million Tshs	Percent
Domestic sales	4,931,725	85.9
Export Sales	807,636	14.1
Total	**5,739,361**	**100**

Source: Annual Survey of Industrial Production and Performance, 2008

Table 16 indicates sales performance in terms of values from own production in different sectors in the year 2008. Although manufacturers in Tanzania remain focused on the domestic market for their products, data shows that there is a move into international exports in recent years. Data on export performance shows that export volumes and values have expanded and that percentage of exporting manufacturing industries has increased (BOT, Economic and Operation Reports (various issues).

However, exports of mining activities as indicated in table 15 were higher than the domestic use of the same. The reason could be having few industries dealing with processing of mineral products. Again, consumption of natural gas in the country is higher compared to exports of the same.

Table 16: Sales from own production by activity year 2008 at current price, 2008

(Million Tshs)

ISIC Rev.4		Activity	Sale of goods produced		
			Export	Local	Total
B		**Mining and Quarrying**	**216,804**	**134,670**	**351,474**
C		**Manufacturing**	**590,832**	**4,002,249**	**4,593,081**
10		Manufacture of food products	463,000	616,057	1,079,057
		of which;			
	102	*Processing and preserving of fish and similar products*	131,831	140,287	272,118
	104	*Manufacture of vegetables and animal oils and fats*	12,626	47,302	59,928
	106	*Manufacture of grain mill products, etc*	68	102,568	102,636
	107	*Manufacture of other food products*	318,476	317,871	636,347
11,12		Manufacture of beverages and tobacco	3,146	108,491	111,637
13,14,15		Manufacture of textiles, wearing apparel and leather products	39,857	153,576	193,433
16,17		Manufacture of wood, paper and similar products except furniture	3,818	29,177	32,995
18		Printing and reproduction of recorded media	5,733	153,959	159,692
20,21		Manufacture of chemical including pharmaceutical products	20,734	401,583	422,317
22,23		Manufacture of rubber, plastics and non-mineral products	523	763,270	763,793
24,25		Manufacture of basic metals and fabricated metal products	10,758	208,694	219,452
27,28,29,30		Manufacture of electrical, transport and other machinery and equipment.	1,126	63,344	64,470
31		Manufacture of furniture	-	24,609	24,609
32,33		Other manufacturing	42,137	503,061	545,198
D		**Electric power generation, transmission and distribution**	**-**	**768,498**	**768,498**
E		**Water collection, treatment and supply**	**-**	**26,308**	**26,308**
		Total	**807,636**	**4,931,725**	**5,739,361**

Source: Annual Survey of Industrial Production and Performance, 2008

4.3.2 Export market

Table 16 shows main manufacturing sectors, which are actively engaging in exporting in percentage. The finding suggests that manufacturers of food products are leading with the export values of about 78.4 percent of the total manufacturing sub-sector sales values in 2008.

Very few large firms such as AZAM export more intensively, and to wider geographical areas, in addition, technological factors such as new vintage capital (proportion of new machine and equipment in firm's total capital stock) and internet access have strong positive effects on both market diversification and export intensity, (Semboja, 2008). These technology factors, not only are positive on productivity enhancement but they also lower trade related sunk entry costs. Internet access for example, reduces the search costs for developing new *clientele* abroad, (Bigsten *et al*, 1999). New machinery and equipment improve product quality to meet product standard set abroad, particularly in high-income markets.

The decision to participate actively in the foreign market is thought to expose enterprises both to greater competition and to options for increased output and efficiency. Consequently, the share of total sales accounted for by exports is seen to reflect the ability of an enterprise to cope with increased competition and to benefit from greater capacity utilization, economies of scale, diversification of risks, and access to technology. Thus determining the characteristics responsible for export access at the enterprise level can be a means of establishing indicators for successful enterprise performance generally.

4.4 Industrial Services

Industry firms may provide certain economic services to other economic entities and in return earn incomes. These industry service incomes include receipts from contracts, repair and other industry services. Table 17 shows incomes earned from industry services by major activities during year 2008. The total industry service accrued in Tanzania was about Tsh. 25,025 Million; the figure account for only 21.4 percent of total amount received from services by the surveyed establishments. About 93.0 percent of industrial services accrued from the receipt from manufacturing sector. This amount is insignificant as compared to the total sales of goods of Tsh. 5,739,361 Million.

Table 17: Industrial Services by Activity

(Million Tshs)

ISIC	Rev.4	Activity	Industrial services	Non-industrial services	Other	Total
B		**Mining and Quarrying**	**542**	**313**	**6,215**	**7,070**
C		**Manufacturing**	**23,341**	**9,977**	**36,023**	**69,341**
10		Manufacture of food products	16,135	1,142	6,497	23,774
		of which;				
	102	*Processing and preserving of fish and similar products*	-	419	1,630	2,049
	104	*Manufacture of vegetables and animal oils and fats*	14,411	-878	1	13,534
	106	*Manufacture of grain mill products, etc*	287	-32	2	257
	107	*Manufacture of other food products*	1,437	1,724	3,194	6,355
11,12		Manufacture of beverages and tobacco	137	-7,614	11,869	4,392
13,14,15		Manufacture of textiles, wearing apparel and leather products	518	2,515	0	3,033
16,17		Manufacture of wood, paper and similar products except furniture	241	139	200	580
18		Printing and reproduction of recorded media	270	-241	527	556
20,21		Manufacture of chemical including pharmaceutical products	641	751	479	1,871
22,23		Manufacture of rubber, plastics and non-mineral products	3,814	4,388	3	8,205
24,25		Manufacture of basic metals and fabricated metal products	89	2,633	3,121	5,843
27,28,29,30		Manufacture of electrical, transport and other machinery and equipment.	343	-50	15	308
31		Manufacture of furniture	527	568	10	1,105
32,33		Other manufacturing	627	5,745	13,300	19,672
D		**Electric power generation, transmission and distribution**	**607**	**3,294**	**29,667**	**33,568**
E		**Water collection, treatment and supply**	**595**	**-149**	**6,857**	**7,303**
		Total	**25,085**	**13,435**	**78,762**	**117,282**
		Total Percentage	**21.4**	**11.5**	**67.2**	**100.0**

Source: Annual Survey of Industrial Production and Performance, 2008

There are very few manufacturing industries that enjoy incomes accrued from the sale of industry services, (BOT, Economic and Operation Reports (*various issues*)). These include manufacturers of food products, which is about 71 percent of the total industry services, and other non-metallic mineral products. Contract manufacturing and packaging are gaining mind-share among food processors as their companies strive to improve operational efficiency, shorten time to market and improve cost control. For small companies and entrepreneurs, contract manufacturing and packaging provide the opportunity to commercialize a product even if they lack manufacturing resources (Semboja, 2009). For large food processors, contract manufacturing is a cost-effective way to manufacture products in small lots for test marketing, seasonal sales or special promotions — without investing in production cells to handle these specialty runs,

Outsourcing frees the processor to focus on its strength as a high-volume manufacturer. In addition, using a contract packager, or co-packer, gives large processors a way to present the same basic product in many packaging configurations, (Vesa and Kalliokoski, 2008). Working with a co-packer, the food company can efficiently package the same product in sizes and assortments tailored to a variety of customer segments. There are views that the food companies' core competency is to make their food products as efficiently as possible, (URT, 2009). They are not going to invest in equipment to do a variety pack or a club packs, because it's going to slow their equipment down. For food processors, creating that level of production flexibility in-house can be cost-prohibitive. Outsourcing often is the most cost-effective way to create and quickly get to market with generation after generation of new products.

4.5 Non-Industrial Services by Activity

Non-industry services including incomes earned by manufacturing from the sale of industry services, which are not directly related to production activities. These include receipts from rents, transport, value of assets, warehousing and others. The above table 16 shows that the total receipts accrued from the non-industry services were about Tsh. 13,435 Million during year 2008; the figure account for only 11.5 percent of total amount received from services by the surveyed establishments. Again, this is insignificant compared to the total sales of goods of Tshs. 5,739,361 Million. About 18.9 of the total non-industry services are related with rent receipts. Rent receipts are payments, usually of an amount fixed by contract, made by a tenant at specified intervals in return for the right to occupy or use the property of another.

4.6 Other Receipts

Other industry service receipts include incomes accrued from other sources other than industrial production activities like interests and dividends, insurance premiums received subsidies and sale of scraps. Amusingly, other receipts accrued large portion of the total services receipts by 67.2 percent. Table 17 indicates the sector received a total of Tsh. 78,762 Million from other receipts. About 54.3 percent of the other receipts have been accrued from interest incomes. Interest is a fee paid on borrowed assets. It is the price paid for the use of borrowed money, or, money earned by deposited funds.

Assets that are sometimes lent with interest include money, shares, consumer goods through hire purchase, major assets such as machinery and other capital equipment, and even entire factories in finance lease arrangements. Interest is compensation to the lender, and for forgoing other useful investments that could have been made with the loaned asset. These forgone investments are known as the opportunity costs. Instead of the lender using the assets directly, they are advanced to the borrower. The borrower then enjoys the benefit of using the assets ahead of the effort required to obtain them, while the lender enjoys the benefit of the fee paid by the borrower for the privilege. Interest also compensates the lender for the risk of losing the principal, called credit risk.

4.7 New Industry Manufacturing Issues

Chapter three has revealed that the Tanzanian manufacturing sector has initiated a serious industry transformation, (URT, 2009, Semboja, 2009 and MITM 2009) It is now producing to

export and capable at meeting domestic product market competition. For sustainable industry development, the sector needs development of industry linkages and services.

4.7.1 Specialized Non-industrial Services are missing

It is noted that non-industry services are specialized services which can be provided by general manufacturing firms and or specialized industry servicing industries. These specialized industry service firms are new in Tanzania. These include industrial cleaning companies, which offer their services to industrial clients. The comprehensive range of cleaning services include emergency response, hydro-blasting, hydro-excavation, plant decommissioning, tank cleaning, transportation, vacuuming, and waste management. These own and maintain, their, own extensive fleet of equipment, which are custom-designed for state-of-the-art operation and reliability. Some of these industry servicing firms place great emphasis on building in-house capabilities and employs a team of engineers, geologists, water treatment specialists, utility and project managers, technicians, and equipment operators who possess the required combination of training and expertise to successfully respond to a wide variety of manufacturing complex activities and challenges.

4.7.2 Industrial service business is a very slow growing business

Industrial service business is a very slow growing business area in the Tanzanian manufacturing industry. There is however, very little progress made by a few companies which are trying to develop industrial services to create new business with customers (Vesa and Kalliokoski, 2008). In many cases, customers have not valued the proposed service models because of lack of added value to current cooperation between supplier and customer. The business environment is influenced by a variety of economic and dynamic trends according to which companies have to consolidate on a global scale. Companies can at the same time be driven by technological and business innovations, all kinds of deregulation, customer requirements and other factors.

CHAPTER FIVE: EMPLOYMENT PERFORMANCES IN THE INDUSTRIAL SECTOR

This chapter examines employment as another important measure of the performance of the manufacturing industry in the year 2008 and factors determining firm-level productivity and competitiveness. The chapter will specifically examine employment trend during the last five years, number of person engaged by gender, citizenship and skills, labour costs and productivity in 2008. One of the SIDP objectives of industrialization is to contribute to human development and create employment opportunities by increasing sustainable production capacity in the economy, (URT, 1996). Also noted are, experiences of the East Asian countries which have shown that the most important actions for poverty alleviation at the initial stage of their industrialization are the creation of jobs, income and support to priority pro-poor sectors. These have often been done through the building of labour-intensive and export-oriented industries, the development of agriculture and the processing of agricultural products, the development of consumer goods and services, and the raising of investment for education and health care, (Allan and Francis 2000 and Do Duc Dinh, 2002).

5.1 Employment Trend in the Industrial Sector

Many think that the industrial sector is important as an employing sector in the formal Tanzania's labour market. It remains the most reliable source of government revenue in terms of import sales, corporate and income taxes. It accounts for over half of government annual revenue collection. Moreover, it is the industrial sector that provides reliable field to practice invention, innovation and nurturing modern technologies for production and service provision, (Semboja, 2010).

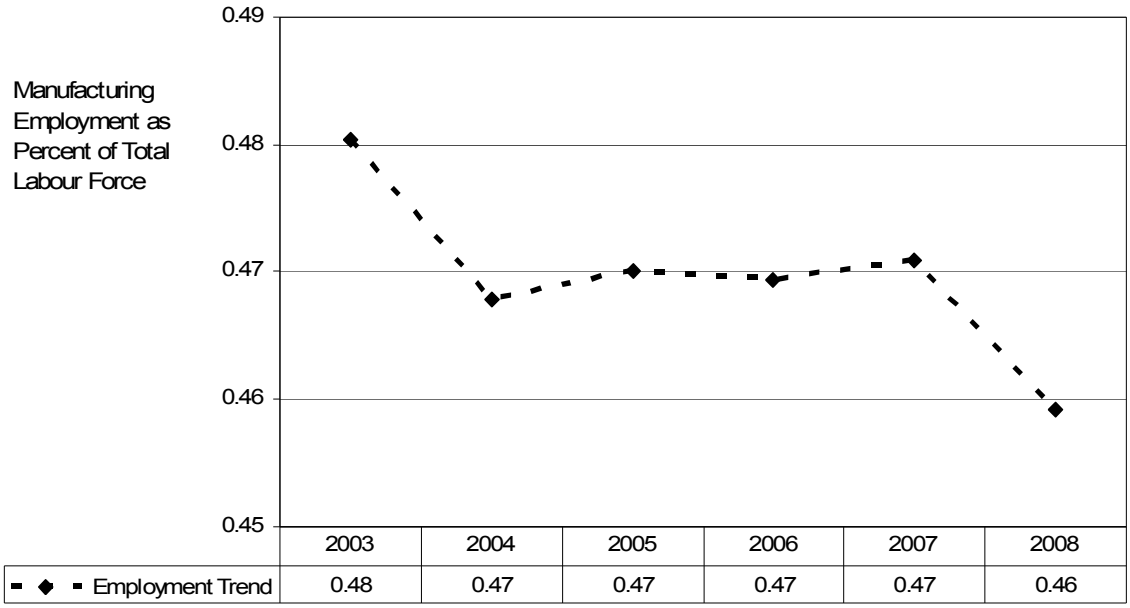
According to the Integrated Labour Force Surveys of 2000-01 and 2005-06, there was an increase of 2.8 million people in the Tanzanian labour force. This is equivalent to a 16.0 percent increase between 2000-01 and 2005-06. The analysis result of ILFS 2005-06 showed that of the total 18.3 million people who were employed, 9.0 million were males while 9.3 million were females. The share of agriculture was 77.0 percent in 2006 down from over 83 percent in 2000-01. This reflects a decline of employment in agriculture activities by more than 6 percent in six years. However, the rate of increase of manufacturing employment in Tanzania has been low and stagnant for many of industrial activities during the last five years.

There are two possible explanations for the low and stagnation in industrial employment both relating to stringent labour laws and regulations. One possible explanation is the under reporting of the number of workers by the manufacturing firms by not mentioning workers hired on temporary terms. This makes firms avoiding paying labour taxes and thus reduces cost of production. Second possible explanation could be the adoption of more capital intensive and labour saving techniques to avoid unnecessary labour problem.

Figure 1 presents the ratio of manufacturing employment to total labour force in Tanzania during the 2005-2008 periods. It is clear that the ratio of employment in manufacturing sector to total labour force has declined significantly from 0.48 percent in 2003 to about 0.46 in 2008. The ratio remained constant at about 0.47 over the period 2004 to 2007. This suggests that Tanzania labour force has been increasing much faster than labour absorption capacity in the manufacturing sector. However, the Tanzanian labour force does not have good attributes that determine

efficiency and market competitiveness. These are [1] low levels of education; [2] unavailability of industry-specific skills; [3] poor work morale; [4] weak labour force organization; and [5] distorting government's regulatory impact on skill transfer. Furthermore, Table 18 disaggregates total employment in the manufacturing sub-sector by detailed activities. It is clear that food processing and textile manufacturing constitute the largest shares of total manufacturing employment but the rate of increase of employment for these activities was constant at 1 percent over the years 2006 – 2008.

Figure 1: Manufacturing Employment Trend, 2003-2008 (Percent of Total Labour Force)



	2003	2004	2005	2006	2007	2008
Employment Trend	0.48	0.47	0.47	0.47	0.47	0.46

Source: URT, Economic Surveys, 2003- 2009

One of the concerns is the low increase in manufacturing industry employment and its subsequent decline relative to the entire labour force. The workers displaced from manufacturing are not be able to find employment elsewhere leading to short-term unemployment, with manufacturing having being a significant source of unemployment during economic crisis, (CIBR, 1995 and MITM, 2008). This suggests that the manufacturing industries use labour savings technologies which suit the skilled employees. The employees therefore must advance their skills regularly to cope with the changing needs of the industrial sector.

The other concern is the emergence of new types of employment that are different from the traditional ones which include part-time work, seasonal work and self-employment or own-account work. It is unfortunate that the concerned workers are not recorded in the official employment statistics which therefore underestimates the actual employment levels. Other factors that encourage underestimation of formal employment in the manufacturing sector include labour hoarding, taxation and social security systems.

The apparent trend in employment for manufacturing industry over the 2000-2008 periods is due to a fall in employment in beverage manufacturing activities from 4,987 people in 2000 to 4,192 people in 2008. Also the newly registered beverage industries use new and modern production

technologies which are less labour intensive. This has lead to a 16 percent decrease in employment over the 8 years period.

Table 18: Employment in selected manufacturing industrial sub-sectors, 2005 - 2008

ISIC	Activities	2005	2006	2007	2008
151-4	Food Processing	43,527	43,962	44,402	44,842
155	Beverages Manufacturing	4,069	4,110	4,151	4,192
160	Tobacco and Cigarette	6,854	6,923	6,992	7,061
171-2	Textile Manufacturing	10,073	10,174	10,276	10,378
201	Timber &Timber Products	2,617	2,643	2,670	2,697
210	Paper products, printing	4,407	4,451	4,496	4,541
242	Manufacturing of chemical	4,857	4,906	4,955	5,004
252	Manufacturing of Plastic products	2,260	2,283	2,305	2,327
269	Manufacturing of Non-metallic products	1,703	1,720	1,737	1,754
	Manufacturing (Total)	**80,367**	**81,172**	**81,984**	**82,796**
	Industry (Total)	**177,774**	**179,553**	**181,348**	**183,143**

Source: **URT, the Economic Survey, 2004 to 2009**

5.2 Number of Persons Engaged by Gender and Citizenship in Summary

Table 19 presents the number of person engaged in the industrial sector by gender and citizenship in 2008. This includes total number of persons who work in the establishment. It includes working proprietors and partners, unpaid workers, managerial and professional staff, operatives and other employees. The survey covers two period of time as reported that is the number of people engaged from January to June 2008 and from July to December 2008.

5.2.1 Industrial employment by citizenship

Table 19 shows that a total of 110,839 persons were engaged by 729 industrial firms, which offered information about their employment situation as at 30th June 2008. Of these about 98.9 percent that is 109,582 workers were Tanzanians and about 1.1 percent (1,257) were foreigners. This number is less than that relating to 31st December 2008 where about 111,073 persons where engaged. Of which 109,831 (98.1%) were Tanzanian and 1,242 (1.1%) were foreigners. The difference between June and December figures is probably due to seasonal variations. The figures for both June and December 2008 do not include the part-time workers. The study suggests that the Tanzanian manufacturing industry employs very few foreign workers (URT 2007a and 2007b). The few foreign workers are engaged through foreign technical assistances as expatriates and consultants and these mainly transfer knowledge, information and skills to the manufacturing sector.

Both small and large industrial firms find themselves in situations where, due to lack of local personnel or expertise in specific areas, need to seek outside professional assistance, (CIBR, 1995). Often a foreign worker can provide the required staffing and knowledge. However, table suggests that the use of foreign consultants in the provision of technical services has been minimal and limited. This suggests two important findings. *First,* is a switch from using foreign consultants in the provision of technical and operative services to being owner of capital and provision of management services. *Second*, this means an increasing utilization of local human resources or workers in the provision of technical services in the industrial firms.

5.2.2 Industrial employment by gender

Compared to males, table 19 shows that, there were fewer female workers in the manufacturing sector in 2008. However, it indicates a slight improvement in the proportion of females from 29.9 percent on 30th June 2008 to about 30.5 percent on 31st December 2008. Table 20 shows that, there are wide variations in female employment among individual activities. Table 20 suggests that the employment of female was highest in manufacture of tobacco, textile and plastic products. The share of women in formal and large scale basic metals, mining and metal products activities is low. Given limited opportunities in the formal modern sectors, the majority of women are self-employed in the informal small scale manufacturing activities such as tailoring, handicrafts, food processing and cottage industries.

Women face various social structural constrains for their effective participation in economic activities. These include: [1] poor customary laws and norms which impede women to a greater extent than men, from obtaining land, credit, productive inputs, education, and information; [2] the coexistence of multiple laws which create ambivalence (for example, customary and statute laws relating to marriage and inheritance); [3] gender bias in access to basic human resource development services such as education and vocational training, resulting in gender gaps in adult and or youth literacy rates, and; [4] time poverty, resulting from women's multiple and competing reproductive and productive responsibilities.

Table 19: Number of persons engaged by gender and citizenship

		30th June 2008				31st December 2008			
Citizenship		**Male**	**Female**	**Total**	**%**	**Male**	**Female**	**Total**	**%**
Tanzanian	Number	76,771	32,811	109,582	**98.9**	76,296	33,535	109,831	**98.9**
	%	*70.1%*	*29.9%*	*100%*		*69.5%*	*30.5%*	*100%*	
Foreign	Number	1,191	66	1,257	**1.1**	1,181	61	1,242	**1.1**
	%	*94.7%*	*5.3%*	*100%*		*95.1%*	*4.9%*	*100%*	
Total	**Number**	**77,962**	**32,877**	**110,839**	**100**	**77,477**	**33,596**	**111,073**	**100**
	%	*70.3%*	*29.7%*	*100%*		*69.8%*	*30.2%*	***100%***	

Source: Annual Survey of Industrial Production and Performance, 2008

5.3 Average Number of Persons Engaged Including Part-Time Workers

Table 20 shows the average number of total persons engaged including part-time workers by activities and gender. It shows that, about 117,622 people were engaged by the industrial sector with the manufacturing sub-sector at 91.3 percent (107,388 persons) accounting for most of the total person engaged. The share of electricity and water was about 6.5 percent (7,616 persons) and mining sub-sector accounted for only 2.2 percent (2,618 persons). The distribution of persons engaged by gender was 83,450 (70.9 percent) males and 34,172 (29.1percent) females.

Table 20: Average number of total persons engaged including part-time workers by activity

ISIC	Activity	Male	Female	Total	(%) Male	% Female
05	Mining and quarrying	455	47	502	0.4	9.4
06	Extraction of crude petroleum and natural gas	41	30	71	0.1	42.3
07	Mining of metal ores	706	36	742	0.6	4.9
08	Other mining and quarrying	1,104	199	1,303	1.1	15.3
	TOTAL MINING	**2,306**	**312**	**2,618**	**2.2**	**11.9**
10	Manufacture of food products	31,686	12,106	43,792	37.2	27.6
11	Manufacture of beverages	5,030	816	5,846	5.0	14.0
12	Manufacture of tobacco products	3,755	2,992	6,747	5.7	44.3
13	Manufacture of textiles	6,636	5,276	11,912	10.1	44.3
14	Manufacture of wearing apparel	53	18	71	0.1	25.4
15	Manufacture of leather and related products	1,133	314	1,447	1.2	21.7
16	Manufacture of articles of straw and plaiting materials	675	104	779	0.7	13.4
17	Manufacture of paper and paper products	1,757	105	1,862	1.6	5.6
18	Printing and reproduction of recorded media	2,487	1,208	3,695	3.1	32.7
20	Manufacture of chemicals and chemical products	3,094	453	3,547	3.0	12.8
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	719	421	1,140	1.0	36.9
22	Manufacture of plastics products	2,189	1,936	4,125	3.5	46.9
23	Manufacture of other non-metallic mineral products	2,179	381	2,560	2.2	14.9
24	Manufacture of basic metals	797	21	818	0.7	2.6
25	Manufacture of fabricated metal products, except machinery and equipment	2,179	216	2,395	2.0	9.0
27	Manufacture of electrical equipment	298	69	367	0.3	18.8
28	Manufacture of machinery and equipment n.e.c	293	71	364	0.3	19.5
29	Manufacture of motor vehicles, trailers and semi-trailers	91	9	100	0.1	9.0
30	Manufacture of other transport equipment	78	16	94	0.1	17.0
31	Manufacture of furniture	2,347	266	2,613	2.2	10.2
32	Other manufacturing	7,536	5,499	13,035	11.1	42.2
33	Repair and installation of machinery and equipment	68	11	79	0.1	13.9
	TOTAL MANUFACTURING	**75,080**	**32,308**	**107,388**	**91.3**	30.1
35	Electricity, gas, steam and air conditioning supply	5,226	1,149	6,375	5.4	18.0
36	Water collection, treatment and supply	838	403	1,241	1.1	32.5
	ELECTRICITY AND WATER	**6,064**	**1,552**	**7,616**	**6.5**	20.4
	TOTAL	**83,450**	**34,172**	**117,622**	**100**	29.1

Source: Annual Survey of Industrial Production and Performance, 2008

5.4 Number of Employees by Sub-Sector

Table 21 shows the number of employees by industrial activity in year 2008. Employees are persons who work in the establishment and receive pay either in cash or in kind. This section considers persons who were directly engaged in production (operatives) and those who dealt with administrative issues (managerial and professional staff). Table 21 shows that the number of managerial and professional personnel was 16,474 (14.2 percent), operatives (skilled and non-skilled) 95,294 (81.9 percent) and other employees were 4,611(4.0 percent). The operatives dominate in all establishments since production process depends much on the operatives.

Other studies done by the ministry note that one of the major constraints to industrial development and competitiveness is the shortage of desired skills from the managerial level to artisan level, (Semboja, 2010). In addition, specific technical and marketing skills are also inadequate. Clearly, this shortage is more severe in smaller operations as the large companies can easily afford to recruit expatriates. The shortage of artisans is aggravated by limited training facilities and the dual nature of technology in the formal and informal sectors as well as production patterns in rural and urban areas (CIBR, 1995). The inadequacy of managerial capabilities is directly related to the structure of the education system, years of central planning and a public sector driven industrial sector. Managerial and workers' education is an important determinant of industrial productivity and competitiveness. The most competent industries are those with a high degree of engineers, scientists, and technicians. While it is acknowledged that the formal educational system could also develop vocational skills, major initiatives should be taken to introduce in plant technical training. Furthermore, the linkage between industry and the relevant training authority should be developed.

5.5 Skills Level of Operatives Labour Force

Skilled operatives are persons who are directly engaged in production using technical equipment and non skilled operatives are those who perform their tasks manually or by using simple hand tools. Skilled operatives in the surveyed establishments accounts 54.6 percent (52,061 employees) leaving 45.4 percent (43,233 employees) as non-skilled operatives during year 2008 (Table 22).

The difference of skilled and non-skilled operatives is very low only about 9.3 percent this suggests that skilled operatives are highly needed for handling technical equipment to increase the productivity and efficiency. This can be done through initiatives by the government and private sectors, (CIBR, 1995). The private sectors could allow their employees to undergo training either in-house or to go for short courses; advising on product design, technology, upgrading and quality control through consultancy and improving business efficiency and performance; especially quality management. Also the government could establish technology support institutions to improve technology acquisition. A major task of the technology institutes would be to raise awareness at the firm level, and raise their demand for technology services. The institutes should deploy industrial technology advisers who can take initiative to visit firms, prepare a plan of action for productivity and technological upgrading, and put manufacturing firms in touch with specialist service providers and technical consultants.

Table 21: Number of employees by sub-sector

ISIC	Activity	Managerial and professional staff	Operative		Other employees	Total employees
			skilled	non skilled		
05	Mining and quarrying	42	17	434	0	**493**
06	Extraction of crude petroleum and natural gas	58	13	0	0	**71**
07	Mining of metal ores	52	186	477	0	**715**
08	Other mining and quarrying	295	546	265	180	**1,286**
	TOTAL MINING	**447**	**762**	**1,176**	**180**	**2,565**
10	Manufacture of food products	5,171	23,973	12439	1908	**43,491**
11	Manufacture of beverages	1,188	2,285	1952	372	**5,797**
12	Manufacture of tobacco products	905	2,438	3404	0	**6,747**
13	Manufacture of textiles	547	3950	6945	243	**11,685**
14	Manufacture of wearing apparel	10	32	20	5	**67**
15	Manufacture of leather and related products	141	1128	157	12	**1,438**
16	Manufacture of articles of straw and plaiting materials	78	144	527	6	**755**
17	Manufacture of paper and paper products	136	342	1381	0	**1,859**
18	Printing and reproduction of recorded media	1,081	1232	1284	11	**3,608**
20	Manufacture of chemicals and chemical products	664	1721	1064	62	**3,511**
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	199	476	435	25	**1,135**
22	Manufacture of plastics products	305	2390	1294	123	**4,112**
23	Manufacture of other non-metallic mineral products	597	1640	273	20	**2,530**
24	Manufacture of basic metals	98	417	273	9	**797**
25	Manufacture of fabricated metal products, except machinery and equipment	392	1212	492	244	**2,340**
27	Manufacture of electrical equipment	96	98	168	0	**362**
28	Manufacture of machinery and equipment n.e.c	26	73	252	3	**354**
29	Manufacture of motor vehicles, trailers and semi-trailers	30	30	34	0	**94**
30	Manufacture of other transport equipment	9	65	14	0	**88**
31	Manufacture of furniture	426	1126	826	47	**2,425**
32	Other manufacturing	1,257	3325	8068	282	**12,932**
33	Repair and installation of machinery and equipment	26	29	23	0	**78**
	TOTAL MANUFACTURING	**13,382**	**48,126**	**41,325**	**3,372**	**106,205**
35	Electricity, gas, steam and air conditioning supply	2,318	2532	504	1020	**6,374**
36	Water collection, treatment and supply	327	641	228	39	**1,235**
	TOTAL ELECTRICITY AND WATER	**2,645**	**3173**	**732**	**1059**	**7,609**
	TOTAL INDUSTRY	**16,474**	**52,061**	**43,233**	**4,611**	**116,379**

Source: Annual Survey of Industrial Production and Performance, 2008

Table 22: Number of skilled and non-skilled operatives by sub-sector

Sub-sector	Skilled	% Skilled	Non-skilled	% Non-skilled	Total Operatives	% Total
Mining	762	0.8	1,176	1.2	1,938	**2.0**
Manufacturing	48,126	50.5	41,325	43.4	89,451	**93.9**
Electricity and water	3,173	3.3	732	0.8	3,905	**4.1**
Total	**52,061**	**54.6**	**43,233**	**45.4**	**95,294**	**100**

Source: Annual Survey of Industrial Production and Performance, 2008

5.6 Labour Costs

In many industrial production processes, labour costs represent a substantial proportion of the total cost. Labour costs refer to all costs that go directly to employees like salaries, payment in kind, employers' contribution to social security schemes, overtime, training expenses and other costs. Table 23 shows the trend of labour costs in the industrial sector during the last four years. The table shows that total labour costs increased over the 2005-2008 period. This is considered to be done to an increase in manufacturing activities, wage rates, employment, taxes and other costs related to use of labour. A rise in labour cost usually alters many economic decisions with respect to technological changes. An economy experiencing a rapid increase in its labour cost would lose its competitive edge in the world market unless its rate of increase in labour productivity at least compensates the increase in the labour cost.

Table 23: Labour cost trend in the industrial sector

Year	Gross Wage (Million Tshs.)	Other Costs (Million Tshs.)	Total Labour costs (Million Tshs.)	%
2005	189,277	38,809	228,086	**19.7**
2006	191,170	39,197	230,367	**19.9**
2007	233,294	77,318	310,612	**26.8**
2008	275,418	115,439	390,857	**33.7**
Total	**889,159**	**270,763**	**1,159,922**	**100.0**

Source: Annual Survey of Industrial Production and Performance, 2008

Table 24 summarizes gross wages and salaries and other labour costs incurred in the production process for the three sub-sectors in year 2008. The manufacturing sector accounts for about 79.5 percent of total labour costs. The other two sub-sectors were mining (5.7 percent) and electricity and water (14.8 percent).

Table 24: Labour costs by sub-sector

(Million Tshs.)

Sub-Sector	Gross Wage	Other payments	Total Labour costs	(%)
Mining	22,906	4,949	27,855	5.7
Manufacturing	275,418	115,439	390,857	79.5
Electricity and Water	48,036	24,881	72,916	14.8
Total	**346,359**	**145,269**	**491,629**	**100.0**

Source: Annual Survey of Industrial Production and Performance, 2008

5.7 Labour Productivity

Labour productivity is defined as output per unit of labour input. For a substantial number of economies, the productivity measures the total economy and manufacturing are complemented with measures of unit labour cost, i.e. labour cost per unit of output. Economic growth in an economy or economic sector can be ascribed either to increased employment or to more effective work by those who are employed. The latter effect can be described through statistics on labour productivity. Labour productivity is therefore a key measure of economic performance. An understanding of the driving forces behind it, in particular the accumulation of machinery and equipments, and improvement in organization, as well as physical and institutional infrastructures, improved health and skills of workers (human capital), and the generation of new

technology is important for formulating policies to support economic growth. Such policies may focus on regulation on industries and trade, institutional innovation and government investment programmes on infrastructure, as well as human capital, technology or any combination of these.

Table 25: Breakdown of labour costs by activity

(million Tshs.)

ISIC	Activity	Gross Wage	Other labour costs	Total labour costs	(%)
05	Mining and quarrying	822	120	942	0.2
06	Extraction of crude petroleum and natural gas	2,804	1,727	4,531	0.9
07	Mining of metal ores	4,483	1,166	5,649	1.1
08	Other mining and quarrying	14,797	1,937	16,733	3.4
	MINING	**22,906**	**4,949**	27,855	5.7
10	Manufacture of food products	52,689	22,890	75,579	15.4
11	Manufacture of beverages	36,275	20,637	56,912	11.6
12	Manufacture of tobacco products	17,375	9,540	26,915	5.5
13	Manufacture of textiles	10,185	3,961	14,146	2.9
14	Manufacture of wearing apparel	77	5	82	0.0
15	Manufacture of leather and related products	1,510	507	2,017	0.4
16	Manufacture of articles of straw and plaiting materials	760	218	978	0.2
17	Manufacture of paper and paper products	3,382	671	4,053	0.8
18	Printing and reproduction of recorded media	14,420	5,070	19,490	4.0
20	Manufacture of chemicals and chemical products	11,283	4,978	16,261	3.3
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	3,176	1,452	4,628	0.9
22	Manufacture of plastics products	6,272	5,242	11,513	2.3
23	Manufacture of other non-metallic mineral products	75,525	8,527	84,052	17.1
24	Manufacture of basic metals	1,933	1,682	3,616	0.7
25	Manufacture of fabricated metal products, except machinery and equipment	4,160	3,042	7,202	1.5
27	Manufacture of electrical equipment	1,475	1,597	3,072	0.6
28	Manufacture of machinery and equipment n.e.c	765	838	1,603	0.3
29	Manufacture of motor vehicles, trailers and semi-trailers	162	43	205	0.0
30	Manufacture of other transport equipment	76	52	128	0.0
31	Manufacture of furniture	2,341	1,739	4,081	0.8
32	Other manufacturing	31,122	22,440	53,561	10.9
33	Repair and installation of machinery and equipment	456	309	764	0.2
	MANUFACTURING	**275,418**	**115,439**	390,857	79.5
35	Electricity, gas, steam and air conditioning supply	44,682	22,067	66,749	13.6
36	Water collection, treatment and supply	3,353	2,814	6,168	1.3
	ELECTRICITY AND WATER	**48,036**	**24,881**	72,916	14.8
	TOTAL LABOUR COSTS	**346,359**	**145,269**	**491,629**	**100.0**

Source: Annual Survey of Industrial Production and Performance, 2008

Table 26 presents information on productivity during 2008. Basic statistics suggest that labour productivity was constant during 2005-2008; however, it was relatively higher than productivity recorded in the previous period in 1990's, (URT 1996, 1998, 2003, 2007a). *Industrial sub sectors such as beverages, tobacco and cigarette, and manufacturing of non-metallic products recorded relatively high levels of labour productivity*. In Tanzania labour productivity varies by industrial activity. Large scale industries have higher labour productivity than medium, small, and micro industries due to the fact that large industries employ advanced technology that

significantly reduces human labour. However, large scale manufacturing industries that use poor technological techniques are likely to also record low levels of labour productivity. These are large industries and use large capital per employee. According to the study done by the Ministry of Industry, Trade, and Marketing in 2007, large scale industries recorded an annual labour productivity of Tshs.81,710.6 in 2006 whereas medium scale industries and small scale industries recorded an annual labour productivity of Tshs.26,815.3 and Tshs.1,388.8 respectively in 2006. However, large scale manufacturing industries that use poor technological techniques are likely also to record a low level of labour productivity.

Table 26: Average labour productivity in selected industries

	Industry	Value in Tshs Million
151	Food Processing	18.2
155	Beverages	116.5
160	Tobacco and Cigarette	28.7
171	Textile Manufacturing	12.4
201	Timber and Timber Products	8.6
210	Manufacturing of paper products, printing	30.9
242	Manufacturing of chemicals	28.4
252	Manufacturing of plastic products	28.9
269	Manufacturing of non-metallic products	167.1
	Total	**27.8**

Source: URT, Economic Survey, 2008

Over recent years, since establishment of East African Custom Union in 2005, Tanzanian manufacturers have continually invested in more and better capital goods and manufacturing techniques in order to remain competitive in the domestic, regional and world markets. That is, investment has enabled them to raise their output and keep pace with overall economic growth without a corresponding increase in the number of workers that they employ (URT 2008 and 2009) (URT, 2009 and Semboja, 2009). Since 2007 the productivity of manufacturing workers has grown at an average annual rate of 3.3 percent, significantly faster than the 2.0 percent growth of labor productivity in the nonfarm business sector overall

Improvements in productivity are economically beneficial, as they permit greater profits, higher real wages, and lower prices, (Grenier, *et al*, 1999). But while the prices of manufactured goods have indeed fallen consistently relative to other prices, those lower prices have not led to increased sales: the share of gross domestic product (GDP) accounted for by manufacturing output has been roughly constant over the past half-century. Strong growth in productivity and a slower rate of growth in the demand for manufactured goods have necessarily entailed a decline in manufacturing's share of total employment.

5.8 Unit Labour Costs and Labour Cost Competitiveness

Unit labour costs represent a direct link between productivity and unit of labour used in generating output. Unit costs can be used to determine nature of rising firm. A rise in economy's unit labour cost represents an increased reward for labour's contribution to output. However, a rise in labour cost that is higher than a rise in labour productivity may be a threat to an economy's competitiveness, if other costs are not adjusted in compensation. As a competitiveness indicator, unit labour cost is particularly relevant for the manufacturing establishments, which produce internationally tradable products. Labour cost competitiveness

measures the efficient and effective management of resources in terms of labour cost in generating higher added value.

Unit labour cost is defined as labour compensation per unit of output produced. Total labour compensation includes not only gross wages and salaries of employees but also other costs of labour that are paid by employers, including employer's contribution to social security and pension schemes. In additions to employees' compensation, estimated labour costs of self-employed are included where possible, mostly imputed on the assumption that labour compensation per self-employed person equals that of an employee. Therefore, this adjustment can only be made when the number of self-employed persons in known separately.

Table 27 shows the unit labour costs for selected industrial sub sector in Tshs. million in the 2000 - 2008 periods. Industries such as manufacturing of beverages, non-metallic products, and plastic products recorded declining unit labour costs. For example, unit labour costs in non-metallic products and beverages declined from 14 percent and 11 percent respectively in 2000 to 5 percent and 8 percent respectively in the 2000-2008 periods. Some industrial sub sectors such as manufacturing of timber and timber products and paper and paper products, however, recorded an increasing unit labour cost.

Table 27: Selected industrial activities: Unit labour cost (%), 2000 and 2008

	Activity	2000	2008
151	Food Processing	0.08	0.09
155	Beverages	0.11	0.08
160	Tobacco and Cigarettes	0.11	0.11
171	Textile	0.13	0.10
201	Timber and Timber Products	0.18	0.24
210	Paper products, printing	0.10	0.23
242	Manufacturing of chemical	0.06	0.06
252	Plastic products	0.10	0.05
269	Non-metallic products	0.14	0.05
	Total	**0.10**	**0.09**

Source: Computed from URT: Economic Survey, 2005 – 2009

Although there is no clear pattern on the trend of unit labour cost on average, data indicates that labour cost did not rise higher than a rise in labour productivity. Therefore, in order for the sector to remain competitive, it is vital that new productivity initiatives should be implemented to ensure productivity growth is higher than wage increase. Additionally, expansion in both domestic and external market demand will improve unit labour cost of the manufacturing sector.

5.9 Main Findings on Labour Force, Employment, Productivity and Competitiveness

The current study indicates that the manufacturing industry was important as an employer in the Tanzania's labour market in 2008. However, time series data suggest that the rate of increase of manufacturing employment in Tanzania has been stagnant for many of industrial sub sectors during the last five years. The relative slow progress in manufacturing employment in 2008 is associated with three interrelated developments: [1] rapid gains in labour productivity (output per hour) in the manufacturing industry, [2] increased competition from imports and [3] insufficient demand due to global financial crisis. Import competition from East African and East Asian

countries helped spur Tanzanian firms to boost productivity, but that competition has also dampened demand for goods produced in the domestic market, despite domestic manufacturers' efforts to reduce costs through productivity enhancements.

Studies suggest that the Tanzanian labour force does not have good attributes needed in the improvement of firm-level productivity and competitiveness (Xavier, 1997 and Wangwe, 2002). These attributes include [1] low levels of education; [2] unavailability of industry-specific skills; [3] poor work morale; [4] weak labour force organization; and [5] and distorting government's regulatory impact on skills transfers.

The study found that food processing and textile manufacturing sub sectors constitute the largest share of total manufacturing employment but the rate of increase of employment for these sub sectors is constant for the last three years.

The study found that one of the major constraints to industrial development and competitiveness is the shortage of desired skills from the managerial level to artisan level. In addition, specific technical and marketing skills are also inadequate. Clearly, this shortage is more severe in small and medium scale operations as the large companies can easily afford to recruit expatriates. The shortage of artisans is aggravated by limited training facilities and the dual nature of technology in the formal and informal sectors as well as production patterns in rural and urban areas.

The study found that industrial sub sectors such as beverages, tobacco and cigarette, and manufacturing of non-metallic products recorded relatively high levels of labour productivity and savings. These are large industries are relatively capital intensive and use large capital per employee. A high labour savings and rising average productivity levels might also be due to a number of effects such as an increase in production levels of individual firms over the period attributable to firm learning or technical change, the exit of low productivity firms and their replacement by new firms exhibiting greater productive efficiency levels, and an increase in the output share of high productivity firms compared to low productivity firms.

CHAPTER SIX: PERFORMANCES OF MATERIAL INPUT UTILIZATION

This chapter examines performance of material input utilization in the Tanzanian industry sector for the year 2008 as important factors determining firm's performances, firm-level productivity and competitiveness. The material input consumption covers costs of material inputs used in the production processes (URT, 2008). A material can be anything: a finished product in its own right or an unprocessed, intermediate and raw material. Raw materials are first extracted or harvested from the earth and divided into a form that can be easily transported and stored, then processed to produce semi-finished materials. These can be input into a new cycle of production and finishing manufacturing processes to create finished materials, ready for distribution, manufacturing, and consumption. Both quantities and values of material inputs will be examined. Values of material inputs or inputs costs from surveyed industries in this context include costs of materials and supplies, costs of energy, cost of goods sold as purchased, costs incurred on industrial services, costs incurred on non industrial services and other costs. Other costs are costs which are not included in the above list.

6.1 Total Material Inputs

Tanzanian industry firms consume different types of inputs. These include material, intermediate goods, energy, industry services, non-industry services and other inputs. Material and supplies costs include raw materials, chemicals and other consumables including spare parts and components for repair and maintenance of machinery and equipment provided that their working life is less than one year. Energy includes electricity, water, fuel for machines and vehicles; gas; and wood, charcoal and peat. On the other hand cost of goods sold purchased means costs incurred by establishments in selling those goods sold in the same condition as purchased without further processing or transformation.

Industrial services include contract and commission paid for work done, cost of repairs and maintenance; and waste treatment costs. Non industrial services include postage and other communication costs; rental of buildings, machinery, plant and equipment; storage and hire of transport; publicity and bank charges; and consultancy and professional fees and other non industrial services expenses which include other are expenses which are not covered in the above list. Other expenses include costs of interests and dividends paid, insurance expense, income tax expense, net value added tax, other taxes on production and other expenses.

Tables 28 and 29 presents total costs of inputs in the Tanzanian industry in year 2008. Table 28 shows that a total of Tshs 4,355,369 Million spent in inputs by surveyed industries; it tell us that cost of material and supplies accounted for about 64.76 percent, followed by other expenses by 11.04 percent, non industrial services by 10.18 percent, energy by 10.15 percent, industrial services by 3.48 percent and cost of goods sold as purchased spend a slight percentage of 0.39 only. This suggests that the Tanzanian industry sector is material intensive, (Wangwe, 2002. Other intermediate inputs such as energy and non-industry services are equally very important in the industry production processes.

Table 28: Total costs of inputs used in production (000 Tshs)

Description	Energy	Cost of goods as purchased	Materials and supplies purchased	Industrial services	Non-industrial services	Other expenses	Total cost of inputs
Mining of coal and lignite	42,005	0	3,380,221	55,850	1,248,738	4,296,609	9,023,423
Extraction of crude petroleum and natural gas	1,493,146	0	49,485,830	3,915,520	11,961,032	21,758,457	88,613,985
Mining of metal ores	884,750	0	9,475,768	149,058	849,554	278,803	11,637,933
Other mining and quarrying	6,752,034	0	32,086,971	52,614,310	29,417,724	10,724,010	131,595,049
Manufacture of food products	38,793,879	1,974,287	466,121,398	15,046,186	112,813,884	58,527,780	693,277,414
Manufacture of beverages	24,932,348	0	439,718,959	13,527,884	82,772,574	104,044,326	664,996,091
Manufacture of tobacco products	7,977,864	10,185,201	95,600,433	3,622,662	68,966,607	112,256,568	298,609,335
Manufacture of textiles	15,537,135	0	95,954,789	2,344,336	5,471,852	12,320,893	131,629,005
Manufacture of wearing apparel	9,708	0	345,043	5,222	11,731	26,183	397,887
Manufacture of leather and related products	938,958	0	8,429,763	236,864	737,851	912,121	11,255,557
Manufacture of wood and of products of wood and cork, except furniture;	1,532,716	293	4,002,999	409,961	296,566	1,866,707	8,109,242
Manufacture of paper and paper products	2,580,405	0	6,816,804	2,000,035	1,261,136	1,697,577	14,355,957
Printing and reproduction of recorded media	3,624,769	682,461	75,911,869	5,180,331	8,106,709	5,111,964	98,618,103
Manufacture of chemicals and chemical products	11,935,312	22,359	160,215,890	3,289,752	21,438,876	11,989,935	208,892,124
Manufacture of basic pharmaceutical products and pharmaceutical preparations	1,234,127	92,362	37,704,553	1,608,866	3,512,324	5,315,719	49,467,951
Manufacture of rubber and plastics products	11,290,884	2,077	272,428,914	2,660,827	14,155,894	5,163,460	305,702,056
Manufacture of other non-metallic mineral products	46,245,402	28,200	159,187,970	4,656,048	23,613,707	39,334,071	273,065,398
Manufacture of basic metals	5,037,650	0	22,829,331	929,033	1,023,126	4,504,385	34,323,525
Manufacture of fabricated metal products, except machinery and equipment	8,242,356	111,403	136,506,685	810,586	4,486,164	4,360,160	154,517,354
Manufacture of electrical equipment	878,023	157,401	33,696,155	431,594	3,869,973	1,863,136	40,896,282
Manufacture of machinery and equipment n.e.c.	666,378	10,887	9,074,378	571,955	622,818	553,555	11,499,971
Manufacture of motor vehicles, trailers and semi-trailers	71,892	0	1,058,764	32,885	104,428	55,767	1,323,736
Manufacture of other transport equipment	129,614	0	329,714	102,592	24,895	12,906	599,721
Manufacture of furniture	1,135,486	259,716	13,516,867	606,083	2,169,445	492,084	18,179,681
Other manufacturing	35,794,677	3,178,223	321,376,299	9,162,620	18,740,224	20,701,123	408,953,166
Repair and installation of machinery and equipment	94,539	0	719,441	26,658	153,712	139,100	1,133,450
Electricity, gas, steam and air conditioning supply	210,786,458	0	353,392,734	26,252,038	23,831,243	51,093,277	665,355,750
Water collection, treatment and supply	3,457,268	235,102	11,187,055	1,437,654	1,635,268	1,387,865	19,340,212
Total	**442,099,783**	**16,939,972**	**2,820,555,597**	**151,687,410**	**443,298,055**	**480,788,541**	**4,355,369,358**
Total Percentage	**10.15**	**0.39**	**64.76**	**3.48**	**10.18**	**11.04**	**100.00**

Source: Annual Survey of Industrial Production and Performance, 2008

Table 29 on the other hand illustrates the trend of material costs in the past seven years; although the trend does not provide the same categorisation of inputs costs rather than the costs of materials, chemicals and packing materials but tells us the same story on the largest share of raw material costs as compared to the other inputs costs. Therefore this trend supports the survey findings.

Table 29: Cost of materials used in industry, 2001- 2005

(000 Tshs)

	2001	2002	2003	2004	2005	2006	2007
Raw Materials	496,324,913	671,441,975	661,802,277	928,535,596	1,104,707,598	1,252,002,103	1,628,579,020
Chemicals	19,673,327	17,335,822	159,410,168	71,266,957	72,327,712	7,609,546	8,503,930
Parking Materials	33,027,554	36,970,729	42,458,061	40,786,759	62,050,602	2,934,036	1,556,616
Total	**549,025,794**	**725,748,526**	**863,670,506**	**1,040,589,312**	**1,239,085,912**	**1,262,545,685**	**1,638,639,566**

Source: NBS Annual Survey Industrial of Production, 2001- 2007

6.2 Energy Consumption

Table 30 shows cost utility structures in the Tanzanian industry in year 2008. The table indicates in detail the breakdown of costs of inputs used and relative shares in percentage. Overall, the surveyed establishments recorded total utility inputs costs of Tshs 442,100 Million. Mining and quarrying; and cement, lime and plaster manufacturing together recorded a large share of 54.92 percent while only 45.08 percent is shared by the rest of industry activities, namely manufacturing sub sectors. This suggests that mining industry is energy intensive sector.

Unexpectedly, surveyed industries under casting of iron and steel recorded a trivial percentage of only 0.16 percent. This could be contributed by the change of process instead of using iron ore to get steel they now uses scrap metal to get steel. Also in recent years the steel industry has reduced its energy consumption per ton of steel by adopting new technology which makes steel stronger so that less steel is needed for many uses. The use of recycled steel also might be a reason to save energy as it requires only 33 percent less energy to recycle steel than to make it from iron ore. Today steel is made up of recycled scrap, making steel the nation's leading recycled product as opposed to previously where the cost of energy got higher between 15 to 20 percent of the total cost of making steel. Some literature from Tanzanian practice tells us the cost of electricity in cement industry is about 45 to 50 percent of the production cost, (Semboja 2007 and 2009).

It is therefore the duty of the government to make sure that it creates levelling of the playing field among industrial players. Availability of energy is a prerequisite for the proper functioning and development of the industrial sector. Since energy demand is driven by requirements of the entire economy, the main challenge is to develop reliable, economically accessible and appropriately priced energy supplies to facilitate the development of other activities in the economy while ensuring environmental sustainability (Semboja 2009).

Table 30: Utility cost structures by industrial activity in 2008

(Million Tshs)

ISIC Rev.4	Industrial activity	Electricity	Water	Gas	Fuels for machines	Wood, charcoal	Other fuels	Total
B	**Mining and Quarrying**	**5,960**	**10**	**544**	**2,644**	**3**	**11**	**9,172**
C	**Manufacturing**	**94,169**	**8,738**	**20,198**	**69,185**	**21,659**	**4,736**	**218,685**
10	Manufacture of food products	15,724	837	1,301	19,449	1,202	280	38,793
	of which;							
102	*Processing and preserving of fish and similar products*	4,151	112	1,099	3,780	3	140	9,285
104	*Manufacture of vegetables and animal oils and fats*	788	38	1	1,090	9	2	1,928
106	*Manufacture of grain mill products ,etc*	1,383	90	79	1,072	-	-	2,624
107	*Manufacture of other food products*	9,352	521	120	13,462	1,189	3	24,647
11,12	Manufacture of beverages and tobacco	8,606	2,012	5,061	15,276	988	967	32,910
13,14,15	Manufacture of textiles, wearing apparel and leather products	7,686	220	2,201	1,611	3,953	815	16,486
16,17	Manufacture of wood, paper and similar products except furniture	851	816	506	1,035	248	657	4,113
18	Printing and reproduction of recorded media	2,153	74	9	1,284	-	105	3,625
20,21	Manufacture of chemical including pharmaceutical products	7,102	458	52	5,370	-	189	13,171
22,23	Manufacture of rubber, plastics and non-mineral products	28,473	1,236	7,225	6,006	14,481	116	57,537
24,25	Manufacture of basic metals and fabricated metal products	10,310	103	1,236	1,440	6	185	13,280
27,28,29,30	Manufacture of electrical, transport and other machinery and equipment.	1,071	42	31	501	-	101	1,746
31	Manufacture of furniture	319	25	56	733	-	2	1,135
32,33	Other manufacturing	11,874	2,915	2,521	16,479	780	1,319	35,888
D	**Electric power generation, transmission and distribution**	**171,598**	**24**	**1,626**	**37,537**	**1**	**-**	**210,786**
E	**Water collection, treatment and supply**	**2,131**	**554**	**-**	**761**	**-**	**11**	**3,457**
	Total	**273,858**	**9,326**	**22,368**	**110,127**	**21,663**	**4,758**	**442,100**
	Total Percent	**61.9**	**2.1**	**5.1**	**24.9**	**4.9**	**1.1**	**100.0**

Source: Annual Survey of Industrial Production and Performance, 2008

Table 30 shows utility consumption patterns in the Tanzanian industry sector in year 2008. The table suggests that electricity is the main energy consumed in the industry processes in Tanzania, amounting to about 61.9 percent of the total utility costs. Fuel for machinery is the second large utility cost component amounting to about 24.9 percent of the total utility costs in year 2008. The other energy services such as water, gas and wood fuel amounted to about 13.2 percent.

It is worth noting that one of the major problems facing manufacturing industry is the cost of power and poor quality of power supply. Electricity costs were highest in Tanzania comparing with other East African countries (EAC, 2000). Frequent power cuts and other forms of instabilities have been interrupting manufacturing processes and activities.

Some of large scale and power intensity manufacturing industry firms have put up own power generators. However, majority of small and medium scale manufacturing firms are unable to establish sufficient power generation facilities. Over time, electricity demand in the

manufacturing sector has been constantly growing and is higher than existing generating and supplying capacities in the entire country. TANESCO is the major producer and distributor of this power but is still in technical and financial distresses due to a number of factors including unstable government policies on the management of power, delays in its electricity billings and customers' non-payment for power consumed.

6.3 Sources of Material Goods

Costs of material goods cover those costs incurred by establishments in the same condition as purchased without further industrial processing or transformation. These also include all of the cost of materials, intermediate and other consumables including spare parts and components for repairs and maintenance of machinery and equipment provided that their working life is less than one year.

Table 31 shows material cost structures and sources in the Tanzanian industry in year 2008. It shows that manufacturing sector is leading by 83.73 percent, followed by electricity and water sector by 12.93; and only 3.35 percent recorded by mining sector. The reason behind the larger share of manufacturing sector might be because the sector covers about 70 percent among the entire establishments in the surveyed industries. Within the manufacturing industry sector, manufacturing of food products, manufacture of beverages, and manufacture of rubber and plastic products spent much on sourcing materials about 19.74 percent 18.62 percent, 13.61 percent and 11.54 percent respectively. While sub sectors of manufacture of other transport equipment and manufacture of leather and related products spent less at only 0.01 percent each.

Table 31 shows also sources of material inputs. The major sources of material inputs are local and foreign (imports) markets. Table shows that about 81.3 percents of material inputs are sourced from domestic markets and about 18.7 percent are imported intermediate inputs. Material inputs for mining, extraction of crude petroleum, paper and paper products, transport and furniture manufacturing sectors are sourced from domestic markets. There are few manufacturing industries which depend very much on imported intermediate inputs, (URT, 2007 and 2008). Manufacturers of rubber and plastics, electrical equipment, and basic metals source their intermediate inputs from foreign markets.

There are two major types of domestic materials. These are natural and raw agriculture inputs produced. Tanzania has comparative advantages in industries whose raw agriculture materials are locally available, (MITM, 1996). These include: (i) Agro processing industries: cashew nut, sisal, cotton, tobacco and textiles; (ii) Hides and skins products: shoe manufacturing, bags, belts etc. (iii) Paper and paper products; (iv), Wood, wood products and furniture and (v) Fresh and Sea fish processing firms.

Table 31: Sources of materials by activities in year 2008

Description	Import (TZS 000)	Local (TZS 000)	Total (TZS 000)	Import Percent	Local Percent
Mining of coal and lignite	0	3,380,221	3,380,221	0.00	100.00
Extraction of crude petroleum and natural gas	0	49,485,830	49,485,830	0.00	100.00
Mining of metal ores	2,504,375	6,971,393	9,475,768	26.43	73.57
Other mining and quarrying	3,700,000	28,386,971	32,086,971	11.53	88.47
TOTAL MINING	**6,204,375**	**88,224,415**	**94,428,790**	**6.57**	**93.43**
Manufacture of food products	94,671,251	371,450,147	466,121,398	20.31	79.69
Manufacture of beverages	17,654,460	422,064,499	439,718,959	4.01	95.99
Manufacture of tobacco products	2,445,426	93,155,007	95,600,433	2.56	97.44
Manufacture of textiles	15,104,514	80,850,275	95,954,789	15.74	84.26
Manufacture of wearing apparel	0	345,043	345,043	0.00	100.00
Manufacture of leather and related products	1,510,998	6,918,765	8,429,763	17.92	82.08
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	1,069,127	2,933,872	4,002,999	26.71	73.29
Manufacture of paper and paper products	0	6,816,804	6,816,804	0.00	100.00
Printing and reproduction of recorded media	18,163,540	57,748,329	75,911,869	23.93	76.07
Manufacture of chemicals and chemical products	40,665,594	119,550,296	160,215,890	25.38	74.62
Manufacture of basic pharmaceutical products and pharmaceutical preparations	26,338,749	11,365,804	37,704,553	69.86	30.14
Manufacture of rubber and plastics products	20,024,045	252,404,869	272,428,914	7.35	92.65
Manufacture of other non-metallic mineral products	51,620,871	107,567,099	159,187,970	32.43	67.57
Manufacture of basic metals	11,109,888	11,719,443	22,829,331	48.66	51.34
Manufacture of fabricated metal products, except machinery and equipment	23,523,231	112,983,454	136,506,685	17.23	82.77
Manufacture of electrical equipment	21,481,306	12,214,849	33,696,155	63.75	36.25
Manufacture of machinery and equipment n.e.c.	6,717,163	2,357,215	9,074,378	74.02	25.98
Manufacture of motor vehicles, trailers and semi-trailers	0	1,058,764	1,058,764	0.00	100.00
Manufacture of other transport equipment	0	329,714	329,714	0.00	100.00
Manufacture of furniture	2,012,295	11,504,572	13,516,867	14.89	85.11
Other manufacturing	166,796,162	154,580,137	321,376,299	51.90	48.10
Repair and installation of machinery and equipment	11,546	707,895	719,441	1.60	98.40
TOTAL MANUFACTURING	**520,920,166**	**1,840,626,852**	**2,361,547,018**	**22.06**	**77.94**
Electricity, gas, steam and air conditioning supply	0	353,392,734	353,392,734	0.00	100.00
Water collection, treatment and supply	216,399	10,970,656	11,187,055	1.93	98.07
TOTAL ELECTRICITY AND WATER	**216,399**	**364,363,390**	**364,579,789**	**0.06**	**99.94**
TOTAL INDUSTRY	**527,340,940**	**2,293,214,657**	**2,820,555,597**	**18.70**	**81.30**

Source: Annual Survey of Industrial Production and Performance, 2008

Tanzania is a rich mineral resource endowed country. The country has the largest industrial mineral potentials. These include limestone, tin, iron ore, gypsum, kaolin, mica, salt, graphite and other industrial minerals. Despite the fact that Tanzania has natural wealth not much of it has been utilized in the industry activities. Some of the reasons for the lack of utilization of these natural resources are lack of knowledge and information on these minerals and potential output markets, low level of technological development, infrastructure, and lack of investments. Some of chief executive officers and business community understand that custom union means opening-up markets, increased knowledge and information

6.4 Industrial Services

Table 32 shows costs related with industry services. Industrial services include contract and commission paid for work done, cost of repairs and maintenance; and waste treatment costs. The findings tell us about 55.7 of industry services are related with repairs and maintenance. Maintenance, repair, and operations (MRO) involves fixing any sort of mechanical or electrical device should it become out of order or broken (known as repair, unscheduled or casualty maintenance). In Tanzania, this has been including performing routine actions which keep the device in working order (known as scheduled maintenance) or prevents trouble from arising (preventive maintenance). In practice, MRO are all actions which have the objective of retaining or restoring an item in or to a state in which it can perform its required function. The actions include the combination of all technical and corresponding administrative, managerial, and supervision actions.

Table 32 shows that about 43.5 percent of industry services are related with contract and commission paid for work done. This contract manufacturing is a recent manufacturing tendency in Tanzania. The contract manufacturer ("CM") is a firm that manufactures components or products for another "hiring" firm. It is a form of outsourcing. The practice of utilizing contract manufacturing relies on the manufacturer's ability to drive down the cost of production through economies of scale (Semboja, 2009). It also allows the hiring company to obtain the needed components or products without needing to own and operate a factory. In a contract manufacturing business model, the hiring firm approaches the contract manufacturer with a design or formula.

The contract manufacturer will quote the parts based on processes, labour, tooling, and material costs. Typically a hiring firm will request quotes from multiple CMs. After the bidding process is complete, the hiring firm will select a source, and then, for the agreed-upon price, the CM acts as the hiring firm's factory, producing and shipping units of the design on behalf of the hiring firm. Some industries utilize this process, especially the food manufacturing fields. Some types of contract manufacturing include CNC machining, complex assembly, aluminium die casting, grinding, broaching, gears, and forging.

Most of the surveyed industries lack waste treatment facilities. Tanzania has an adequate policy, legal, regulatory and institutional framework to cater for sustainable industry development and thus taking environment. The findings from table 32 tell us that only 0.8 percent was spent in waste treatment facilities. This suggests that the system has failed to ensure that manufacturing industry firms have waste treatment systems. Industries dealing with water collection, treatment and supply; tobacco and tobacco products, food products; and manufacture of made-up textiles articles, except apparel sub sectors recorded 30 percent, 20 percent, 10 percent and 10 percent respectively. The four sub-sectors have a total of 80 percent spent on waste treatment, remaining with only 20 percent spent by other type of industries activities.

Table 32: Industrial Services consumed by activity (Million Tshs)

ISIC Rev.4		Industrial activity	Contract	Industrial services repairs and maintenance	Others	Total
B		**Mining and Quarrying**	**52,211**	**4,522**	**2**	**56,735**
C		**Manufacturing**	**12,240**	**54,253**	**770**	**67,263**
10		Manufacture of food products	3,196	11,650	200	15,046
	102	**of which;** *Processing and preserving of fish and similar products*	594	2,336	36	2,966
	104	*Manufacture of vegetables and animal oils and fats*	74	446	11	531
	106	*Manufacture of grain mill products, etc*	71	453	5	529
	107	*Manufacture of other food products*	2,390	8,308	143	10,841
11,12		Manufacture of beverages and tobacco	1,684	15,160	307	17,151
13,14,15		Manufacture of textiles, wearing apparel and leather products	138	2,338	110	2,586
16,17		Manufacture of wood ,paper and similar products except furniture	33	2,373	4	2,410
18		Printing and reproduction of recorded media	2,360	2,806	15	5,181
20,21		Manufacture of chemical including pharmaceutical products	1,140	3,683	75	4,898
22,23		Manufacture of rubber ,plastics and non-mineral products	192	7,117	8	7,317
24,25		Manufacture of basic metals and fabricated metal products	13	1,704	22	1,739
27,28,29,30		Manufacture of electrical, transport and other machinery and equipment.	89	1,050	0	1,139
31		Manufacture of furniture	75	527	4	606
32,33		Other manufacturing	3,320	5,844	25	9,189
D		**Electric power generation, transmission and distribution**	**1,608**	**24,644**	**0**	**26,252**
E		**Water collection, treatment and supply**	**0**	**1,024**	**413**	**1,437**
		Total	**66,059**	**84,443**	**1,185**	**151,687**
		Total Percent	43.5	55.7	0.8	100.0

Source: Annual Survey of Industrial Production and Performance, 2008

6.5 Non Industrial Services

Table 33 shows that the main non-industrial costs spent by surveyed industries are consultancy 25.2 percent; storage 19.4 percent, publicity 11.8 percent; rental 5.2 percent, postage 4.5 percent; and other costs accounted for 33.9 percent. Consultancy costs involve all payments to specialist professional knowledge and/or expertise that may not be maintained in-house. It was observed in the surveyed industries that some consultants work as individuals, some work through agencies. Recent studies suggest that the use of foreign consultants has been on the increase in the manufacturing industry firms in Tanzania.

Table 33: Non-Industrial Services consumed by industrial activity-2008

(Million T.shs.)

ISIC Rev.4	Industrial activity	Non-industrial services						Total services
		Postage	Rentals	Storage	Publicity	Consultant	Other	
B	**Mining and Quarrying**	**1,792**	**2,059**	**13,998**	**816**	**2,033**	**22,780**	**43,478**
C	**Manufacturing**	**17,076**	**20,231**	**71,315**	**46,375**	**95,495**	**123,862**	**374,354**
10	Manufacture of food products	1,935	3,333	19,540	5,340	62,387	20,279	**112,814**
11,12	Manufacture of beverages and tobacco	9,093	9,616	29,524	20,586	18,765	64,155	151,739
13,14,15	Manufacture of textiles, wearing apparel and leather products	869	205	2,326	1,607	508	707	6,222
16,17	Manufacture of wood ,paper and similar products except furniture	202	63	172	758	363	0	1,558
18	Printing and reproduction of recorded media	657	1,149	1,397	1,020	908	2,974	8,105
20,21	Manufacture of chemical including pharmaceutical products	1,006	1,235	6,843	3,611	1,962	10,294	24,951
22,23	Manufacture of rubber ,plastics and non-mineral products	1,367	2,498	4,528	8,560	4,976	15,840	37,769
24,25	Manufacture of basic metals and fabricated metal products	306	266	1,254	1,186	2,211	286	5,509
27,28,29,30	Manufacture of electrical, transport and other machinery and equipment.	117	240	490	164	1,410	2,201	4,622
31	Manufacture of furniture	191	274	1,034	209	118	343	2,169
32,33	Other manufacturing	1,332	1,351	4,206	3,336	1,886	6,783	18,894
D	**Electric power generation, transmission and distribution**	**1,143**	**689**	**649**	**4,864**	**14,109**	**2,378**	**23,832**
E	**Water collection, treatment and supply**	**117**	**29**	**21**	**238**	**191**	**1,040**	**1,636**
	Total	**20,128**	**23,008**	**85,983**	**52,293**	**111,828**	**150,060**	**443,300**
	Total Percent	**4.5**	**5.2**	**19.4**	**11.8**	**25.2**	**33.9**	**100.0**

Source: Annual Survey of Industrial Production and Performance, 2008

Consultants are typically hired or/and retained for one of three reasons, [1] to provide specialized service not available through existing staff resources; [2] to supplement existing staff in completing industrial projects and/or doing planned manufacturing projects when the existing staff does not have time or the expertise to complete the project; and [3] to get a second opinion from an outside source on a possible project or to review, provide input, analyze data and conclusions reached by the villages through other studies. That means consultants are hired and retained for many types of industry projects, services and activities. There are different capacities, types or forms of consultant services needed by the manufacturing firms, (Semboja 1997 and 2009). These may include management or organizational development, technical, finance and market. The organizational development consultants look at the company's communications, shared values and beliefs, common behaviours, and unwritten rules, as well as management styles, involvement, decision-making, and teamwork.

6.6 Other Expenses

Table 34 shows costs connected with payment of interests and dividends, insurance, income tax, value added other taxes on production and other expenses. The first important expenses are

interest and dividend payments, which account for about 25.3 percent of the total other expenses. Other taxes on production accounted for about 24.3 percent. Income tax was the third other expense accounted for about 18.7 percent and value added tax was about 13.2 percent.

The total tax paid was about 56.2 percent of the total other expenses. These results indicate some problems in the Tanzanian taxation system and administration. Other studies suggest that there are problems related to taxation regime for the manufacturing sector in Tanzania. There are still many taxes and fees that must be paid to different authorities. The tax administration and system lack transparency thereby inhibiting voluntary compliance due to unnecessary high compliance costs being imposed on taxpayers. That is, despite the changes in the tax policy adopted in 1998 (new Finance Act of 1997) and re-organization of the tax administration which led to the creation of the Tanzania Revenue Authority (TRA) in 1996, the country still lacks a coherent taxation policy and the tax system remains complex. Other related macroeconomic constraints include insufficient protection from dumping, various types of bureaucratic constraints, cumbersome export and importing procedures, lack of regional economic integration strategies, and non-transparent investment incentives.

Table 34: Other expenses

	Amount (Tshs million)	Percent
Interests and dividends	121,680.4	25.3
Insurance	27,407.2	5.7
Income tax	89,666.5	18.7
Value Added	63,529.9	13.2
Other taxes on production	116,824.2	24.3
Other	61,680.4	12.8
Total	480,788.6	100.00

Source: Annual Survey of Industrial Production and Performance, 2008

Table 35 shows the trend of the tax amounts contributed by the surveyed industries. The observed continuous decline in the amount of VAT could be explained by the associated decline in the revenues generated by these entities during the same period and other changes in tax structure. Although the total value of tax paid in 2008 seems to increase in relation to previous three years it does not show the adequate amount that everyone could expect. More efforts are required by the tax authorities to make sure that all taxes and fees are collected.

Table 35: Total industrial contribution to the government tax revenue, 2005 -2007

Industrial size	Amount (Tshs Millions) in 2005	Percent	Amount (Tshs Millions) in 2006	Percent	Amount (Tshs Millions) in 2007	Percent
Value Added Tax (VAT)	303,763.76	82.58	231,608.70	74.74	98,641.4	39.92
Corporate Tax	6,634.58	1.8	11,635.04	3.75	39,878.2	16.14
Income Tax	331.98	0.09	274.99	0.09	23,252.3	9.41
Import duty	5,270.92	1.43	9,154.44	2.95	35,043.4	14.18
Royalties	30,289.16	8.23	8,382.42	2.7	14,975.8	6.06
Service Levy	5,738.47	1.56	7,064.54	2.28	12,058.6	4.88
Others	15,821.11	4.3	41,770.64	13.48	23,245.7	9.41
Total	**367,849.98**	**100**	**309,890.77**	**100**	**247,095.4**	**100**

Source: MITM Industrial Surveys, 2005 – 2007

CHAPTER SEVEN: VALUE OF INVENTORIES AND ADDITIONS TO FIXED ASSETS

Chapter Seven presents the level of inventories and expenditure on fixed assets in the Tanzanian industrial sector in 2008.

7.1 Value of Inventories

Inventories are assets that are intended for sale, are in process of being produced for sale or to be used in producing goods. Inventories represent a large (if not the largest) portion of assets and, as such, form an important part of the balance sheet. It is, therefore, crucial for investors who are analyzing capital stocks to understand how inventories are valued.

7.1.1 Opening inventories

Opening inventories are the book value of goods, inputs or materials available for use or sale at the beginning of an inventory accounting period. The beginning or opening inventory is similar to ending inventory except that it is adjusted for any accounting discrepancies. It is an important figure for manufacturing firms because they use it to gauge the ordering of new requirements and to forecast future sales.

Table 36 presents opening balances of inventories in the industrial sector in 2008. Materials were constituted the first major inventories in all industries. These were about 64 percent of the total inventories in mining sub-sector, 59 percent in manufacturing and 32 percent in the utility industry sub-sector. Material inventories include all items that after being received at the plant require additional processing before becoming finished products. It is obvious that the finished product of one plant such as roll, bar, and sheet steel- may be the raw material for the next industrial purchaser and consumer, (URT 2007 and 2008).

Finished goods were the second largest inventories in the manufacturing sector. They accounted for about 30 percent of the total value of opening inventories for 2008. They comprise quantities of finished goods that are held at the factory awaiting transportation. In many instances, however, it will include stocks held in warehouses owned and operated by the manufacturer, or stocks held on dealers' floors on consignment. In this latter case the value of the finished goods inventories is usually very high and a principal factor in the financial problems of the company.

A typical example of this is the piston ring manufacturer who in addition to supplying the original car manufacturer also maintains large stocks of many different sizes of piston rings in automotive supply houses for quick service to the auto repairman. All of these stocks are on consignment; that is, the piston ring manufacturer does not receive any payment for the goods until they have been sold by the distributor. The value of work-in-progress was the largest in the utility industry sub-sector. They accounted for about 68 percent of the total value of the opening value inventories in 2008. Work-in-progress are materials that leave either raw material stores or purchased parts stores enter the work-in-process inventory until the products concerned are completed and placed among finished goods.

Table 36: Values of the inventories ('000 Tshs): opening balances, 2008 (Land Scaping)

		Material	Fuels	Work-in-progress	Finished goods	Goods purchased for resale	Total
05	Mining of coal and lignite	0	4,554	0	0	0	4,554
06	Extraction of crude petrol and natural gas	9,891,210	0	4,165,560	0	0	14,056,770
07	Mining of metal ores	1,111,402	0	0	777,922	0	1,889,324
08	Other mining and quarrying	15,850,245	1,036	2,369,577	3,878,923	4,078,626	26,178,407
	Total Mining Industry	26,852,857	5,590	6,535,137	4,656,845	4,078,626	42,129,055
	Total Mining Industry in Percent	**64**	**0**	**16**	**11**	**10**	**100**
10	Manufacture of food products	72,967,910	1,343,583	1,437,631	13,227,210	930,045	89,928,328
11	Manufacture of beverages	38,914,291	8,366,636	4,820,344	9,355,947	0	61,457,218
12	Manufacture of tobacco products	31,828,091	358,812	471,250	11,077,321	0	43,735,474
13	Manufacture of textiles	23,030,297	323,109	554,274	5,597,703	1,810	29,507,194
14	Manufacture of wearing apparel	86,730	16	0	0	0	86,746
15	Manufacture of leather and related products	6,370,795	609,333	527,004	771,199	2,341,759	10,627,719
16	Manufacture of wood and of products of wood and cork, except furniture	746,287	30,983	2,525	885,020	0	1,664,815
17	Manufacture of paper and paper products	927,801	0	44,811	84,452	92,360	1,149,424
18	Printing and reproduction of recorded media	8,057,869	67,322	152,033	1,304,452	409	9,582,085
20	Manufacture of chemicals and chemical products	41,895,470	26,478	838,770	4,193,161	232,153	47,186,027
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	4,865,791	2,498	728,434	4,243,700	0	9,840,423
22	Manufacture of rubber and plastics products	16,906,209	9,219	623,501	9,839,535	0	28,058,293
23	Manufacture of other non-metallic mineral products	18,812,012	1,604,690	10,219,477	9,415,326	0	40,051,505
24	Manufacture of basic metals	4,380,901	12,561	629,397	1,682,543	20,865	6,726,267
25	Manufacture of fabricated metal products, except machinery and equipment	19,348,818	3,322,690	486,470	88,194,446	108,264	123,911,256
27	Manufacture of electrical equipment	7,557,880	0	1,302,225	1,351,684	2,111	10,213,900
28	Manufacture of machinery and equipment n.e.c.	204,123	1,830	15,720	650,349	0	872,022
29	Manufacture of motor vehicles, trailers and semi-trailers	124,458	0	0	0	0	124,458
30	Manufacture of other transport equipment	0	0	57,258	0	0	57,258
31	Manufacture of furniture	1,332,870	2,176	277,517	1,087,750	15,553	2,716,133
32	Other manufacturing	45,388,292	4,595,271	4,351,701	12,233,037	998,663	67,566,964
	Total manufacturing	343,746,917	20,677,147	27,540,342	175,194,835	4,743,992	585,063,463
	Total manufacturing in percent	**59**	**4**	**5**	**30**	**1**	**100**
33	Repair and installation of machinery and equipment	18,618	0	3,265	52,716	0	74,599
35	Electricity, gas, steam and air conditioning supply	52,592,047	287,212	118,447,537	0	0	171,326,796
36	Water collection, treatment and supply	3,246,523	51,304	210	42,069	0	3,340,106
	Total utility industry	55,857,188	338,516	118,451,012	94,785	0	174,741,501
	Total utility industry in percent	**32**	**0**	**68**	**0**	**0**	**100**

Source: Annual Survey of Industrial Production and Performance, 2008

Table 37: Values of the inventories ('000 Tshs): closing balances, 2008

		Material	Fuels	Work-in-progress	Finished goods	Goods purchased for resale	Total
05	Mining of coal and lignite	29,001	8,102	0	0	0	37,103
06	Extraction of crude petrol and natural gas	10,009,580	0	3,283,770	0	0	13,293,350
07	Mining of metal ores	990,188	0	0	707,489	0	1,697,677
08	Other mining and quarrying	18,625,711	3,375	2,900,224	2,457,514	5,355,959	29,342,783
	Total Mining Industry	29,654,480	11,477	6,183,994	3,165,003	5,355,959	44,370,913
	Total Mining Industry in Percent	**67**	**0**	**14**	**7**	**12**	**100**
10	Manufacture of food products	75,377,383	1,253,116	2,390,778	18,297,318	1,776,282	107,699,662
11	Manufacture of beverages	59,964,217	11,368,391	6,554,204	18,684,791	0	96,571,603
12	Manufacture of tobacco products	44,892,424	286,810	553,123	11,986,698	0	57,719,055
13	Manufacture of textiles	33,733,872	511,140	2,694,204	12,839,517	1,725	49,780,458
14	Manufacture of wearing apparel	152,011	20	0	0	0	152,031
15	Manufacture of leather and related products	5,739,164	683,900	556,659	995,244	2,834,522	10,835,092
16	Manufacture of wood and of products of wood and cork, except furniture	839,703	4,802	3,430	466,401	0	1,314,336
17	Manufacture of paper and paper products	971,725	0	81,843	85,517	123,683	1,262,768
18	Printing and reproduction of recorded media	11,170,434	53,916	209,993	1,806,063	425	13,240,831
20	Manufacture of chemicals and chemical products	39,929,705	19,459	1,233,854	4,536,786	295,998	46,015,802
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	5,249,044	2,000	1,480,417	5,645,863	0	12,377,324
22	Manufacture of rubber and plastics products	20,343,811	723	308,548	10,776,139	0	31,429,221
23	Manufacture of other non-metallic mineral products	27,177,412	5,466,938	9,642,704	10,602,545	0	52,889,599
24	Manufacture of basic metals	9,099,690	16,247	1,715,856	2,763,468	18,549	13,613,810
25	Manufacture of fabricated metal products, except machinery and equipment	21,571,177	2,846,559	894,457	82,671,723	1,811	118,268,309
27	Manufacture of electrical equipment	6,575,367	0	858,520	3,404,219	1,903	10,840,009
28	Manufacture of machinery and equipment n.e.c.	565,787	653	17,731	1,367,857	0	1,952,028
29	Manufacture of motor vehicles, trailers and semi-trailers	82,108	0	0	0	0	82,108
30	Manufacture of other transport equipment	0	0	79,582	0	0	79,582
31	Manufacture of furniture	1,566,893	7,326	286,612	1,077,373	24,799	2,963,003
32	Other manufacturing	79,460,775	5,219,392	5,476,178	26,878,546	1,395,598	118,416,179
	Total Manufacturing	444,462,702	27,741,392	35,038,693	214,886,068	6,475,295	747,502,810
	Total Manufacturing in Percent	**59**	**4**	**5**	**29**	**1**	**100**
33	Repair and installation of machinery and equipment	93,983	0	11,071	78,421	0	183,475
35	Electricity, gas, steam and air conditioning supply	61,133,174	3,163,984	73,282,729	0	0	137,579,887
36	Water collection, treatment and supply	3,366,854	92,954	210	37,964	0	3,497,982
	Total utility industry	64,594,011	3,256,938	73,294,010	116,385	0	141,261,344
	Total utility industry in percent	**46**	**2**	**52**	**0**	**0**	**100**

Source: Annual Survey of Industrial Production and Performance, 2008

7.1.2 Closing inventories

Closing inventories are book values of goods, inputs, or materials (assets) available for use or sale at the end of an inventory accounting period. The ending or closing inventory is used to gauge whether companies have overestimated their needs for inputs and production requirements. The current balance of inventory is sustained daily by the adding to the inventory account when goods are received and the deducting from the account when they are used. This method, as opposed to a yearly or monthly calculation, allows a firm to have more timely and accurate data on inventories.

Table 37 presents closing balances of values of the inventories in the industrial sector in 2008. Again, materials constituted the largest inventories in all sub-sectors except the utility industry. They accounted for 67 percent of the total inventories in the mining industry, 59 percent in manufacturing industry and 46 percent in the utility industry.

Finished goods were the second largest inventories in the manufacturing sector. They accounted for about 29 percent of the total value of closing inventories in 2008. Values of work-in-progress were the largest inventories in the utility industry sector. They accounted for about 52 percent of the total values of closing inventories as the opening balances in 2008. Work-in-progress are materials that leave either raw material stores or purchased parts stores enters the work-in-process inventory until the product concerned are completed and placed among finished goods.

The complex relationship between modern industry and its market presents a real problem in regard to the size of inventories that should be maintained. Large inventories in the face of declining sales mean lower profits. Small and inadequate inventories in the face of an increasing market demand may result in- the loss of sales to competitors and a decreased profit. Recognition of these conditions indicate that the optimum inventory is not necessarily either the minimum or the maximum level of inventory; nor is it operation at a maximum inventory turnover.

Inventories represent a financial investment: the purchase price paid for the material, the cost of labour applied to goods that are in process or finished, and the cost of handling and storage. A determination of the proper ratio of this investment to operating profits can be used to establish optimum inventory levels for all classes of inventory. This may be done on a historical basis or by empirical means. On the other hand, it presents one of the most lucrative fields for investigation by rue of the toot of operations research.

The planning of optimum inventory levels by inventory management requires close cooperation with the marketing function. Market trends must be predicted accurately and inventory levels are adjusted when increased sales are anticipated, and decreased when a lower sales volume can be foreseen. This is a problem in both marketing and manufacturing communications and again presents an opportunity for research and development of scientific means for determination of the proper solutions.

7.2 Expenditure on Fixed Assets

Fixed assets, also known as non-current assets or as property, plant, and equipment, is a term used in accounting for assets and property which cannot easily be converted into cash. This can be compared with current assets such as cash or bank accounts, which are described as liquid assets. In most cases, only tangible assets are referred to as fixed. Moreover, a fixed/non-current asset can also be defined as an asset not directly sold to the firm's customers. These are items of value which the organization has bought and will use for an extended period of time; fixed assets normally include items such as land and buildings, motor vehicles, furniture, office equipment, computers, fixtures and fittings, and plant and machinery. These often receive favourable tax treatment (depreciation allowances) over short-term assets. According to International Accounting Standards, (IAS) 16, Fixed Assets are assets whose future economic benefit is probable to flow into the entity, whose cost can be measured reliably.

It is pertinent to note that the cost of a fixed asset is its purchase price, including import duties and other deductible trade discounts and rebates. In addition, cost attributable to bringing and installing the asset in its needed location and the initial estimate of dismantling and removing the item if they are eventually no longer needed on the location.

The primary objective of a business entity is to make profit and increase the wealth of its owners. In attaining this objective it is necessary for the management to exercise due care and diligence in applying the basic accounting concept of “Matching Concept”. Matching concept is simply matching the expenses of a period against the revenues of the same period.

Tables 38-40 present expenditures on fixed assets in mining, manufacturing and utility industries by type and nature in 2008. Table 38 indicates that in the mining sector the shares of machinery and mining equipment in the total value of fixed assets was 90 percent at the beginning and 75 percent at the end. Table 39 shows that the major fixed assets in the manufacturing industry were machinery and capital equipment; building and other construction and transport equipment. Their shares of the total opening value were 34 percent, 27 percent and 24 percent respectively.

Table 40 suggest that machinery and other equipment are the major types of fixed assets in the electricity and water industries. Machinery and capital equipment had the value of about 66 percent at the beginning and 68 percent as net value at the end. Tables 38 and 40 indicate that expenditures on land improvements, computers and soft ware were very minimal in the mining, electricity and water industries. However, table 39 indicates that the land improvements was about 10 percent at the beginning and about 0.2 percent at the end in the manufacturing sector. The trend in manufacturing is toward the automatic factory with computer-controlled processes. Machine tools are being used less independent operations and more as part of automated processes. Automatic turning, machining, grinding, and drilling machines achieve higher productivity with increased accuracy

Expenditures or investment in fixed assets is essential for social reproduction of fixed assets. By means of expenditures in fixed assets, more advanced technologies and equipment are adopted in the national economy, and new sectors are established, which promote the adjustment of economic structure, national and the regional distribution of productive forces and enhance the

economic strengths so as to provide the material conditions for improving people's livelihood. This is significant for speeding up the drive of Kilimo Kwanza in Tanzania.

Table 38: Expenditure on fixed assets in mining industry, 2008

(million Tshs.)

Type	Value at the beginning	Additions		Disposals	Depreciation	Net Value at the end
		Purchased	Own production			
Land Improvements	3,217	1,014	-	2,965	-	1,265
Buildings and other construction works	18,959	2,558	-	14,384	-	7,133
Transport equipment	2,179	1,055	-	1,729	114	1,390
Machinery and other equipment	370,369	44,488	6,215	368,752	17,838	34,481
Database peripherals, software etc	298	15	-	90	-	223
Other fixed assets	14,531	2,136	-	15,343	128	1,196
Total	**409,553**	**51,266**	**6,215**	**403,263**	**18,080**	**45,688**

Source: Annual Survey of Industrial Production and Performance, 2008

Table 39: Expenditure on fixed assets in manufacturing industry, 2008

(million Tshs.)

Type	Value at the beginning	Additions		Disposals	Depreciation	Net Value at the end
		Purchased	Own production			
Land Improvements	670,314	158,608		828,584	747	3,123
Buildings and other construction works	1,747,430	213,961	16,187	1,711,648	3,916	273,613
Transport equipment	1,557,790	398,982	217	1,481,723	977	478,034
Machinery and other equipment	2,198,215	364,394	5,290	2,112.323	7,747	543,874
Database peripherals, software etc	50,297	18,601	1,964	62,258	13	8,591
Other fixed assets	197,248	108,430	8,927	250,684	7,248	56,673
Total	**6,421,294**	**1,262,976**	**32,585**	**6,447,220**	**20,648**	**1,363,908**

Source: Annual Survey of Industrial Production and Performance, 2008

Table 40: Expenditure on fixed assets in electricity and water industry, 2008

(million Tshs.)

Type	Value at the beginning	Additions		Disposals	Depreciation	Net Value at the end
		Purchased	Own production			
Land Improvements	5,779	4	150	5,633	-	300
Buildings and other construction works	42,909	679	-	41,705	-	1,883
Transport equipment	2,573	8,857	-	9,295	-	2,135
Machinery and other equipment	135,580	5,055	-	129,710	38	10,887
Database peripherals, software etc	227	21	-	134	-	114
Other fixed assets	19,044	1,478	-	19,825	-	697
Total	**206,112**	**16,094**	**150**	**206,302**	**38**	**16,016**

Source: Annual Survey of Industrial Production and Performance, 2008

7.3 Depreciating a Fixed Asset

Depreciation is the expense generated by the use of an asset. It is the wear and tear of an asset or diminution in the historical value owing to its usage. Further to this; it is the cost of the asset less any salvage value over its estimated useful life. It is an expense because it is matched against the revenue generated through the use of the same asset. Depreciation is usually spread over the economic useful life of an asset because it is regarded as the cost of an asset absorbed over its useful life. Invariably the depreciation expense is charged against the revenue generated through the use of the asset. The method of depreciation to be adopted is best left for the management to decide in consideration to the peculiarity of the business, prevailing economic condition of the assets and existing accounting guideline and principles as implied in the organizational policies.

Tables 41-43 show how industrial firms have been depreciating their fixed assets. Expenditures on depreciation are high in both mining, electricity and water industries in Tanzania. This goes together with capital allowances offered to these industries. The capital allowances are critically important to manufacturers who need to invest regularly in top end equipment to stay competitive. And technology is shortening the "tax life" of machines, meaning it takes longer for the machine to pay for itself, making the allowance even more important. Manufacturers, especially those who use precision machine tools for advanced manufacturing applications, know better than anyone the importance of capital allowances. Higher allowances make investing in machinery more affordable and companies can compete more effectively. It is worth noting that not all fixed assets depreciate in value year-over-year. Land and buildings, for example, may often increase in value depending on local real-estate conditions.

Table 41: Percentage distribution of expenditure on fixed assets in mining industry by type

Type	Value at the beginning	Additions		Disposals	Depreciation	Net Value at the end
		Purchased	Own production			
Land Improvements	1	2	-	1	-	3
Buildings and other construction works	5	5	-	4	-	16
Transport equipment	1	2	-	0.4	1	3
Machinery and other equipment	90	87	100	91	99	75
Database peripherals, software etc	0.1	0.03	-	0.02	-	0.5
Other fixed assets	4	4	-	4	1	3
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: Annual Survey of Industrial Production and Performance, 2008

Table 42: Percentage distribution of expenditure on Fixed Assets in Manufacturing Industry

Type	Value at the beginning	Additions		Disposals	Depreciation	Net Value at the end
		Purchased	Own production			
Land Improvements	10	13	-	13	4	0.2
Buildings and other construction works	27	17	50	27	19	20
Transport equipment	24	32	1	23	5	35
Machinery and other equipment	34	29	16	32	38	40
Database peripherals, software etc	1	1	6	1	0.1	1
Other fixed assets	3	9	27	4	35	4
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: Annual Survey of Industrial Production and Performance, 2008

Table 43: Percentage distribution of expenditure on fixed assets in electricity and water industry

(Percentage)

Type	Value at the beginning	Additions		Disposals	Depreciation	Net Value at the end
		Purchased	Own production			
Land Improvements	3	0.02	100	3	-	2
Buildings and other construction works	21	4	-	20	-	12
Transport equipment	1	55	-	5	-	13
Machinery and other equipment	66	31	-	63	100	68
Database peripherals, software etc	0.1	0.1	-	0.1	-	1
Other fixed assets	9	9	-	10	-	4
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: Annual Survey of Industrial Production and Performance, 2008

CHAPTER EIGHT: BUSINESS ENVIRONMENT

Chapter Eight presents main business environment issues as perceived by stakeholders in the Tanzanian industry sector in year 2008. Industry enterprises considering locating or relocating in a country will generally undertake a careful study of the cost of doing business there, and the overall business and policy environment. Some of the major cost factors which influence the decision to locate in a particular site include the policies, laws, regulations, institutional frameworks, human resources, infrastructure, finances, political environment, climate, culture and other social economic factors. The current annual survey year 2008 focuses on business support private sector organizations and association. Others are members in the private sector organizations, public-private partnership, licenses of the establishment, tenure of the building occupied, quality of products, quality and control of raw material, establishment of laboratory, environment management plan, establishment treatment facilities for waste, HIV/AIDS and major challenges facing industry sector in Tanzania.

8.1 Membership in Business Support for Private Sector Organizations

The private sector organizations and association are largely reorganized by bringing in roles to strengthen the private sector by promoting and assisting enterprises in their efforts to succeed, coordinating private sector activities, policy lobbying and advocacy. The capacity of the majority of private firms is rather low and is often exposed to weak institutional arrangements. This justifies the consideration of alternative institutional arrangements, which would involve business community becoming better organized in forms generally referred to as business association. Business support association can play a critical role in safeguarding the interests of private firms (ESRF,-CTI 2000 and ESRF-EAC, 2000). They also provide a vehicle to ensure availability of effective and efficient markets as well as campaigning for a conducive business environment that is necessary for facilitating the growth of the industrial sector.

Table 44 indicates that about 63.6 percent of the establishments under mining sector were registered to be a member of different associations; 57.1 percent of the establishments under utility sector were registered to be a member of different associations whereas 45.6 percent of the establishments under manufacturing sector were registered to be a member of different associations. The remaining 36.4 percent, 42.9 percent and 54.4 percent establishments under mining, utility and manufacturing sectors respectively are not registered. This implies that, significant numbers of industries are operating without being members of any association. The major reason from the study was mainly industrial firms are not aware with existence of these associations. This is due to lack of wide networks and coverage especially due to absence of outreach offices in the country, and some of the industrial firms are not interested in affiliating their firms with business associations, (Bekefi, 2006). Some of the industries reported to have multiple memberships whereas others had only one membership.

In Tanzania membership has always been open to registered companies, associations or individuals for the purpose of attaining a certain goal. Membership is recognized and most respected by the Government, business market community and the general public. By being a member, you will gain credibility and international image. It provides effective lobbying and advocacy on business associations in Tanzania. It provides research based policy advocacy and its views are the most solicited, heard and considered by the government. It is also a major

source of information to associated industries and associations. It provides information and practical experience on the investment climate in Tanzania. Enhances learning of various issues that help and add value to your business. Members are being provided with information on business opportunities, trade fairs, markets, products, training opportunities, joint ventures, financial intermediation and other business related activities. By being a member, firms have the opportunity to network with their peers and other members in the industry community.

Table 44: Membership percentage in business support to private sector organisation

	Members Percent	Non-members Percent
Mining	63.6	36.4
Manufacturers	45.6	54.4
Electric and water	57.1	42.9

Source: Annual Survey of Industrial Production and Performances, 2008

8.2 Awareness of the Establishment on PSOs

Awareness is the state or ability to perceive, to feel, or to be conscious of events, objects or sensory patterns. More broadly, it is the state or quality of being aware of something. It contributes to enhance the understanding of awareness via mediated communication. Public awareness is one of the major pillars in building business effectiveness of the private sector organization in development of the economic growth.

Table 45: Awareness by the establishments of the private sector organisation (PSOs)

	CTI		ATE		TCCIA		DSE		MINES	
	Aware	Not Aware	Aware	Not Aware	Aware	Not Aware	Aware	Not Aware	Aware	Not Aware
Mining	4	7	4	7	3	8	1	10	5	6
Manufacturing	261	370	180	451	217	414	97	534	59	572
Electric and Water	18	17	24	11	19	16	7	28	15	20
Total Number	**283**	**394**	**208**	**469**	**239**	**438**	**105**	**572**	**79**	**598**
Total %-age	**42%**	**58%**	**31%**	**69%**	**35%**	**65%**	**16%**	**84%**	**12%**	**88%**

Source: Annual Survey of Industrial Production and Performances, 2008

8.3 Licenses of the Establishment

According to National Industries Act 1967 with 1982 amendments requires each industry with ten or more workers employed to be registered by the Licensing Board, (ESRF-CTI, 2000). It is compulsory that application forms for industrial licenses shall be accompanied by feasibility studies, environmental impact assessment with adequate data for financial and economic viability. This Act has a good governance objective of ensuring the ordinary promotion and development of industries, registration and licensing of certain industries and provides for matters related to those and connected therein.

Table 46: Ownership of licences by activities in percentage

Sector	Yes	No
Mining	90.9	9.1
Manufacturers	76.9	23.3
Electricity & Water	37.1	62.9
Total Industry Sector	**74.9**	**25.1**

Source: Annual Survey of Industrial Production and Performances, 2008

The majority of active industries are operating with licenses. According to the survey results, 74.9 percent of respondents were maintaining licenses for their business while 25.1 percent were operating without licenses. In sub sector wise, electricity and water is relatively more inactive, only 37.1 percent acquired license compared to mining which is about 90.9 percent and other manufacturer sub-sectors with about 76.7 percent. Despite that majority of the industrial firms had licensed but substantial number of industries are still operating informally without permission from the respective government authorities.

Table 47: Number of establishments not having licenses by person

	Total	Finance	Complicated bureaucratic procedures	Business too small	Does not feel the need	Other
Number	170	35	53	48	17	17
% ge	*100%*	*21%*	*31%*	*28%*	*10%*	*10%*

Source: Annual Survey of Industrial Production and Performances, 2008

The survey also reported major reasons for unlicensed industries to include bureaucratic procedures, small sizes of the businesses and finance. According to the study results, about 31 percent of the respondents reported stiff bureaucratic procedures as key reason for acquiring businesses licenses. It is followed by small size of their businesses with about 28 percent and finance issues with about 21 percent. This connote advocacy on licensing to authority and other stakeholders coupled with linking operators with loan providers as well as improving policies to support small industries.

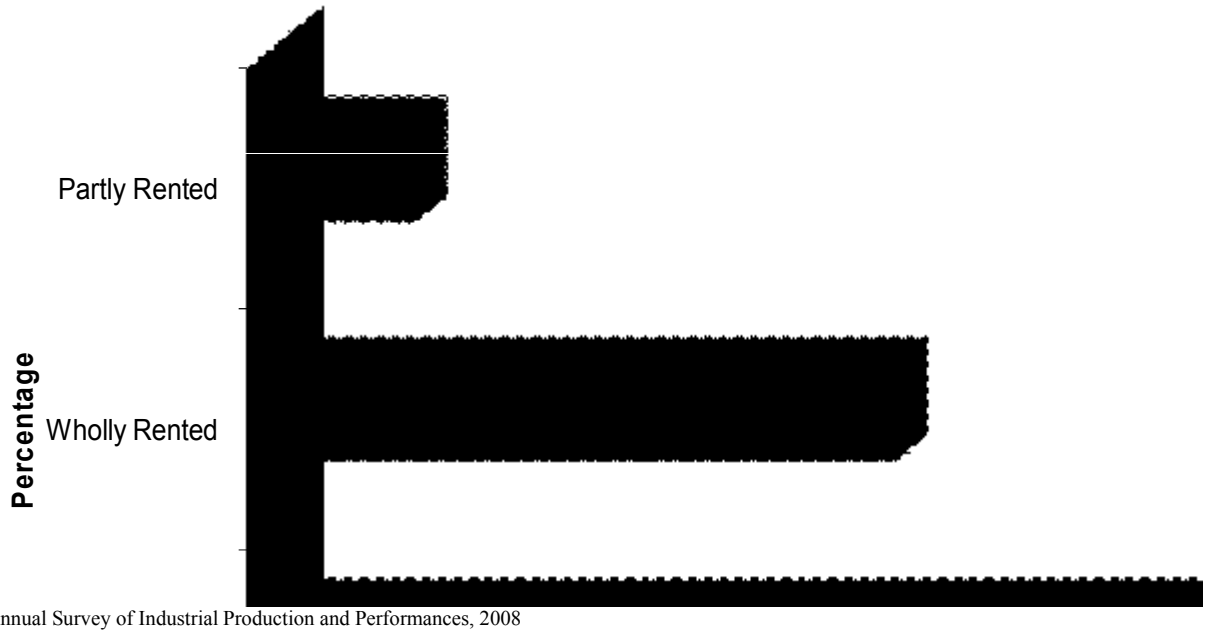
8.4 Tenure of the Occupied Buildings

Tenure describes any rights over land. If you have the use of it, you are the tenant and you have tenure. If you have absolute rights to the use of land, this is described as freehold. Usually you talk about a freehold property which means you own the buildings and have a freehold over the land. If someone else owns the freehold and charges you rent, that's called leasehold. A leasehold property is usually one where you own the building but you pay ground rent to someone else for the land. Subject to certain conditions, you usually acquire a right to buy the freehold. Housing tenure is a term used by experts to determine the type of ownership an individual or group of people have in any type of residential real estate. Some of the most frequently used types of housing tenure are owner occupancy and tenancy.

Most of the buildings in which industries are located are possessed fully by industries' owners. A study result shows that, over 57 percent industrial building as properties fully occupied by the owners whereby electricity and water sub-sectors have higher percentage, i.e. at about 77.14 percent and then followed by mining at about 72.7 percent and Manufacturing at about 55.6

percent. Meanwhile, 34.8 percent and 8.12 percent of industrial buildings are wholly and partly rented by owners of the industries respectively.

Figure 2: Tenure of Buildings Owned by Businesses



Source: Annual Survey of Industrial Production and Performances, 2008

8.5 Quality of Products

Following liberalization of the economy where the private sector plays important roles in the economy, the government established a number of regulatory authorities to regulate the market economy to avoid any distortions which could be associated with the market. Some of the regulatory authorities which were established include: Tanzania Food and Drugs Authority (TFDA), Government Chemist Laboratory Agency (GCLA), Tanzania Atomic Energy Commission (TAEC), Energy and Water Utilities Regulatory (EWURA), Surface and Marine Transport Regulatory Authority (SUMATRA) and Tanzania Bureau of Standard (TBS). The government also established acts and regulations which allowed these authorities to collect from their clients fees with which to run their operations, (ESRF-CTI, 2000).

Considerations were made to capture type and extent of regulatory bodies/agencies responsible for industrial products. According to the study results, low numbers of industries does not undertake certification of their products. Of the 666 respondents, only 36.5 percent reported to certify their products through Food Safety regulation while about 18.9 percent respondents certify products vide ISO and 36.5 percent certifies through TBS. Based on these results, there is a need to disseminate knowledge on the importance of proper products certification.

Table 48: Distribution of respondents based on certification of the products

Activity	Food safety regulation			ISO			TBS		
	Yes	No	Total	Yes	No	Total	Yes	No	Total
Mining	4	7	11	4	7	11	6	5	11
Manufacturing	227	404	631	118	513	631	228	403	631
Electricity & Water	12	23	35	6	29	35	13	22	35
Total	**243**	**434**	**677**	**128**	**549**	**677**	**247**	**430**	**677**
Total in Percent	***35.9***	***64.1***	***100.0***	***18.9***	***81.1***	***100.0***	***36.5***	***63.5***	***100.0***

Source: Annual Survey of Industrial Production and Performances, 2008

8.6 Quality and Control of Raw Materials

Quality control, (QC), can be defined simply as 'maintenance of quality at a level that satisfies the customer and that is economical to the producer or seller'. This definition could apply to almost any procedure involving the quality control of inputs or and finished products. However, QC usually means something more formal, based on written agreed procedures or specifications which are designed to reduce mistakes, and then QC is used.

Table 49 suggests that many industries undertake products' quality control. Out of the interviewed respondents, 53.6 percent reported that, they have a scheme of controlling products quality. On the other hand, 46.4 percent do not care on issues of products control. Quality is normally controlled by designated trained staff that has a clear knowledge of what the customer wants.
Process specification is a written description, mainly for the benefit of the producer, of how the product is to be made.

The objective of QC is to assist the maintenance or improvement of profitability by minimizing customer complaints about quality, and hence to avoid the resulting lost business. The complexity of QC depends on the size of company and the kind of products it is handling; merchant sending iced fillets to retailers and fryers will require much less sophisticated QC than a large firm making high priced, elaborately prepared frozen dishes.

Table 49: Distribution of respondents by the quality control of raw materials

Activity	Yes	No	Total
Mining	7	4	11
Manufacturer	333	298	631
Electricity &Water	23	12	35
Total	**363**	**314**	**677**
Total Percentage	***53.6***	***46.4***	***100***

Source: Annual Survey of Industrial Production and Performances, 2008

8.7 Establishment of Laboratories

Table 50 presents establishment of laboratory in the Tanzanian industry sector in year 2008. According to the study results, majority of the industries are operating without laboratories. Out of interviewed respondents, 70.6 percent reported no establishment of laboratory and only 29.39 percent were noted to have laboratory. The laboratories are critical for successful manufacturing of quality products.

Table 50: Distribution of respondents based on establishment of Laboratory

Activity	Yes	No	Total
Mining	7	4	11
Manufacturing	178	453	631
Electricity & Water	14	21	35
Total	**199**	**478**	**677**
Total in percent	***29.4***	***70.6***	***100.0***

Source: Annual Survey of Industrial Production and Performances, 2008

8.8 Environment Management Plan

Environmental management system is a method of incorporation environmental care throughout the corporate structure, (ESRF-CTI, 2000). It includes planning activities, the organization structure and implementation of the environmental policy. It is now generally agreed that environmental consideration are crucial for sustainable development. It is also agreed that the manufacturing sector in Tanzania will play an increasingly important role in social-economic development of Tanzania. Pollution from industry sector is therefore, a major factor in the sustainable development of Tanzania.

Table 51 suggests that many of industries are operating without environment management plans. Out of the interviewed industries, 54.5 percent reported had no environmental management plan; on the other hand, 45.5 percent were noted to have environmental management. One of the challenges facing industrial development activities rest on the environmental thrust either at firm level or its impact to the surrounding human habitants. In 2004 the government enacted Environmental Management Act (EMA) which, among others, addresses sector-specific environmental issues as well as prevention and control of pollution, waste management, environmental quality standards, public participation, compliance and enforcement for sustainable management of the environment.

Table 51: Environmental Management Plan

Item		Yes	No
Total Industries	Number	308	369
Establishments	*%ge*	*45.5*	*54.5*

Source: Annual Survey of Industrial Production and Performances, 2008

8.9 Establishment of Treatment Facilities for Wastes

In order to obtain useful products from a given materials, physical, chemical and/or biological transformations need to be applied. Not all products may be of value at a particular span of time, and hence the inevitability of producing other products than the desired ones. A product that cannot be used or is no longer in use or is unwanted after a production process is termed as a waste. Wastes which have deleterious effects to mankind, other living things and the general environment are called pollutants. They may be in solid, liquid or gaseous state. Urban areas in Tanzania suffer from industrial pollution, as 80 percent of all industries are located in urban centres. Industrial effluents may contain toxic heavy metals including chromium, mercury, cadmium, lead also contain salts, cyanide, nitrates, fluorides that affect human health. Industrial effluents may also contain diseases causing bacteria, which will contaminate receiving water due to direct discharge or indirectly through sewerage system. The effluents may also contaminate ground water due to leakage from sewers and treatment plants. This can be treated by connecting all industries in sewerage system, and the most used treatment facilities are stabilization ponds. The operation and maintenance of the sewerage systems in some of the industries is insufficient due to lack of equipment, funds and staff.

Table 52: Industries waste water treatment facilities

		Yes	No
Total	Number	281	396
Establishment	*%*	*41.5*	*58.5*

Source: Annual Survey of Industrial Production and Performances, 2008

Same of industries were planned and implemented without consideration of their environmental impacts. Even with the current awareness, most industries do not have treatment facilities for their effluents, and the few, which exist, are poorly maintained and/or not operational due to technical and financial constraints. This has resulted in environmental pollution through discharges of waste into air, rivers, ocean, and lakes either treated or inadequately treated. Table 52 shows that about 58.5 percent of the industries interviewed do not have wastewater treatment facilities. While environment Management Act is in place, sound strategies are therefore, urgently needed to be implemented by sector-specific stakeholders to rescue the situation. Since some of the industries are situated around human habitat and produces wastes that have chemicals. It is important to put more emphasis to all industries in making wastewater facilities to protect people and environment.

8.10 HIV/AIDS in manufacturing sector

This section provides some perceptions as to how the industry sector in Tanzania is responding to the situation and what types of the response may be required or possible from government officials, managers, enterprise owners and trade union officials or workers representatives and the private sector.

The specific characteristics of HIV/AIDS and its epidemiology suggest that it will have great economic impact than any other more prevalence diseases in Sub-Saharan African region, due to fatal nature of the disease, larger percent of those infected are afflicted to productive workforce

and to the fact that the disease is in prevalence among all social classes. An understanding of the nature and magnitude of the impact of HIV/AIDS on the economy calls for close look at the extent to which this disease affects the business community, (URT 2007 and 2008).

Table 53: Perception of HIV/AIDS in the industrial sector (percentage)

Activity	Yes	No
Mining	63.6	36.4
Manufacturer	28.5	71.5
Electric & water	80.0	20.0
Overall percent	***31.8***	***68.2***

Source: Annual Survey of Industrial Production and Performances, 2008

Out of 677 surveyed industries, only 31.8 percent reported to have workplace packages and 68.2 percent of the industries interviewed were operating without workplace packages. Manufacturing firms were the leading industry sector, out of 631 industries interviewed 71.5 percent reported to operate without workplace packages. This implies that majority of industries have no good strategies to curb this disease as a results it will continue affecting workforce and the economy as a whole, (URT 2007 and 2008).

As it is believed that prevention is better than cure, 52.3 percent of respondents said HIV/AIDS workplace education and prevention is a method that will reduce industrial sector vulnerability to HIV/AIDS. Table 54 shows that, movement towards capital-intensive operations recorded little share of only 2.06 percent.

Table 54: Methods that will reduce vulnerability to HIV/AIDS in the industrial sector

Activity	HIV/AIDS Workplace education and prevention	Treatment	Counselling	Movement towards capital intensive operations	Others
Mining	6	3	2	0	0
Manufacturers	322	92	182	14	21
Electric &Water	26	4	5	0	0
Total Number	**354**	**99**	**189**	**14**	**21**
%	**52%**	**15%**	**28%**	**2%**	**3%**

Source: Annual Survey of Industrial Production and Performances, 2008

HIV/AIDS affect and will continue to affect economies and societies at all levels, from household to the macro-economy. Between these two extremes there are effects on communities and socio-economic sectors. It is at the lower middle levels, which include the productive sectors that the worst effect may be experienced and interventions are most urgently required. The epidemic will affect production in two ways. First, there will be increased morbidity (illness) and mortality (death) among the workers. Second, there will be changes in earning capacity and the pattern of expenditure. People may earn less and divert their incomes from consumption and savings to health care. The impact of HIV/ADIS vary with the type of operation, sub-sector, its size, location and the employment package depending on the level of staff employed, the scarcity or otherwise of their skills and whether they are locally or internationally recruited. HIV/AIDS particularly will affect productivity by (URT, 2007 and 2008).

(i) *Morbidity*: During the illness of the employees they take as much time off as they are able too. This includes the maximum allowable sick leave and annual leave doing nothing with waste products. While Environmental management Act in place sound

strategies are therefore, urgently needed to be implemented by the sector-specific stakeholders to rescue the situation. Leave before they are dismissed or resign on medical grounds, there are also instances of unauthorized absenteeism.

(ii) *Mortality*: Once a person dies (or has been released from employment) he/she must be replaced and productivity is reduced while the new staff is trained: and

(iii) *Other absenteeism*: This includes compassionate leave to care for sick family members. In some cases time spent on funerals of families, friends or colleagues is considerable.

8.11 Major Challenges Facing Manufacturers in Tanzania

Tanzania has several problems, constraints and challenges hampering industry development. These challenges have contributed to low productivity of the manufacturing sector as a result most of the existing industries operate below capacity, have limited technological capacity, slow rate of growth, and the industrial sector has remained largely agricultural with a low level of the value addition to primary products, (EAC, 2000, ESRF-CTI, 2000, and Semboja, 2001, 2004 and 2007). Figure 4 summarizes major challenges perceived by industry firms in year 2008. These are policy findings or inputs to be used by the MITM in developing or reviewing policies, programmes and strategies that support sector-productivity growth. These are briefly presented as follow;

8.11.1 Inadequate physical infrastructure

Major infrastructure challenges in this area are electricity supply and distribution, alternative energy sources, port, road and railway development hinder industrial developments in Tanzania. Despite the fact that the country has very high electricity power production potential but it is still faces a shortage of energy.

The poor state of transport infrastructure is also a major obstacle for SME development especially in rural areas. Road infrastructure is generally fair, most become impassable during rainy seasons, and some feeder roads hinder proper functioning of the local markets and increase the cost of vehicle maintenance and cost of production. Poor railway network has contributed to inefficiencies and considerable delays in inputs delivery. Inevitably, manufacturers have to use the road, which is very costly to transporting, invariably increasing operation costs.

8.11.2 High cost of production

Keeping down the cost of production has direct bearing on product pricing and hence influencing demand (the high cost of production and the high products cost lowers the demand). The high cost of production at a firm level in Tanzania is caused by inability of the firms to control the cost centres and lack of best practices in operations. These can be caused by unreliable power supply, lack of qualified staff, poor technology in production, high taxes in raw and intermediate materials.

8.11.3 Inadequate technology or lack of equipment

A limited application of modern, appropriate and efficient technologies has been one of the major obstacles achieving sufficient and rewarding industrial sector growth. Industrialization process should be backed by appropriate equipment and machineries, appropriate human skills and know how, correct information and organization structure. This has partly been attributed to uncoordinated research development, inadequate awareness and un-affordability of efficient technologies resulting in limited value addition in agro-processing sub-sector.

8.11.4 Shortage of qualified labour

Manufacturing sector in Tanzania has a high labour force even though the level of education is relatively low. Studies revealed that there is a general lack of industry specific skills, weak work ethics, and relatively low level of labour force regulation, poor skills mix and productivity. There are various challenges being experienced in transferring the knowledge and lessons leant from one sector to another. Thus leaving the country disadvantaged while competing internationally in constantly changing market, technology, regulations and management practices.

8.11.5 Foreign currency fluctuations

Exchange rate is the price at which you can buy that currency. Theoretically, identical assets should sell at the same price in different countries, because the exchange rate must maintain the inherent value of one currency against the other. If demand for a currency is low, its value will decrease, thus making imported goods more expensive and stimulating demand for local goods and services. Currency exchange–rate fluctuations are expected because many currencies are not tied to the U.S. dollar. In order to report consolidated financial statements, companies must effectively convert multiple currencies into a single reporting currency.

8.11.6 Insufficient production capacity

Capacity in the industrial sector in Tanzania is still being used at below the installed capacity although large-scale industries tend to exhibit relatively greater capacity utilization. Low capacity utilization is associated with infrastructure constraints such as electricity (availability, reliability, and quality), inadequate water supply, poor technology, and unsatisfactory transport and communication services.

8.11.7 Shortage of raw materials

Shrinking crop yields are causing severe raw material shortages for companies that rely on agricultural-based raw materials, leaving most manufacturers struggling as they battle to stem rising production costs. Most agro-based processors have reported sharp increases in the production cost, a factor that they mainly attribute to the erratic supply of raw materials and also poor transport infrastructures from farm to the industries.

8.11.8 Taxes

High tax increases the cost of doing business and hence affect prices and lowers consumer demand. Compared with Kenya and Uganda Tanzania has many multiple taxes imposed at central and local government levels. Some of the taxes are very high, which have attributed to Tanzania's un-competitiveness in business due to high and multiple Taxes.

8.11.9 Insufficient demand and marketing

The industrial sector is still inward oriented. Most industries produce consumer goods, which are mostly consumed within the country. In 2005, about 71.6 percent of total sales was accounted for by domestic sales while export sales accounted for 28.4 percent, suggesting that the competitive ability of the industrial sector is limited, most (foreign) investors concentrate on consumer goods industries and favour domestic markets where they can make quick profits and apparently compete favourably.

8.11.10 Marketing

Marketing plays very important role in all socioeconomic sectors especially in the liberalized market environments. It addresses price avenues, products and promotion issues, important in disposing commodities. To expand the market share of the products a clear marketing strategy needs to be developed. Unfortunately in Tanzania, many enterprises are facing problems of marketing due to poor quality of the products, poor packaging and branding, inadequate marketing skills and staff competition.

8.11.11 Unfair competition

Unfair competition from imported products in the form of counterfeits and dumping, limited use of proper weights and measures as well as uncoordinated management of the value chain have adversely affected manufacturing development sector; and while the existence of the adequate and reliable domestic market is instrumental in development competitiveness, the external markets are important if the country wishes to competitively exploit opportunities in regional, international and emerging markets. However majority-manufacturing firms in Tanzania are inward looking producing for the domestic market compared to a country like Kenya where more than 50 percent of local production is for the export market.

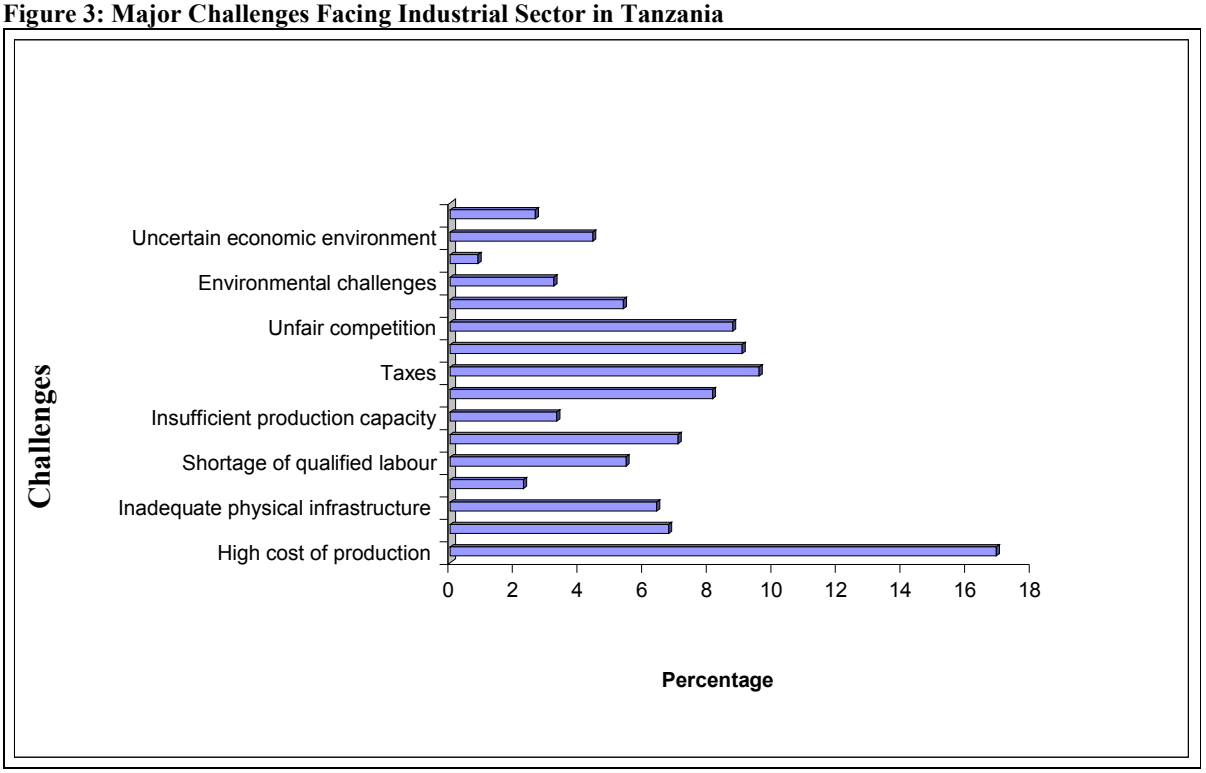
8.11.12 Infant private sector with weak support

A vibrant private sector brings about increased income levels needed to stimulate industrial development. The major challenge facing private sector includes legal, institutional and regulatory burden, underdeveloped infrastructure, and stringent quality requirement in export market, limited market linkages which constrain wealth creation along value chains. The lack of finance particularly for and medium sized Enterprise (SMEs) has remained a serious challenge despite considerable efforts in developing the banking sector.

8.11.13 Environmental challenges

Sustainable industries development involves striking an appropriate balance between development pursuits, cultural consideration and basic needs on one hand and the protection of the natural environment for current and future generation.

Figure 3: Major Challenges Facing Industrial Sector in Tanzania



Source: Annual Survey of Industrial Production and Performances, 2008

Some of the environmental challenges Tanzania is facing regarding industrial sector development include disposal and/or recycling of industrial by-products, the use of non-recycled plastic material and the use of firewood in boilers for steam generation and tobacco curing have negative effects on sector development, (Yves and Jebamalai, 2002),

8.11.14 HIV/AIDS pandemic

We have noted that prevalence of HIV/AIDS pandemic has significantly reduced productive and reproductive labour force in all sectors of the economy resulting into increased cost of production and provision of services. Companies experience loss of man hours due to absenteeism from work by an infected staff, soaring costs of related expenses including that replacing deceased staff and diminishing corporate morale among many colleagues. All these directly affect productivity.

8.11.15 Uncertain economic environment

Macro-economic policies are important to sustainable industrial development. These policies include fiscal policies that impact on the levels and patterns of taxation and public expenditure; monetary policies, which have a bearing on the level of monetary expansion such as credit and the level of inflation; and exchange rates policies (UNIDO, 2002). The current macro-economic challenges faced by industrial sector include devaluations of currencies in relation to trading partners' currencies, instability of exchange rates and weak anti-dumping strategies. To reverse the trend, strong macro-economic policies and structural and reforms are needed for foster industrial development.

High production costs, high taxes, poor infrastructure, under-declaration of imports, the inexorable depreciation of the shilling against major currencies and high lending rates are ailing the manufacturing sector in Tanzania.

8.12 Other Findings

Notwithstanding the various policy reforms initiated by the government to shift industrial strategies and foreign trade regime towards greater market-orientation, manufacturing firms face various types of obstacles while doing business in Tanzania. Recently, the World Bank (2010) identified major business problems in Tanzania. According to Doing Business 2010, Tanzania's ranking deteriorated from 127 (2009) to 131 (2010).

The principal finding of this study is that the un-favourable business environment caused by poor implementation of government policy, bureaucratic and political and policy instability are the biggest problems faced by industrial sector while doing business in Tanzania. In terms of their relative seriousness, other problems faced by the business community in terms of the order of seriousness are: depressed economic activity and low aggregate demand for products, poor access to finance, and inadequate infrastructure

CHAPTER NINE: CONCLUSION

Chapter Nine presents the conclusion under the following sub-titles: major research findings; policy recommendations; and foundation, principles and general objectives.

9.1 Major Research Findings

The following are some of major findings, issues and facts based on the statistical analysis made in Chapters Two to Seven.

9.1.1 The industrial sector shows signs of overcoming the difficult years of the 1980's

The industry sector of Tanzania grew at 9.9 percent (at 2001 constant prices) in 2008 compared to the growth of 8.7 percent recorded in 2007. It contributed 8.5 percent to GDP as was the case in 2007. Tanzania's manufacturing sub-sector showed, in 2008/9, signs of overcoming the difficulties of the 1980's and 90's and its growth accelerated during the five years period from 2004-2008

9.1.2 Rising exports for the manufacturing industry

Although manufacturers in Tanzania remain focused on the domestic market for the sale of their products, the survey shows that they have ventured into the regional and international export markets in recent years. The contribution of manufactured goods to total exports increased from 4.9 percent in 2000 to 18.9 percent in 2008. In 2007 the exports of manufactured goods caught up with the value of traditional exports for the first time in Tanzania's history. Between 2007 and 2008, manufactured exports increased by 160 percent.

9.1.3 Single establishments dominate the industrial sector

The industrial sector is dominated by simple, single and independent production units, operating in a competitive product markets. Very few are complex or organized as interlinked business entities. Both mining and manufacturing sectors are largely dominated by single establishments. These have the inward operational model and limited business linkages. Many of the electricity and water industrial firms are public enterprises with some establishments being owned and controlled by other establishments and few are single establishments.

9.1.4 Agro manufacturing industries dominate

The study confirms that industrial sector in Tanzania is dominated by agro-manufacturing activities such as food processing industries, beverage and tobacco industries. The agro-processing industrial activities constituted about 70 percent of industrial production in Tanzania reflecting the fact that agriculture is the mainstay of the Tanzanian economy.

9.1.5 Increasing private ownership in mining and manufacturing industries

It was noted that most large scale operators in both mining and manufacturing industries were under private ownership form with different capacities. Most micro and small scale private manufacturing firms are owned, managed and operated by the local indigenous population.

9.1.6 Accessible but costly bank financial services

Many firms have access to short term bank loans and facilities. However, these industrial firms have very limited access to formal long-term credit due to weak and non-competitive financial systems. The financial system is very costly and too complex and has a lengthy loan application process and too short maturity for the specific cases of bank loans.

9.1.7 New industries with modern production technologies established

About 62.4 percent of manufacturing firms were established during the last fifteen years, 1995/6-2009/10. More interesting is the fact that about 21 percent of the manufacturing firms were established during the last five years. These are new with increased manufacturing capacities and export capabilities. The survey notes that, it is very unfortunate that there were no new large scale mining industrial firms established during 2005 - 2009.

9.1.8 Low but improving manufacturing industry production capacities

The study indicates that the average capacity utilization rate for the total industrial sector was as low as 42 percent in 2008. However, this is an improvement compared to 1980s and 1990s. Failure or inability to utilize installed capacity because of, for example, machinery failures results in considerable loss of manufacturing production in the manufacturing industry.

9.1.9 Tanzanian firms focus on domestic market but exports have increased

The study found that although manufacturers in Tanzania remain focused on the domestic market for their products. More have entered into the international exports market in recent years. Data on exports show that export volumes and values expanded and that percentage of exporting manufacturing industries has increased.

9.1.10 Food products dominate exports

The study found that manufacturers of food products dominated the export values with a share of 42.9 percent for the sub sector in 2008. The manufacturers of basic metals, textiles and basic pharmaceutical products and preparations were second. The decision to participate actively in the foreign market exposes enterprises to greater competition and options for increased output and efficiency.

9.1.11 Formal employment in industry is minimal but has improved over time

Study found that industry is one of major social-economic sectors for formal and modern employment. However, the ratio of employment in manufacturing sector to total labour force declined from 0.48 percent in 2005 to about 0.46 in year 2008. This suggests that the Tanzania labour force has increased much faster than labour absorption capacity in the manufacturing sector

9.1.12 Few foreign workers in the industrial sector

The Tanzanian manufacturing industry employs very few (about 1.1 percent) foreign workers. The few foreign workers are engaged through foreign technical assistances as expatriates and consultants. The study notes a switch from using foreign consultants in the provision of technical and operative services to being owner of capital and provision of management services. This suggests an increasing utilization of local human resources and workers in the provision of technical services in the manufacturing firms.

9.1.13 Few but significant female workers employed in the industrial sector

The study found out that there were few but significant (about 30 percent) female employees in the manufacturing sector in 2008. However, there were wide variations in female employment between and within the sub-sectors. Female employment was highest in tobacco, textile and plastic products industries. The share of women employed in formal and large scale basic metals, mining and metal products sectors was low.

9.1.14 Varying labour productivity

Industrial activities such as beverages, tobacco and cigarette, and manufacturing of non-metallic products recorded relatively high levels of labour productivity. Large scale industries had higher labour productivity than medium, small, and micro industries due to the fact that large industries employed advanced technology that significantly reduced human labour. However, large scale manufacturing industries that used poor technological techniques recorded low labour productivity levels.

9.1.15 Tanzanian manufacturing industry is material intensive

Tanzanian manufacturing firms consume different types of inputs. These include materials, intermediate goods, energy, industrial services, non-industrial services and other inputs. The study found out that the cost of materials and supplies accounted for about 64.8 percent, of the total of inputs followed by other expenses (11.04 percent), non industrial services (10.2 percent) and energy (10.2 percent). This suggests that the Tanzanian manufacturing industry is material intensive.

9.1.16 Impact of high cost of power and poor quality of power supply

Electricity costs accounted for about 61.9 percent of the total energy costs. It may be noted that one of the major problems facing the manufacturing industry is the cost of power and poor quality of power supply.

9.1.17 Manufacturing industrial firms consumes domestic agricultural raw materials

The study noted that the major sources of material inputs were local and foreign (imports) markets. About 81.3 percents of material inputs were sourced from domestic markets and about 18.7 percent were imported intermediate inputs. There are two major types of domestic materials and these are natural and raw agriculture inputs. Tanzania has comparative advantages most industries sourced the raw agriculture materials locally.

9.1.18 insignificant industrial service costs

The industrial firms use different industrial services in the form of contracts and commissions work, costs of repairs and maintenance; and waste treatment costs. About 43.6 percent of industrial services consist of contract and commission paid work. However, contract manufacturing is a recent manufacturing tendency in Tanzania.

9.1.19 Insignificant but troublesome taxation costs

The industrial sector has other costs which include payment of interests and dividends, insurance and income taxes; value added and other taxes on production and other expenses. The total tax paid accounted for about 56.2 percent of the total other expenses. The study indicates that taxes form a very small component of the total production costs. However, the problem lies with taxation system and administration. The tax administration and system lack transparency thereby inhibiting voluntary compliance due to unnecessary high compliance costs being imposed on taxpayers.

9.1.20 Materials and finished goods accounted for the largest inventories

Materials constituted about 64 percent of the inventories in mining, 59 percent in manufacturing and 32 percent in the utility industry. Finished goods came second in the manufacturing sector accounting about 30 percent of the total values of inventories as the opening balances in 2008.

There is a complex relationship between modern industry and its market which presents a real problem in the size of inventories that should be maintained. Large inventories in the face of declining sales mean lower profits. Small and inadequate inventories in the face of an increasing market demand may result in- the loss of sales to competitors and a decreased profit.

9.1.21 Machinery and equipment are the first forms of fixed asset

Fixed asset, also known as a non-current asset or property, plant, and equipment, is a term used in accounting for assets and property which cannot easily be converted into cash. The study indicates that most of fixed assets are in the form of machinery and equipment. Consultations revealed that expenditures or investment in fixed assets is the essential means for social reproduction of fixed assets.

9.1.22 Expenditures on depreciation are high in specific industries in Tanzania

Depreciation is, the expense generated by the use of an asset. Expenditures on depreciation were high in both mining, electricity and water industries in Tanzania. This goes together with capital allowances offered in these sectors. The capital allowances are critically important to manufacturers who need to invest regularly in top end equipment to stay competitive. And technology is shortening the "tax life" of machines, meaning it takes longer for the machine to pay for itself, making the tax allowances even more important.

9.1.23 Weak private sector organization

The private sector organizations and associations largely play the following roles; strengthen the private sector by promoting and assisting enterprises in their efforts to succeed, coordinating private sector activities, policy lobbying and advocacy. The study found that about 46.5 percent of industrial firms were registered members of different associations whereas 53.5 percent were not registered as members in any private sector association. This implies that, many of industries operate without being members of any association. The major reason is lack of awareness on the existence of these associations.

9.1.24 Major challenges facing manufacturers in Tanzania

Tanzania has several problems, constraints and challenges that hamper industrial development (URT, 2007 and 2008 and MITM 2010. These challenges have contributed to low productivity in the manufacturing sector as a result of which most of the existing industries operate below capacity, have limited technological capacity, slow rate of growth, and the industrial sector has remained largely agricultural with a low level of the value addition to primary products. These are briefly presented as follow;

- Inadequate physical infrastructure
- High cost of production
- Inadequate technology or lack of equipment
- Shortage of qualified labour
- Foreign currency fluctuations
- Insufficient production capacity
- Shortage of raw materials
- High and complex taxes rates, system and administration
- Insufficient demand and marketing
- Unfair competition
- Infant Private Sector with weak support

- Environmental challenges
- HIV/AIDS pandemic
- Uncertain economic environment

9.2 Policy recommendations

The following are general and specific policy recommendations based on the above research survey findings of year 2008 taking into account SIDP, (URT, 1996, 2003, 2004 and 2010).

a) Enhance and accelerate the growth of manufacturing sector

b) Search for support the emerging export manufacturing industries

c) Promote and develop different economic organisations set up for serving small, medium and large scale corporate entities

d) Embark on Kilimo Kwanza to support agro manufacturing industries dominates

e) Promote and facilitate establishment of PPP models in the industry sector.

f) Intensify second generation financial reforms to improve accessibility of bank financial services to all industrial activities.

g) Support and protect new industries with modern production technologies

h) Improve manufacturing industrial production capacities

i) Promote diversified Tanzania product markets

j) Promote and support expansion of food product manufacturing processes

k) Implement measures to support labour intensive manufacturing industries

l) Encourage use of foreign workers, experts and consultants in the industry sector to increase acquisition of production technologies and foreign direct investments

m) Encourage utilization of female workers in the industrial sector

n) Improve labour productivity through use of better manufacturing technologies

o) Encourage utilization of domestic natural resources in the manufacturing industry which is already material intensive

p) Intensify implementation of national energy policy to enhance good quality power supplies which is the major manufacturing constraint

q) Implement Kilimo Kwanza to enhance linkages between manufacturing and agriculture sector

r) Support implementation of industrial sector specific policies to enhance optimal use of industrial services at minimum cost.

s) Intensify third generation fiscal institutional framework and TRA corporate strategy

t) Encourage investments in the machinery and equipment and other forms of fixed asset

u) Enhance use of income tax and other related regulations to support optimal utilization of capital machinery and equipment

v) Finalize and implement private sector development policy to enhance private sector organization capacity and participation.

w) Finalize and implement an Integrated Industry Development Strategy and Master Plan (IIDS & MP) in order solve all major challenges facing manufacturers in Tanzania

9.3 Foundation, Principles and General Objectives

9.3.1 Foundation

Above are many specific policy recommendations based on survey done in 2008. These have now well articulated in the *Integrated Industry Development Strategy*, (IIDS), as a SIDP policy implementation instrument, (MITM, 2010 and UNIDO 2006 and 2007). IIDS is an integrated strategy in the sense that designed policy strategies are integral part of other national policies, strategies and measures. It is strategic in the sense that the strategy is linked to the national economic transformation and development of other major social economic sectors.

The study proposes simultaneous, effective and efficient implementation of major national industrial development policies as the route to economic transformation objectives set in a long term National Development Vision 2025 and in a number of government policy documents, (Semboja 2009). These major national industry policies include SIDP, Agriculture, Investment, Trade, Export Promotion, Infrastructure, Energy, Mineral and other national policies

9.3.2 Principles

The IIDS strategy to be adopted is that of transforming the economy from a predominantly agricultural one with low productivity to a diversified and semi-industrialized economy with a modern rural sector and high productivity in agricultural production which generates reasonably high incomes and ensures food security and food self-sufficiency. The diversification of the economy must be based on a dynamic industrialization programme focused on rising resource-

based industries (agro-industries) and capable of meeting the needs of other sectors whilst continuously developing activities that have dynamic comparative advantages.

9.3.3 Strategic objectives

The following are strategic objectives articulated in the Integrated Industrial Development Strategy 2025 (IIDS) (MITM, 2010);

a) To build up internationally competitive business environment, through formation of industrial accumulations, institutional back up and concentrated infrastructure development, and promote internationally competitive enterprises to make the industry as the real engine of the economic growth.
b) To make Tanzania as the industrial and logistic hub of East and Central Africa, thorough extension of existing development corridors and provision of export and import platform at waterfront. .
c) To promote rural industrialization, through Agricultural Development Led Industrialization strategy, to support successful implementation of Kilimo Kwanza and equitable growth of the regions.

To provide growth opportunity to all of growth oriented Micro, Small and Medium scale enterprises as well as entrepreneurs through provision of attentive supporting measures fitting to every development stage to up-grade and bottom-up local industries

Like other Sub-Saharan Africa countries, Tanzania must industrialize in order to advance. Industrialization is a crucial issue in agriculture sector development and poverty reduction. A healthy and competitive manufacturing sector is needed to generate resources, optimize use of human, natural resources, sustain employment and export growth and contribute to the modernization and diversification of developing countries' economic base and their integration in the regional and global economies (UNIDO, 2002 and 2005). To catalyze growth and industrial development in EAC economies, it will be necessary to reconsider the strategy at present pursued while paying due attention to strengthening technological and industrial capabilities.

REFERENCES

Allan Harding and Francis Teal (2000),*'Firms Survival, Growth and Productivity: Tanzanian manufacturing in the 19990's*', Centre for Study of African Economies, University of Oxford, Oxford, UK.

Bank of Tanzania: Economic and Operations Reports (*Various Issues*).

Bekefi, Tamara, (2006). "*Tanzanian: Lessons in building linkages for competitive and responsible entrepreneurial-ship*". UNIDO and Kennedy School of Government, Harvard University.

Bigsten A., P. Collier, S. Dercon, M. Fafchamps, B. Gautheir, J. W. Gunning, J. Habarurema, A. Isaksson, A. Oduro, R. Oostenderp, C. Pattillo, M. Söderbom, F. Teal, and A. Zeufack (1999), "Exports of Africa Manufactures: Macro Policy and Firm Behaviour", *Journal of International Trade and Development* 8, 53-71.

Centre for International Business Research, (1995), "Dynamics of Enterprise *Development in Tanzania*", A second report done by the Centre for International Business Research, Helsinki School of Economics, Finland on behalf of the World Bank Regional Programme on Enterprise Development, RPED,

Do Duc Dinh, (2002), "Industrialization key to Development. In East Asia and East Africa, Paper prepared for the Globalisation and East Africa Project Economic and Social Research Foundation, (ESRF)- Dar Es Salaam, and delivered as Paper 4 to the Project's Seminar, November, 6, 2002.

ESRF-CTI (2000),"A Review of Legal, Regulatory and Judiciary Framework that affecting Manufacturing Firms and Business Activities in Tanzania". *A research report* prepared by the ESRF for the CTI.

ESRF-EAC, (2000), Tanzania Country Report for the Industrial Development Strategy of East Africa Community. A background report prepared and submitted to EAC Arusha, Tanzania.

East Africa Community, EAC, (2000), ''East *African Industrial Development Strategy* ".. A Research Report Prepared by Gero Winklesr, Esther Kinama, Pual Sagala, Semboja Haji and Rasul Shams and submitted to the East Africa Community, Arusha Tanzania.

Grenier, Louise, Andrew Mackay and Oliver Morrissey, (1999), Competition and Business Confidence in Manufacturing Enterprises in Tanzania. A Centre for Research in Economic Development and International Trade, CREDIT, University of Nottingham. UK.

Ndulu B (1986), "Investment, Output Growth, and Capacity Utilization in an African Economy: the Case of the Manufacturing Sector in Tanzania", *Eastern Africa Economic Review,* 2(1), pp. 14-30.

Ministry of Industries and Trade, MIT (1996) *''Sustainable Industrial Development Policy – SIDP (1996 – 2020)''*. Government of Tanzania, Industry Policy Document.

Ministry of Industry, Trade and Marketing (2010) "*Integrated Industrial Development Strategy*", Dar es Salaam Tanzania 2010 - 2025

Semboja Haji Hatibu Haji, and Josephat Kweka, (1998), "*Import Liberalization, Industrialization and Technological Capabilities in Sub-Saharan Africa: The Case of the Garment Industry in Tanzania*", ESRF Discussion Paper No 23, Dar er Salaam

Semboja Haji Hatibu Haji, (2001), "*An Analysis on Increased Competitive Pressure in the Tanzanian Manufacturing*. A paper presented at the CSAE and UNIDO International Forum on New Industrial Realities and Firm Behaviour in Africa, 20 – 22, September, 2001, at St. Edmund Hall, Oxford, UK

Semboja Haji Hatibu Haji, (2004), "*Industrialization of Tanzania" Towards Poverty Alleviation"* Final Research Report prepared and published by the Confederation of Tanzania Industries (CTI), Dar es Salaam, Tanzania. The President of United Republic of Tanzania wrote a forward note and inaugurated the report in November 2004

Semboja Haji Hatibu, (2005), "*Generating African Competitiveness for Sustainable Market Access": The Case of Tanzania.* The Paper prepared for the Confederation of Tanzania Industries, Dar es Salaam, Tanzania and presented at the 16th Africa Industrialization Day 2005, 20th November 2005.

Semboja Haji Hatibu Haji, (2007), Analysis of Factors Determining the Tanzania Manufacturing Performances: *The Accountant Journal of the National Board of Accounts and Auditors Tanzania.* Vol.20 No 2 April –June, 2007

Semboja Haji Hatibu (2008). "*Study on the Impact of the Implementation of the East African Custom Union on the Industry and Business Community*". A Research Report prepared and submitted to Tanzania Chambers of Commerce, Industry and Agriculture and financed by the BEST Programme, Dar es Salaam, Tanzania

UNIDO (2002), "Industrial Development Perspective Plan: Vision 2020 Project NC/NEP/00/009," Analytical Report. Prepared for HM's Government of Nepal, Ministry of Industry, Commerce and Supplies by the United Nations Industrial Development Organization on behalf of the United Nations Development Programme

UNIDO: United Nations Industrial Development Organization (2005) *"Industrial Performance and Capabilities of Cameroon Analysis of the industrial sector*" Republic of Cameroon Ministry of Industry, Mines and Technological Development, December 2005

United Nations Industrial Development Organisation (UNIDO) (2006). *Industrial Development Review of Tanzania*: Industrial Development Policies, Plans and Strategies, UNIDO/Government of Tanzania, Dar es Salaam.

UNIDO (2007), " *UGANDA: Integrated Industrial Policy for Sustainable Industrial Development and Competitiveness"* Prepared by Ministry of Finance, Planning and Economic Development, Uganda Manufacturers Association, Uganda National Chamber of Commerce and Industry Private Sector Foundation Uganda and Ministry of Tourism, Trade and Industry.

United Nations Industrial Development Organization Vienna, 2007

URT, SIDP, Vol. II, (1996), *Analytical Overview of the Experience and Prospective Strategies in Industrial Development in Tanzania, 1996-2020* Background paper prepared by the Ministry of Industry and Trade.

United Republic of Tanzania URT, (1999 and Various Issues), Economic Surveys, Planning Commission and Bureau of Statistics Dar es Salaam.

United Republic of Tanzania (1998), National Accounts of Tanzania, Bureau of Statistics/ national Bureau of Statistics (NBS), Dar es Salaam.

United Republic of Tanzania (URT) (1996). *Sustainable Industrial Development Policy (1996-2020)*. Ministry of Industries and Trade (MIT), Dar es Salaam.

United Republic of Tanzania (2003), "National Trade Policy: Trade Policy for a Competitive Economy and Export-Led Growth," Ministry of Industry and Trade, Dar es Salaam, February.

United Republic of Tanzania (URT) (2003). *Small and Medium Enterprise Development Policy*. Ministry of Industries and Trade (MIT), Dar es Salaam

United Republic of Tanzania (URT) (2004). *"National Strategy for Growth and Reduction of Poverty (NSGRP)"*. Vice-President Office's, Dar es Salaam.

United Republic of Tanzania (2007a), "Revised National Accounts Estimates for Tanzania Mainland, Base Year, 2001", National Bureau of Statistics, and Ministry of Planning, Economy and Empowerment.

United Republic of Tanzania, (2007b), "*Industry Sector Performance in Tanzania 2006*";. Industry Survey Report prepared by the Ministry of Industry, Trade and Marketing, National Bureau of Statistics, Ministry of Planning, Economy and Empowerment, Dar es Salaam, Tanzania.

United Republic of Tanzania, (2008), "*Industry Sector Performance in Tanzania 2007*"; Industry Survey Report prepared by the Ministry of Industry, Trade and Marketing, Dar es Salaam, Tanzania.

United Republic of Tanzania (2009) "*Study on How Can Tanzania Cope and Benefit from Globalization"* A Final Report Submitted by Economic Research Bureau University of Dar es Salaam, October 2009 President's Office, Planning Commission.

United Republic of Tanzania (URT) (2010). *"National Strategy for Growth and Reduction of Poverty (NSGRP)"*. Ministry of Finance and Economic Affairs, Dar es Salaam

USAID CTI (1994), "*Industrial Policy Proposal*", A report based on joint USAID and CTI Program, Dar es Salaam USAID CTI (1994), "*Industrial Policy Proposal*", A report based on joint USAID and CTI program, Dar es Salaam.

Vesa Salminen and Petri Kalliokoski (2008) "Challenges of Industrial Service Business Development". Paper presented at BestServ Forum Helsingr Finland

Yves Ekoue Amaizo and Jebamalai Vinanchiarachi, (2002), Industrial Performance: Promoting Regional and Sectoral Approaches. Background Paper prepared for First Sub-Regional Meeting 24th – 25th October, 2002, Arusha Tanzania, UNIDO

Xavier Blanc, (1997), "*Industrial Change under structural Adjustment: Tanzania*", A third report prepared by the Centre for International Business Research, Helsinki School of Economics, Finland on behalf of the World Bank Regional Programme on Enterprise Development, RPED.

Wangwe, S.M (1995), *Exporting Africa: Technology, Trade and Industrialization in Sub Saharan Africa,* Rutledge Publisher.

Wangwe, S. M. (2002). "*Industrial Policy Reforms: The Changing Roles of Government and Private Sector in Promoting Competitiveness*". Paper Presented to "Industrialisation Day" on Strengthening the Productive Capacity of Africa: The New Imperative for Integration into Global Market. Dar es Salaam.