



AFRICAN DEVELOPMENT BANK GROUP

# Eastern Africa's Manufacturing Sector

Promoting Technology, Innovation, Productivity And Linkages

TANZANIA COUNTRY REPORT November 2014





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#### THE AFRICAN DEVELOPMENT BANK GROUP

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### ABBREVIATIONS

AfDB	African Development Bank
BEST-AC	Business Environment Strengthening in Tanzania – Advocacy Component
BET	Board of External Trade
BIT	Board of Internal Trade
BRELA	Business Registration and Licensing Agency
BRN	Big Results Now
CAMARTEC	Centre for Agricultural Mechanisation and Rural Technology
CEOrt	Chief Executive Officers Round Table
CIP	Competitive Industrial Performance
COMESA	Common Market of Eastern and Southern Africa
COSTECH	Tanzania Commission for Science and Technology
CTI	Confederation of Tanzania Industries
EAC	East African Community
EPZ	Export Processing Zone
EPZA	Export Processing Zones Authority
FDI	Foreign Direct Investment
FYDP	Five Year Development Plan
GDP	Gross Domestic Product
GVA	Gross Value Added
HHI	Herfindahl-Hirschman Index
ICT	Information and Communication Technologies
IIDS	Integrated Industrial Development Strategy
ISI	Import Substitution Industrialization
ISIC	International Standard Industrial Classification of All Economic Activities
MDAs	Ministries, Departments and Agencies
MFI	Micro-Finance Institution
MIT	Ministry of Industry and Trade
MNE	Multinational Enterprise
MPDI	Manufacturing Product Diversification Index
MVA	Manufacturing value added
NDC	National Development Corporation
NEER	Nominal Effective Exchange Rate
NEMC	National Environmental Management Council
NSGRP	National Strategy for Growth and Reduction of Poverty
RCA	Revealed Comparative Advantage
REER	Real Effective Exchange Rate

SADC	Southern African Development Community
SEZ	Special Economic Zone
SIDO	Small Industries Development Organization
SIDP	Sustainable Industrial Development Policy
SITC	Standard International Trade Classification
SMEs	Small and Medium-sized Enterprises
SOE	State-Owned Enterprise
STI	Science, Technology, and Innovation
SWOT	Strengths, Weaknesses, Opportunities and Threats
TanTrade	Tanzania Trade Development Authority
TBS	Tanzania Bureau of Standards
TCCIA	Tanzania Chamber of Commerce, Industry and Agriculture
TCRA	Tanzania Communications Regulatory Authority
TDV	Tanzania National Development Vision
TFDA	Tanzania Food and Drugs Regulatory Authority
TIB	Tanzania Investment Bank
TIC	Tanzania Investment Centre
TIRDO	Tanzania Industrial Research and Development Organization
TNBC	Tanzania National Business Council
TNBC	Tanzania National Business Council
TPSF	Tanzania Private Sector Foundation
TRA	Tanzania Revenue Authority
UNIDO	United Nations Industrial Development Organization
VAT	Value Added Tax
WDI	World Development Indicators
WTO	World Trade Organization





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### FOREWORD BY MINISTRY OF INDUSTRY AND TRADE

The adoption of trade liberalization policies in Tanzania from 1980's was a result of changing realities of the global economy in trade and production processes under the framework of globalization. It then became an era of the market led economy in which the role of the public sector in the economic activities (production and trade) started to diminish while providing room for the private sector to play the role of engine of economic growth. Under such economic transformation, the key challenges which arose were on how to sustain economic growth, create lasting jobs, generate incomes and enable the accumulation of wealth and thus eradicating the scourge of poverty in the society. Creating lasting and sustained jobs requires structural change, or the ability of an economy to constantly generate new and fast-growing activities characterized by higher value added and productivity and increasing returns to scale. Manufacturing therefore, has been at the core of structural change that consistently creates higher levels of output and employment leading to an unprecedented growth in incomes.

For developing countries like Tanzania, manufacturing aims at maintaining growth while sustaining job creation. Manufacturing offers an opportunity not only to balance the economy towards higher value added products, but also to providing a relatively wide employment base with higher labor productivity. In Tanzania, the role of manufacturing sector in social-economic development has been articulated in the national and sectoral policy documents, plans and strategies. It is a sector that contributes significantly to the country's development goals as stated in the Vision 2025, National Strategy for Growth and Reduction of Poverty (MKUKUTA II), Long Term Perspective Plan, Five Years Development Plan, Sustainable Industrial Development Policy (1996), the Integrated Industrial Development Strategy (2011) among others.

On the other hand, policy relevant information and statistics are important part of the development of any sector and more particularly, the manufacturing sector. Regular monitoring of performance and progress using indicators and benchmarks is therefore an essential part of evidence based industrial policy making. With this understanding, I would like to appreciate and congratulate the African Development Bank for funding the research informing this publication. I call upon other development partners to emulate this commendable example. I also like to congratulate the researchers who undertook the Tanzania country study. It is my call for other scholars to use their research knowledge and skills to conduct studies that will inform policy and decision makers as well as practitioners.

The Ministry of Industry and Trade is aware of the status of the

manufacturing sector in Tanzania and beyond. The Ministry acknowledges the various available and ever-unfolding opportunities and challenges in the sector. Opportunities include but not limited to the growing domestic, regional and global market. Within the region for example, the East African Community (EAC) Common Market Protocol and the EAC Industrialization Policy and Strategy offer a number of opportunities for manufacturers. The envisaged EAC Monetary Union will also offer more opportunities for the manufacturing and other sectors if we are strategically positioned. I call upon the manufacturers to properly identify all the unfolding opportunities and make use of them. The Ministry and the Government in general is always committed to support manufacturers in their efforts to identify and make use of the many opportunities around us.

Apart from the many unfolding opportunities in the manufacturing sector, the Ministry is also aware of a number of challenges that make it difficult for realization of the potential opportunities in the sector. Whereas the many and far-reaching reforms of the mid-1980s have improved the business and investment climate in which the manufacturers operate, there are still many areas left for improvement.

We are all aware that areas of business and investment climate such as adequate quantity and quality of electricity; efficiencies in transport infrastructure including ports, railways and roads; access to finance especially for small and medium size manufacturers; access to export markets especially in more advanced economies of Europe and North America; bureaucracy as well as high rates and many types of taxes are still among the constraints for vibrant, dynamic and competitive manufacturing sector in Tanzania. Other constraints include inadequate quality of human resource skills especially industrial skills; unfair competition including counterfeit goods; tax evasion and false declaration in goods and services. The Ministry in collaboration with other stakeholders is committed to working together to find solutions to these challenges.

I once again would like to insist on the role of research for policy and decision making. My Ministry will make use of the findings and recommendations of the research that informs this publication

Dr. Abdallah O. Kigoda (MP), **MINISTER FOR INDUSTRY AND TRADE** The United Republic of Tanzania





### FOREWORD

Improving productivity and competitiveness of the industrial sector is of paramount importance to accelerate Africa's transformation and to reduce poverty. As East Africa solidifies its position as an attractive global investment hub for the foreseeable future, it is imperative that countries in the region intensify their trading and investment relationships with each other and with countries in other regions in a mutually beneficial manner. In doing so, countries should work towards getting the most out of their endowments and comparative advantage. To achieve symbiotic trade and investment relationships, countries must include value addition as part of their development strategy, particularly in the manufacturing sector. To this end, Tanzania has the potential to form a competitive and robust market economy that enables its private sector to identify its potential and enhance its efficiency.

Tanzania's renewed commitment to improve its business environment through the "Big Results" agenda and other initiatives promises the beginning of an era characterized by the realization of its full potential. Furthermore, the discovery of natural gas and other resources, continued economic integration with its neighbors and beyond, strong economic growth performance at the back of a healthy macroeconomic environment and political stability, all present the country with numerous opportunities. Tanzania's Development Vision 2025 (TDV 2025) outlines a number of key priorities for the country moving forward, one of which is to form a competitive economy which will sustain pro-poor growth and shared benefits. The strategy, which is the primary policy tool guiding Tanzania, aims at removing binding constraints thereby setting the stage for industrialization, and inclusive growth supported by greater private sector participation.

In the same breath, the African Development Bank launched a Tenyear strategy (2013-2022) that aims to facilitate growth in the Private Sector. In addition, the Bank developed the Private Sector development strategy (2013-2017) that specifies how economic growth will be achieved through an enhanced role of the private sector in Africa's transformation. The TDV 2025 and the African Development Bank's Ten Year and Private sector development strategies, to this end, have numerous synergies that could result in accelerated growth and poverty reduction outcomes in Tanzania. The Tanzania manufacturing sector country report is therefore timely, as it identifies the current opportunities for and constraints to a competitive industrial sector.

The country report is part of a regional study covering seven countries in Eastern Africa. It illuminates Tanzania's position in Eastern Africa and among selected comparators globally. By highlighting progress and Tanzania's current position against regional players, the report sheds light on areas of improvement needed and reveals potentials that can be unleashed for a brighter future for Tanzanians.

Tonia Kandiero (Ph.D) Resident Representative Tanzania Field Office (TZFO) African Development Bank





### **EXECUTIVE SUMMARY**

It is widely acknowledged that a competitive and private sector-led manufacturing sector plays a key role in socioeconomic transformation and development. The limited role that manufacturing currently plays in Tanzania is therefore a potential source of concern for policy makers and their development partners alike. At the same time, the manufacturing sector has seen rapid growth over the past decade and carries a great opportunity for Tanzania to achieve inclusive growth if it can achieve its development objectives in the sector.

Against this background, the purpose of the present report is to identify binding constraints, opportunities and strengths for the development of the manufacturing sector in Tanzania and provide recommendations for policy reform and manufacturing development strategy. In doing so, the report aims at complementing the recent work undertaken by, among others, the Government of Tanzania, UNIDO (2012) and the World Bank (Dinh and Monga 2013). The report is part of a regional study of the manufacturing sectors in seven Eastern African countries, Burundi, Ethiopia, Kenya, Rwanda, Seychelles, the United Republic of Tanzania, and Uganda.

#### Status and competitiveness of manufacturing in Tanzania

Tanzania's manufacturing sector is relatively small: its share in GDP is about 10%, and employment is on the order of 600,000, less than 5% of the total labour force.

The sector has a narrow range of products which are mainly lowvalue-added basic goods, consisting mainly of limited processing of agricultural or resource raw materials. Food and beverage products constitute about 50% of total MVA, followed by nonmetallic mineral products (11%), tobacco (7%) and textiles (5%). Automobile & motorcycle assembly has been established recently. The private sector dominates (91%) manufacturing as the 56 SOEs constitute 8% of the total manufacturing enterprises. 97% of manufacturing entities are micro enterprises with less than 10 employees; most of these operate in the informal sector. Geographically, manufacturing is concentrated in Dar es Salaam (over 50%) and other major towns such as Arusha and Mwanza.

While the manufacturing sector in Tanzania has developed little over the long run – today, the sector contributes less to GDP than it did in the 1970s – there has been a turnaround in performance in the past decade, with manufacturing growing at a pace of 8.6% per annum in real terms. Manufacturing exports have grown strongly at about 31% per annum over the period 2000 to 2010. However, there is little penetration to export markets in Europe and North America due to high standards requirements. The regional (Africa) and Asian markets are the main export destinations.

Since the mid-2000's, Tanzania has risen in UNIDOS's Competitive Industrial Performance (CIP) rankings, moving up fourteen places to 106<sup>th</sup> out of 133 countries in 2010 (UNIDO 2013) from 120<sup>th</sup> in 2005, and narrowing the gap between it and the region's leader, Kenya. Measured by the revealed comparative advantage (RCA), another competitiveness indicator, Tanzania's manufacturing sector has had a consistent comparative disadvantage compared with world competition<sup>1</sup>.

However, with regard to potential competitiveness, Tanzania's position appears to be much stronger: First, unit labour costs are relatively low, with prospects of growing cost advantage in relation to East Asia. Labour market efficiency is also recognized as one of Tanzania's strengths. Second, Tanzania has vast gas, mineral and agricultural raw materials which can be used as manufacturing inputs at competitive prices.

In addition, Tanzania's supply side competitiveness potential has to be seen in combination with a number of opportunities stemming from the demand side: In terms of future opportunities, Tanzanian demand growth, to the tune of 18% or nearly USD 4.4 billion annually, provides excellent scope for local manufacturers to increase production. Moreover, neighbouring landlocked countries that have no access to the sea, such as Zambia, Uganda, and DR Congo, represent market opportunities: their total imports reached USD 12 billion in 2010, an amount that is expected to rise by 18% to 21% annually. On the other hand, Tanzania's manufacturing sector faces stiff competition from Chinese manufactured imports, which have increased their share of the Tanzanian market from 4% in 2000 to 12% in 2010 and are making inroads throughout Eastern Africa.

Overall, Tanzania has great development potential: the country has booming manufacturing sector exports, vast natural resource endowments, and excellent development potential to better connect East Africa to global markets through its seaports.

#### Enabling factors and constraints for manufacturing

A wide range of factors determine the level of productivity and competitiveness of a country's manufacturing sector, including, among others, the legal and regulatory environment, support institutions, infrastructure, higher education and training, market efficiency (including labour market efficiency), market size, financial market development, technological readiness and innovation. All these factors can be enablers (or constraints) for the manufacturing industry.

Based on international and national surveys, Tanzania's business

<sup>&</sup>lt;sup>1</sup>The RCA is an index used in international economics for calculating the relative advantage or disadvantage of a certain country in a certain class of goods or services as evidenced by trade flows. The manufacturing sector RCA is calculated as the share of the country's manufactured exports in the country's total exports divided by the share of manufactured world exports in total world exports (Balassa 1965).

environment has room for improvement: The World Economic Forum's Global Competitiveness Report 2013/2014 ranks Tanzania 125<sup>th</sup> overall, out of 148 countries. In the World Bank's Ease of Doing Business 2014 rankings, Tanzania slipped from 136<sup>th</sup> a year before to 145<sup>th</sup> place, out of 189 countries. This is not necessarily a sign that the business environment is getting worse in Tanzania but that other countries are doing more in terms of improving the business environment.

A more detailed analysis of the various enablers (or constraint) for the manufacturing sector in Tanzania reveals the following: First, with regard to the legal and regulatory environment, issues related to access to land/tenure and construction permits, corruption, and inconsistent rules across the various regions of the country constitute constraints for the manufacturing sector.

Second, although Tanzania has a comprehensive set of good manufacturing-related policies in place, difficulties and delays in implementation have occurred. At times, targets and deadlines have been too optimistic. The 2011 Integrated Industrial Development Strategy (IIDS) recognizes this, and focuses, over a period of 15 years (until 2025) on the further development of (agricultural, gas and mineral) resource-based manufacturing.

Third, the manufacturing sector enjoys a range of incentives from the Government, and stakeholders consider these to be both helpful and important. At the same time, incentives for the manufacturing sector could be improved further if predictability was enhanced. At present, they are provided on a short-term basis, which makes it difficult for companies to take long-term (investment) decisions.

Fourth, a large number of support institutions exist in Tanzania. While this is laudable, it also has some disadvantages. For example, stakeholders were of the view that most institutions do not offer effective support to the manufacturing sector. This may be a result of Government funding being too thinly spread across a large number of individual institutions. On the positive side, stakeholder satisfaction with some institutions, such as TPSF and TANTRADE, was high. There is thus a need for a more detailed review of the institutional support network for the manufacturing sector.

Fifth, infrastructure weaknesses feature prominently as constraints for the manufacturing sector:

• Problems related to adequate and reliable supply of electrical power remain a major binding constraint to growth and pose a substantial challenge to the manufacturing sector's operation and further development. However, positive developments can also be noted: the discovery of substantial amounts of natural gas in parts of Tanzania is expected to significantly reduce the electricity problem in Tanzania in the future. In this context, the Government has embarked on substantial investments in gas and emphasises the transformation of Tanzania's rich natural gas reserves into power generation through public-private

partnerships.

Although the Government has invested heavily in the rehabilitation and expansion of the transport infrastructure, important constraints remain, including the high costs of transport, poor road quality, unreliable and low quality railway transport, and last but not least very congested and inefficient ports. Government is fully aware of these shortcomings and has an ambitious ongoing programme, i.e. the 2007 Transport Sector Investment Programme, which was adjusted and reinforced by the FYDP, which aims at improving and expanding roads, ports and railways. It will also be important to complement infrastructure improvements with transport policy reforms and improvements in services and logistics.

• Similarly, improvements in Tanzania's telecommunications infrastructure have been achieved over the last decade, notably in the mobile telephony sector and the use of internet. However, communication costs remain high.

Sixth, international trade logistics in Tanzania have improved significantly on an overall basis in recent years but with some notable backsliding in key areas such as customs clearance and timeliness of shipments. Tanzania's ranking on the overall Logistics Performance Index calculated by the World Bank improved substantially between 2007 and 2010, from rank 137 to 95, and slightly further between 2010 and 2012.

Seventh, with over 40 financial institutions, availability of finance has markedly improved since mid-1980s. However, access challenges persist, including high interest rates, difficult borrowing conditions and collateral requirements, and lack of development and investment banks. On a positive note, the fact that real interest rates on savings are positive encourages savings and thereby creates a sound basis to finance investments in the manufacturing sector.

Finally, with regard to education, training, and skills, academic qualifications among graduates are generally satisfactory but business representatives find that practical qualifications, talents, work skills, innovations and other soft skills are inadequate. Although the IIDS recognizes that "[s]carcity of middle level management and skilled labor is one of the most serious constraints and at the same time the factor which pushes up the operational costs for Tanzanian industries" (p.92), no specific policy measures are identified, apart from a reference to the important role of the Vocational Education and Training Authority (VETA) and the need for a national test system. The SIDP had attached comparatively more importance to education and training but failed to define specific measures. More importance on skills development would seem to be warranted in view of the important effect that this has on productivity and hence cost competitiveness.

In sum, Tanzania's manufacturing sector faces a number of binding factors and constraints. These include various policy, institutional, and capacity constraints; legal and regulatory frameworks; as well as developmental aspects, such as inadequate infrastructure





quantity and quality, availability and access to finance, and technology. On the other hand, Tanzania's manufacturing sector also presents a number of strengths and opportunities. The domestic availability of important inputs for manufacturing, low labour costs, increasing domestic and regional demand, and a locational advantage for trading with the world are but some examples of these strengths and opportunities.

#### **Policy Recommendations**

The policy challenge for the further development of the manufacturing sector is to remove, or at least ameliorate, the identified weaknesses in order to build the sector based on the strengths and opportunities. The report offers various policy options and recommendations for this.

The long-term vision proposed for Tanzania's manufacturing sector is to gradually move from the production of a limited portfolio of low technology and low value-added products to a more diversified higher technology product portfolio. Tanzania's current industrial development strategy, the IIDS, focuses on the further development of resource-based manufacturing industries, thereby being less ambitious than the older SIDP, which had foreseen the development of a capital goods industry by 2020. While the time frame may have been unrealistic, the vision of Tanzania's structural transformation towards higher shares of low- medium, and finally high technology manufacturing should be maintained – although of course these would ideally be developed based on Tanzania's resource endowments. In any case, a mix of different products is needed to reduce vulnerability to external shocks.

In this context, the following policy options are proposed:

- Formulation and adoption of a manufacturing sector policy framework with targeted incentives for diversification, high-tech manufacturing, higher value addition and market diversification;
- Empowerment of stakeholders in the manufacturing sector, and strengthening of support institutions so that they are able to support manufacturing adequately. Tanzania should consider establishing a manufacturing centre of excellence;
- Finalization and implementation of the Science, Technology and Innovation Policy;
- Creation of a more explicit link between technology and innovation issues and Tanzania's investment policy. This is in our view critical: one of the key contrasts between Southeast and Northeast Asian economic development was the relatively weaker development of indigenous innovative firms in Southeast Asia, where growth was heavily dependent on FDI;
- Development of stronger links and joint projects between research institutes/universities and manufacturers, in particular in selected priority sectors;
- Promotion of knowledge spillovers among private sector operators, e.g. through university-linked clusters/technology centres;
- Combining the ideas of EPZ/SEZ, clusters, and innovation systems, Tanzania could establish technical schools (along

the lines of Germany's Fachhochschule which recruit professors with at least three years of practical experience outside the educational system) in the established EPZ/SEZ clusters, with curricula organized to advance technological adaptation and absorption within the EPZ/SEZ regions;

- Immediate action on rationing and stabilizing power supply to manufacturing industrial districts should be considered a top priority. Clearly, this would be to the disadvantage of other sectors of the Tanzanian economy and society and thus a political issue that would need to be carefully addressed;
- In transport infrastructure, the various ports, especially Dar es Salaam, need to be adequately linked with modern railway lines as well as roads, both main and feeder ones. Emphasizing rail links to inland dry ports associated with industrial clusters has major advantages over road transport. Also, the process of customs control using well established techniques such as the Authorized Economic Operator system can be greatly facilitated and goods can be moved much more quickly through ports. Accordingly trunk rail should be favoured over road links between major industrial regions and the major ports in Tanzania's infrastructure planning;
- Trade logistics for both domestic and external trade in Tanzania need to be improved. This includes timely custom clearance of goods. One suggestion to facilitate rapid action in this area is to designate the main seaports and airports as EPZ/SEZs. This would allow the formulation of legal frameworks for operation within these zones that are different from those in place in the rest of the country. The advantage of this approach is that it allows experimentation in policies that could not practically be rolled out on a national basis all at once;
- With accessibility to finance still being a challenge especially for micro, small and medium-sized manufacturers, and in particular those in the informal sector, there is a need for policies to address the challenges related to borrowing conditions and collateral requirements as well as credit information, if the manufacturing sector is to access the available finance relatively smoothly. Another option in this context to improve the financing of manufacturing is through supply chain financing. State-of-the-art methods alleviate the problems faced by small suppliers in participating in value chains sponsored by larger manufacturers, in part by using the creditworthiness of the supply chain organizer to extend working capital to suppliers based on contractual commitments;
- Issues related to access to land, tenure and construction could be addressed in limited areas on an experimental basis: in EPZs, SEZs or industrial zones in general. While SEZs are one of the core instruments of the IIDS, implementation is still at the initial stage and has been affected by a number of shortcomings, most notably the lack of an effective institutional framework. Addressing these shortcomings should thus be a priority – for this, a troubleshooting approach, similar to the one that was applied in Kenya and Ethiopia in the context of developing

the cut flower sectors, should be considered;

 While the typical approach to corruption is to apply stronger penalties, what may be more important is to tackle the underlying causes. Excessive bureaucracy with complicated and lengthy procedures as well as unclear rules are a gateway to corruption. Therefore, rules and regulations affecting the manufacturing sector would need to be reassessed in order to identify unnecessary, unnecessarily complex, and unclear rules. Such ex-post regulatory impact assessment should serve to simplify existing rules, thereby not only reducing the breeding ground for corruption but also reducing compliance costs. In addition, in the context of setting new rules, ex-ante regulatory impact assessments should become common practice;

 Finally, on balance regional integration offers much expanded labour and product markets and serves to attract FDI from abroad. All these stand to improve the quality of life of the people of EAC in general and Tanzania in particular through increased competitiveness, value added production, trade and investment, technology inflows and social and cultural integration. Therefore, Tanzania's commitment to regional integration should continue.





### INTRODUCTION

The Tanzanian economy has gone through various phases of development over time. It is important to understand these phases in order to have a broader perspective of various current developments<sup>2</sup>. After political independence from Britain was achieved in 1961, Tanzania continued with a private sector-led, capitalist economic system. All major means of production including industries, agriculture, mining, banks and others were in private hands. In 1967, however, there was a major U-turn in Tanzania's economic philosophy. Pursuant to the Arusha Declaration of 1967, which established the Ujamaa (African Socialism) Policy, all major means of production were put under state ownership, control and management. In the manufacturing sector, Tanzania adopted an Import Substitution Industrialization (ISI) strategy, created a number of state-owned enterprises (SOEs), and introduced development initiatives for small scale industries.

In the mid-1980s, however, Tanzania abandoned the Ujamaa policy and re-embraced a private sector- and market-led economic system: most of the SOEs were privatized; reforms have allowed the private sector to play a leading role in productive economic activities; and trade, both local and international, was liberalized, including importation of manufactured goods. However, the manufacturing sector in Tanzania, as in Eastern Africa generally, remained comparatively underdeveloped and lacking in diversification. This led to a third shift, with Tanzania recently reverting to a more interventionist policy based on systematic planning.

Against this background, the main objectives of this report are as follows:

- 1. Produce a diagnostic and analytical assessment of the status of Tanzania's manufacturing sector;
- 2. Identify binding factors, constraints, opportunities and strengths for development of the sector; and

3. Provide country-specific recommendations (reforms, policies, strategies, etc.) to strengthen the role of manufacturing as a dynamic force of economic development and transformation in Tanzania.

The report is part of a regional study comprised of seven country reports (on the manufacturing sectors of Burundi, Ethiopia, Kenya, Rwanda, Seychelles, Tanzania, and Uganda, hereafter, study countries) and a regional report.

This Tanzania country report is based on both primary and secondary data. Primary data are drawn from field interviews with key stakeholders. These include but are not limited to the Confederation of Tanzania Industries (CTI); Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA); Tanzania National Business Council (TNBC); National Development Corporation (NDC); and Small Industries Development Organization (SIDO). Secondary data were collected from various relevant documents. While statistical data on Tanzania's manufacturing sector are comparatively scarce, notable improvements have been made in recent years, allowing for the first time rigorous analysis of the sector's performance in support of evidence-based policies.

This report is structured in four main chapters. Chapter 1 describes the Current Status of Manufacturing in Tanzania, including an overview of the economy and an evaluation of its competitiveness and structure of comparative advantage. Chapter 2 assesses the factors bearing on competitiveness and comparative advantage including enablers for the manufacturing industry, product diversification and structural transformation of the manufacturing sector, as well as a SWOT analysis of Tanzania's manufacturing sector. Chapter 3 reviews policy options to harness opportunities for, and to ease the constraints on, manufacturing in Tanzania. Chapter 4 suggests a road map and action plan to achieve these objectives.

<sup>&</sup>lt;sup>2</sup>For a more detailed summary of the historical evolution of Tanzania's manufacturing sector, see Wangwe et al. (2014: 4ff).





### 1. THE CURRENT STATUS OF MANUFACTURING IN TANZANIA

1.1 Overview of the Economy

# **1.1.1 Overall Economic Development Framework** for Tanzania

Tanzania's development framework is articulated in Tanzania Vision 2025 (TDV 2025). This statement envisages Tanzania as having the following attributes by 2025: (i) high quality livelihood; (ii) peace, stability and unity; (iii) good governance; (iv) a welleducated and learning society; and (v) a competitive economy capable of producing sustainable growth and shared benefits. Of these goals, the most directly relevant to manufacturing policy is the fifth. According to TDV 2025, by the year 2025:

"Tanzania should have created a strong, diversified, resilient and competitive economy which can effectively cope with the challenges of development and which can also easily and confidently adapt to the changing market and technological conditions in the regional and global economy."

To implement TDV 2025, Tanzania has adopted a medium-term planning framework, with the Five Year Development Plan 2011/12 – 2015/16 (FYDP1) being the first of three such plans which are to cover the period to 2025. The first plan is to remove binding constraints, thereby setting the stage for more rapid industrialization in the second and third phases. The adoption of the planning framework was explicitly based on dissatisfaction with the pace of progress under the more neutral market-oriented policy approach that preceded it. Moreover, it integrates a number of pre-existing strategy plans<sup>3</sup>.

FYDP1 sets a target for average GDP growth of 8% per annum (5% per capita), accelerating to at least 10% per annum from 2016 until 2025. It also identifies various key elements to achieve this growth dynamic:

- 1. Improved energy and transport infrastructure (including energy, transport and ICT);
- Development of various strategic sectors (cotton textiles, high value crops, grains for food self-sufficiency and export, fertiliser, manufacturing, heavy industry, finance and tourism);
- 3. Enhanced skills development;
- 4. Improved business environment; and
- 5. Institutional reforms for effective implementation, monitoring

and evaluation of the Plan.

For manufacturing, the FYDP1 aims to accelerate growth from 8% recently to 12.1% by 2015/16, with an average annual growth rate of 11% over the period 2010 to 2015. To achieve this, it continues the emphasis of previous plans on establishment of Special Economic Zones (SEZs) and Export Processing Zones (EPZs),4 and targets exports to regional partners, especially landlocked neighbours.

Institutional reforms have been ongoing for the past two decades and are explicitly modelled on the Malaysian development model and developed with Malaysian technical assistance. In order to ensure smooth progress in the implementation of reforms as well as of the FYDPs, the Big Results Now (BRN) initiative was launched in 2013.

Overall, reforms being undertaken show the commitment of the government to industrialization based on the East Asian model.

# **1.1.2 Overview of Economic Performance and Challenges**

Tanzania has recorded solid growth on trend: between 2002 and 2012, the economy grew 7.0% on an annual average basis and 4.3% per capita. The pace of growth, though impressive, has been insufficient to generate sufficient employment for the rapidly growing labour force, resulting in persistent high overall unemployment (about 14.9% according to the FYDP 1) and extensive underemployment. While overall poverty has declined, growth in Tanzania could have been more inclusive, thereby achieving a greater impact on poverty reduction and employment creation. This is partly because the drivers of growth have been capital intensive sectors such as telecommunications, transport, mining, financial services and trade.

In terms of the sectoral composition of real GDP growth over the period 2001 to 2011, the service sector accounted for 57%, industry for about 27% and agriculture about 16%. The manufacturing sector's contribution was about 11%5. While the service sector contributed a disproportionately large share of real growth compared to its share of total sectoral value added (table 1), its share in total gross value added (GVA) remained constant over the course of the period. The share of agriculture in total GVA fell over the period, reflecting higher price growth in other sectors, specifically in industry. Manufacturing's share of total sectoral GVA remained almost constant for much of the last decade, at slightly less than 9%, but increased significantly more recently, from 8.5% in 2008 to 10.1% in 2011.

<sup>&</sup>lt;sup>3</sup>Among the sectoral and cross-cutting developmental policies are the Sustainable Industrial Development Strategy, which envisions the manufacturing sector expanding its contribution to GDP from single digits currently to about 23% of GDP by 2025) and the National Strategy for Growth and Reduction of Poverty (NSGRP) II.

<sup>&</sup>lt;sup>6</sup>Pursuant to the Export Processing Zones Act of 2002, and institutionalized with the oreation of the Export Processing Zones Authority (EPZA) in 2006, the Export Processing Zones Program sought to trigger export-led industrialization. The program resulted in the establishment of six industrial parks, with many more in the plans. In a similar vein, the Mini-Tiger Plan announced in 2005 sought to use Special Economic Zones to emulate the East Asian export-led manufacturing growth model. <sup>6</sup>National Bureau of Statistics 2012: National Accounts of Tanzania Mainland 2001-2011,

<sup>&</sup>quot;National Bureau of Statistics 2012: National Accounts of Tanzania Mainland 2001-2011, Table 6: Gross Domestic Product at 2001 Prices by Economic Activity; and author's calculations.

Table 1: Compo	Table 1: Composition of Tanzania's GVA, 2001-2011 (percent)														
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010r	2011p				
Agriculture	30.8%	30.4%	30.6%	31.4%	29.9%	28.6%	28.2%	28.1%	26.9%	26.2%	25.8%				
Industry	19.1%	20.9%	22.3%	22.1%	22.5%	22.6%	23.1%	22.9%	24.0%	24.5%	24.8%				
Manufacturing	8.9%	8.8%	8.8%	8.6%	8.6%	8.5%	8.5%	8.5%	9.4%	9.8%	10.1%				
Other Industry	10.2%	12.1%	13.5%	13.5%	13.9%	14.2%	14.6%	14.3%	14.5%	14.7%	14.7%				
Services	48.3%	47.0%	45.5%	44.8%	46.0%	47.3%	47.3%	47.8%	47.6%	47.8%	47.9%				

Source: Tanzania National Bureau of Statistics, National Income Accounts 2001-2011 (December 2012): Table 3: Gross Domestic Product Estimates at Current Prices by Economic Activity, and author's calculations.

Both exports and imports increased faster than GDP, and the share of total trade in GDP increased from 39% to 86% between 2001 and 2011. However, imports expanded much faster than exports and thus the current account deficit widened from around 4% of GDP early in the decade to an average of over 11% over the period since 2006, peaking at an estimated 15.9% in 2012 before falling again to 14.3% in 2013<sup>6</sup>. The Tanzanian shilling depreciated

significantly over the first half of the last decade (Figure 1) from substantially over-valued levels but was broadly stable in real effective terms over the second half of the decade, albeit at modestly over-valued parities (IMF, Article IV, 2011). The recent steep real appreciation of the shilling will have driven it up to a higher degree of over-valuation.



Consumer price inflation averaged 8.5% over the period but on an accelerating trend which resulted in year-over-year monthly inflation rates rising to the 19% range in late 2011 and early 2012; since then, however, headline inflation has eased substantially, falling back into single digits over the course of 2013 and reaching as low as 6.2% in November 20137. Real interest rates are encouragingly positive with the overall term deposit rate over 8% in November 2013 and the lending rate about 16%<sup>8</sup>.

In summary, macroeconomic performance has been reasonably stable but with a widening external imbalance, driven by the widening domestic savings-investment gap. While conventional measures suggest the currency is only modestly over-valued, such valuation has been insufficient to support a strong export-led industrial transformation. The growth outlook is solid (about 7% in the IMF Spring World Economic Outlook Forecast) and the recent deceleration of inflation holds out hope for the possibilities that Tanzania will meet its medium-term inflation target of 5%, especially with domestic natural gas coming on stream to replace expensive

<sup>&</sup>lt;sup>6</sup>IMF World Economic Outlook, April 2014. <sup>7</sup>Bank of Tanzania 2013: Monthly Economic Review, December 2013. <sup>8</sup>lbid.





#### imported oil9.

However, the continuation of this solid performance depends on monetary and fiscal restraint (including a stable nominal exchange rate). Moreover, Tanzania's exposure to the boom-bust cycles of resources such as gold leaves it vulnerable to the many uncertainties surrounding the timing of the coming on stream of significant gas export revenues and the time profile of its gold revenues (which may have peaked in 2012). Importantly, success in exporting resources will confront Tanzania with a more acute problem of managing "Dutch disease" (or, alternatively, the "resource curse")10, which has negative implications for nonresource-based manufacturing activity.

#### **1.2 Descriptive Overview**

#### 1.2.1 Size of the Manufacturing Sector in Tanzania

The definition of manufacturing used in this report is based on the ISIC classification and refers specifically to industries belonging to ISIC Rev. 3 divisions 15 to 3711. Value added is defined as the net output of a sector after adding up all outputs and subtracting intermediate inputs.

Tanzania's manufacturing sector is relatively small and over the long run has failed to develop. As noted by Dinh and Monga (2013: 13), manufacturing in Tanzania today contributes less to GDP than it did in the 1970s. Manufacturing employment accounts for only a small fraction of the total labour force<sup>12</sup>. Simply put, during almost a half century of highly dynamic manufacturing activity worldwide that has witnessed the rise of the East Asian Tigers, global value chains and the "made in the world" production system, Tanzania until recently has been largely on the sidelines, stagnating.

There has been a turnaround in performance in the past decade, however, with manufacturing growing at a pace of 8.6% per annum in real terms<sup>13</sup>, and over 9% per annum in current US dollar terms. This raised the level of manufacturing output to USD 2.6 billion in 2012, more than doubling the size of manufacturing value added (MVA) per capita between 2000 and 2012 in US dollar terms (table 2). Although the contribution of manufacturing to the industrial GDP fell over the period, from 48.9% to 40.6%, the development since 2007, when it had reached a bottom point of 36.7%, has been positive.

Table 2: Manufacturing value added (MVA) in Tanzania, 2000-2012													
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
MVA (million USD)	894	869	896	965	1,036	1,124	1,114	1,305	1,618	1,844	2,057	2,214	2,609
MVA (Millions USD, Constant 2005 Prices)	762	800	860	937	1,026	1,124	1,220	1,326	1,457	1,574	1,698	1,831	1,981
Share of industrial GDP (%)	48.9%	46.5%	42.2%	39.5%	39.0%	38.3%	37.5%	36.7%	37.3%	39.3%	40.1%	40.8%	40.6%
MVA per capita	26.3	24.9	25.0	26.3	27.5	29.0	27.9	31.8	38.2	42.3	45.7	47.8	54.6

Source: World Bank / World Development Indicators (WDI)

This positive performance raised Tanzania's manufacturing sector above the Eastern African average in terms of share of GDP but still well below East Asian economies which Tanzania is seeking to emulate in its industrial strategy (Figure 2).

<sup>&</sup>lt;sup>a</sup>IMF Country Report No. 13/166, June 2013. <sup>10</sup>The "resource curse" or "Dutch disease" refers to the negative impact which large-scale exports of natural resources can have on other sectors of the economy, e.g. the manufacturing sector. The inflow of foreign currencies resulting from the exports of natural resources leads to an appreciation of the exporting country's currency which causes other sectors to lose competitivenes

See http://unstats.un.org/unsd/cr/registry/regcs.asp?Cl=2&Lg=1&Co=D.

<sup>&</sup>lt;sup>a</sup>The Integrated Labour Force Survey (ILFS) of 2006 estimated the active labour force to be 18.8 million, of whom 16.6 million were employed and 2.2 million or 11.7% were unemployed. The ILFS counted 434,206 employees in the manufacturing sector (National Bureau of Statistics 2007: 117), 2.6% of total employment. With the sector averaging about 8.4% annual growth since then, employment in 2013 can be estimated to be approx. 600,000. Note that the FYDP 1 estimates manufacturing employment in 2010 at 120,000 and sets a tarreat to increase this to over 221 000 by 2015/16 2010 at 120,000 and sets a target to increase this to over 221 ,000 by 20 National Bureau of Statistics 2012: National Accounts of Tanzania Mainland 2001-2011



Also, the reported substantial increase of MVA per capita to about USD 55 in 2012 has resulted in Tanzania's manufacturing sector performing better than the regional average (also see Wangwe et al., 2014). Nevertheless, it is still substantially lower than the

regional leader, Kenya (), and far lower than that of benchmark countries such as Vietnam, South Africa, China and Korea, whose MVA per capita stood in 2012 at USD 301, 835, over 1,300, and over 6,000, respectively.

United Republic of Tanzania, and Uganda).

<sup>&</sup>lt;sup>14</sup>The "East Africa average" is calculated here as the average share of the manufacturing sector in the seven country studies (Burundi, Ethiopia, Kenya, Rwanda, Seychelles, the









Formal employment in manufacturing accounts for less than 5% of the labour force (Government of Tanzania and UNIDO, 2012). Much of it is concentrated in the largest 40 manufacturing companies, which employ 36% of all manufacturing workers. Moreover, the job creation dynamic is weak, with only 11% of industrial employment having been generated by firms established in 2005 or later. In other words, new investments in manufacturing

have not yet resulted in significantly more jobs, partly as a result of the focus on capital-intensive, resource-based sectors at the expense of traditional labour-intensive manufacturing (e.g., textiles and clothing).

Tanzania's manufacturing exports have grown very strongly in the last decade, from just under USD 400 million in 2001 to USD 2.8 billion in 2011 (Table 3).

#### Table 3: Tanzania exports of manufactured products, 2001-2012<sup>16</sup> 2001 2002 2003 2004 2005 2006 2007 2008 2010 Total manufactured exports, million USD 381 474 702 854 949 1,073 848 1,888 1,610 2.170 2.820 50.0% 52.6% 57.6% 58.2% 56.8% 57.5% 39.6% 60.5% 54.0% 53.6% 59.6% Share in total merchandise exports As% of industrial GDP 19.0% 20.8% 26.7% 29.8% 29.5% 32.7% 21.6% 39.4% 31.0% 38.4% 47.1%

Source: International Trade Centre's TradeMap (for export data); World Bank / World Development Indicators (WDI) (for data on GDP)

is based on the ISIC classification (specifically, ISIC Rev. 3), i.e. chapter D - Manufacturing (sections 15–37). Other sources for international trade data – such as WDI – apply a more restricted definition of "manufactures", which comprise "commodities in SITC sections 5 (chemicals), 6 (basic manufactures), 7 (machinery and transport equipment), and 8 (miscellaneous manufactured goods), excluding division 68 (non-ferrous metals)". In other words, they exclude processed agricultural products, beverages and others.

<sup>&</sup>lt;sup>15</sup>This figure only covers continental East African countries. The Seychelles have not been included because MVA per capita in Seychelles is significantly higher – because of its very specific situation – than in the six other study countries, at USD 867 per capita in 2012. <sup>16</sup>Data for 2012 are available from the International Trade Centre based on the partner reported data (Mirror data). However, these data are clearly inconsistent with the Tanzanian-reported data. The definition of "manufacturing" applied to determine manufactured exports in this table

On a per capita basis, this corresponds to an increase of Tanzania's manufactured exports from USD 10.9 per capita in 2001 to USD 60.8 per capita in 2012<sup>17</sup>. This performance has enabled Tanzania to overtake Ghana and Malawi and to reduce the gap with Kenya, in terms of regional comparators. The distance to more advanced African comparator countries like South Africa and Mauritius is still considerable.

In terms of destination, Tanzania has had little success penetrating export markets in the more advanced European and North American markets; accordingly, regional markets together with Asian emerging markets constitute today the main export destinations. In this context, Tanzania has recently taken a number of initiatives to boost its exports in general and manufacturing exports in particular. Among the most important measures to boost exports is the creation of Export Processing Zones (EPZs) with a number of fiscal and non-fiscal incentives for exporters located in these zones.

#### 1.2.2 Structure of the Manufacturing Sector

Manufacturing in Tanzania is restricted to a comparatively narrow range of products, mostly low-value-added basic goods based on limited processing of agricultural or resource raw materials. Food and beverage products account for nearly 50% of total MVA, followed by non-metallic mineral products (11%), tobacco (7%) and textiles (5%). In recent years, some diversification has taken place. For example, a number of automobile and motorcycle assembly operations have been established.

The main manufacturing subsectors are the following.

- Food, Beverage and Tobacco: This subsector includes manufacturing dairy products, canning and preserving fruits and vegetables, canning fish and similar foods, manufacturing animal and vegetable oils, grain milling, baking, sugar and confectionery, as well as preparing animal feeds. Beverages include distilling ethyl alcohol; distilling, rectifying, and blending spirits; and manufacturing wines, ciders, and beer. Beverage manufacturing also includes the production of soft drinks and carbonated waters and bottling natural spring and minerals waters. The tobacco sub-sector comprises manufacturing of cigarettes, tobacco, and other tobacco products.
- **Textiles and Clothing:** This subsector includes spinning, weaving, and finishing textiles; manufacturing made-up textile goods; knitting; and manufacturing carpets, rugs, cordage, rope, and twines.
- Leather and Footwear: Leather and footwear activities include tanneries, leather finishing, and manufacturing products from leather, such as luggage, handbags, and purses.
- Wood and Wooden Products: This subsector includes sawmills, planed and other milled wood products,

manufacturing of wooden containers, cane products, and other wooden products.

- **Paper and Paper Products:** This subsector includes manufacture of pulp, paper, paperboard, fibreboards, light packaging, heavy packaging, stationery and other paper products.
- Chemicals, Petroleum, Rubber and Plastics: This subsector includes manufacture of basic industrial chemicals, fertilizers, pesticides, plastic materials and products, medicinal and pharmaceuticals, soap, detergents, perfumes and other cosmetics, paints and other chemical products. The petroleum subsector consists of one company, TIPER, whose activity is limited to petroleum storage and distribution (the TIPER refinery was closed in 1999). Rubber products include tyres and tubes, conveyors and fan belts, rubber mats, gloves, pipes and tanks, plastic sheets, kitchenware, furniture and footwear.

Most of the manufacturing sector is in private hands reflecting the extensive privatization of industry in the mid-1980s and early 1990s. Private sector manufacturing firms account for 91% of all manufacturing establishments. Nonetheless, there remains a good number of large state-owned enterprises (SOEs) with the 56 remaining (down from 400 prior to the privatization wave) accounting for 8% of the total number of manufacturing enterprises in the country.

Geographically, manufacturing is concentrated in Dar es Salaam, which hosts over 50% of all large manufacturing establishments. The second-largest manufacturing centre is Arusha, which has seen a relatively strong expansion of its population of manufacturing firms in recent years. Mwanza, Singida, Tanga, Kagera and Kilimanjaro also have a notable level of manufacturing activity.

Older companies continue to be the largest employers. The textiles sector has created the largest number of jobs in new companies. The food sector accounts for the second highest number of jobs created in new companies. Other dynamic sectors in terms of creating jobs have been paper, electrical equipment, and basic metals.

In terms of firm size, most manufacturers are micro enterprises with fewer than ten employees: these account for 97% of all manufacturing enterprises. Most of these are family-owned and have fewer than five employees. Conversely, a total of 686 manufacturing establishments with ten or more employees were in operation in Tanzania in 2009. The population of larger manufacturing firms is relatively small with only food products (13), textiles (8), tobacco (3) and paper and paper products (2) featuring more than one firm with over 500 employees (Table 4). The 13 large food product and textile manufacturers account for 40% of total

<sup>&</sup>lt;sup>17</sup>Source: International Trade Centre's TradeMap (for export data); World Bank/World Development Indicators (for data on population).





employment within this population of manufacturing firms.

The large number of micro enterprises stands in sharp contrast to the relatively small number of small and medium-sized enterprises. This hints at bottlenecks that prevent smaller micro enterprises from scaling up production to move up in the size classifications as one of the major factors holding back a stronger dynamic of manufacturing growth. The pace of new firm formation in manufacturing has been weak; as a result, many sectors lack a critical mass of (formally established) firms.

In this context, it is important to note that the manufacturing sector is dominated by informal activities: the 2008 Annual Survey of Industrial Production estimated that around 78% of all manufacturing establishments operated on an informal basis.

	10-19	20-49	50-99	100-499	500	Total
Food products	84	47	38	24	13	206
Beverages	2	5	4	8	5	35
Tobacco products	-	-	-	-	3	3
Textiles	5	1	4	4	8	22
Wearing apparel	-	1	-	-	-	1
Leather and related products	-	З	2	1	1	7
Wood and wood or straw products	10	6	1	4	-	21
Paper and paper products	-	-	-	3	2	5
Printing and reproduction of recorded media	13	21	7	10	1	52
Chemicals and chemical products	10	7	4	10	-	31
Basic pharmaœutical products	1	1	1	2	1	6
Rubber and plastics products	1	5	10	5	1	22
Other non-metallic mineral products	13	10	З	3	1	30
Basic metals	2	1	2	5	-	10
Fabricated metal products, except M&E	5	9	3	6	-	23
Bectrical equipment	2	1	2	2	-	7
Machinery and equipment n.e.c.	З	4	-	-	-	7
Motor vehides, trailers and semi-trailers	3	5	-	-	-	8
Other transport equipment	2	-	1	-	-	3
Furniture	49	23	6	2	1	81
Other manufacturing	41	17	14	23	3	98
Pepair and installation of M&E	6	2	-	-	-	8
Total Manufacturing	252	180	102	112	40	686

The structure of the manufacturing sector, consisting of very few **1.2.3** medium and large (and even formal small) enterprises and a vast **Anal** 

number of informal businesses with low productivity, also means that competition is weak in the sector<sup>18</sup>. A consequence of this is the lack of competitive pressure which in turns leads to limited investments and productivity improvements. The outcome is, as stakeholders noted, that technology in use by manufacturers is often outdated, limiting their competitiveness both with imports on the domestic market and on export markets.

The most attractive manufacturing sub-sectors for Tanzania, as elsewhere in Eastern Africa, would appear to be regional processing and labour-intensive tradable goods. The first of these two aims to develop manufacturing capacity to serve regional needs drawing on global resources while the second involves the reverse strategy of drawing on local resources to serve both domestic, regional and global markets. Neither sector is being strategically contested by the major economies, although the labour-intensive tradable goods sector has faced traditional market access restrictions in the advanced countries as these sectors are

<sup>1.2.3</sup> Key Manufacturing Sub-sectors for Further Analysis

<sup>&</sup>lt;sup>18</sup> A more detailed analysis of the level of competition in Tanzania's manufacturing sector is provided in Dinh/Monga (2013: 35ff).

phased out there. As assessed in Dinh and Monga (2013), Tanzania has a competitive advantage in these sub-sectors already, and benefits both from an abundant supply of (primarily low-skilled) labour and exceptional resource endowments. On the demand side, regional markets have been growing fast, fostered not least by Eastern African regional integration, and Tanzania benefits from preferential access to developed economies. In addition, labour costs in East Asia, and particularly in China, have been rising, thereby making Tanzanian manufacturers in these low-skilled labour intensive sectors increasingly competitive.

In the short to medium-term, therefore, the highest potential for manufacturing exists in resource-based and low technology subsectors. In line with Sutton and Olomi (2012), and Dinh and Monga (2013), the following sub-sectors are thus considered as priority sub-sectors<sup>19</sup>:

- Oilseeds and Edible Oils: Products include various kinds of oil. Major manufacturers of oilseeds and edible oils in Tanzania include Murzah Oil Mills Limited, Mount Meru Millers Limited, Vegetable Oil Industries Ltd, and BIDCO Oil and Soap Limited.
- Wood and wood products: Activities in this sector range from the production of sawn wood and wood pulp to finished wood products, including wooden furniture. At present, most output in the sector is marginally processed wood (i.e. sawn wood), while finished goods are produced by few small manufacturers, and most domestic demand is covered by imports.
- Food Processing: Food processing is the leading subsector of the manufacturing sector. Major manufacturers in this category include Vicfish, Tanga Fresh Limited, Azania Wheat Flour and Coast Millers Ltd.
- Beverages: This sub-sector includes distilling ethyl alcohol; distilling, rectifying, and blending spirits; and manufacturing wines, ciders and beer. Also included are soft drinks and carbonated water natural spring and mineral water. Major manufacturers include Tanzania Breweries Limited, Coca Cola Kwanza Limited, SBC Tanzania Limited, Banana Investment Limited, and Bonite Bottlers Limited.
- · Textiles: Activity in this sub-sector includes spinning,

weaving, and finishing textiles; manufacturing made-up textile goods; knitting; and manufacturing carpets, rugs, cordage, rope and twines. Among the major manufacturers are Tanzania-China Textile Friendship Mills (Urafiki) and Karibu Textile Mills.

- Leather and leather goods: This sub-sector covers the whole value chain from hides to finished leather articles.
   Less than ten tanneries are active in the sub-sector, and very few small producers of leather goods. The sub-sector is among the priority sectors of the Integrated Industrial Development Strategy 2025.
- Cement and Building Materials: Products include cement and related products, aggregates, and other building materials. Major firms include Tanga Cement Company Limited and Tanzania Portland Cement Company Limited.

#### 1.3 Evaluation of Competitiveness and Comparative Advantage

#### 1.3.1 Overall Competitiveness of the Manufacturing Sector

Since the middle of the past decade, Tanzania has risen in UNIDO's Competitive Industrial Performance (CIP) rankings, moving up fourteen places to 106th out of 133 countries in 2010 (UNIDO 2013) from 120th in 2005, and narrowing the gap between it and the region's leader, Kenya, which has been static over this period (table 5). However, Tanzania along with its regional peers, still lags the East Asian countries.

Examining UNIDO's sub-index on manufacturing exports per capita, Tanzania is well below countries with a similar ranking in international industrial competitiveness. For example, the three countries immediately ahead of Tanzania in UNIDO's 2010 CIP rankings (Gabon, Barbados and Fiji) together with the three immediately behind Tanzania (Azerbaijan, Suriname and Mongolia) average USD 525 per capita worth of manufacturing exports, 12 times the level achieved by Tanzania. This underscores the extent to which Tanzania has to raise the level of its performance to become a genuine force in international markets.

<sup>&</sup>lt;sup>19</sup>A slightly different selection of sub-sectors is presented by Wangwe et al. (2014), which additionally include plastics and rubber, chemicals, basic metal works, fabricated metal works, and machinery and equipment among the emerging sectors, but do not include oilseeds & oils, wood and wood products, beverages, leather & leather goods, and cement and building materials.





able 5: Overview of UNIDO's Competitive Industrial Performance (CIP) Index for Tanzania and benchmark countries													
Indicator	2000	2005	2006	2007	2008	2009	2010						
Tanzania	0.003	0.004	0.005	0.005	0.007	0.008	0.009						
East African countries:													
Average East Africa	0.002	0.004	0.004	0.004	0.004	0.005	0.005						
Kenya	0.008	0.010	0.010	0.009	0.009	0.011	0.010						
Uganda	0.002	0.003	0.004	0.004	0.004	0.004	0.004						
Ethiopia	0.000	0.001	0.001	0.002	0.002	0.002	0.002						
Rwanda	0.001	0.002	0.002	0.002	0.002	0.003	0.002						
Burundi	0.000	0.001	0.000	0.001	0.001	0.001	0.001						
Benchmark countries:													
Korea	0.318	0.356	0.364	0.366	0.373	0.399	0.404						
China	0.162	0.239	0.257	0.274	0.291	0.318	0.329						
Malaysia	0.197	0.190	0.192	0.183	0.169	0.184	0.183						
Thailand	0.136	0.151	0.155	0.157	0.160	0.168	0.171						
Turkey	0.096	0.121	0.124	0.128	0.132	0.130	0.128						
Indonesia	0.077	0.074	0.074	0.072	0.075	0.082	0.082						
South Africa	0.072	0.076	0.076	0.076	0.080	0.077	0.077						
India	0.045	0.056	0.059	0.060	0.064	0.073	0.075						
Philippines	0.084	0.075	0.075	0.072	0.070	0.071	0.073						
Chile	0.060	0.069	0.072	0.071	0.072	0.073	0.072						
Vietnam	0.025	0.035	0.038	0.041	0.045	0.051	0.054						
Source: UNIDO													

A second indicator to measure competitiveness it the revealed comparative advantage (RCA), an index used in international economics for calculating the relative advantage or disadvantage of a certain country in a certain class of goods or services as evidenced by trade flows. The manufacturing sector RCA is calculated as the share of the country's manufactured exports in the country's total exports divided by the share of manufactured world exports in total world exports (Balassa 1965). For this calculation, manufactured exports were determined the definition based on the ISIC classification, as specified in section 1.2.1. A comparative advantage is "revealed" if RCA>1. If RCA is less than 1, the country is said to have a comparative disadvantage.

As shown in table 6, Tanzania's RCA is below 1 for all years during the period 2001–2012 and therefore the country can be said to have a comparative disadvantage in manufacturing. This comparative disadvantage in manufacturing is shared by all study countries except Seychelles while most of the selected benchmark countries appear to have a comparative advantage in manufacturing (figure 4). It can be noted however that the RCA is calculated here based on official trade data: it therefore does not capture informal or mispriced trade flows, which could be of significant size of magnitude in the case of agro-processing products.

Table 6: Revealed Comparative Advantage (RCA), Tanzania/World, Manufacturing sector													
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Manufacturing <sup>(1)</sup>	0.65	0.67	0.73	0.75	0.74	0.76	0.49	0.77	0.67	0.67	0.76	0.41	
Source: Author's calculations based on International Trade Centre's Trade Map. (1) ISIC Rev. 3 divisions 15 to 37.													



One problem of the competitiveness indicators discussed above is that they measure "revealed" competitiveness but fail to address potential competitiveness. With regard to the latter, Tanzania's position appears to be much stronger, as a result of the following factors:<sup>20</sup>

- Relatively low unit labour costs (figure 5) with prospects of growing cost advantage in relation to East Asia. Labour market efficiency is also recognized as one of Tanzania's strengths;
- Vast gas, mineral and agricultural raw materials which can be used as manufacturing inputs at competitive prices.

This supply side competitiveness potential has to be seen in combination with a number of opportunities stemming from the demand side: In terms of future opportunities, Tanzanian demand growth, to the tune of 18% or nearly USD 4.4 billion annually,

provides excellent scope for local manufacturers to increase production. Moreover, neighbouring landlocked countries that have no access to the sea, such as Zambia, Uganda, and DR Congo, represent market opportunities: their total imports reached USD 12 billion in 2010, an amount that is expected to rise by 18% to 21% annually. On the other hand, Tanzania's manufacturing sector faces stiff competition from Chinese manufactured imports, which have increased their share of the Tanzanian market from 4% in 2000 to 12% in 2010 and are making inroads throughout Eastern Africa. Overall, Tanzania has great development potential: the country has booming manufacturing sector exports, vast natural resource endowments, and excellent development potential to better connect the Eastern Africa region to global markets through its seaports. In this context, the manufacturing sector's competitiveness could be significantly enhanced by better trade logistics and connectivity.

<sup>&</sup>lt;sup>20</sup>Tanzania ranks 49th (out of 148 countries) in the "labour market efficiency" indicator of the 2013/2014 Global Competitiveness Report (World Economic Forum 2013).







Average monthly wages were then converted into daily wages assuming 25 work days per month

#### 1.3.2 Competitiveness of Key Manufacturing Sub-sectors

While Tanzania has a comparative disadvantage in manufacturing overall, it does have comparative advantage in several sub-sectors. Table 7 presents the evolution of Tanzania's RCA in several key manufacturing sub-sectors since 2001. Several observations may be made on these data. First, Tanzania has a comparative advantage particularly in manufacturing sub-sectors in the early stages of the value chain. This is illustrated when decomposing the RCA in the leather and footwear, and wood and furniture sectors. Although in both of these sectors Tanzania has an overall comparative disadvantage, this is especially strong in the final products (shoes and furniture) while being much smaller in the intermediaries (leather and wood), which in fact in several years over the period showed a comparative advantage. This highlights both the potential for manufacturing in these sectors and the difficulties that Tanzania has faced so far in turning the potential into actual manufacturing success, especially in downstream industries based on the country's resource endowments.

Second, the sharp changes in 2012 may be heavily affected by the fact that these are figures based on mirror data, i.e. imports reported by Tanzania's trading partners; mirror import data often differ quite dramatically from a country's export data for a range of reasons, not least of which is that importing customs offices tend to be more vigilant to tariff classification since import tariffs apply in most cases.

Third, even ignoring the changes in 2012 (which for the most part are to suggest significant improvements in sub-sector RCAs), Tanzania has shown an increasing degree of revealed comparative advantage in most sub-sectors - only the RCA of the food processing and leather and footwear sub-sectors showed a declining trend.

Table 7: Revealed Comparative Advantage (RCA), Tanzania/World, by Manufacturing Subsector												
Manufacturing Sub-sector	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Food products (ISIC 151, 152, 153, 154)	2.52	2.84	1.84	1.53	1.88	1.58	1.95	2.32	1.44	1.76	1.38	2.16
Beverages (ISIC 155)	0.09	0.18	0.28	0.36	0.35	0.42	0.38	0.42	0.37	0.38	0.21	0.34
Textiles (ISIC 17)	1.29	0.88	0.97	1.80	1.90	1.54	1.69	2.75	2.13	1.47	1.25	1.13
Cement & building materials (ISIC 269 excl. 2691)	1.21	0.78	0.33	0.44	0.21	0.05	1.02	1.19	0.87	1.67	1.51	3.75
Vegetable and animal oils and fats (ISIC 1514)	1.15	1.82	1.03	0.84	1.33	1.61	1.87	3.39	1.66	2.24	1.73	2.48
Leather and footwear (ISIC 19)	0.66	0.86	0.78	0.62	0.37	0.61	0.94	0.47	0.32	0.39	0.29	0.60
Leather (ISIC 191)	0.98	1.05	0.90	0.96	0.49	0.85	1.66	0.90	0.44	0.67	0.58	1.38
Footwear (ISIC 192)	0.41	0.71	0.68	0.35	0.27	0.42	0.37	0.14	0.23	0.18	0.07	0.02
Wood and furniture (ISIC 20 & 361)	0.14	0.16	0.16	0.22	0.31	0.32	0.62	0.66	0.67	1.05	0.43	0.52
Wood (ISIC 20)	0.22	0.28	0.28	0.38	0.55	0.52	1.13	0.98	1.28	1.38	0.67	0.86
Furniture (ISIC 361)	0.04	0.02	0.03	0.03	0.03	0.09	0.04	0.30	0.08	0.66	0.17	0.19
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Source: Author's calculations based on International Trade Centre's Trade Map

Some manufacturing sub-sectors are confronted with specific issues impacting on competitiveness:

- Oil Seeds and Edible Oils: Tanzania has significant potential to develop manufacturing based on oil seeds and edible oils. These include sunflowers, cotton, groundnuts and palm oil. However, inadequate processing facilities as well as high cost of processing constrain the sector. Imported oil, for example, easily out competes some domestically produced oil on account of lack of double refinery.
- Wood and wood products: As mentioned above, most of this sub-sector's output is sawn wood, while finished goods are produced by few small manufacturers, and most domestic demand is covered by imports. One important reason for this is the relatively high unit cost (see above), which primarily is a result of low productivity in the sector (Dinh/Monga 2013: 74f). Also, the sector – although resource based – is not among the industrial priority sectors in Tanzania's policy documents.
- Food Processing and Beverages: Being among the largest manufacturing sub-sectors, food processing (incl. beverages) suffers from similar challenges as the oil seeds and edible oils sub-sector. Over and above that it suffers from packaging materials and standardization challenges.
- Textiles: The textile manufacturing sub-sector was once a promising sector in Tanzania. After trade liberalization in the mid-1980s, the sector experienced stiff competition from

cheap second hand clothes from America and Europe as well as new higher quality textiles from Asia. The sector therefore experiences competition from imports as well as challenges associated with the difficult domestic business environment.<sup>21</sup>

- Leather and leather goods: While Tanzania has a vast resource base in term of livestock, the downstream production contracted considerably following privatisation and liberalisation in the 1980s and 1990s. Recently, some signs of recovery have been noted, not least as a result of policy support measures. However, as elsewhere in Eastern Africa, the leather sector's competitiveness is affected by quality problems of the key input, hides and skins, as well as the high cost of other inputs, most of which have to be imported.
- **Cement and Building Materials:** Apart from the general challenges that other sectors face, this sub-sector has been facing the problem of cheap imported cement. This is among the key policy issues that need to be addressed.

In sum, significant potential exists for the development of resourcebased manufacturing industries both aiming at regional and global markets. At the same time, the uneven performance of manufacturing sub-sectors over the past decade indicates that a number of constraints still need to be overcome. The next chapter aims at identifying these.

<sup>&</sup>lt;sup>21</sup>A more detailed analysis is presented in Dinh/Monga (2013: 51ff).









### 2. EXPLAINING COMPETITIVENESS & COMPARATIVE ADVANTAGE

2.1 Enablers for the Manufacturing Industry

#### 2.1.1 Overview

The World Economic Forum (2013) defines competitiveness as the set of institutions, policies and factors that determine the level of productivity of a country. In this context, a wide range of factors determine the level of productivity and competitiveness of a country, including, inter alia: the legal and regulatory environment, support institutions, infrastructure, higher education and training, market efficiency (including labour market efficiency), market size, financial market development, technological readiness and innovation. All these factors can be enablers (or constraints) for the

manufacturing industry.

Various international and national surveys aim at measuring the competitiveness of Tanzania. Among these, the World Bank's Doing Business indicators as well as the World Economic Forum's Global Competitiveness Index are prominent examples of international measures, while BEST AC's Business Leaders' Perceptions of the Investment Climate in Tanzania (BEST AC 2013) is an example of a national survey. We briefly summarise their findings before analysing the various enablers and constraints in more detail.

In the World Bank's Ease of Doing Business 2014 rankings, Tanzania slipped to 145th place in the world, out of 189 countries (table 8). Based on this index, the business environment has thus continued to lag behind other countries. This is not necessarily a sign that the business environment is getting worse in Tanzania but that other countries are doing more in terms of improving the business environment (also see figure 6).

Indicators	DB 2012 Rank	DB 2013 Rank	DB 2014 Rank	Change in Rank 2012-14
Starting a Business	117	115	119	-2
Dealing with Construction Permits	170	177	177	-7
Getting Electricity	95	102	102	-7
Registering Property	140	140	146	-6
Getting Credit	127	126	130	-3
Protecting Investors	98	95	98	0
Paying Taxes	128	140	141	-13
Trading Across Borders	119	137	139	-20
Enforcing Contracts	35	41	42	-7
Resolving Insolvency	128	132	134	-6
Overall Ease of Doing Business	133	136	145	-12

In the World Economic Forum's Global Competitiveness Report 2013/2014 (World Economic Forum 2013), Tanzania ranks 125<sup>th</sup> overall and 4<sup>th</sup> among study countries (Rwanda obtained the highest ranking among study countries as it ranked 66<sup>th</sup> overall, followed by Seychelles at 80<sup>th</sup> and Kenya at 96<sup>th</sup>, while Ethiopia, Uganda and Burundi were ranked 127<sup>th</sup>, 129<sup>th</sup> and 146<sup>th</sup> respectively). The Report notes the following about Tanzania:

"Tanzania's institutions have been deteriorating over the past years — although government regulation is not seen as overly burdensome (53rd), corruption has been worsening (106th) and policymaking has become less transparent. In addition, some aspects of the labor market — such as the country's strong female participation in the labor force (5th) and reasonable redundancy costs — lend themselves to efficiency. On the other hand, infrastructure in Tanzania is underdeveloped (134th), with poor roads and ports and an unreliable electricity supply (131st). And although primary education enrollment is commendably high, providing universal access, enrollment rates at the secondary and university levels are among the lowest in the world (at 134th and 138th place, respectively), while the quality of the educational system needs upgrading. A related area of concern is the country's low level of technological readiness (126th), with very low uptake of ICTs such as the Internet and mobile telephony. The basic health of its workforce is also a serious concern: the country is ranked 125th in this area, with poor health indicators and high levels of communicable diseases."



The current state of the overall enabling environment for Tanzania's manufacturing sector can also be summarized by the 2013 Business Leaders' Perceptions of Investment Climate in Tanzania (BEST AC 2013). In particular, the survey reveals the main factors increasing the difficulty of running and growing a business in

Tanzania according to Tanzanian business leaders: as shown in Figure 7, the top four are power supply (consistently considered as the main constraint over the last five years), the level of taxation, corruption, and tax administration. Other relevant constraints include limited access to finance, inadequate transport infrastructure and access to land.







Finally, a look at the factors that have been making business difficult in Tanzania for 2010, 2011 and 2012, shows that there are some

factors that have improved over these years while others have not. Figure 8 illustrates the point.



Note: Business leaders were asked to rate factors as 'making business very difficult', 'making business somewhat difficult', 'could be improved' or 'not a problem'. The responses have been coded (ranging from 1: 'not a problem' to 4: 'makes doing business very difficult') and then averaged.

The following sections analyse the various enablers (or constraints) for the manufacturing industry with a view to assessing how and to what extent they impact on the performance of Tanzania's manufacturing sector.

#### 2.1.2 Legal and Regulatory Environment

The Constitution of the United Republic of Tanzania of 1977 is the supreme law of the country. It provides for an independent judiciary, among other organs of the State, and recognizes the sacred right of individuals to acquire and own property. Much of the legislation affecting the manufacturing sector has been reformed since the early 1990s to improve Tanzania's investment climate. Examples include the following acts:

- The Tanzania Investment Act, 1997 (No. 26 of 1997) governs investment activities and provides more favourable conditions for investors. It sets out definitions for, inter alia, local investor, foreign investor, and local capital;
- The Business Licensing Act (No. 25 of 1972) provides for licensing of business operations, without which no firm or business entity may enter business;

- The Village Land Act and the Land Act, both of 1999 provide the basic legislation in relation to land and village land: management of land, settlement of disputes and related matters;
- Land Acquisition Act, 1967;
- The Mining Act, 1999;
- National Land Use Planning Commission Act, 2007;
- The Value Added Tax Act, 1997 (No. 24 of 1997) establishes the Value Added Tax on supplies of goods and services and provides for related matters;
- The Employment Ordinance Act: cap 366 amends and consolidates laws relating to labour, and regulates conditions of employment and employees;
- The Environment Management Act, 2004;
- The Income Tax Act, 2004; and
- The Customs Tariff Act, 1976.

Table 9 presents the strengths and weaknesses of selected laws/acts based on the views of stakeholders consulted.

Table 9: Strengths and Weaknesses of Laws affecting Manufacturing in Tanzania								
Laws/Act	Strength	Weakness						
Environment Management Act, 2004	It addresses the issue of environment mismanagement, provides directives and penalties for law breakers	The enforcement mechanism / body failed to take some actions immediately when it became apparent that some were breaking this law.						
Tanzania Investment Act, 1997	It puts in place guidance on investment issues	It fails to clearly distinguish between industrial investment and business activities such as retail sales.						
Village Land Act, 1999.	It gives local government authorities (LGAs) mandate to manage their land.	Failed to give full mandate to decide the use of large portions of land.						
Mining Act, 1999	It provides guidelines for investors in the mining sector.	Failed to protect the indigenous interests in respect of minerals. The Act failed to ensure that villages are given a share in the mining revenues						
Customs Tariff Act, 1976	It acts as a guideline on imported goods	Tariff protection is inad equate to protect local investment from some imported products						
Source: Stakeholder consultation	S.							

The regulatory environment of relevance to the manufacturing sector is established by various regulatory authorities. These include but are not limited to: the Tanzania Bureau of Standards (TBS); Weights and Measures Authority; Tanzania Food and Drugs Regulatory Authority (TFDA); National Environmental Management Council (NEMC); and the Fair Competition Commission.

Important issues for manufacturing stemming from the legal and regulatory environment, as noted in the introductory section, are access to land/tenure and construction permits, and corruption, as well as inconsistent rules across the various regions of the country.

Regarding the former, even though business leaders did not rank it very high in this year's survey, it remains a major constraint in Tanzania. Indeed, the Growth Diagnostic Study (Government of Tanzania and USAID/Millennium Challenge Corporation 2011) identified the lack of supportive conditions for an effective land market, access to land by investors, and for security of land tenure as one of three most binding constraints to growth in Tanzania together with poor electricity supply and poor road infrastructure. According to the World Bank's Doing Business Report (World Bank 2013), it takes eight procedures and 68 days for property to be registered, and another 19 procedures and 206 days to cope with construction permit requirements.

These constraints are particularly relevant for agro-processing manufacturers which represent the bulk of the manufacturing sector, but also severely limit the options for expansion of manufacturers in other sub-sectors. As noted elsewhere, the existence of formal, scalable manufacturers is a pre-condition for a burgeoning, internationally competitive manufacturing sector. As in other areas, the Government is aware of these constraints and has enacted various acts, listed above, to improve security of property rights and land tenure; however, as Dinh and Monga (2013: 35) note, implementation progress has been slow.

With regard to corruption, as mentioned above, both BEST AC's

business survey and the Global Competitiveness report note that the situation has worsened in the recent past. Indeed, Tanzania's rank for the GCR's sub-indicator "irregular payments and bribes" (at 132 out of 148 countries) is the worst by far of the 21 subindicators measuring the quality of institutions.

Although it was not captured in the Business Leaders' Perception report, stakeholders at the dissemination workshop for this report informed that Local Government Authorities (LGAs) are among the constraints in the manufacturing sector. The LGAs have the mandate to make their own by-laws some of which are not necessarily good for business and investment climate. Some by-laws focus more on local revenue collection that at times contravene good investment climate. There is therefore a need to ensure that LGAs' by-laws are aligned with central government and other laws and policies promoting investments, in order to provide a coherent regulatory environment for manufacturing in Tanzania.

# **2.1.3** Industrial, Innovation and Manufacturing Sector Policies

Tanzania has put in place policies related to the promotion of industry, manufacturing, and innovation. Among the various programmes and strategies to promote the industrial and particularly manufacturing sector, the following ones are particularly important:

- Five Year Development Plan 2011-2016, which aims at removing binding constraints, thereby setting the stage for more rapid industrialization in the second and third phases of TDV 2025 (see section 1.1.1 above);
- Sustainable Industrial Development Policy SIDP (1996-2020): The SIDP foresees a 3-stage process. In the short term (first five years), agro-allied industries are the top priority in order to benefit from Tanzania's endowments. In the medium term (2000-2010), the priority would be a diversification into intermediates and light manufacturing. Finally, the long-term perspective (2010-2020) was to consolidate the industrial structure and focus on capital





goods. Furthermore, a key policy strategy in the SIDP was to phase the public sector out of productive activities and allow the private sector to become the principal vehicle for economic growth;

- Integrated Industrial Development Strategy (IIDS) 2025: in response to the perceived limitations in the SIDP, the Government in 2011 adopted the IIDS, to review the policies of SIDP in the context of the emerging economic environment and prepare a road map for implementation of the SIDP strategies so as to achieve the objectives of the industrial sector as mandated under the TDV 2025. The focus of the IIDS is on agriculture-led and resource-based industrialisation;
- Investment Policy in Tanzania 2003;
- Small and Medium Size Enterprises (SME) Development Policy of 2003;
- Export Processing Zones Act 2002 and the Economic Zones Law 2011;
- EAC Industrialization Policy; and
- Public Private Partnership Policy 2010.

In addition, two programmes can be mentioned that are critical for technological development, innovation and upgrading:

- The Industry Upgrading Programme under the MIT;
- The Regional Industrial Upgrading and Modernization Programme under the EAC Secretariat.

The Science, Technology, and Innovation Policy for Tanzania is still under development, as is the Private Sector Development Policy.

According to stakeholders consulted, support policies have resulted in a number of improvements for the manufacturing sector. For example, they:

- Promote the building of a diversified competitive economy and encourage higher value-added on primary exports;
- Enhance the generation of foreign exchange;
- Promote domestic production and technological change consistent with the required productivity increase; and
- Facilitate the development and enforcement of quality standards (through the Tanzania Bureau of Standards – TBS).

Tanzania thus has a comprehensive set of good manufacturingrelated policies in place. However, difficulties and delays in implementation have occurred. At times, targets and deadlines have been too optimistic – the three phases of the SIDP are a case in point. When needed measures are comprehensive, costly and/or address fundamental changes in the economic policy framework, their implementation takes time – often more time than is accorded in the policies. The IIDS recognizes this, and focuses, over a period of 15 years (until 2025) on the further development of (agricultural, gas and mineral) resource-based manufacturing.

As of yet, the combination of policies and institutional mechanisms has not yet eliminated the binding constraints on rapid

industrialization. One conclusion that can be drawn in this regard is the utility of experimentation in export processing zones (EPZs), special economic zones (SEZs) or industrial zones in general. Such zones, appropriately serviced and with streamlined rules applied, allow to test and discover which policies actually work in Tanzania, before being rolled out nationally. In fact, SEZs are one of the backbones of the IIDS, but the implementation is still at the initial stage and has been affected by a number of shortcomings, most notably the lack of an effective institutional framework (Dinh/Monga 2013: 40f).

In addition to these more general problems related to policy implementation, stakeholders consulted mentioned the following issues:

- Implementation of laws, rules and policies relevant to manufacturing was lacking predictability, and changes in direction were frequent. For example, the licence tax was removed in 2004, but returned in 2011; deemed capital goods were not taxed formerly but currently are. The impact of such lack of predictability is that businesses lack a sound informational basis for taking long-term business decisions – typically, investment decisions – which are a prerequisite for enhancing productivity.
- There was a need for more deliberative participation and involvement of stakeholders in formulating policies, instead of the Government imposing policies and strategies.

#### 2.1.4 Incentives for the Manufacturing Sector

A large number of tax and non-tax incentives are available to manufacturing companies in Tanzania subject to fulfilling eligibility criteria. These include the following:

#### I) Corporate income tax incentives:

- Tax holidays or reduced tax rates, such as reduced taxes until realization of profits for textile industries;
- Tax credits;
- Investment allowances;
- Accelerated depreciation;
  - Reinvestment or expansion allowances.

#### ii) Other tax incentives:

- Exemption from or reduction of withholding taxes;
- Exemption from import tariffs, including duty free importation of raw materials for capital goods;
- Exemption from export duties;
- Exemption from sales, wage income or property taxes;
- Reduction of social security contributions.

#### iii) Financial and regulatory incentives:

- Subsidised financing;
- Grants or loan guarantees, such as the credit guarantee scheme for agro-processing and agro-business sectors;
- Provision of infrastructure such as access roads and utilities, e.g. water, as well as preferential access to electricity for industrial users through dedicated power

lines;

- TIC and EPZA certificates of incentives;
- Training.
- iv) Preferential access to land;
- v) Preferential access to government contracts;
- vi) Protection from import competition:
  - Subsidised delivery of goods and services;
  - Derogation from regulatory rules and standards.

In addition, 'Strategic Investors' (those investing more than USD 20 million) have access to special incentives. Investors in the Export Processing Zones (EPZs) also have special incentives (e.g. tax exemption if they export at least 80% of their products).

According to stakeholders consulted, incentives provided to the manufacturing sector are helpful and important. For example, in 2012 electricity for industries was not affected by rationing, thereby allowing manufacturers to operate continually. Also, the duty free importation of capital goods has reduced production costs. At the same time, incentives for the manufacturing sector could be improved further if predictability was enhanced. At present, they are provided on a short-term basis, which makes it difficult for companies to take long-term (investment) decisions.

#### 2.1.5 Support Institutions

A large number of institutions, including public sector agencies and private sector organizations, support the development of manufacturing in Tanzania in various ways.

Ministries, Departments and Agencies (MDAs):

- **Ministry of Industry and Trade (MIT),** which is responsible for:
  - Industrial and commercial development policy;
  - Enabling environment for industrial and trade development;
  - Entrepreneurship promotion and development;
  - Monitoring of industrial sector performance; and
  - Provision of support through research on technology and production as well as by setting rules and regulations to guide standards of local and imported goods.
- Tanzania Investment Centre (TIC), which is a "one-stop shop" agency of the Government of Tanzania, established under the Tanzania Investment Act, No. 26 of 1997 to facilitate investment into Tanzania, including access to land for investment.
- Export Processing Zones Authority (EPZA) which is responsible for the development of EPZ/SEZ infrastructure, provision of business services to EPZ/SEZ investors, and issuing of EPZ/SEZ licenses.
- Ministry of Lands, Housing and Human Settlement Development, which promotes the manufacturing sector through land surveys and liaising with TIC in provision of land to investors.
- Business Registration and Licensing Agency (BRELA).

- The Tanzania Trade Development Authority (TanTrade), the successor institution to the Board of Internal Trade (BIT) and the Board of External Trade (BET). TanTrade is mandated to implement the National Trade Policy, the National Export Development Strategy, the Trade Integration Strategy and the Agricultural Marketing Policy and other sectoral policies concerned with Tanzania's internal and external trade.
- **Tanzania Bureau of Standards (TBS),** which ensures quality control of products of all descriptions and promotes standardization in industry and commerce.
- **Tanzania Food and Drugs Authority (TFDA),** Tanzania Customs.
- **Tanzania Revenue Authority (TRA),** including its Customs and Excise Department, and the Tanzania Ports Authority.

#### Research and development institutions:

- Tanzania Industrial Research and Development Organization (TIRDO), a multi-disciplinary research and development organization established by an Act of Parliament with a mandate to provide technical expertise and support services to upgrade the technology base of Tanzanian industry. Its focus is on new technology. Its functions include:
  - To carry out and promote applied research to facilitate the evaluation, development and use of local materials in industrial processes.
  - To carry out research in various local and foreign industrial techniques and technologies and evaluate their suitability for adoption and alternative use in industrial production.
  - To promote or provide facilities for the training of local personnel for carrying out scientific and industrial research.
- Centre for Agricultural Mechanisation and Rural Technology (CAMARTEC), which conducts applied research to improve technologies suitable for agricultural and rural development.
- Small Industries Development Organization (SIDO), which supports small scale industries through enterprise development.
- Tanzania Commission for Science and Technology (COSTECH), which coordinates and promotes research and technology development activities in the country.

#### **Business associations:**

- Confederation of Tanzania Industries (CTI).
- Tanzania Private Sector Foundation (TPSF), which acts as an apex institution for the articulation of private sector-led approaches to economic and social policy in Tanzania.
- Tanzania Chamber of Commerce, Industry and Trade (TCCIA).
- Chief Executive Officers Round Table (CEOrt).
- Association of Small Businesses (VIBINDO).
- Tanzania National Business Council (TNBC).





 Business Environment Strengthening in Tanzania – Advocacy Component (BEST-AC), a grant-giving organization established to administer the Private Sector Advocacy (PSA) Fund, which is funded through grants from Denmark, Sweden, and the United Kingdom.

In terms of the quality of support institutions, stakeholders were of the general view that the effectiveness of support to the manufacturing sector provided by most institutions could be improved. For example, some TBS laboratories are not accredited and hence the certificates provided are not accepted in other countries. In response, manufacturers have to send their products outside Tanzania (typically to Kenya or South Africa) for verification. The government needs to adequately fund these institutions so that they can support the sector. In the same vein, the Tanzania Food and Drugs Authority (TFDA) was said to be poor in offering support services to manufacturers in terms of licensing/registration issues and issuing investment permits. A similarly critical assessment was made with regard to the market research and information services offered, as well as research and support services. Regarding education and research institutions, research done by them is more often than not for academic purposes and is unrelated to manufacturing sector needs.

On the other hand, stakeholder satisfaction with TPSF and TANTRADE was high, and these institutions were seen as offering fair and good quality support in the area of trade and business association support. Likewise, the Tanzania Revenue Authority (TRA) was particularly rated fair in supporting customs clearance for the manufacturing sector. Also, institutions such as TIC and BRELA were rated good, but were considered to have weaknesses in the follow up of their licences to see if rules are being complied with. Finally, institutions supporting logistics and delivery of goods were rated differently. Those in the transport (road, port, rail and air) were rated good, fair, poor and fair respectively.

Recommendations for improvements made by stakeholders include the following ones:

- TANTRADE should stick to its core functions of supporting manufacturers in accessing international markets.
- TPSF should support manufacturers more.
- The government should ensure adequate funds for manufacturing-related research and university-industry linkages should be forged.
- Quality institutions such as TBS, TFDA and the central government should harmonise standard testing qualities and facilities. TBS should accredit its laboratories internationally. The government should open up for private sector provision of standards services.
- In the area of customs, TPA and TRA should modernize their facilities by utilizing modern information and

communication technology (ICT). All institutions dealing with customs clearance should work from one window system (one stop centre).

- In the area of logistics the government should invest in ports improvement and efficiency as well as in roads (reduce/remove road blocks and weighbridges), railways (TAZARA, central and northern lines), marine transport in the lakes and ocean as well as improvement and development of airports.
- In the area of licensing, there is a need to speed up processing so as to cut waiting time in institutions such as the National Environmental Management Council (NEMC), TFDA, EPZA, TIC, TBS, BRELA, etc.

# 2.1.6 Infrastructure: Energy, Transport and Communication

Tanzania's infrastructure of direct relevance to manufacturing includes, of principal importance, the transportation, power and telecommunications infrastructure.

#### Energy

The lack of adequate and reliable supply of electrical power - as evidenced by frequent and sustained power outages, low levels of power coverage, a widening gap between power demand and supply (see Dinh/Monga 2013: 28), and a high level of generator use in both mainland Tanzania and Zanzibar - remains a major binding constraint to growth: electricity is currently still available to only one in five Tanzanians.<sup>22</sup> As a matter of fact, the 2011 Tanzania Growth Diagnostic found that the poor provision of electricity was by far the most important infrastructure constraint to investment and economic output in Tanzania (Government of Tanzania and USAID/Millennium Challenge Corporation, 2011). The report also highlighted that in 2006 88% of Tanzanian firms considered inadequate electricity to be a major constraint to their operations, the highest percentage of any country in the World Bank's Enterprise Surveys. Also, the Global Competitiveness Report 2013/14 (World Economic Forum 2013) ranks Tanzania's quality of electricity supply at 131 out of 148 economies.

The above assessments reported in the literature were confirmed in stakeholder consultations. With respect to electricity supply, the main challenges affecting the manufacturing sector mentioned by stakeholders include:

- Low quality and unpredictable supply of electricity: although Tanzania's cost of electricity is the lowest in terms of electricity tariffs in the EAC (USD 0.12/kWh), the poor quality and unpredictable/erratic supply limits the benefits of low rates;
- Occasional power outages characterized by rationing, frequent high/low voltage (but in 2013 there has been some evidence of slight improvement);
- Standby generators are expensive substitutes.

<sup>&</sup>lt;sup>22</sup>See Katrina Manson, "Infrastructure: Power and port projects will ease Tanzania's energy supply and congestion," Financial Times, 30 September 2013.

The deficiencies in the power infrastructure pose substantial threats and challenges to the manufacturing sector's bid to make use of many and unfolding opportunities both within and outside Tanzania. However, positive developments can also be noted: the discovery of substantial amounts of natural gas in parts of Tanzania including Mtwara and Lindi is expected to significantly reduce the electricity problem in Tanzania in the future. In this context, the Government has embarked on substantial investments in gas to reduce overdependence on hydropower, such as the ongoing gaspipeline project. In effect, the power system master plan for 2010-33 emphasises the transformation of Tanzania's rich natural gas reserves into power generation through public-private partnerships. Private sector participation in the power sector is already being implemented: for example, the Government has allowed private sector to generate power (Symbion, Songas, and IPTL) who together are able to generate 500MW.

To reduce the cost of electricity, more competition in electricity generation, transmission and distribution is needed – the Tanzanian Electricity Supply Company (TANESCO) should be split into three companies in order to minimize costs.

#### Transport

As regards transportation facilities, the major components are the ports such as Dar es Salaam, Mtwara, Zanzibar, Tanga and those in the shores of lakes Victoria, Tanganyika and Nyasa among others. Airports include the Mwalimu Julius Kambarage Nyerere International Airport in Dar es Salaam; Abeid Aman Karume International Airport in Zanzibar, Kilimanjaro International Airport, Mwanza airport and many other airports and airstrips. Other infrastructure serving the manufacturing sector in Tanzania includes the network of tarmac road especially trunk roads linking various regions and major towns as well as feeder roads. Tanzania has also railway lines including the central line that stretches from Dar es Salaam to Kigoma. Another railway of potential importance is the Tanzania-Zambia Railway that stretches from Dar es Salaam to Kapirimposhi in Zambia.

Over the past decade, the Government has invested heavily in the

rehabilitation and expansion of the road network. Nonetheless, much remains to be done in order to facilitate transport of manufactured goods both domestically and especially to the ports for export. With respect to the cost and quality of transport, the following constraints have been noted by stakeholders:

- Very high costs of transport: Road = USD 114 cents ~ USD 2 per tonne/km compared to Asian countries at USD 6 - 7 cents per tonne/km.
- Poor road quality: most trunk roads are good but rural/feeder roads are very poor making transport of goods (raw materials and finished manufactured goods) difficult.
- Unreliable and low quality, inefficient railway transport.
- Very congested and inefficient ports, inadequate cranes in quantity and quality.

Government is fully aware of these shortcomings and has an ambitious ongoing programme, i.e. the 2007 Transport Sector Investment Programme, which was adjusted and reinforced by the FYDP, which aims at improving and expanding roads, ports and railways. Of particular importance are efforts to decongest the Dar es Salaam port by, inter alia, establishing an Inland Container Depot, as well as improving linkages with the road and rail network. Although the Government's priority on improving transport infrastructure – ports, roads, railways, and airports – is welcome, as noted by Dinh and Monga (2013: 29), it will also be important to complement infrastructure improvements with transport policy reforms and improvements in services and logistics, as discussed in section 2.1.7 below. To a certain extent, Government is working on these issues. For example, reforms at the Dar es Salaam port are being undertaken to improve efficiency at the port.

#### Communication

Manufacturing also relies heavily on a functioning telecommunications infrastructure. Improvements in this area have been noted over the last decade (notably in the mobile telephony sector and the use of internet), and Tanzania's communication indicators are approximately at the study country average, and continue to be substantially below those of other developing countries (Table 10).

Indicators	Tanzania	EasternAfrica average*	South Africa	Vietnam	China	Rep. Korea
Telephone lines (per 100 people)	0.4	0.6	7.9	11.4	20.6	61.9
Mobile cellular subscriptions (per 100 people)	57.1	45.8	134.8	149.4	81.3	110.4
Internet users (per 100 people)	13.1	11.8	41.0	39.5	42.3	84.1
Fixed broadband Internet subscribers (per 100 people)	0.0	0.05	2.2	5.0	13.0	37.6
Secure Internet servers (per 1 million people)	0.8	1.5	83.7	6.7	3.1	2751.6

\* Calculated as the average of the values for the six continental study countries, i.e. excluding the value for Seychelles of the corresponding indicator. Source: World Bank's World Development Indicators.





Despite these indicators, stakeholder views on the constraints of the telecommunication infrastructure focused primarily on the cost aspect. Thus it was stated that telephone services are relatively good and of high quality (generally) because of many service providers, but prices are still high, despite recent improvements. Conversely, internet was felt to be poor – which is in line with the virtual inexistence of fixed broadband internet – and characterized by high charges. Nonetheless, stakeholders confirmed that they could engage in e-commerce and thus could effectively reduce costs.

Government is aware of these constraints. Among the interventions to address the challenges in the telecommunication

sector is the establishment of the Tanzania Communications Regulatory Authority (TCRA) as a regulator in communication mandated to monitor all issues related to communication and license providers.

#### 2.1.7 Trade Logistics

International trade logistics in Tanzania have improved significantly on an overall basis in recent years but with some notable backsliding in key areas such as customs clearance and timeliness of shipments. Tanzania's ranking on the overall Logistics Performance Index calculated by the World Bank improved substantially between 2007 and 2010, from rank 137 to 95, and slightly further between 2010 and 2012 (Table 11).

Table 11: Logistics Performance Index (LPI) Rankings 2010/2012, Tanzania									
Indicators	2010 Rank	2012 Rank	Change in Rank						
Customs	74	129	-55						
Infrastructure	125	104	21						
International shipments	86	61	25						
Logistics Competence	104	93	11						
Tracking & tracing	103	77	26						
Timeliness	80	99	-19						
Source: World Bank's Logistics Performance Index.									

Compared to regional and global competitors, Tanzania is towards the low end of the scale in terms of effectiveness. In particular, its clearance times are high, even when there is no physical inspection of the goods. In business, time is money and the long clearance times add deadweight costs to Tanzanian trading firms. Lead times for ports are also on the high side as are the actual out-of-pocket costs of shipping standard containers (Table 12).

Table 12: Domestic LPI Performance 2010, Tanzania and benchmark countries									
Indic	Tanzania	Uganda	Kenya	Ethiopia	South Africa	Vietnam	Korea		
Clearance time with physical inspection (days)	3.11	7.48	3.05	20	2.67	3.46	1		
Gearance time without physical inspection (days)	3.27	3.87	1.36	18	0.5	1.41	0.63		
Physical inspection (%)	6.9%	75.0%	29.1%	75.0%	5.1%	41.8%	2.6%		
Multiple inspection (%)	1.0%	11.2%	7.3%	75.0%	1.5%	4.2%	4.8%		
Lead time export for port/airport, median case (days)	3.16	5.48	2.96	5	2.28	1.41	1.59		
Lead time import for port/airport, median case (days)	7.07	13.96	5.92	6	3.25	1.73	2		
Number of agencies-exports	4	3.5	4.5	5	3.2	3	2.5		
Number of agencies-imports	4	6	5.38	8	3.08	5.5	2		
Typical charge for a 40-foot export container or a semi-trailer (US\$)	2,000	2,466	1,236	1,000	907	500	354		
Typical charge for a 40-foot import container or a semi-trailer (US\$)	3,000	2,236	2,460	2,000	1,516	500	500		
Source: World Bank's Logistics Performance Index.									

#### 2.1.8 Access to Finance

Before the major and far-reaching economic reforms dating back to the mid-1980s, the availability of investment and operating finance for manufacturing was a major issue. This was due in part to a limited supply of banking and a total lack of non-banking financial institutions in the country. Following liberalization, there was an influx of finance, including over 40 banks, comprising at least one investment bank (Tanzania Investment Bank, TIB), several micro finance institutions (MFIs), and several non-banking financial institutions.

For some micro, small and medium manufacturing enterprises in Tanzania, access to finance is still a challenge. This is mainly due to inability to fulfil conditions for accessing finance. These include availability of good and bankable business plans, availability of collateral, availability of and access to guarantee schemes as well as relatively high borrowing interest rates of up to 20% and above. In the 2012 Business Leaders' Perceptions of the Investment Climate in Tanzania, which included the views of manufacturers, access to finance was seen as an important problem factor by 70% of business leaders (see BEST AC, 2013: 12). Indeed, the constraints regarding the availability and cost of finance are also confirmed by international rankings - e.g. Tanzania's 2014 rank in the Doing Business indicator for "Getting Credit" is 130 - and the real lending rate is comparatively high; not least as a result of the financial sector's high degree of concentration and lack of competition.23

On a positive note, the fact that real interest rates on savings are positive encourages and savings and thereby creates a sound basis to finance investments in the manufacturing sector.

#### 2.1.9 Education, Training, and Skills

Educational institutions in Tanzania range from pre-primary school to university level. There are also various vocational training institutions. All these offer education, training, and skills for various sectors of the economy, including manufacturing.

The Government of Tanzania and UNIDO (2012) report that, overall, 20% of the average company's workforce consists of university graduates. However, regarding the Tanzanian workforce skills content, the same report notes a number of worrying signs. About two-thirds of business respondents claim that none or few of their workers are literate, about four-fifths claim none or few are numerate, and 90% claim that none or few have IT skills. This study also found that, on average, managers were more satisfied with their workers' academic, learning, communication, and teamwork skills, and less satisfied with their presentation, problem solving, initiative, and analytical skills. The study suggests that there is a large skills gap in manufacturing firms, requiring more university graduates if companies are to expand. Small companies want to Over 75% of manufacturing companies are in need of more engineers and computer science experts. The vast majority of companies (84%) are seeking to recruit more graduates from the Science, Technology, Engineering & Math (STEM) fields, closely followed by business graduates. Demand for graduates from non-STEM fields, such as the arts, languages, social sciences, and humanities is lower, but still at about 50%.

The Government of Tanzania and UNIDO (2012) found that skills availability is very low for Tanzanian manufacturers. Over 80% of companies have no difficulty finding low-skilled workers, but finding medium-skilled workers is difficult and finding high-skilled workers appears to be nigh impossible, with 90% of respondents claiming it to be very difficult to find high-skilled workers. Over 75% of respondents indicated relevant work experience, followed by a positive attitude, to be the most important factors in recruiting graduates. A candidate's academic background, degree, or university attended are generally not considered as relevant. This suggests a general lack of confidence among companies in the quality of the education system and concerns that graduates lack relevant practical experience.

Although the IIDS recognizes that "[s]carcity of middle level management and skilled labor is one of the most serious constraints and at the same time the factor which pushes up the operational costs for Tanzanian industries" (p. 92), no specific policy measures are identified, apart from a reference to the important role of the Vocational Education and Training Authority (VETA) and the need for a national test system. The SIDP had attached comparatively more importance to education and training but failed to define specific measures. More importance on skills development would seem to be warranted in view of the important effect that this has on productivity and hence cost competitiveness.

#### **2.2 Product Diversification and Structural Transformation of Manufacturing**

#### 2.2.1 Product Diversification

Table 13 presents two indicators measuring Tanzania's manufactured exports product diversification: the ten-commodity concentration ratio and the Herfindahl-Hirschman Index (HHI). For both indicators, scores go from 0 (being the most diversified) to 1 (being the least diversified). Although a substantial volatility fromyear-to-year can be noted, the trend of both indicators since 2001 (in particular the trend of the concentration ratio) seems to indicate that there has been some diversification in the last decade.

increase their share of university-educated workers by only 5%, while large companies want this share to increase by more than 20%.

 $<sup>^{\</sup>rm 22}{\rm Dinh}/{\rm Monga}$  2013: 25f. Also see their more detailed analysis related to access to finance at 2013: 31-36.





Table 13: Concentration of Tanzania's manufactured exports, by product												
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012 <sup>[3]</sup>
Concentration ratio <sup>[1]</sup>	0.82	0.82	0.80	0.78	0.76	0.73	0.33	0.61	0.69	0.61	0.72	0.47
Herfindahl-Hirschman Index <sup>[2]</sup>	0.18	0.18	0.33	0.30	0.24	0.22	0.05	0.10	0.18	0.11	0.19	0.04
Source: Author's calculations based on International Trade Centre's TradeMap. Notes: [1] The concentration ratio is calculated as the share of the 10 most important manufactured export products (at HS 6-digit level) in total manufactured exports. [2] $HHI = \sum s_i^2$ , where s <sub>i</sub> is the share of export product <i>i</i> in total manufactured exports. [3] 2012 data are based on mirror data and the sharp changes in that year may be affected by that.												

As shown in Figure 9 and Figure 10, Tanzania's manufactured exports are less diversified (in terms of product diversification) than most of the selected benchmark countries but compares relatively

well with other study countries (within this group, only Kenya exhibits a substantially higher level of diversification)<sup>24</sup>.



<sup>&</sup>lt;sup>24</sup>This confirms the findings in Government of Tanzania and UNIDO (2012): When benchmarking product diversification against a selection of 14 competitor countries, Tanzania ranked sixth in 2010, having risen one position since 2000. This shows that Tanzania has recently improved its export performance, by diversifying its exports to a selection more in line with world demand.



Table 14 presents another indicator to measure the product diversification of Tanzania's manufactured exports: the Manufactured Product Diversification Index (MPDI), which was originally developed by UNCTAD and then amended by UNIDO for manufacturing products. The MPDI measures the extent to which a

country depends on particular products relative to world exports: in other words, it compares a country's export structure with the world's export structure. Scores go from 0 (being the most diversified) to 1 (being the least diversified).

Table 14: Manufactured Product Diversification Index (MPDI), Tanzania <sup>25</sup>												
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
MPDI	0.431	0.432	0.403	0.393	0.381	0.389	0.334	0.358	0.376	0.351	0.371	0.351
Source: Auth	Source: Author's calculations based on International Trade Centre's TradeMan											

Figure 11 shows the evolution of the MPDI value from 2001 to 2012

for Tanzania and the selected benchmark countries.

<sup>&</sup>lt;sup>20</sup>The MPDI is computed by measuring absolute deviation of the country share from world structure, as follows:  $MPDI_j = \frac{2\ln \mu_j - \kappa_i j}{2}$ , where  $h_i$  is the share of product *i* in total manufactured exports of country *j*, and  $h_i$  is the share of product in total world manufactured exports. Only those manufactured products *i* whose share in a country's total manufactured exports is 0.5% or above are considered.







The observed trend since 2001 and the relative value of Tanzania's MPDI compared to selected benchmark countries confirm the findings derived from the analysis of the two other indicators: while Tanzania's manufactured exports are still not very diversified, notable progress has been made over the last years, and the level of diversification of Tanzania's manufactured exports is now higher than the regional average.

In terms of Tanzania's diversification of export markets, Tanzania's performance is generally better than its EAC partners, due mainly to Tanzania having a more limited dependence on the EAC market. Kenya displays a very high market concentration (72% of its exports go to Sub-Saharan countries), positioning it last in rankings. The Government of Tanzania and UNIDO (2012) rank Tanzania eighth among 14 countries in 2010 with regards to market diversification, an improvement of two positions since 2000.

The key markets for Tanzanian manufactures have changed over time. The market destination structure shows that, in 2000, 78% of Tanzania's manufactured exports were concentrated in two markets: the EU (49%) and Sub-Saharan Africa (29%). By 2010, however, the share of Tanzanian manufactured exports going to the EU decreased substantially, while exports to Sub-Saharan Africa (36%) and East Asia and the Pacific region (34%) gained in significance. Contributing factors, according to the Government of Tanzania and UNIDO (2012), include China's role and the emergence of other markets in the region.

The Government of Tanzania and UNIDO (2012) suggest that East Asia will have a growing importance as a consumer market in the future, while stringent standards and complex consumer demands in the EU and US markets restrict imports. Together, these factors encourage Tanzania to foster strong relationships with East Asian countries. The study argues that African markets, on the other hand, might display less competitive pressures, as well as lower demand standards, making them easier to access in the short run.

Overall, Tanzania is on a promising path: its relatively high diversification of export markets and decreasing product concentration mean a reduced vulnerability for its manufacturers. In terms of further reductions of product concentration, the challenge for Tanzania is to bolster the production and export of other manufactured products, including resource-based and lowtechnology products, but with high value added. In relation to export markets, still more could be done for Tanzanian manufacturers to actively participate in several important world markets which are not currently served. Policies are accordingly needed to promote new manufacturing activities, to attract investment for these sectors, and to diversify export markets.

In doing so, Tanzania can learn from the more mature economies of South Korea, China, South Africa, Malaysia, and Indonesia, which

are all characterized by high product and market diversification. This lowers their vulnerability to changing global demand, price fluctuations, and competition.

#### 2.2.2 Structural Transformation

Tanzania's economy is predominantly agricultural. Over time, however, industrialization has progressed from primary sectors to secondary sectors, including manufacturing. There has also been a shift towards the services sector. Regarding the manufacturing sector's transformation, the Government of Tanzania and UNIDO study (2012) indicates that a shift is taking place in production and export structures towards more "complex" activities in Tanzania. This would suggest some domestic technological deepening and upgrading, albeit limited.

Table 15, which presents the distribution of Tanzania's manufactured exports based on UNIDO's technological

classification of manufactured exports, provides however little evidence for such a transformation; while a shift away from resources based manufactures towards low- and mediumtechnology products was evident in the first half of the last decade, this trend has been converted since about 2007/2008, and the composition of manufacturing exports in 2012 thus was very similar to the one a decade earlier. Moreover, Figure 12 demonstrates that Tanzania remains at the low end of the technology spectrum compared to the benchmark countries. Tanzania's high share of resource-based manufactures in total manufactured exports (which reflects the fact that the bulk of Tanzania's manufacturing sector consists of agro-processing activities) is substantially above the regional average, while in terms of its export structure the region is already characterised by a strong dependence on resource-based manufactures compared to the benchmark countries.

Table 15: Change in Tanzania manufacturing exports by technology classification, 2001-2012												
Export Flows	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Resource-based	0.763	0.776	0.666	0.652	0.647	0.611	0.588	0.556	0.624	0.653	0.687	0.738
Low-technology	0.181	0.182	0.211	0.197	0.202	0.159	0.206	0.216	0.172	0.168	0.147	0.132
Medium-technology	0.026	0.034	0.107	0.138	0.13	0.205	0.188	0.158	0.15	0.151	0.134	0.114
High-technology	0.03	0.008	0.017	0.013	0.021	0.025	0.018	0.07	0.054	0.027	0.033	0.016

Source: Author's calculations based on International Trade Centre's TradeMap.

Note: The figures for this table were calculated following UNIDO's technological classification of manufactured exports, according to SITC revision 3; for the detailed classification of SITC sections per category, see Annex 1 of UNIDO's Tanzania Industrial Competitiveness report (UNIDO, 2012: 104). Note that the definition of "manufactured export" according to this classification is narrower than the definition we used elsewhere in the report.







# **2.3 SWOT Analysis of the Manufacturing Sector** in Tanzania

As discussed in the preceding sections, Tanzania's manufacturing sector faces a number of binding factors and constraints. These include various policy, institutional, and capacity constraints; legal and regulatory frameworks; as well as developmental aspects, such as inadequate infrastructure quantity and quality, availability and access to finance, and technology.

On the other hand, Tanzania's manufacturing sector also presents

a number of strengths and opportunities, also discussed in this chapter. The domestic availability of important inputs for manufacturing, low labour costs, increasing domestic and regional demand, and a locational advantage for trading with the world are but some examples of these strengths and opportunities.

Box 1 summarises the various identified issues in the form of a SWOT analysis of Tanzania's manufacturing sector, based on the reviewed literature, field interviews, and observations.

#### Box 1: SWOT Analysis of Tanzania's Manufacturing Sector

Strengths	Weaknesses
Locational/demand conditions:	Factor conditions:
<ul> <li>Locational/demand conditions:</li> <li>Geographical advantage (Indian Ocean location with about eight land-locked countries as potential markets);</li> <li>Large and growing regional markets such as SADC and EAC (combined population of about 300 million);</li> <li>Relatively diversified export markets.</li> <li>Factor conditions:</li> <li>Rich agricultural potential for agro-processing manufacturing;</li> <li>Potential for hydrocarbons – e. g., oil and in the immediate future natural gas;</li> <li>Rich natural resources, including metals and nonmetallic minerals as well as cement;</li> <li>(Relatively) low labour costs and effective labour regulations.</li> <li>Related and supporting industries:</li> <li>Emerging local, regional and global value chains including the food sub-sector and oils and gas sector;</li> <li>Availability of supporting services albeit inadequate.</li> <li>Firm strategy, structure and rivalry:</li> <li>Increasing competition from domestic and foreign manufacturers.</li> <li>Government/political and social conditions:</li> <li>Some efforts to improve the business environment including the legal, policy and regulatory environment;</li> <li>Peace and growth of the region;</li> <li>Domestic political and social stability can attract the establishment of manufacturing firms.</li> </ul>	<ul> <li>Factor conditions: <ul> <li>High cost of imported inputs;</li> <li>Inadequate infrastructure;</li> </ul> </li> <li>Demand conditions: <ul> <li>High domestic poverty levels;</li> <li>High inflation rates.</li> </ul> </li> <li>Related and supporting industries: <ul> <li>Weak domestic value chains (except in food processing) and lack of integration into global value chains;</li> <li>Inefficiency of support services such as the port of Dar es Salaam and TAZARA and Central line railways;</li> <li>Difficult access to finance especially for small-scale manufacturers</li> </ul> </li> <li>Firm strategy, structure and rivalry: <ul> <li>Unfair competition from counterfeit manufactured goods and illegally untaxed products, non-tariff barriers;</li> <li>Even though it is currently increasing, the level of competition among manufacturing firms is still comparatively weak.<sup>26</sup></li> </ul> </li> <li>Government: <ul> <li>Poor business environment as shown under the section on enablers;</li> <li>Weak customs administration which gives rise to under-declared quantity of goods imported and undervaluation of the costs of imported goods.</li> </ul> </li> </ul>

<sup>24</sup>See Kahyarara (2012) and Dinh/Monga (2013: 35ff.) for more detailed analyses of the links between competition and manufacturing development in Tanzania.

<ul> <li>More private sector – and business – friendly policy, legal and regulatory environment such as the introduction of the Public Private Partnership (PPP) policy and the 2013 government adoption of Malaysian model of Big Results Now under Presidential Delivery Bureau;</li> <li>Emerging oil and gas industry create additional demand for manufactured products;</li> <li>The recent discovery of gas creates new opportunities that could transform industry in Tanzania, as gas could also be used as a feedstock for the manufacturing of a number of products;</li> <li>President Obama's Power Africa Initiative;</li> <li>Growing local, regional and global markets;</li> <li>Development Partners interventions.</li> </ul>	<ul> <li>Threats</li> <li>Decline in demand in times of economic crisis such as the 2008 global economic crisis and the 2010 Euro Zone sovereign debt crisis;</li> <li>Increased exports of gas and other raw materials might lead to appreciation of the Shilling, thereby reducing international competitiveness of manufacturing sector.</li> </ul>
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From the point of view of entrepreneurs, the top issues on which the Government should focus its attention are, in order of priority, power supply and corruption, followed by the level of taxation and tax administration, as shown in Figure 13 and Figure 14 below (in Figure 13, the lower the number, the higher the priority).



difficulty for business and in which the government is making the problem worse will get the lowest score.

<sup>&</sup>lt;sup>27</sup>The "enabling environment priority index" combines the perceived level of difficulty imposed on a business with the perceived effort of government in addressing the issue. In this chart, the score has been inverted and rescaled so that a factor that causes the most







Finally, in the boxes below, two case studies are presented to illustrate the above identified issues with the actual experience of manufacturing firms. It should be noted that the purpose of the consultations undertaken for the case studies was to focus on the constraints in order to identify potential remedies.



#### Taxes

- High tax rates: Tanzania's VAT rate of 18% is higher than those faced by other EAC countries (Kenya's VAT is 16%, for instance). This reduces the competitiveness of Tanzania's manufactured goods relative to other EAC markets where consumers are able to engage in cross-border shopping.
- Tax administration is complicated by the absence of a one stop shop for payment of various taxes.
- Policy advice: Tanzania ought to consider means of increasing revenue other than the VAT.

#### **Regional trading blocks**

Tanzania is not a member of COMESA, which makes its exports of manufactured goods to COMESA members uncompetitive compared to other COMESA countries, such as Kenya, which is also in EAC.

#### Infrastructure

 Feeder roads and main roads to and from factories, such as tea or timber factories, are often very poor. This is also the case for roads leading to farms like Idodi, Pawaga, and Dabaga (in the Iringa region). These areas produce raw materials for food processors. A Dutch company stopped investing in food processing in Tanzania due to poor infrastructure, including the lack of acceptable airports in regions (Nduli airport only has capacity for 30-tonne planes, while the company needed an airport that could handle at least 100-tonne cargo).

#### Electricity

Supply of electricity is inadequate and unstable and electricity tariffs are too high, making them uncompetitive. Electricity users using 30 kWh to 80 kWh pay less per unit than those using over 100 kWh, who tend to be manufacturers. Manufacturers are at times also required to pay for electricity installation costs, such as buying poles, wire, and transformers.

Source: Stakeholder consultations.

В	ox 3: IVORI Case Study, Iringa Region
	The Irings Vegetable Oil and Related Industries (IVORI) is in the feed processing sub-spater. It feed a number of issues
	riven the way the VAT was introduced in Tanzania and also with a range of regulatory requirements
	Inconsistent application of the VAT
	IVORI used to process sunflower oil, but closed down this business when the VAT was introduced since small
	processors were not taxed, making it a skewed plaving field
	<ul> <li>At 18%, the VAT is higher than Kenva's 16%, According to the company, common import tax/VAT is necessary</li> </ul>
	within FAC.
	<ul> <li>The service levy has been removed but regulatory taxes/fees are paid. For example, the fire department wanted</li> </ul>
	the company to pay fire fees per square metre of plant.
	The Tanzania Bureau of Standards (TBS) and Tanzania Food and Drugs Authority (TFDA) are adding production
	costs through the fees that manufacturers pay.
	Sweets manufacturing:
	VAT is paid all along the sweets manufacturing chain. Imports needed include glucose, flavour, and sugar (local
	sugar is more expensive than imported varieties). The Kilombero Sugar Company was allowed to sell sugar at
	world market prices. However, all raw materials are now imported due to local inputs, such as sugar, being of a
	lower quality.
	When sugar was smuggled out of Tanzania it was difficult to source locally.
	Standards issues
	IBS standards do not allow colour on tomatoes (for tomato sauce), while customers want colour in this product.
	Imported tomato sauce, such as Heinz and American Garden, have colour. It appears there is a double standard.
	IBS does not always respect other standards bureaus on some products.
	<ul> <li>The Weight and Measures Authority is about to introduce a charge based on Cost. Insurance and Erright (CIE) as</li> </ul>
	its income source. This will be double counting/tayation because the Redigtion council charges are based on CIE
	<ul> <li>Others that are also demanding similar charges from manufacturers include TRS_TDEA_and the Occupational and</li> </ul>
	Safety Healthy Authority (OSHA), which charges inspection fees for inspecting food
	<ul> <li>The Local Government Authority (LGA) charges 0.3% on turnover even when no profit is made. LGAs also charge</li> </ul>
	service fees, solid waste fees, and packing fees. This type of payment costs IVORI a total of Tshs 30 million.
	The Government Chief Chemist wanted to charge all chemicals that are used in production, but the company was
	able to negotiate against it.
	Too many regulatory bodies
	The manufacturer is of the view that there are too many regulatory bodies, adding monetary and non-monetary
	(such as time, stress) costs to the production process, which contributes to the manufacturing sector being less
	cost-competitive.
	Starting on 1 September 2013, the Dar es Salaam Port wants all Bills of Lading to go through its agency for
	electronic scanning, which will add more costs for manufacturers.
	IBS removed COTECNA, but introduced Pre-Shipment Verification of Standards (PVOS), which adds cost for
	tirms, who also pay Skills Development Levies (SDL).
	Ine manufacturer bought butter from South Africa, due to shortages in Kenya. It took two months to get the
	PVOS (due to bureaucracy in South Africa).
	<ul> <li>Too many costs lead to hagging out or manufacturers or forcing them to import cheaper products and selling them inputs instead of manufacturing leadly. The manufacturer suggested that one company producing ism in Tenzania.</li> </ul>
	alosed its iom factory and is now importing the same iom. This manufacturing environment is not conducive to
	importing
	<ul> <li>In 2013 TBS imposed new laws prohibiting it from giving PVOS exemptions for raw materials without TBS</li> </ul>
	certification. This does not recognize the fact that dual-purpose raw materials. like sugar, already had exemptions
	The new PVOC costs (0.5% of the value) will add production cost for sweets
	Incentives
	IVORI faces challenges to access available incentives. While establishing the chocolate factory, it benefited from
	TIC incentives that were used to purchase vehicles. However, Tanzania Revenue Authority (TRA) is causing issues
	with respect to the depreciation of these vehicles. The chocolate business model is not understood by TRA: the
	manufacturer invests his sweets' sales earnings in advance, but the TRA taxes these earnings as though they are
	undeclared sales. TIC incentives are therefore cumbersome to implement at the TRA level, which means the





manufacturer does not enjoy the 50% reduction benefit.

#### **Support institutions**

• IVORI has received some support services from support institutions, such as CTI, but IVORI is of the opinion that CTI does not always deliver the needed support.

#### **Skills/education**

 IVORI, like other manufacturers, experiences problems in hiring local qualified staff to repair complicated machines (such as sweets wrapping machines). It was forced to source staff from India, which cost extra (travel costs, local context translation, work permit costs, etc.). This also incurs time costs, as IVORI had to go through the Labour Ministry to ensure no local skills existed before work permit were issued. The first time IVORI went through this process, it took 6 months for the expatriate to get his working permit. IVORI was forced to pay his salary for this time even though he was not yet performing his work duties.

#### Water

 Water disposal is a problem for IVORI. There is no waste/sewage system in IVORI's area (Ipogoro Iringa Municipal Council), despite paying a service levy, which should include wastewater removal. The company thus built its own wastewater disposal system, in the vicinity of which the Iringa Municipal Council located its school. To assuage ensuing noise complaints, IVORI offered to relocate the school. The Council rejected this offer.

Source: Stakeholder consultations.

In sum, transformation of the Tanzanian manufacturing sector from low-technology to high-technology has not been achieved so far. However, the future prospects are high with increased entry of FDI in the sector bringing with it more sophisticated technology and promising greater linkages to global markets. In the area of harnessing technology, the main challenge includes expanding technology transfer from large to small manufacturers. The problems in this area lie in the differences in the size and nature of these two sets of manufacturers and the absence of a policy and legal framework that makes technology transfer a must. This has been outlined in Diyamett, Ngowi and Mutambala (2012).

Enhancing productivity in the Tanzanian manufacturing sector is faced with a number of challenges. These are mainly in form of the

difficult business environment outlined earlier in this report. While some linkages have developed, many more that are required in the manufacturing sector have not worked. Backward and forward linkages are still limited domestically as a number of raw materials have to be imported. Although this implies linkages to global chains, it might be a negative development in domestic intersectoral linkages.

The policy challenge for the further development of the manufacturing sector is therefore to remove, or at least ameliorate, the weaknesses in order to build the sector based on the strengths and opportunities. The next chapter provides various policy options and recommendations for this.





### 3. POLICY OPTIONS: HARNESSING OPPORTUNITIES AND EASING THE CONSTRAINTS TO MANUFACTURING IN TANZANIA

In what follows, some key policy options to harness opportunities and ease the constraints to the manufacturing sector in Tanzania are outlined.  $^{\rm ^{26}}$ 

#### 3.1 Long-term Vision

Tanzania's manufacturing sector produces mainly low technology and low value-added products. It also produces few products and thus features a highly concentrated and undiversified product palette. Transformation from resource based manufacturing to low technology to high technology is yet to take place fully. Tanzania's current industrial development strategy, the IIDS, focuses on the further development of resource-based manufacturing industries, thereby being less ambitious than the older SIDP, which had (somewhat unrealistically) foreseen the development of a capital goods industry by 2020. While the time frame may have been unrealistic, the vision of Tanzania's structural transformation towards higher shares of low- medium, and finally high technology manufacturing should be maintained - although of course these would ideally be developed based on Tanzania's resource endowments. In any case, a mix of different products is needed to reduce vulnerability to external shocks.

One important implication is that Tanzania needs to carefully manage its natural resource wealth, including gas and mineral resources, in order to avoid the "resource curse". In this context, the Global Competitiveness Report notes that:

> "One crucial factor that allows countries to effectively channel mineral revenues toward productive investments is the presence of strong, transparent, and efficient institutions. The absence of corruption, along with high levels of transparency and accountability and a strong commitment to a longterm economic agenda that is based on steady productivity gains and independent from the political cycle, are necessary, if not always sufficient, conditions to ensure that natural resources support long-term growth" (WEF 2013: 40).

The policy options presented in this chapter do not aim primarily on the further development of resource-based manufacturing industries. Policies for this are in place (under the SIDP and IIDS), and important complementary recommendations have been made in various studies (in particular, Dinh/Monga 2013). Rather, the focus of the policy options in this chapter is on the longer term, focussing on support to the eventually required structural transformation of Tanzania's manufacturing industry towards higher technology products.

#### 3.2 Structural Transformation

As has been pointed out in policy documents (e.g., the IIDS) as well as analytical reports (e.g., Government of Tanzania and UNIDO 2012), macroeconomic stabilization policies, trade liberalization and regional integration have proved to be insufficient in bringing about manufacturing competitiveness and structural transformation in Tanzania. This points to a failure of purely horizontal industrial policies.<sup>29</sup> For structural transformation to take place, specific support is required. Policy options available for this include the following ones.

#### 3.2.1 Formulation and Adoption of a Manufacturing Sector Policy Framework

A policy environment supporting investments in high-technology manufacturing is needed and important. This can be achieved through fiscal policy and fiscal policy instruments such as taxation, incentives, exemptions and subsidies. It can also be achieved through monetary policy and its various instruments such as interest rates. Various policy options (policy mixture) can be used with the aim of attracting and retaining high tech manufacturing in Tanzania. These are not limited to improvements in the business and investment climate but can also include the removal of other (e.g. infrastructural) constraints facing investors/manufacturers in Tanzania.

Likewise, an enabling policy environment for value addition is important for the manufacturing sector. Specific support, such as fiscal and monetary policy instruments, including export taxes, can be used to encourage domestic value addition and discourage export of non-value added manufacturing products. This would seem particularly important in Tanzania's context, where in several manufacturing sub-sectors the value chain is broken: if there is no continuous value chain leading from the domestically available raw material or input (hides, agricultural produce, minerals, gas), downstream producers – i.e. the manufacturers of the final product – will continue to depend on imported inputs. The example of the leather sector, as described in detail by Dinh and Monga (2013: 65ff) is particularly illustrative.

Stakeholder interviews identified various areas, ranging from the specific ways in which VAT was implemented and the structure of electricity tariffs to the educational priorities, which were not conducive to manufacturing. Moreover, incentives that are provided in Tanzania are not necessarily tailored to the manufacturing sector. They are general for investors in all sectors who qualify for the incentives eligibility criteria. There is a need to have incentives that will ensure the development and competitiveness of the manufacturing sector. These include policies to ensure that there is transition from low- to high-technology manufacturing.

<sup>&</sup>lt;sup>28</sup>For a similar set of recommendations, see Wangwe et al. (2014: 44).

<sup>&</sup>lt;sup>29</sup>For a more detailed discussion of horizontal vs. vertical industrial policy, please see the regional synthesis report of this study and the literature quoted there.

Critically, the nature of the policies and incentives that will work in Tanzania's context are not known – that is clear from the failure of manufacturing to take off notwithstanding the many wellarticulated plans and strategies. Pragmatic experimentalism is called for in such cases. Tanzania has several EPZ/SEZs in place, and plans to establish additional ones. Allowing local autonomy in setting framework policies for within those zones would accelerate the learning process of what is needed to make Tanzania work as a manufacturing centre.

# **3.2.2 Strengthening of Support Institutions and Stakeholders**

To attain product diversification, stakeholders should ensure that the policy environment, such as the fiscal regime, infrastructure and other enablers are in place to encourage product diversification. This is also the case for market diversification. However, for stakeholders to play this role they will need to be empowered; this could be an area where donor intervention is particularly helpful.

The same applies to the various support institutions for the manufacturing sector which themselves need various kinds of support in order to be able to fully play their role and contribute to economic transformation. There is therefore the need to enhance the capacity of support institutions so that they are able to support manufacturing adequately. Tanzania should consider establishing a manufacturing centre of excellence with the main mission of analysing domestic policies from the perspective of manufacturing. This centre would work with the various MDAs to sensitize them to the needs of the manufacturing sector. The centre could be organized from existing resources: for example, the various private sector peak organizations could contribute personnel and facilities already in use to form the concentrated nexus of talented individuals and physical resources dedicated to manufacturing-related policy.

A clear and obvious target for such analysis and advocacy would be monetary policy, given the risk of "resource curse"/Dutch disease problems emerging in Tanzania as FDI related to the hydrocarbon discoveries and subsequently the flow of energy work to create comparative disadvantage to Tanzania's manufacturing sector.

#### **3.3 Harnessing Technology, Innovation, Productivity, and Linkages**

The role of technology, innovation, productivity and linkages for the competitiveness of the manufacturing sector cannot be overemphasized. However, the policy environment should be conducive for the opportunities and potential embedded in technology, innovation, productivity, and linkages to be realized by the manufacturing sector. This would entail the following policy options.

#### 3.3.1 Focus on Technology and Innovation

The long overdue policy on science, technology and innovation in Tanzania should be finalized and properly implemented if the role of technology and innovation for manufacturing competitiveness is to be realized.

Technology and innovation issues could also be made more explicit in Tanzania's investment policy. Presently, no legal obligations exist on this matter. This is in our view critical: one of the key contrasts between Southeast and Northeast Asian economic development was the relatively weaker development of indigenous innovative firms in Southeast Asia, where growth was heavily dependent on FDI. In this context, measures that could support the technology and innovation in the Tanzanian manufacturing sector include:

- Develop stronger linkages between research institutes/universities and the private sector, and manufacturers in particular. Furthermore, academic institutions and technology/innovation institutes should be encouraged to developing joint curricula and research projects in collaboration with the private sector;
- Examine the structure, capabilities, and relevance of technology/innovation institutes, including R&D support and technology financing. Priority should be given to a small selection of sectors deemed as strategic to allow for well-targeted interventions;
- Examine the possibility to promote knowledge spillovers among private sector operators, e.g. through cluster approaches. While the cluster approach features prominently in the IIDS, there is no explicit focus on the contribution that clusters can have on fostering innovation and knowledge spillovers. One way of building these in would be through university-linked clusters/technology centres (particularly in non-traditional agriculture; specific sectors would have to be targeted).

#### 3.3.2 Enhancing of Productivity and Linkages

Productivity in general and in the manufacturing sector in the context of this study is a function of many variables including the policy environment. Productivity is affected by, inter alia, the quantity and quality of various factor inputs needed in manufacturing. The policy environment should ensure that such factors as labour and capital – including machinery – are available in needed quantity and quality for the manufacturing sector to increase its productivity. Factors that are needed for high productivity include: highly educated, skilled, healthy, innovative and experienced labour force; adequate infrastructure including electricity, ports, airports, railways and manufacturing premises. Because the role of Tanzania's government is no longer that of conducting business but of creating a conducive business environment, policies should aim at, inter alia, attaining high manufacturing productivity.

Various kinds of linkages are important for the competitiveness of the manufacturing sector in Tanzania. However, for these linkages to develop and be maximized, various interventions are necessary, including policy intervention. There is a need for more targeted policy measures to ensure that various kinds of linkages are in place for the competitiveness of the manufacturing sector. These





linkages include but are not limited to:

- Backward and forward linkages in the context of inter- and intra-sectoral linkages and output-input relationships both through the inputs and outputs markets;
- Linkages within and between local and international value chains;
- Linkages between Foreign Direct Investment and the rest of the economy (e.g., through conditionality for FDI approval and through enhancement of the capacity of local firms to serve as suppliers, contractors and sub-contractors of multinational enterprises (MNEs) undertaking FDI in Tanzania);
- Linkages between universities and industry to ensure, inter alia, that the education and training provided and the research produced in universities meets the demands from the industry.

# 3.3.3 Improvements of Education, Training and Skills Level

Industry leaders in Tanzania consulted for this study noted the inadequate quality of skills especially from fresh university graduates who lack the ready-to-use skills that the labour market needs. Vocational and technical training institutions offer more job-ready graduates than universities, which focus more on theoretical rather than practical education. Partly, this is due to inadequate or lack of university-industry linkages. In short, the clear-cut message from stakeholders in the manufacturing sector is that basic literacy and numeracy are severely lacking while higher education is not turning out graduates with industrial skills and education and industry are not connecting. Several specific approaches can be recommended to address these problems.<sup>30</sup>

First, a leading example of success in developing labour skills today is Finland. It has emphasized equality of access to education. This echoes the success of the East Asian economies which also emphasized widespread basic education. By emphasizing basic access to all youth, Tanzania can develop the basic literacy and numeracy of the population cohorts that will be entering the workforce in the next phase of its development program when it expects to accelerate growth to double-digits. Acting now on basic education will enable the achievement of those growth targets 5 and 10 years down the line.

To support enrolment growth at the tertiary stage, as noted by the Global Competitiveness Report 2013/2014, efforts could also be targeted at improving math and science education at the secondary stage (results of exams for the Cambridge International General Certificate of Secondary Education – IGCSE – are generally particularly weak in science).

Furthermore, combining the ideas of EPZ/SEZ, clusters, and innovation systems, Tanzania could establish technical schools

(along the lines of Germany's Fachhochschule which recruit professors with at least three years of practical experience outside the educational system) in the established EPZ/SEZ clusters, with curricula organized to advance technological adaptation and absorption within the EPZ/SEZ regions. Thus, the technical schools linked to a cluster focussing on agro-processing would also feature professors who had worked in agro-processing and curricula aimed at addressing the issues faced by agro-processing firms. Similarly the technical schools linked to textiles and apparel clusters would focus on those areas. This approach would address two critical problems simultaneously.

#### 3.4 Improving the Business Enabling Environment

Various reports have identified the poor business environment in Tanzania one of the key constraints and binding factors that hold back the development and competitiveness of the country's manufacturing sector.<sup>31</sup> There may hardly be new policy recommendations over and above those given in these reports. However, the following are seen as among the key policy options in the context of this study:

- The efforts and speed to improve the business environment in which the manufacturing sector operates must be improved and fast-tracked;
- There is a need to prioritize the implementation of industrial policy, strategies and projects that will address the business environment challenges in the manufacturing sector;
- There is a need for targeted policy measures to ensure that there is development of strong leadership capabilities to reduce and eventually eliminate the binding constraints for the manufacturing sector; and
- Targeted policy measures to solve the problem of weak and discouraging environment for the manufacturing sector in the short, medium and long term are needed.

The following sub-sections address some particular areas of the business environment which have been identified as constraints for the manufacturing sector, and propose measures for improvement.

# 3.4.1 Infrastructure: Energy, Transport and Communication

Power supply is at the top of the list of complaints of manufacturers, their suppliers, contractors and subcontractors. While the natural gas boom that is now moving towards the launch phase will be critical to meeting the power generation needs of Tanzania as it moves into its 2<sup>nd</sup> and 3<sup>rd</sup> five-year development plan periods, immediate action on rationing and stabilizing power supply to manufacturing industrial districts should be considered a top priority. Clearly, this would be to the disadvantage of other sectors of the Tanzanian economy and society and thus a political issue that would need to be carefully addressed. However, the lesson from success in industrialization is that manufacturing is at the base of

<sup>&</sup>lt;sup>30</sup>Dinh and Monga (2013: 94ff) provide further recommendations regarding institutional improvements of the vocational and technical education system.

<sup>&</sup>lt;sup>31</sup>These have been extensively referred to in this report. They include Government of Tanzania and USAID/ Millennium Challenge Corporation (2011), Government of Tanzania/UNIDO (2012), Sutton/Olomi (2012), BEST AC (2013), Dinh/Monga (2013), World Bank (2013), and World Economic Forum (2013).

that process: the generation of wealth and rising living standards drives from that base and so it needs to be protected from disruptions first.

Another type of infrastructure that needs dedicated policy efforts is transport infrastructure. The various ports especially Dar es Salaam need to be adequately linked with modern railway lines as well as roads, both main and feeder ones. Emphasizing rail links to inland dry ports associated with industrial clusters has two major advantages over road transport. First, for longer distances it is cheaper and not subject to time delays by road congestion. Second, once goods are shipped from the factory gate, the supply chain security cannot be easily compromised as it can with trucking. By the same token, the process of customs control using well established techniques such as the Authorized Economic Operator system can be greatly facilitated and goods can be moved much more quickly through ports. Accordingly trunk rail should be favoured over road links between major industrial regions and the major ports in Tanzania's infrastructure planning.

Finally, as noted in the Global Competitiveness Report Tanzania currently has a low level of technological readiness with very low uptake of ICTs, which can affect its competitiveness: in this context, the country will need to pursue policy efforts to improve the communications infrastructure.

#### 3.4.2 Trade Logistics

Trade logistics for both domestic and external trade in Tanzania need to be improved. This includes timely custom clearance of goods. Tanzania's lack of progress on "trading across borders" calls for application of well-rehearsed reforms in the customs area. One suggestion to facilitate rapid action in this area is to designate the main seaports and airports as EPZ/SEZs. This would allow the formulation of legal frameworks for operation within these zones that are different from those in place in the rest of the country. The advantage of this approach is that it allows experimentation in policies that could not practically be rolled out on a national basis all at once (also see Dinh/Monga 2013: 39ff). At the same time, the experience of Tanzania shows that the complex interactions of policies – even well-meaning policies consistent with what is accepted as best practice regionally and globally – often result in unexpected consequences.

Streamlining the flow-through of goods through ports could cut weeks off the time spent in transit of goods being imported for processing and subsequent export: currently the World Bank's Doing Business "trading across borders" indicator lists 18 days' time to export and 31 days to import, for a total of 49 days to move articles intended for processing trade. The OECD average is 21 days. Accordingly, there are technically feasible ways to cut the time by 28 days or 4 weeks. Since, in a logistical sense, time is equivalent to distance, reducing the time of processing goods through ports by four weeks brings Tanzania four weeks closer in travel time to major markets like China, India and Europe. Moreover, reducing the total length of time would also reduce the uncertainty, which is also a critical factor for business decisionmaking in today's time-sensitive production systems.

Tanzania cannot afford to wait until it sorts out the complications of its internal governance system to get its trade logistics up to worldclass standards – which is what it needs to do to achieve its doubledigit growth ambitions. Transforming ports into SEZs – as already envisaged in the IIDS – for which de novo framework policies can be tried out should be a top priority.

#### 3.4.3 Access to Finance

With over 40 banks in Tanzania, availability of finance should not be a problem as such. However, accessibility to the available finance is still a challenge especially for micro, small and medium-sized manufacturers and in particular those in the informal sector. Access is made difficult mainly due to tough borrowing conditions and collateral requirements that some would-be borrowers are unable to meet. The conditions include availability of fixed assets and guarantees. Other constraints to accessing finance include higher borrowing interest rates of up to 20%, and very limited availability of long-term capital. There is also a challenge of lack of credit reference bureau in Tanzania that makes access to finance challenging, which results in higher borrowing rates. There is a need for policies to address these challenges if the manufacturing sector is to access the available finance relatively smoothly.

A clear area where improved financing can facilitate manufacturing is in supply chain financing. State-of-the-art methods alleviate the problems faced by small suppliers in participating in value chains sponsored by larger manufacturers, in part by using the creditworthiness of the supply chain organizer to extend working capital to suppliers based on contractual commitments. An effective export credit financing system that supports the supply chain of export-oriented production serves at once to develop the backward linkages within the economy, promote enterprise development by enabling small firms to graduate into larger size classifications by providing working capital based on the receivables of the larger, creditworthy buyers, and improve export competitiveness in a WTO-compatible way.

# 3.4.4 Legal, Regulatory and Institutional Environment

The analysis in chapter 2 of this report identified access to land, corruption, and the lack of coherence in the regulatory environment as constraints for the manufacturing sector. Some policy options for addressing these are the following ones.

Regarding access to land, security of land tenure, and construction permits, as noted above Government is aware of these constraints and has enacted various acts to address them, but implementation progress has been slow (Dinh/Monga 2013: 35) – as everywhere, land issues in Tanzania are a complex and politically highly sensitive issue. In response, as suggested above, land issues could be addressed in limited areas on an experimental basis: in EPZs, SEZs or industrial zones in general. Indeed, SEZs are one of core





instruments of the IIDS, but the implementation is still at the initial stage and has been affected by a number of shortcomings, most notably the lack of an effective institutional framework. Addressing these shortcomings should thus be a priority – for this, a troubleshooting approach, similar to the one that was applied in Kenya and Ethiopia in the context of developing the cut flower sectors, should be considered.

With regard to corruption, the situation appears to have deteriorated in the recent past. While the typical approach to corruption is to apply stronger penalties, what may be more important is to tackle the underlying causes. Excessive bureaucracy with complicated and lengthy procedures as well as unclear rules are a gateway to corruption. For example, where the time to obtain construction permits is counted in months, incentives are created for businesses to speed up the process through side payments. Therefore, rules and regulations affecting the manufacturing sector would need to be reassessed in order to identify unnecessary, unnecessarily complex, and unclear rules. Such ex-post regulatory impact assessment should serve to simplify existing rules, thereby not only reducing the breeding ground for corruption but also reducing compliance costs. In addition, in the context of setting new rules, ex-ante regulatory impact assessments should become common practice.

# 3.5 Benefits that Tanzania can Reap from Regional Integration

It is a well-known fact that regional integration matters for industrial development, and by extension, for manufacturing sector development. As correctly stated in the Government of Tanzania and UNIDO (2012), regional integration is an important trigger for economic growth through enhanced openness and trade competitiveness. It stands to foster competition in various markets including the labour market as well as the product input and output

markets. It also has the potential to provide access to wider markets, help diversify investments and production, attract more FDIs especially market-seeking ones.

Regional integration is also good in that it potentially stands to positively affect governance, peace, defence and security throughout the regional bloc in questions. Depending on the level of integration, countries may benefit from reduction and eventual removal of tariffs as well as from imposition of common external tariffs. This may enhance intra-regional trade. At a common market level as is the case for the East Africa Community (EAC), countries may benefit from free movement of labour and capital and at monetary union level, a number of transaction costs related to money exchange and movement between the countries can be substantially reduced.

Benefits of regional integration for the manufacturing sector can be seen in the context of benefits of integration through trade liberalization. This is because trade liberalization is among the primary goals of regional integration. According to the Government of Tanzania and UNIDO (2012), trade liberalization is closely associated with enhanced industrial supply capacity and upgrading, ceteris paribus. Potentially, openness in form of regional integration can lead to a more competitive, innovative and strong manufacturing sector.

However, the benefits of integration vary depending on the country's level of development and maturity. In particular, by increasing competitive pressure it can lead to the exit of manufacturing entities that are uncompetitive or at an infant stage of development. Therefore, industrial policies can complement regional integration in general and trade liberalization policies in particular. Box 4 summarises the EAC's policy in this regard.

#### Box 4: EAC Integration and Industrialization

EAC's mission is "to widen and deepen Economic, Political, Social and Culture integration in order to improve the quality of life of the people of East Africa through increased competitiveness, value added production, trade and investments". Between 2005 and 2010, the EAC implemented a Customs Union and a Common External Tariff on imports from third countries and duty-free trade between the Partner States and common customs procedures. In 2010, the EAC Partner States signed a Common Market Protocol. The protocol seeks to "accelerate regional economic growth and development by introducing the free movement of goods, persons and labor, the right of establishment and residence, and the free movement of services and capital".

According to the EAC Industrialization Policy 2012-2032, the overall objective of the community with regard to industry is to create a market-driven competitive industrial sector based on the comparative and competitive advantages of the EAC region. It also aims to accelerate the structural transformation of the Partner States' economies. In the context of manufacturing, the specific policy targets are diversifying the manufacturing base and raising the valued added content of resource-based exports from 8.62% to 40% by 2032, increasing the contribution of intraregional manufacturing exports relative to total manufactured imports; and transforming MSMEs so they can increase contributions in manufacturing GDP from currently 20% to 50% by 2032.

In addition to the EAC, Tanzania is also member of the Southern Africa Development Community (SADC). It was also a member of COMESA before pulling out.

Regional integration offers several advantages for Tanzania. For example, compared to the EU and US markets, there are relatively lower standards requirements in SADC and EAC markets. This makes the markets more attractive to countries such as Tanzania which have infant industry in more technologically sophisticated products. Both the SADC and EAC markets have a very high growth rate in general. The slowest growing product groups have growth rates above 9% annually. The existing market for resourcebased manufactures is the largest in the two blocs; the EAC market is growing faster for low-, medium- and high-technology goods. It offers an easier route for deepening sophistication. Primary and resource-based goods are the fastest growing groups in SADC, which reflects a de-sophistication of the demand structure of SADC. The above implies that Tanzania's manufacturing sector stands to gain from the SADC and EAC markets. However, as pointed out in the Government of Tanzania and UNIDO (2012), focusing on the EAC market seems to be more relevant for Tanzania to tap into faster and more sophisticated demands. SADC markets are bigger than EAC markets for manufacturing products. However, for most technology levels EAC markets are more dynamic than the respective SADC markets. Accessing markets that are growing faster is easier, therefore the EAC seems to offer more opportunities for Tanzanian manufactures.

According to the Government of Tanzania and UNIDO (2012), new opportunities also exist in medium- and high- technology manufacturing in the EAC. This is because these product groups are growing well above average. Tanzania is currently not yet extensively involved in these categories. The market for mediumtechnology products in SADC is the largest. However, it is growing below the average of all regional markets.

In terms of actual performance, Tanzania has staged an impressive performance in the EAC. Its manufactured exports rose rapidly

from USD 20 million in 2000 to USD 183 million in 2010. This is an increase by USD 163 million or 815%. By 2012, Tanzania was accounting for about 20% of all EAC intraregional manufactured exports, a rapid increase from only 5% in 2000. Tanzania's manufactured exports to the EAC in 2010 were similar to those of Kenya in 2000. This implies that in the context of the two countries' role in EAC, there might be a 10-year trade gap between the two countries and suggests that Tanzania has benefited from intraregional trade (Government of Tanzania and UNIDO 2012). Furthermore, Tanzania has an overall positive trade balance in manufactured trade today with other EAC members. This is the opposite of the situation in 2000 when it faced a deficit in all technological categories. Low-tech exports grew at 36% between 2000 and 2010 implying that Tanzania is becoming a stronger player in the industrial markets of the EAC.

On the other hand, there may also be some challenges that Tanzania will have to address if it is to benefit from regional integration (see Government of Tanzania/UNIDO 2012). The challenges include but are not limited to low industrial capabilities in which skills, technology and infrastructure shortages limit the country's capacity to benefit from the enhanced trade prospects of regional integration. Another challenge is the low purchasing power within EAC in which structural change towards high value added sophisticated manufactures can be hampered by the limited purchasing power within the region. Furthermore, different levels of development, especially in the sophistication and maturity of the manufacturing sector, are likely to continue inhibiting equitable growth.

In sum, EAC integration offers much expanded labour and product markets and serves to attract FDI from abroad. All these stand to improve the quality of life of the people of EAC in general and Tanzania in particular through increased competitiveness, value added production, trade and investment, technology inflows and social and cultural integration. Therefore, Tanzania's commitment to regional integration should continue.









### 4. CONCLUSIONS, ROAD MAP AND ACTION PLAN

#### **4.1 Conclusions**

It is widely acknowledged that a competitive and private sector-led manufacturing sector plays a key role in socioeconomic transformation and development. The limited role that manufacturing currently plays in Tanzania is therefore a potential source of concern for policy makers and their development partners alike. The sector's share in GDP is about 10%, and employment of around 100,000 absorbs only a small fraction of the total labour force. Also, the sector has a narrow range of products which are mainly low-value-added basic goods, consisting mainly of limited processing of agricultural or resource raw materials.

At the same time, the manufacturing sector has seen rapid growth of 8.6% per annum in real terms over the past decade. Manufacturing exports - mainly to regional (African) and Asian markets - have grown strongly at about 31% per annum over the period 2000 to 2010. Also, Tanzania has risen in UNIDO's Competitive Industrial Performance (CIP) rankings, moving up fourteen places to 106<sup>th</sup> out of 133 countries in 2010 (UNIDO 2013) from 120<sup>th</sup> in 2005, and narrowing the gap between it and the region's leader, Kenya. Although the revealed comparative advantage (RCA) indicates a consistent comparative disadvantage compared with world competition, potential competitiveness of Tanzania's manufacturing appears to be strong: First, unit labour costs are relatively low, with prospects of growing cost advantage in relation to East Asia. Labour market efficiency is also recognized as one of Tanzania's strengths. Second. Tanzania has vast gas. mineral and agricultural raw materials which can be used as manufacturing inputs at competitive prices.

In addition, Tanzania's supply side competitiveness potential has to be seen in combination with a number of opportunities stemming from the demand side: In terms of future opportunities, Tanzanian demand growth provides excellent scope for local manufacturers to increase production. Moreover, neighbouring landlocked countries that have no access to the sea, such as Zambia, Uganda, and DR Congo, represent market opportunities: their total imports reached USD 12 billion in 2010, an amount that is expected to rise by 18% to 21% annually. On the other hand, Tanzania's manufacturing sector faces stiff competition from Chinese manufactured imports, which have increased their share of the Tanzanian market from 4% in 2000 to 12% in 2010 and are making inroads throughout Eastern Africa. Overall, Tanzania has great development potential: the country has booming manufacturing sector exports, vast natural resource endowments, and excellent development potential to better connect the Eastern Africa region to global markets through its seaports.

In order to convert this potential into actual development of the manufacturing sector, Tanzania will need to overcome some binding factors and constraints which include various policy, institutional, and capacity constraints; legal and regulatory frameworks; as well as developmental aspects, such as inadequate infrastructure quantity and quality, availability and access to finance, and technology. Recommendations and actions aimed at addressing some of these issues are presented in the following section.

#### 4.2 Road Map and Action Plan

The following tabular road map and action plan constitutes a nucleus for the further development by Government. It addresses both horizontal and vertical policy recommendations through different phases of the industrialization process.

Action	Expected outcome	Responsibility	Timing (phases)	Pre-conditions
Horizontal Policies				
1. Manufacturing sector policy	framework			
Action 1a: Remove administrative obstacles; tailor incentives for manufacturing	Less bureaucracy and greater uptake of incentives	All relevant Ministries, Departments and Agencies (MDAs)	Immediately	MDAs informed on the cost of bureaucracy to the sector
Action 1b: Provide policy autonomy to established EPZ/SEZs to encourage policy experimentation	Accelerated identification of practical solutions to the unexpected consequences of policy interactions	ШТ	Immediately	Enabling authority granted to the EPZ/SEZ administrators
<ol><li>Support institutions</li></ol>				
Action 2a: Build capacity of support institutions	More informed policymaking	All relevant parent mi nistries	Immediately	Capacity-needs assessment
Action 2b: Educate them on their roles for competitive manufacturing sector	Improved policies	Ministry of Industry and Trade (MIT) through its relevant service providers	Immediately	MIT acknowledging that the institutions need to be educated
Action 2c: Establish a manufacturing centre of excellence for policy analysis and advocacy	Concentrated analysis and advocacy for manufacturing	Various manufacturing sector support (lobby and advocacy) organizations including CTI, TPSF, TNBC, BEST-AC and Members of Parliament	Immediately	None: the conditions are in place
3. Foster lechnology, Innovati	on, Productivity and Linkages			
Action 3a: Finalize and implement policy on science, technology and innovation	Framework for technology and innovation in place	All relevant ministries, Parliament	Immediately	
Action 3b: Develop linkages between research institutes/ universities and manufacturers	More focused applied research	Relevant ministries, universities, and private sector	Immediately	
Action 3c: Identify priorities for R&D support	Focused R&D support to priority sectors	Relevant ministries	Medium term	STI policy in place
Action 3d: Promote knowledge spillovers among private sector operators through cluster approach	Cross-fertilization among manufacturers in clusters increases productivity	All relevant Ministries, Departments and Agencies (MDAs)	Immediately	
Action 3e: Promote knowledge	Use of better techn ology and	All relevant Ministries,	Immediately	

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Pre-conditions			University-industry linkages to determine the needs of the industry	Existence of knowledge on how to conduct tracer studies and use of results for more relevant training	None			Infrastructure needs assessment	Build the capacity of the responsible institutions to lobby and advocate for better infrastructure	Appropriate regulatory amendments	Identification of main manufacturing industrial zones	Conduct trade logistics needs assessment	Conduct customs diagnostic	Appropriate regulatory amendments
Timing (phases)			Immediately	Immediately	Medium term	Medium term		Immediately	Immediately	Immediately	Medium term	Immediately	Immediately	Immediately
Besponsibility	Departments and Agencies (MDAs)		Relevant Ministries and owners of the education and training institutions	Training and education institutions	Training and education institutions	Training and education institutions		Responsible parent ministries and private sector	Manufacturing sector support organizations including CTI, TPSF, TNBC, BEST-AC and Members of Parliament	Responsible ministries	Responsible ministries	Relevant Ministries, Departments and Agencies	Tanzanian Revenue Authority	Relevant Ministries
Expected outcome	skills by domestic manufacturers increases productivity	level	More relevant training, education and skills as per manufacturing sector needs	More awareness by training and education institutions on the relevance of their training/curricula to labour market needs	Addresses the main problem encountered by manufacturers: widespread illiteracy and innumeracy	Intensify natural industry- educational system interaction	oort and Communication	More focused and tailor-made infrastructure	More awareness and sensitization on those responsible for various infrastructure	Sideline the most binding constraint identified by stakeholders in manufacturing	Enable streamlined movement of goods from factory gate	More targeted and focused trade logistics for the sector	Dramatic reduction in transit times to enable processing trade	Enable creation of dedicated business environment for key logistics facilities
Action	transfer from FDI to domestic manufacturers	4. Education, training and skills	Action 4a: Build capacity of training institutions	Action 4b: Conduct tracer studies	Action 4c: Emphasize basic literacy and numeracy on a broad basis	Action 4d: Locate technical schools in EPZ/SEZ industrial districts, with professors required to have industrial work experience	5. Infrastructure: Energy, Transp	Action 5a: Identify the sector's infrastructure needs	Action 5b: Raise awareness and sensitization on the role of each infrastructure to the manufacturing	Action 5c: Prioritize electricity supply to designated manufacturing industrial zones	Action 5d: Priority to rail over road links from main manufacturing zones to ports 6. Trade logistics	Action 6a: Improve trade logistics for manufacturing and related sectors	Action 6b: Streamline import and export processing times	Action 6c: Establish main seaports and airports as SEZs

Action	Expected outcome	Responsibility	Timing (phases)	Pre-conditions
7. Access to finance				
Action 7a: Export financing supply chain financing	Expanded exports	Ministry of Finance	From 2014/15 fiscal year	Review export financing capacity and program
Action 7b: Make access to finance easier	Accelerated growth of small and medium-sized firms	Relevant Ministries and financial institutions	Immediately	Financial needs assessments by the sector
Action 7c: Raise awareness of manufacturers on sources and modalities of financing	Increased awareness on available sources and modalities of funding businesses	BDS providers following initiatives from relevant organizations (CTI, TPSF, TNBC, BEST-AC, MIT)	Immediately	Existence of the awareness of alternative sources of funding on the part of BDS providers
8. Regulatory environment				
Action 8a: Fast-track SEZs, including through troubleshooting approach	Identify policies and measures (on access to land, infrastructure provision for national roll-out)	All relevant MDAs	Immediately	Joint approach by all MDAs
Action Bb: Undertake ex-post and ex ante regulatory impact assessments of regulations affecting the manufacturing sector	Simplification of regulations, reduced corruption and compliance costs	MIT with all relevant MDAs, Parliament	Immediately and then ongoing	Legal basis in place for regulatory impact assessments
Sectoral / Vertical Policies				
Sector 1 : Oil seeds and edible c	oils			
Action 1: Build the capacity of local manufacturers	More competitive local manufacturers	MIT and relevant BDS providers	Immediately	Capacity needs assessment for individual manufacturer
Action 2: Protect local	More competitive local	Ministry of Finance	Immediately	Existence of able oils seeds and
rnariuraciurers iron unian import competition	processors			eulule ulls value criairt acturs
Sector 2: Wood and wood produ	cts			
Action 1: Provide training to manufacturers and staff	Increased HR productivity, reduced unit labour costs	MIT and BDS providers	immediately	Capacity needs assessment
Action 2: Provide needed tools and equipment	Increased productivity through technological upgrading	MIT and DBS providers	Immediately	Tools and equipment needs assessment
Action 3: Develop sector strategy and include elevating sector to priority level	Coherent approach to develop the sector	ТІМ	Immediately	
Sector 3 : Food processing and	beverages			
Action 1: Building the capacity of food processors	More competitive local food processors	Ministry (MIT) and BDS providers	Immediately	Capacity needs assessments for individual processor
Action 2: Provide needed tools and equipment	Well-equipped food processors	MIT and private sector	Immediately	Tools and equipment needs assessment
Sector 4: lextiles Action 1: Build the capacity of local textile manufacturers to	More competitive textile sector	MIT and BDS providers	Immediately	Capacity needs assessment



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Pre-conditions		Equipment and tools needs	4000011011C				Tools and equipment needs	assessment		Capacity strengthening needs	assessment	Capacity of local manufacturers to provide needed quantity and quality of cement and building materials
Timing (phases)		Immediately			immediately		Immediately			Immediately		Immediately
Responsibility		MIT, BDS and the pr ivate sector			Relevant MDAs and private	sector (livestock sector)	MIT and DBS providers			MIT and DBS providers		Relevant Ministries, Departments and Agencies (MDAs)
Expected outcome		Better equipped textile sector	cle	c n c	Increased availability of high-	quality hides & skins	Better equipped leather and	leather goods manufacturers	aterials	Stronger cement and building	materials sector	Fairer playing ground for the sector
Action	compete with imported textile	Action 2: Provide needed	Sector 5: 1 esther and leather and	OCULO O. FORMER AND TOTALIES NOT	Action 1: Commercialise	livestock industry	Action 2: Support technological	upgrading	Sector 6: Cement and building ma	Action 1: Strengthen the	capacity of local manufacturers	Action 2: Prevent unfair competition from imports

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