MENDEL UNIVERSITY IN BRNO

Faculty of Regional Development and International Studies

DIPLOMA THESIS

The Feasibility of Industrial Diplomacy in Tanzania: An Assessment of Industrial Enabling Environment

Supervisor:

Ing. Nahanga Verter, Ph.D.

Author:

Charles Peter Mtakwa

Brno 2017

DECLARATION

I declare that I carried out this thesis independently, and only with the cited sources, literature and other professional sources.

I agree that my work will be published in accordance with Section 47b of Act No. 111/1998 Coll. on Higher Education as amended thereafter and in accordance with the Guidelines on Publishing University Student Theses.

I understand that my work relates to the rights and obligations under the Act No. 121/2000 Coll., the Copyright Act, as amended, in particular the fact that Mendel University in Brno has the right to conclude a license agreement on the use of this work as a school work pursuant to Section 60 paragraph 1 of the Copyright Act.

Before closing a license agreement on the use of my thesis with another person (subject) I undertake to request for a written statement of the university that the license agreement in question is not in conflict with the legitimate interests of the university, and undertake to pay any contribution, if eligible, to the costs associated with the creation of the thesis, up to their actual amount.

In Brno, May 2017 ……

B.A. Charles Peter Mtakwa

ACKNOWLEDGEMENT

First and foremost, I would like to express my heartfelt gratitude to YHYWH who granted me sufficient grace from the beginning to the end of the study program.

I sincerely thank my supervisor Ing. Nahanga Verter, Ph.D. for his valuable comments, consultations and helpful recommendations. My extended acknowledgment also goes to the CARIBU program that financially supported my study program as well my long stay in the Czech Republic and to my loving family (Faraja, Charity, Charisa, Chariton, Dad, Mom, to mention only a few) for their prayers, love, patience and support while I was abroad for studies.

ABSTRACT

Mtakwa, Charles. The Feasibility of Industrial Diplomacy in Tanzania: An assessment of Industrial enabling environment. Diploma Thesis. Brno, 2017.

This thesis discusses industrialization in Tanzania by looking at the extent to which Tanzanian's domestic environment conforms to the country's industrial aspirations as reflected by its industry as well as foreign policy. This study also explores the drivers for and challenges of industrialization in the world, Africa and, particularly, in Tanzania. The study revealed that there are challenges to industrialization that affects Africa, these include; lack of competitiveness, weak logistics and trade facilitation systems, slow regional integration and absence of accreditation frameworks. The study also investigates the internal drivers for industrialization in the context of the situation in Tanzania to identify its readiness to attract foreign investment in the industrial sector. With the application of descriptive analysis in conjunction with the method of regression analysis on the data from 1961 (the year that the country gained independence) to 2015, the findings show that low agricultural output and mechanization, unreliable power supply as well as fettered economy have constrained Tanzania's industrial growth and development. The study discusses the problems and opportunities, and drawn from the theoretical background and conceptual framework with more focus on the results. The following recommendations were made for a more effective move towards the pursuit of industrialization: the country should focus on agricultural innovations and mechanization, it should make vocational training more accessible and affordable to its communities and, last but not least, electricity sources should be diversified for a more promising power supply.

Key words: foreign policy, industrialization, industrial diplomacy, unfettered economy

ABSTRAKT

Mtakwa, Charles. Proveditelnost průmyslové diplomacie v Tanzanii: Hodnocení průmyslového prostředí. Diplomová práce. Brno, 2017.

Tato diplomová práce se zabývá industrializací v Tanzanii zkoumáním, v jakém rozsahu domácí prostředí Tanzánie odpovídá průmyslovým aspiracím země, odrážející se v jejím průmyslu, tak i v zahraniční politice. Tato studie zkoumá také hnací síly a výzvy industrializace ve světě, v Africe a zejména v Tanzánii. Studie odhalila, že existují výzvy pro industrializaci, které postihují Afriku, mezi které patří; nedostatečná konkurenceschopnost, slabá logistika a systémy usnadňující obchod, pomalá regionální integrace a absence akreditačních rámců. Studie rovněž zkoumá vnitřní hnací mechanismy pro industrializaci v kontextu situace v Tanzanii, aby určila její připravenost přilákat zahraniční investice do průmyslového sektoru. S použitím popisné analýzy ve spojení s metodou regresní analýzy na údaje od roku 1961 (rok, kdy země získala nezávislost) do roku 2015, zjištění ukazují, že nízká zemědělská produkce a mechanizace, nespolehlivá dodávka energie i omezená ekonomika omezili průmyslový růst a rozvoj v Tanzánii. Studie pojednává o problémech a příležitostech vycházejících z teoretického pozadí a koncepčního rámce s větším zaměřením na výsledky. Následující doporučení byla učiněna pro efektivnější pohyb směrem k úsilí o industrializaci: země by se měla soustředit na zemědělské inovace a mechanizaci, měla by zajistit, aby odborná příprava byla pro své komunity přístupnější a cenově dostupná a v neposlední řadě by měly být zdroje elektřiny diverzifikovány pro více příznivý zdroj napájení.

Klíčová slova: zahraniční politika, industrializace, průmyslová diplomacie, neomezená ekonomika

LIST OF ABBREVIATIONS

AfDB	African Development Bank
BBC	British Broadcasting Corporation
BIS	Basic Industry Strategy
FDI	Foreign Direct Investment
FAO Stat	Food and Agriculture Organization Statistics
EPP	Emergency Power Producer
EPZs	Export Processing Zones
ERPs	Economic Recovery Programmes
FYDP	Five Years Development Plans
GDP	Gross Domestic Product
GWh	Gigawatt hours
IIDS	Integrated Industrial Development Strategy
ILO Stat	International Labour Organization Statistics
IMF	International Monetary Fund
IPP	Independent Power Producer
kWh	Kilowatt hours
LDCs	Least Developed Countries
LNG	Liquefied Natural Gas
LTPP	Long-term Perspective Plan
MTOE	Million Tons of Oil Equivalent
MVA	Manufacturing Value Added
MW	Megawatt
NBC	National Bank of Commerce
NDC	National Development Corporation
NCI	National Chemical Industries
NIC	National Insurance Corporation
OECD	Organisation for Economic Co-operation and Development
PPP	Purchasing Power Parity
PSMP	Power System Master Plan
SAP	Structural Adjustment Programme
SEZ	Special Economic Zones
SIDO	Small Industries Development Organisation

SIDP	Sustainable Industrial Development Policy
SPP	Small power Producer
TANESCO	Tanzania Electric Supply Company Limited
TAZARA	Tanzania-Zambia Railway Authority
TDV	Tanzania Development Vision
TEXCO	Textile Corporation
TKAI	Tanzania Karatasi Associated Industries
TLAI	Tanzania Leather Associated Industries
TPDC	Tanzania Petroleum Development Corporation
TOE	Tons of Oil Equivalent
Tshs	Tanzanian Shillings
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development Statistics
UNIDO	United Nations Industrial Development Organization
USD	United States Dollars
VETA	Vocational Education and Training Authority
WTO	World Trade Organization

Table of Contents

1. INTRODUCTION

1.1. Background to the Study

The society of humans has evolved through mainly two huge and lasting transitions which deserve the name revolution. The first, Neolithic Revolution, started around 8000 BC and it carries on through thousands of years. Its effect is human settlement on the land and it makes peasant agriculture the standard everyday activity of the human species. The second is Industrial Revolution, which started from the 18th century and is still evolving to date. Basically, it entails people moving from rural and less developed areas into rapidly expanding cities and towns. Additionally, it turns labour into a disciplined and mainly indoor activity, while increasing the difference between managers, employers and owners on one side and workers on the other (Gascoigne, 2001).

The period of Industrial Revolution, which happened around the 18th to 19th centuries, was an era during which rural societies in America and Europe, which predominantly depended on agriculture (agrarian societies) became industrial and urban. Before the Industrial Revolution, which began in the late 1700s in Britain, manufacturing activities were often carried out in people's homes, using less advanced tools mainly basic machines or hand tools. Industrialization marked a shift to powered, specialized machinery, mass production and factories. The textile and steel industries, along with the development of the steam engine, played crucial roles in bringing about the Industrial Revolution, which also witnessed improved systems of communication, transportation, and banking (Staff, 2009).

Recently, the emerging Asian economies have been considerably more successful in manufactured exports than countries in sub-Saharan Africa (Söderbom, 2015). Over the past forty years, Africa's experience with industrialization has rather been disappointing.The share of sub-Saharan Africa's manufacturing in GDP had fallen from 19 percent in 1975 to 11 percent in 2014 (Rush, 2016).

Tanzania is one of many African states that have been struggling in the spectrum of industrialization. Since the coming of the new millennium, the formulation and conduct of Tanzania's foreign policy had economic considerations as its utmost priority. In the year 2001, The United Republic of Tanzania adopted a new Foreign Policy which focuses on economic diplomacy as a means of securing its core national interest as a state. The new Policy manifest itself in active international cooperation engagement, which is basically

geared towards the pursuit of economic objectives, without eliminating the gains of the past but by consolidating the fundamental principles of the traditional foreign policy of Tanzania. Currently, Tanzania is determined to pursue industrialization in some few years to come and it has made it a foreign policy objective through economic diplomacy.

1.2. Statement of the Problem

The role of manufacturing industries in job creation is well documented. All the same, the extent of job creation highly depends upon the pursuit of existing industrial policies and strategies. Tanzania's industrial policies and strategies have, historically, varied in each Government's phase. The policy strategies and frameworks that were pursued since independence depended mainly on the material condition that existed then, that is from the first phase up to the fourth one.

However, buttressing this initiative (of industrialization) through foreign policy and diplomacy, it is something that requires not only sound domestic policies, but also an enabling environment including resources, economic and social conditions for industrialization. It is the purpose of this paper, therefore, to assess the potential of industrial diplomacy in Tanzania.

1.3. Significance of the Study

The study will help policy makers as well as civil servants to know whether Tanzania is ready to pursue Industrial Diplomacy and the appropriate steps to take to buttress the initiative by exploring whether there is an industrial enabling environment within Tanzania. The study will also be of aid to future researchers who will inquire for findings pertaining industrialization in Tanzania.

2. AIM AND METHODOLOGY

2.1. Aim of the Study

The overall objective of the study is **to explore the feasibility of Industrial diplomacy to Tanzania.** The objective primarily purposes to answer the following question: *"Is Tanzania's domestic environment favourable to support industrialization as promoted by its foreign policy?"* To fulfil the overall objective and to effectively interrogate the question, the following specific objectives were determined:

- To assess the nations' agricultural and raw materials output
- To determine how integrated is Tanzania's economy to complement industrialization
- To discover the nation's urban population and skilled labour.
- To assess whether there are enough resources necessary for the forthcoming industries.

2.2. Scope of the Study

This study investigates the feasibility of industrial diplomacy in Tanzania, and discusses the readiness of Tanzania (internally) to pursue the motives of becoming an industrial nation (externally) through economic diplomacy. The study focuses mainly on Tanzania while other countries were used for comparative purposes. It focuses mainly on the variables that contribute to industrialization as proposed by the conceptual framework derived from various industrialization theories. The study, therefore, examines the integration of economy, agricultural output, raw material output (particularly the sources of energy) and demography of urban population.

2.3. Research Questions

- Are agricultural outputs enough to cater for the near-future industrial workforce?
- How well is Tanzanian economy integrated?
- Is there enough labour force in Tanzania for the forthcoming industrialization?
- Are there enough resources in Tanzania to support industrialization?

2.4. Materials and Methods

2.4.1. Sources of Data

The study employed secondary data using the variables as proposed by the conceptual framework. Descriptive analysis was then carried. In depth information is obtained from Tanzania's government reports, statistical websites such as United Nations Industrial Development Organization (UNIDO) Statistical data Unit, Food and Agriculture Organization Statistics (FAO Stat), International Labour Organization Statistics (ILO Stat), International Monetary Fund (IMF) Data, World Bank, United Nations Conference on Trade and Development Statistics (UNCTAD Stat) and others. Data ranges from 1961 (the year that Tanzania gained independence) to 2015. Information was also obtained from library, both written and online, including from various well-respected professional articles such as The East African, The Economist and from other academic journals.

2.4.2. Data Analysis

Descriptive statistics and comparative analysis was exercised, measuring the indicators between Tanzania vis-à-vis selected countries and the rest of the world, and the research questions were answered. Regression analysis was, as well, carried out to measure the strength of relationship between various variables. The model for the simple linear regression is mathematically presented as follows:

Model one:

$$Y = f(x) \quad (1)$$

$$Y = a + \beta_1 X + \varepsilon_i \quad (2)$$

Where;

Y= dependent/explained variable

X= independent/explanatory variable

a= Intercept of regression line

β_1= Slope of regression line

ε_i= Error term

From the data used in this thesis, the functional form of the model is presented here as follows:

Model two

$$IVA = f(GP) \quad (3)$$

Where;

IVA = Industry value added (% of GDP)

GP = GDP per Capita PPP

This model is mathematically stated as:

$$IVA_i = a + \beta_1 GP + \varepsilon_i \quad (4)$$

Model three:

$$IVA = f(UP) \quad (5)$$

Where;

IVA = Industry value added (% of GDP)

UP = Urban population (% of total population)

This model is mathematically stated as

$$IVA_i = a + \beta_1 UP + \varepsilon_i \quad (6)$$

In the regression analysis, positive relationships are expected between urban population as well as GDP per capita PPP and value added industry in Tanzania. This means that an increase in Urban population as well as GDP per capita PPP will bring a corresponding increase in value added industries (% of GDP) holding other things constant.

The obtained results were then presented in; textual, tabular and graphical means. In textual presentation statements with numbers serves as supplements to tabular presentation; Tabular presentation provides a systematic arrangement of related ideas arranged in rows and columns in order to present their relationships in understandable forms and; Graphical presentation encompass charts representing the quantitative variations or changes of variables in diagrammatic or pictorial form.

3. LITERATURE REVIEW

3.1. Diplomacy

Diplomacy has been defined differently by different scholars. It has been defined as the management of international relations by negotiations, the method by which such relations are managed and adjusted by envoys and ambassadors; the business or the art of the diplomat (Nicolson, 1963).

In his classic work, The Guide to Diplomatic Practice, Sir Ernest Satow, has defined diplomacy as "the application of intelligence and tact to the conduct of official relations between the Government of independent States, extending sometimes also to their relations with vassal States"; or more briefly still, the conduct of business between states by peaceful means (Krishnamurthy, 1980, p.36).

Harold Nicholson, who compiled a scholarly treatise—Diplomacy— defined the term as: The management of international affairs/ relations through negotiations, it is the method by which such relations and interactions are managed and adjusted by envoys and ambassadors (Nicolson, 1963).

For the avoidance of doubt, diplomacy is not foreign policy, although it is often used as a synonym for it. While foreign policy represents the principles, objective and attitudes of one particular state towards another; diplomacy is a key instrument that is employed for conveying and giving effect to the spirit of foreign policy (Berridge, 2001).

Diplomacy is also an instrument of conflict and conflict resolution. However, it would be wrong to describe diplomacy as a mere instrument of conflict. To do so one will be placing it in the same category of secret intelligence, economic statecraft, force and propaganda. Diplomacy, in its very character and essence, expresses the idea that States have both cooperative and competitive interest and values, which need statecraft management (Eze, 2011).

As an instrument for the foreign policy formulation, implementation and monitoring, diplomacy promotes peaceful settlement of differences, disputes or conflicts through lobbying, negotiation, conciliation, mediation, arbitration; information gathering; treaty making and reporting. The main tasks of diplomacy may be summarized as that of:

a) building and rebuilding relationship;

b) defining and redefining relationship;

c) healing and not hurting feelings in relations (as much as possible); and

d) Promoting and not undermining mutual interest (Okogwu & Akpuru, 2004).

Modern diplomacy, in terms of strategy, engages the aids of the following to extract influence:

a) persuasion;

b) isolation; and

c) Militant-destructive-confrontation.

Diplomacy of persuasion is verbal, explanatory, pacific and preventive in orientation. It seeks to condemn; make threats and promises; promote government to government dialogue. “Isolation takes the forms of ostracisation, severance of diplomatic ties, sanctions or embargoes, withdrawal of grants and aid, or economic assistance. The militant phase of diplomacy has to do with the actual threat and engagement of force” (Akpuru, 1998 p.28). Such an expression supports the view that power politics is inherent in diplomacy. In the Wright’s (1946) opinion, it is the polities of force, the conduct of international relations by force or by the threat of the use of force without consideration of justice and right. However, diplomatic strategies of exercising influence are designed to signal, and convey the intentions, interest, aspirations and perceptions of one States towards another. For this, over time, States have developed vested interest in diplomatic art and science.

Currently, diplomacy is the hallmark of international relations. The present world system, without the value of diplomacy in world politics, would have been too chaotic, anarchical and jungle-like for the survival of human civilization. Every issue demands diplomacy and every relation invites diplomacy. Even the making of either war or peace relies on diplomacy. Peace or war begins, first, in the minds of diplomats, who act as a bridge or buffer between and among governments.

Once foreign policy is made, diplomats are obliged to convey the modified objective of foreign policy to foreign governments through any of the existing channels of communication until consensus is reached through bargaining, lobbying, negotiation, conciliation, mediation; threat of the use of force or actual use of force. Economic diplomacy, in our considered opinion, is a peaceful form of struggle engaged by foreign policy activists as a means of solving mostly economic challenges and problems.

Such a struggle manifests through intrigue maneuvering, and manipulation among and between ambassadors, foreign affairs ministers and envoys in the process of negotiations and discussion. The argument is that diplomacy involves compromise in international political gaming; although it doesn't mean that this act of compromise make who will defeat who irrelevant, hence national interests of one state (stronger state) overrides another state (weaker state) in each deal involving especially international economic matters.

3.1.1. Economic Diplomacy

Economic diplomacy is certainly not a new phenomenon, but globalization and shifting power balances are making it a more important diplomatic instrument in foreign affairs for governments throughout the world. Economic Diplomacy is increasingly becoming comprehensive, both as strategy and practice (Okano-Heijmans, 2016).

Economic diplomacy is generally deals with economic policy issues like the work of delegations of one state in another state or at standard setting international organizations such as the World Trade Organization (WTO). It is the duty of Economic diplomats to monitor and report on issues pertaining economic policies in foreign countries and give feedback and advice to the home government on how to best influence them. Economic diplomacy uses economic resources as gifts and/or punishment, either through rewards or sanctions, in the pursuit of foreign policy objectives. This is sometimes referred to as "economic statecraft" (Saner & Yiu, 2001).

3.2. Theories of the Industrial Revolution

The Industrial Revolution, which commenced from the 18th up to the 19th centuries, was a period during which the societies that predominantly depended on agriculture, which are to be regarded as rural and agrarian societies, in Europe and America became urban and industrial. Before the Industrial Revolution, which first began in Britain in the late 1700s, manufacturing activities were often limited to people's homes and the tools used were crude, mainly basic machines or hand tools. But industrialization marked a shift to special-purpose, powered machinery, factories and mass production. The textile and steel industries, along with the development of the steam engine, played crucial contribution for the Industrial Revolution which along with it came improved systems of communication, banking and transportation (Staff, 2009).

There are several factors that contributed to Britain's role as the pioneer/ birthplace of the Industrial Revolution. One among those reasons is that it had great deposits of iron ore and coal, which proved essential for industrialization. Another reason is the fact that Britain was a society that was stable politically and it was the world's dominant colonial power which had an implication that its colonies served as a marketplace for manufactured goods and as a source for raw materials. When there was an increase in demand for British goods, merchants required more cost-effective methods of production, which ultimately led to the rise of innovation through mechanization and the factory system (ibid).

This chapter will explore some works on the feedback processes that embody possible bottlenecks, barriers, and limits to growth of an economy and how the British economy managed to break free of these constraints.

3.2.1. Industrialization, Technology, and Society

Hartwell defines the Industrial Revolution as "the sustained increase in the rate of growth of total and per capita output at a rate which was revolutionary compared with what went before" (Hartwell, 1967). Such an increase in output is, mainly, identified with the growth in an urban, industrial manufacturing sector of which production caters for both domestic and foreign markets. More emphasis has been placed on the role of trade.

All sorts of production requires inputs and a method for combining and transforming inputs into a product (output). A generalized production function has inputs of raw materials, labor, capital (equipment and buildings) and technology. Technology is often seen as the key to production, partly because it determines the types and optimal (or desired) ratios of capital,

material and labor inputs. Technology is the critical variable in determining the efficiency or productivity of the transformation process, in terms of output units relative to input units. For this reason, the swift technical advances of the late 18th century specifically, the introduction of Watt's steam engine and Cort's iron puddling and rolling process are probably pointed to most often as the "root causes" of the Industrial Revolution (Homer & Alfred, 1982). As Deane states, "The adoption of a metal-using technology employing decentralized sources of power, which the inventions permitted, lies at the heart of the first Industrial Revolution" (Deane, 1965). The new technologies removed the bottlenecks on output that were imposed by the old technologies and changed the nature of the entire economy and its use of material resources, capital and labor.

While it is important for an understanding of the Industrial Revolution to trace out the effects of technology on production and indirectly, on demand, it is equally important to examine these social and economic forces that provided the incentive to innovate in the first place. Technology and society are intertwined by feedback loops which can cause explosive growth of the economy. The social changes that accompanied the great increases in output and technology will be examined here, with special attention given to:

i. the dramatic shift out of agriculture and into industry

ii. the connection between labor supply and consumption demand

iii. the importance of raw materials, and

iv. The process of innovation in a scientific society.

Values and institutions that developed largely prior to the 18th century (such as Science, individualism, rationality, laissez-faire, and a tradition of and positive regard for commerce and enterprise), are outside the boundary of consideration here, because of the long intervals of time over which these developed. Such factors played important roles in the development of a favorable climate for industrial change and are taken to be "preconditions" of radical change, as Rostow puts it (Rostow, 1960).

3.2.2. A Theory of Unfettered Economic Growth

Adam Smith's classic statement on the industrialization process (setting aside agricultural considerations for now) still forms the foundation for many modern theories; and rightly so, because(as opposed to transient) it describes feedback processes that can lead to continuous market growth, and in so doing, connects supply to demand.

On the side of supply, profits from businesses are invested in new, more efficient, and more specialized techniques of production. The resulting increase in productivity increases actual output for a given level of capacity utilization. On the demand side, expansion of capacity generally generates additional employment. Assuming that wages are sticky downward, the increased employment will push up the average standard of living. Given access to goods, a higher standard of living leads to a greater demand for goods, and so more purchases. Such a growth of a middle-class labor force is Adam Smith's most important aspect in the concept of "market expansion".

Prices as well as other indicators of relative market balance, such as quality of service and delivery delays, will not change much if demand and supply keep pace with one another. As long as demand stays high and operating costs (labor, capital, and materials costs) are low, profits will continue to be made and ploughed back into productive enterprises for further expansion (It should be noted that competitive prices actually fell during much of the 18th century, but innovations occurred rapidly enough to keep profits rising).

There are several important assumptions implicit in the idealization of an industrial economy that "profit- produces- growth-produces-profit" as follows:

i. Materials, physical capital and labour are all in sufficient supply to keep their economic use;

ii. A rising average income is enough to boost demand for the, various, produced goods and services;

iii. Efficient unification of demand and supply for both inputs and outputs has been achieved through rapid and relatively cheap transportation and communication;

iv. There is a well-integrated economy, so that linkage and diffusion effects produce general growth instead of contained or localized growth;

v. Production technologies in use improve steadily so that costs steadily decline, preventing profits from being swallowed up by competition;

vi. The process of technical advance, from invention to entrepreneurial application, diffusion and improvement takes place with no serious hitches.

This requires that profits be dedicated into industry instead of used to buy country estates or other items of luxury.

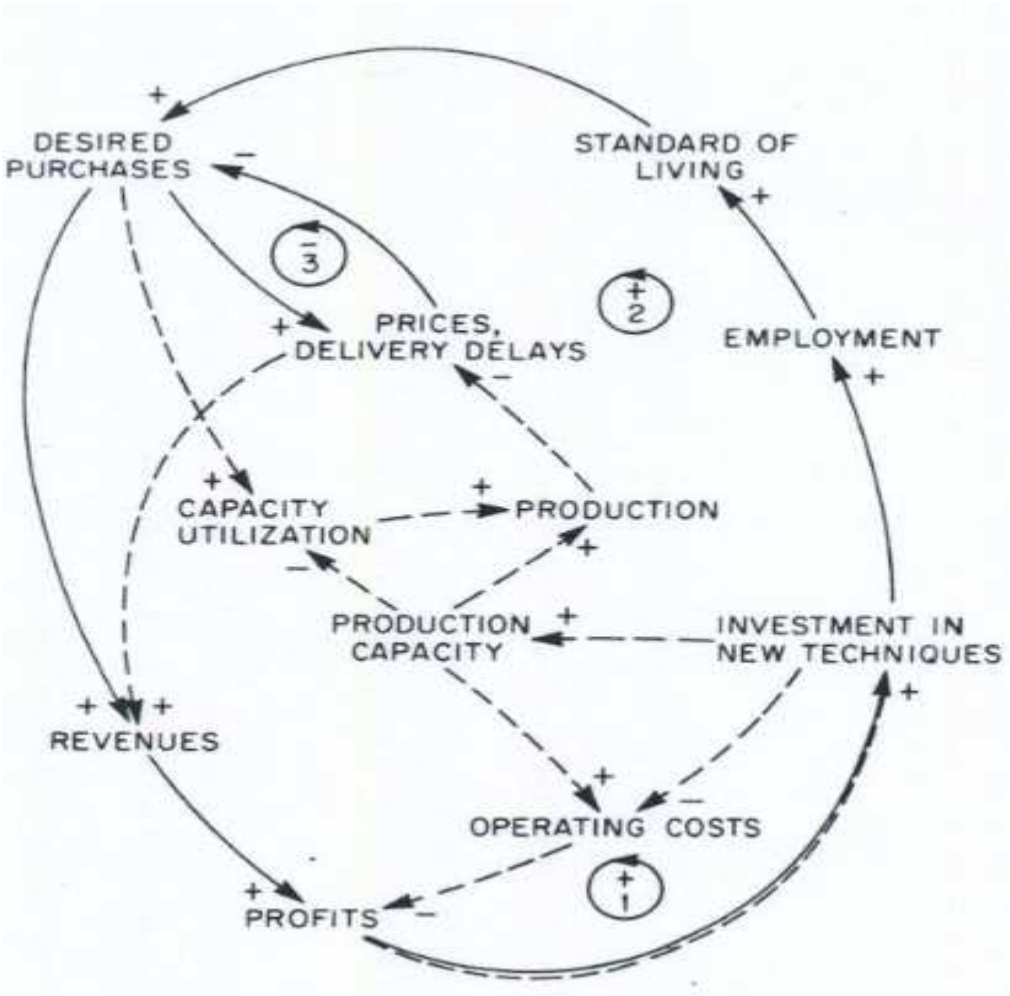


Figure 1: The Central Theory of Economic Growth
Source: Homer & Alfred, 1982

Figure 1 shows that profits lead to investment in new techniques which lead to lower costs which lead to more profits. The second loop says that investment leads to an expansion of the labor force which, in turn, increases demand and thus increasing profits as well. As a result of these two loops, there is a tendency that production will increase exponentially. Demand and supply will march more or less in lockstep, because of the mechanisms of balancing or equilibrating price and delivery delay. The third loop (a negative, controlling loop) reflects a negative relationship in a sense that when demand runs ahead of (or behind) supply, prices and delivery delays will rise (fall), which then pushes demand back down (up).

3.2.3. The Role of Agriculture

Agriculture is important for economic growth for a number of reasons. Enclosures and the resulting interest in applying profits toward agricultural investment sparked off a series of innovations in land drainage, land extension, field rotation, irrigation, animal

husbandry, and other elements of farm productivity. Such innovations and the accompanying capital accumulation allowed food output to increase so that urban populations could continue to eat and so continue to grow. Since there was an increased demand of labor in the factories, food can be considered a potential constraint on industrial output.

Another way in which agriculture may be a constraint on manufacture is through land competition that is if the land requirements for agriculture compete with the land requirements for industrial raw materials, such as wool and timber. Such a competition for land was regarded by Adam Smith as the single biggest stumbling block to industrialization, and he therefore advised developing economies to focus their innovative energies on agriculture. The payoff for increased productivity per acre is theoretically a smaller requirement of agricultural land, leaving more land for the extraction and development of industrial raw materials. This constraint was effectively removed by the replacement of timber by coal (a change not foresaw by Smith), so the argument is of importance in understanding the barriers to growth that existed prior to the Industrial Revolution.

The third most important factor in economic growth is the effect of food prices on the demand for industrial goods. When there is a decline in food prices, real wages rise, and more of one's income can be spent on non-food items. Many theorists identify the good harvests of 1715-1750 (resulting from unusually stable weather conditions) as the exogenous shock to the British economy that started the ball rolling, since demand for industrial goods responded hastily to the lower food prices.

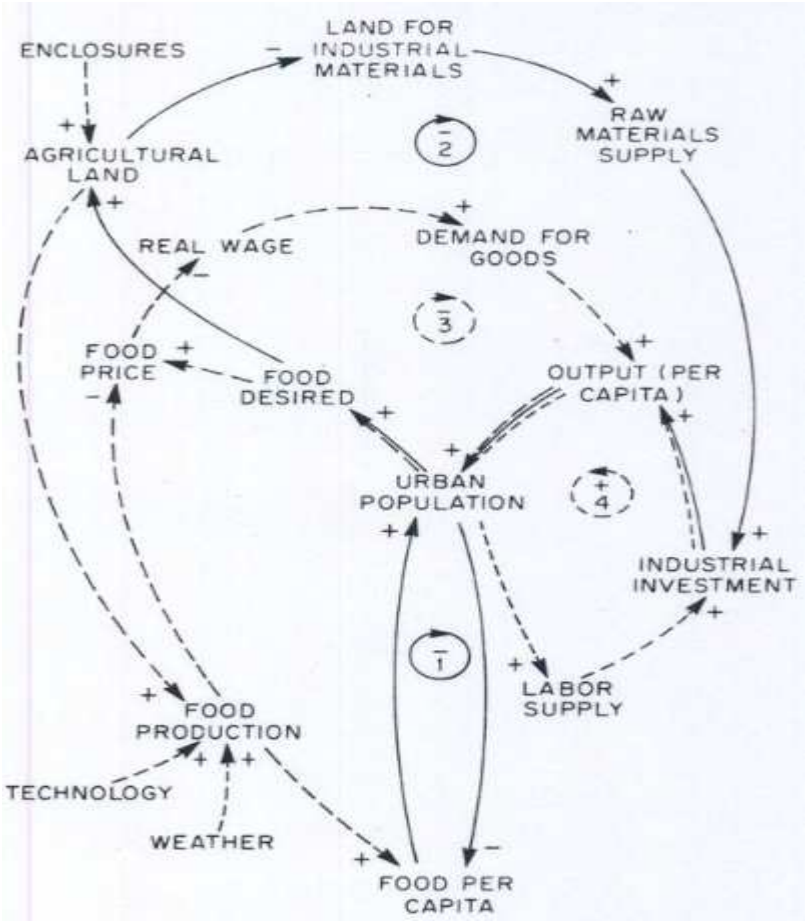


Figure 2: The Role of Agriculture in Industrialization

Source: Homer& Alfred, 1982

Figure 2 summarizes the role of agriculture in economic growth discussed above. The idealisation of agriculture as a potential constraint on economic growth is reflected in the three negative feedback loops (1, 2, and 3). Loop 1 shows that if food production cannot match with urban population growth, then there will be a natural limit to the urban population growth process, which in turn limits the supply of labor. (This is a simple Malthusian food production extended to show its possible implication for economic growth). The second loop (Loop 2) says that increases in population (other things being equal) lead to a greater requirement for land for agriculture, which might cut off the supply of raw materials needed for further growth of the population and the economy. The third loop (Loop 3) shows how an increase in population might lead to inflated food prices, which will cut down real wages, aggregate demand, as well as economic and growth. These loops collectively indicate how agricultural investment and innovation is crucial for the provision of low-priced food to the cities of a developing nation.

3.2.4. The Role of Labor Supply and the Standard of Living

Loop 4 in Figure 3 better explains of the story of labor supply in a growing economy. It states that a growing urban population provides the labor demanded for the continual process of industrialization and further population growth.

As Deane puts it, an elastic labor supply (access to an abundant supply of labor at a relatively low price) immensely encourages potential investors (Deane, 1965). However, growth in population does not (by itself) imply an elastic labor supply. What needs to be explained is people's willingness to work in the impersonal and often wretched factory conditions. In some cases, it is true, there was no alternative for an unskilled, poor city dweller. But most people, including women and children, worked in order to supplement family incomes or because, compared to elsewhere, wages were higher in the factory (Gilboy, 1967). In other words, availability of factory labor was depended highly on the income demand or wage-consciousness of the population.

Wage-consciousness is majorly a function of the standard of living. The standard of living is not only determined by the real wage, but also by an awareness of the variety of available products and a desire, born of social mobility. With this in mind, Figure 3 shows the simple positive feedback relationship between labor supply and the demand for goods. Assuming sticky wages and a concern with "ape one's betters", this loop shows that a rising standard of living prompts people to work harder and more willingly as well as to push the standard of living up still further by the fruits of their labor.

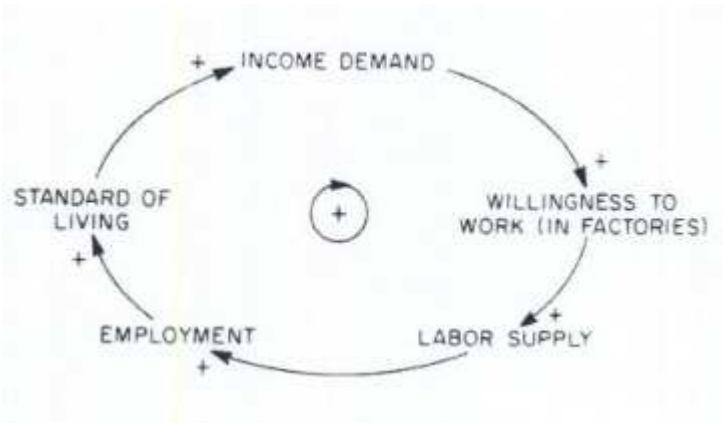


Figure 3: The Treadmill of Materialism
Source: Homer& Alfred, 1982

3.2.5. The Role of Raw Materials

Switchover from timber to coal was important in avoiding a raw materials supply shortage due to land competition with agriculture. In fact, the supply of organic sources of supply in Britain were already in shortage by the mid-1700s and could not cope with the expanding base of demand (Homer, 1982). Thus, it was a great breakthrough when the British successfully switched from a water and wood based economy to coal and iron. The supply of coal could be stepped up much more easily in the short term than the supply of timber. Wrigley, in addition to this direct spur to production, states that the use of mineral raw materials demonstrated that the 'powers of nature' were present just as abundantly in the mines as in the land, so that capital invested in industry could yield at least as good a return as investment in the land from the point of view of the community as a whole (Wrigley, 1967).

Mineral utilization had numerous linkage effects with the rest of the British economy, the development of the steam engine and the canal and railway system being most important. The steam engine was, initially, developed to pump water from mineral pits and later it proved to be applicable throughout the industrial complex. The sheer weight and concentrated supplies of minerals made investment in the "social overhead" of transportation worthwhile, whereas the lightweight, widely dispersed nature of vegetable supplies (like wood and cotton) had never provided that incentive (Homer, 1982). However, once the transportation system was built, everything could be shipped across it, including cotton, which formed a large portion of English's economy in the late 1700s. With the advent of efficient transportation, the market for industrial goods, both unfinished and finished, was expanded also communication between regions was greatly improved.

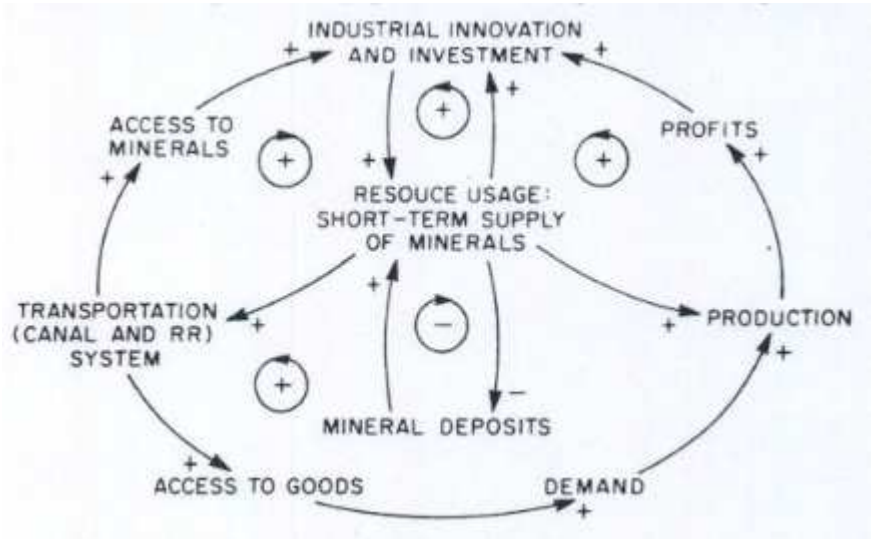


Figure 4: Mineral Resources and the Economy
Source: Homer& Alfred, 1982

Figure 4 shows the major impacts of the switch over to mineral resources. There is one negative and four positive resource-related loops. The positive loops shows that resource availability leads to investment and innovation (in mineral-using production processes) and the reshaping the patterns of both supply and demand. As investment in the new technologies increases, so does mineral resource usage. On the other hand, the negative loop points out the permanent depletion that any heavily exploited non-renewable resource faces. While the positive loops indicate increasing powers of production, they also indicate a rising dependence on the mineral resources, as more and more investment is devoted to a mineral-based economy. Depletion of resources eventually restricts growth of the transformed economy unless a new industrial revolution (with technologies based on different power sources) is successfully staged. Resources play a very significant role in any culture and define its capabilities and its limits.

3.2.6. The Role of Technological Innovation

The used model of sustained growth includes a positive link between profits and investments in technologies that are new and more efficient. But in addition to investment capital, innovation also requires entrepreneurial attitudes, economic incentives to change technique and previous knowledge or inventions which make possible the development of a new technology. Availability leads to investment and innovation (in mineral-using production processes) and the reshaping of both supply and demand patterns.

Entrepreneurial attitudes are often considered the most significant element of economic growth, since the entrepreneur is the initiator of positive changes. The entrepreneur is willing to experiment with new technologies and introduce them well before the old technologies prove themselves not being sufficient to produce continued growth. The determinants of entrepreneurial ability are apparently related to practices of child-rearing and thus lie in the philosophical, religious and cultural roots of a people (Mcclelland, 1961). The English experience includes important philosophical and religious movements, such as Wesleyan Protestantism, nonconformism, laissez-faire, and the Enlightenment. These, however, are only clues to the great entrepreneurial blossoming of the 1700s. Such entrepreneurial attitudes, in any case, are generally accepted as a cornerstone of economic development, a precondition, so to say.

The economic incentives for innovation are rather well known. Innovations are often induced in an attempt to overcome constraints created by high factor prices (Musson, 1972). When customer demand is high, producers are under pressure to increase production capacities in the most economical way possible. Additionally, patents and prizes for innovation offer tangible benefits for taking the risks involved in trying the new.

Entrepreneur's success in the Industrial Revolution is often attributed to the advancement of science. Mathias, however, has noted that the progress of scientific invention was not closely coupled to actual implementation: "Great areas of advance were relatively untouched by scientific knowledge, judging by result rather than by intention of endeavor. Until the 19th century: agriculture, machine-making, canals, the mechanization of cloth making, iron and steel making" (Mathias, 1972). On the other hand, science helped change societal attitudes towards the direction of careful measurement, experimentation and standardization. In general, the actual scientific knowledge had less effect than the procedures of science on the process of technical improvement and development. But scientific advances did sometimes pass into application, if only in bits and pieces. Moreover, innovations were often studied by scientists who wished to discover the laws governing their operations. The results of those studies provided crucial knowledge upon which to base new technologies.

The successful diffusion of innovations and the instant fame of their creators prompted prestige escalation in entrepreneurship, thereby increasing the effort put into discovering new techniques to increase productivity. Improvements came quickly as entrepreneurs gained experience with the new techniques. The great gift of science, cumulative on-the-job improvement was quite significant even in steam power (Mathias, 1972).

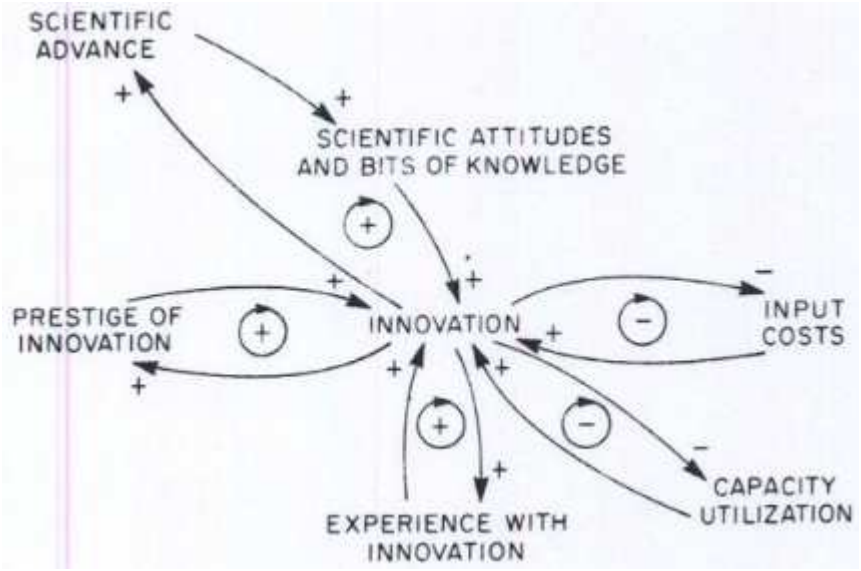


Figure 5: Innovation in the Industrial Revolution

Source: Homer& Alfred, 1982

Figure 5 illustrates the process of innovation as it has been discussed above. Science, experience and prestige provide increasing encouragement to an entrepreneur to plough back his profits into better processes and machines (and if need be, to borrow additional funds for the purpose). Rising costs of input provide incentive to switch to a process that would reduce input requirements per unit of output, thereby removing the obstruction in production. Note that if the obstruction is removed, the negative feedback relationship says that the incentive to innovate decreases correspondingly (other things being equal). Likewise, when capacity utilization is higher than desired or normal, this indicates that demand is running ahead of the ability to produce, and to eliminate the problem, investment in a more efficient technology might deem necessary.

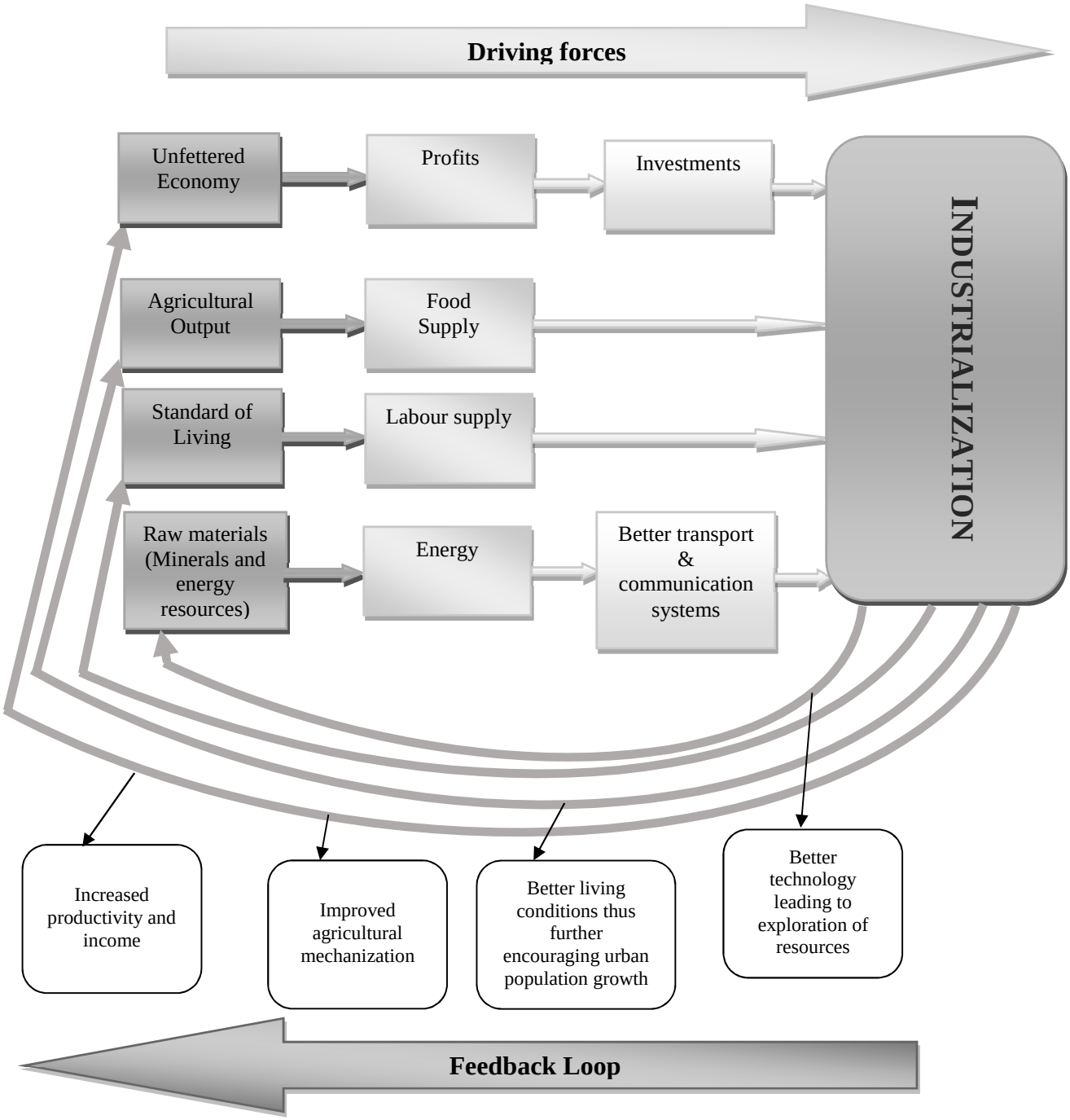


Figure 6: Conceptual Framework

Source: Researcher's work

Figure 6 illustrates the main driving forces of industrialization and the positive feedback loop. In an unfettered economy, business surplus on the supply side is invested in new, efficient and more specialized techniques of production which brings about more productivity. Agriculture on the other hand, provides food for the population and importantly to the working force. Low standard of living will force people to willingly work even in wretched

conditions thus ensuring labour supply to the established factories. As investment in the new technologies increases, so does mineral resource usage. Resources such as coal are very crucial as they can be used for steam engine which will foster transport of goods and services.

3.3. Industrialization in Africa and Least Developed Countries

Infrastructure, technological progress and sustainable industrial development are very crucial for social development, economic growth and climate action since the later are heavily dependent on the former. In the current rapidly changing global economic order and increasing inequalities, sustainable growth must include industrialization that creates opportunities accessible to all people and that is supported by innovation and resilient infrastructure (United Nations, 2016).

Basic infrastructure, however, like roads, communication and information technologies, sanitation, electrical power and water remains scarce in most least-developed countries.

Recent studies conducted by UN shows that approximately 800 million lack access to water and almost 2.5 billion people worldwide lack access to basic sanitation. It also shows that 1 to 1.15 billion people do not have access to reliable phone services. Additionally, hardly 30 percent of agricultural production in developing countries undergoes industrial processing (United Nations, 2016).

In Africa and Least Developed Countries (LDCs) where agricultural productivity remains low and most of rural farming communities are still subsistence-oriented and poorly connected to markets, services, political processes and information flows, structural transformation has been slow and non-existent. Rather than seeing labour shift rapidly from agriculture to manufacturing, many African and LDCs have experienced slow labour productivity growth in agriculture and a less pronounced shift from agriculture to services, and to an even lesser extent to manufacturing (IMF, 2012).

LDCs in Africa remain on the margins of industrialization, as exemplified in the very low and declining shares of their manufacturing value added (MVA) in GDP since the 1970s and in MVA per capita, lagging significantly behind developing country averages. Africa's MVA accounted for only 1.6 percent of the global total in 2014, and its growth has lagged far behind that of all other regions since 1990 (UNIDO, 2016)

Similarly, Africa exhibits the lowest regional medium- and high-tech share among global regions (Table 1). Among Africa, Asia and Pacific and Latin America, Asia and Pacific

experienced the most significant change in technology structure. In the other regions, manufacturing still is highly dependent on resource-based products.

Table 1: Technology composition of manufacturing value added, by development group, region and income, 1990, 2010 and 2013

	1990			2010			2013		
Economy/indicator	Resource based	Low tech	Medium & high tech	Resource based	Low tech	Medium & high tech	Resource based	Low tech	Medium & high tech
World	33	22.5	44.6	28.1	26	46	28	25.3	46.7
Industrialized countries	32	21.8	46.3	25.7	23.3	51.1	25.7	24.2	50.1
Developing and emerging industrial economies	39.5	26.9	33.6	31.6	30	38.6	36.6	29.4	34
By development group									
Emerging industrial countries	38.3	26.5	35.3	31	29.6	39.5	36	28.4	35.5
Least developed countries	71.5	12.1	16.4	67.5	24.1	8.4	8.4	24.3	8.9
Other developing countries	47.8	31.9	20.4	39.8	31.4	29	29	34.4	29.8
By region									
Africa	42.2	36.1	21.7	45	31.6	23.5	44.7	32.9	22.4
South Africa	36.6	35.5	27.8	38.6	34.9	26.6	41.3	34.3	24.4
Asia and Pacific	29.8	24.2	46.1	26	27	47	25.1	25.6	49.3
China	36.1	26.1	37.8	28.6	30	41.4	28.6	30	41.4
India	31.4	28.6	40	22.7	38.1	39.2	21.2	38	40.8
Europe	34.8	25	40.3	28.7	25	46.3	27.9	25.5	46.6
Poland	35.9	30.4	33.7	32.7	28.2	39.1	34.6	28.1	37.1
Turkey	35.5	38.1	26.3	40.2	27.1	32.7	40.2	27.1	32.7
Latin America	34.3	24.8	40.9	36.2	29.3	34.6	37.9	29.1	33
Mexico	31.1	26.8	42.1	33.4	29.9	36.9	33.2	29.9	37
By income									
High income	42.8	27.9	29.3	33.7	31.6	34.7	33	29.3	37.6
Upper middle income	37.8	27.2	35	30.9	29.8	39.3	37	29.4	33.6
Lower middle income	46.7	25.7	27.6	35.4	31.6	33	34.9	29.7	35.4
Low income	70.6	12.1	17.4	63.2	26.1	10.7	64.6	26	9.4

Source: UNIDO elaboration based on INDSTAT2 (UNIDO 2015)

While people have moved out of rural areas and the share of agriculture in employment and value added has dropped since the 1960s, the primary beneficiaries have been urbanized and often informal services, not manufacturing. African labour has tended to move from agriculture to services, and while services have had much higher productivity than agriculture, their productivity gains over time have been very limited. Thus the transformation of some of these economies has not been in an enabling environment where transformation could be translated into decent income opportunities.

Productivity in Africa's manufacturing is still far below that of developed countries (around 40 percent of that of the United States for the most advanced countries in the continent), and most of the firms in manufacturing are small and informal. Egypt, Morocco and South Africa stand out for their higher specialization in manufacturing and higher labour productivity. These countries have positioned themselves as assembly hubs for automobiles in, for example, Durban (South Africa), and in textiles and clothing for European firms in Tangier (Morocco), Monastir (Tunisia), and in other such "garment towns" in these two countries, as

well as in Mauritius. But these are exceptions — almost 90 percent of manufacturing exports in Africa are in natural resource–based sectors (AfDB, OECD, & UNDP, 2014).

3.4. Main Challenges to Industrialization

According to UNIDO, the main reason for the opening of industrialization gap is due to structural weaknesses such as poor infrastructure, weak trade facilitation and logistics, absence of accreditation frameworks and slow regional integration. Such factors have contributed to the relative isolation of African states and low levels of trade in Africa, where continental trade in merchandise represented only 11 percent of total trade between 2007 and 2011 (compared with 50 percent in Asia and 70 percent in Europe) — preventing firms from exploiting a huge potential market (UNIDO, 2016).

3.4.1. Lack of Competitiveness

Compared to low-income Asian countries, most African LDCs have struggled to take advantage of low labour costs to increase their share of labor-intensive manufacturing. This can be explained by a combination of poor business environments, low institutional capacity, weak infrastructure and relatively high unit labour costs in manufacturing, which compare unfavorably with competitors in Asia. The challenge, therefore, is to tackle a combination of obstacles to improve the business environment and encourage foreign investment. For instance, although Tanzania and Ethiopia — two LDCs in Africa — have competitive unit labour costs, they also suffer from intermittent power supplies and low quality transport infrastructure, including ports (Ceglowski et al., 2015).

In most African countries; rail, road, and freight transport systems were established during the colonial times and focus on transporting unprocessed raw materials from zones of extraction to coastal areas for onward shipment to international markets. And even if in recent years the continent has invested hugely in transport and logistics, capabilities in these areas are still low — and Africa needs US$93 billion a year to close its infrastructure gap. (In Africa, railways have only a marginal role.) Lack of energy and information and communications technology infrastructure further constrain development. The amount of electricity per person in Sub- Saharan Africa is lower today — excluding South Africa — than it was 30 years ago. Indeed, only 290 million out of 915 million people in Sub- Saharan Africa have access to electricity, and the number of people without access to electricity is increasing.

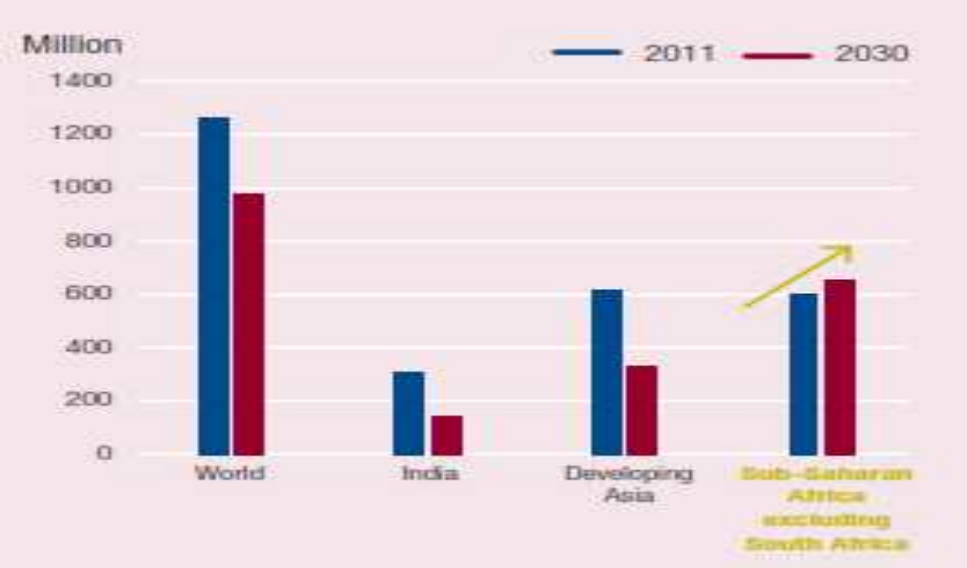


Figure 7: Number of people without access to electricity in Sub-Saharan Africa
Source: International Energy Agency 2013

3.4.2. Weak Logistics and Trade Facilitation Systems

Improving sustainable logistics performance is critical for trade, economic integration, growth and competitiveness. Efficient border management is critical for eliminating shipment delays and enhancing predictability in border clearance. Coordination among government customs control agencies on regional transit regimes, introducing best practices in "single windows for trade", automation and risk management in non-customs control agencies are all vital for improving trade facilitation.

Poor trade facilitation undermines industrial competitiveness (Table 2). According to the World Bank's Logistics Performance Index (LPI), over 2007–2014, low-income Sub-Saharan Africa showed the weakest performance of all World Bank regions and income groups (Figure 8) (UNIDO, 2016). According to the Doing Business survey, the average cost of shipping a container for African exporters in 2012 was US$1,990, compared with US$1,268 in Latin America. And the cost for many landlocked countries, such as Niger, Rwanda and Zambia, was more than 50 percent higher than that average (ICA, 2012).

Table 2: Industrial competitiveness ranking and selected indicators for LDCs and world ranking comparison, 2013.

Group ranking 2013	World ranking 2010	World ranking 2013	Country	MVA per capita (2005 $) 2013	Manufactured exports per capita (current $) 2013	Impact of a country on world MVA (percent) 2013	Impact of a country on world manufactures trade (percent) 2013
1	80	77	Bangladesh	118.28	152.13	0.21	0.19
2	93	90	Cambodia	146.84	428.64	0.03	0.05
3	103	106	Senegal	98.86	117.20	0.02	0.01
4	114	109	Zambia	76.93	182.34	0.01	0.02
5	133	120	Mozambique	50.95	44.62	0.02	0.01
6	116	121	Tanzania, United Rep. of	43.04	32.95	0.02	0.01
7	121	123	Madagascar	37.22	42.51	0.01	0.01
8	134	126	Niger	18.40	66.96	0.00	0.01
9	125	127	Yemen	59.45	36.04	0.02	0.01
10	124	128	Nepal	26.32	23.97	0.01	0.01
11	130	129	Uganda	27.28	17.28	0.01	0.01
12	135	134	Haiti	50.58	6.19	0.01	0.00
13	131	135	Malawi	22.59	22.21	0.00	0.00
14	136	136	Rwanda	22.03	26.96	0.00	0.00
15	139	138	Ethiopia	13.33	6.81	0.01	0.01
16	138	139	Central African Republic	15.92	4.96	0.00	0.00
17	142	141	Eritrea	10.91	0.44	0.00	0.00
18	141	141	Gambia	22.53	0.64	0.00	0.00

Source: UNIDO elaboration based on Competitive Industrial Performance Index database 2015

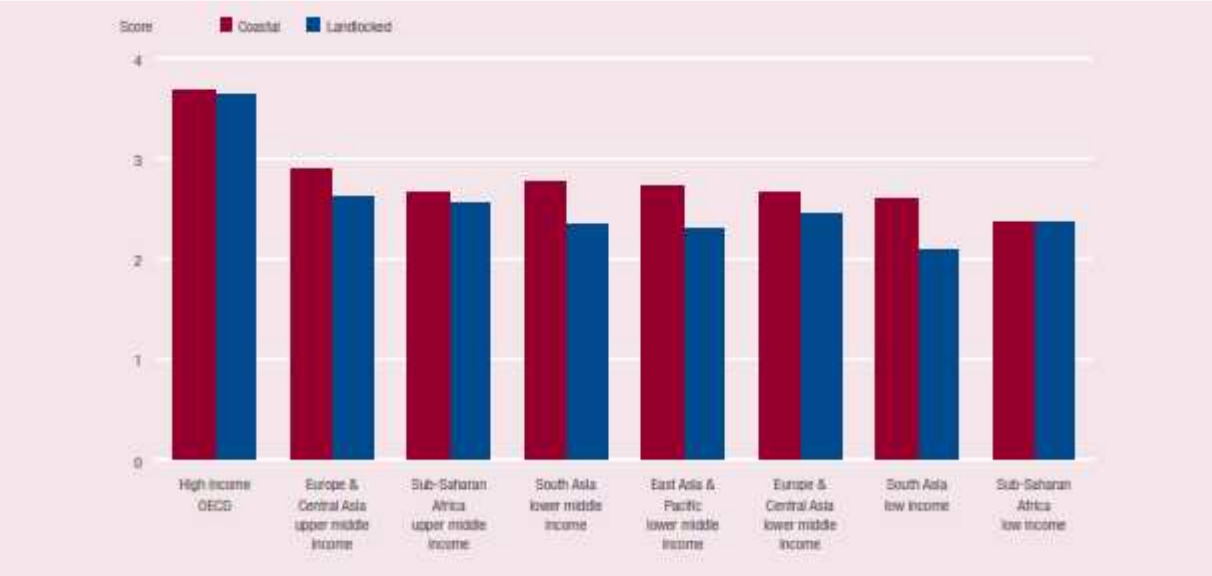


Figure 8: Overall Logistics Performance Index 2007-2014, by coastal and landlocked countries and by World Bank region and income group

Source: World Bank Group Logistics Performance Index 2007, 2010, 2012 and 2014

Countries in Sub- Saharan Africa have made progress in improving trade facilitation with the biggest reductions in time to trade as measured by the World Bank Group's Doing Business Trading Across Borders indicator between 2009 and 2014. According to Doing Business survey by the World Bank, 46 of the 133 trade facilitation reforms implemented in this period

were in Sub- Saharan Africa (Huria & Brenton, 2015). But Africa still has much to do to catch up with other regions on both the time (Figure 9) and cost of trade indicators. Ratification and implementation of the WTO's Trade Facilitation Agreement is one concrete measure that countries should take to reduce these costs.

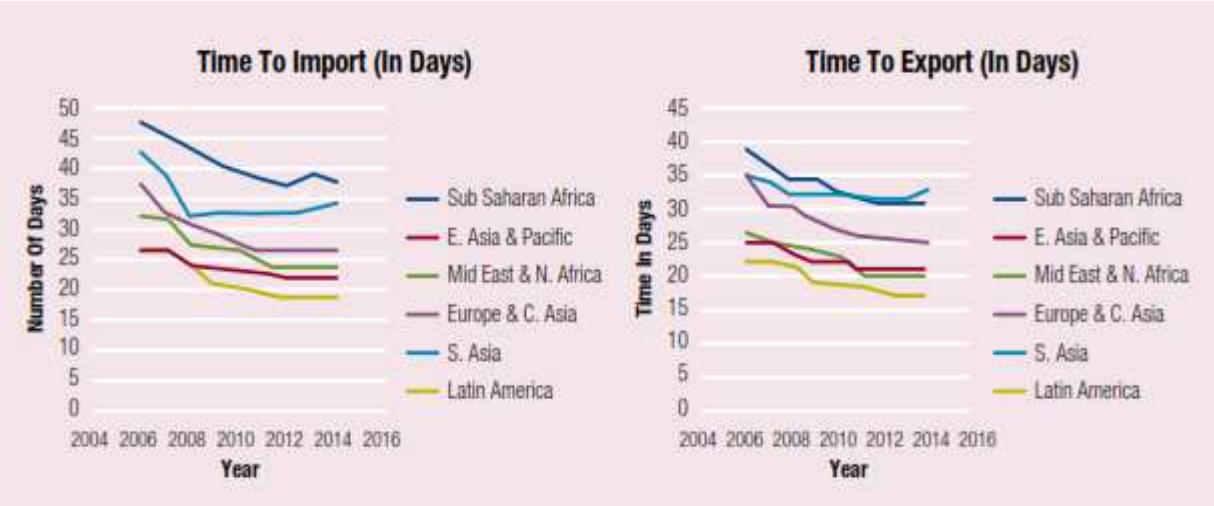


Figure 9: Time to import and export by region, 2004-2014
Source: World Bank Group, Doing Business

3.4.3. Slow Regional Integration in Africa

Africa is one of the least regionally integrated continents in the world. Trade barriers among African countries often are higher than those between them and the rest of the world (UNCTAD, 2015). While the continent's trade with the rest of the world has grown at double digit rates since 1995, it remains dominated by trade with developed countries and is highly concentrated in natural resources and primary commodities.

Africa's intraregional trade is more diversified than that with the rest of the world, and some two thirds of it is in manufacturing. Yet its real potential remains heavily untapped. The share of intra-African trade is the lowest among global regions, in 2013 it was at 16.3 percent (UNECA, 2015).

Figure 10: Manufacturing, by main destination of Africa's exports (%), 2005-2010
Source: AfDB, OECD and UNDP, 2014

According to the most recent calculations available, local value added represented only about 9.5 percent of the total value added trade within African countries in 2011 (UNECA, 2015). In other words, most of the value added in intraregional trade was imported rather than created locally. This matches the lack of exports of manufacturing intermediates in the region.

The overall fragmentation of the African market is very costly for all African countries, with loss of wealth creation and its equal distribution; no prospects to realize economies of scale and scope; and under-provision of regional public goods, particularly infrastructure, knowledge and a harmonized trade and investment regime among countries. Cross-border infrastructure has to be made widely accessible and reliable, supported by institutional harmonization in the trade regime, to increase productivity and competitiveness. In addition, consistency between trade and industrial strategies with an African perspective is of pivotal importance to foster regional integration, especially as the continent's own multiple regional trade agreements often form their own obstacles.

3.4.4. Absence of Accreditation Frameworks

The lack of such systems crimps African firms' entry into international markets. Only three countries in Africa — Egypt, South Africa and Tunisia — have national accreditation bodies. International bodies step in when African countries lack one: for example, Tanzania's laboratories and certification bodies apply to the South African National Accreditation Service.

Many African economies, however, do not require laboratories, inspection organizations or certification bodies to provide conformity assessment services for technical regulations (Huria & Brenton, 2015). This is a major defect in any technical regulation regime, and a major impediment for exporters of products falling within the scope of targeted markets' technical regulations. Many governments also restrict testing to domestic public (often non-accredited) laboratories and do not accept certificates of conformity from internationally accredited laboratories.

4. TANZANIA'S FOREIGN AND INDUSTRIAL POLICIES

4.1.Tanzania's Foreign Policy

After achieving independence, Tanzania's leadership emphasized supporting the efforts of other African nations to gain independence and this was reflected in its foreign policy. It supported the struggle against the apartheid government of South Africa, championed some form of political union of African states, and promoted a non-aligned stance toward the Cold War antagonists. To these ends, Tanzania has played an important role in regional and international organizations (Pike, 2015).

The new foreign Tanzanian policy is geared towards enabling the country to tackle the new development challenges and exploit new opportunities inherent in the changes brought about as a result of the wave of globalization and the shift towards market-led economies. In conforming to these transitions, the country's new foreign policy formulation and conduct, which aims at achieving sustainable people-centered development has economic considerations at its core (Embassy, 2016).

Soon after the election in 2015, President John Magufuli said industrialization would be a key to his plans, saying he hoped that by the year 2020 manufacturing sector would account for 40 percent of all new jobs. He also added that he had ordered all privitisation contracts that were entered between the private investors and government to be reviewed. He noted that his government is determined to revive the existing factories that were bought by investors who, for some reason, have failed to develop them as initially agreed. He also vowed to encourage setting up of industries for production of mass consumption products like textile, clothes and edibles. "Agro-based industries and those for fisheries and livestock will bring quick wins for our farmers and raise income for rural communities that form the largest percentage of the population" (Mtulya, 2015, Para 25).

Of late, on 31st May 2016 upon presenting the budget of the Ministry of Foreign affairs, the president's determination of creating an Industrial nation was announced. The Ministry aimed at pursuing Industrial Diplomacy Alongside agricultural and infrastructure Diplomacy. Tanzania's Foreign policy has to mirror the Government through Embassies, High Commissions and Consulates.

4.2. Tanzania's Economic Diplomacy

Tanzania Government has attached the highest priority to economic diplomacy in the conduct of its foreign policy. This is aimed not only to bring a more focused economic orientation for

the Foreign Ministry and Tanzania Missions abroad, but also to bring about better Foreign Office centered co-ordination on issues traditionally dealt with by line Ministries, but which are moving to center stage of intergovernmental interaction, both bilateral and multilateral. It is now believed that Tanzania Ambassadors, apart from being a plenipotentiary, need to become the foremost salesmen for the country.

Core of Economic Diplomacy

The thrust on economic diplomacy aims at integrating the processes and substance of diplomacy. The success of such a thrust requires the cooperation and support from all branches of the Government. The Ministry of Foreign Affairs and its Missions abroad need to be equipped to support this responsibility, within the resources that are at their disposal. There needs to be a well-coordinated and collective effort, involving not least the private sector.

There are four major thrust areas in the pursuit of economic diplomacy, viz.:

a. **Enhancing Tanzania's capacity to meet the challenges of globalization**. This, generally within the government, and specifically within the Ministry of Foreign Affairs and others directly dealing with the issues. The country needs to address the efficiency level and strengthen coordination.

b. **Creating enhanced market access for exports** as well as facilitating the diversification of the export basket. There's a need to focus on greater private sector and public sector coordination. The Government has an important role in facilitating both access and diversification. But the actual entrepreneurial threshold will have to be achieved by the private sector. In a market that has gone global, they need to remain competitive and create capacity to respond to changes in the external environment. In this, there's a need to look at creating a niche for our products, which in turn will ensure an initial competitive edge.

c. **Attracting FDI:** This issue touches on practically every aspect of governance and the issue of the country's image abroad. The Government and the private sector need to work hand in hand to promote a positive and investment-friendly image of Tanzania. It is not enough for the government to announce incentives packages. The prospective investors need to perceive Tanzania as a country where foreign direct investment (FDI) will be secure and the rate of return will be attractive. Tanzania's facilities and

support this includes incentives as much as the credibility of the local partners/interlocutors – need to be geared to secure competitive advantage.

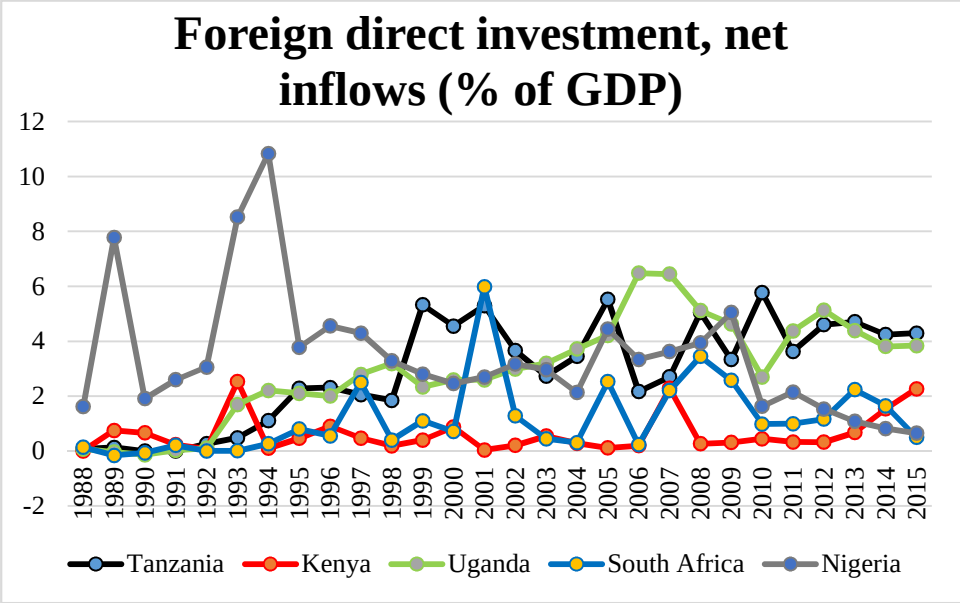


Figure 11: FDI net inflows (% of GDP) in Tanzania and selected countries, 1988-2015
Source: Researcher's analysis based on World Bank, 2017

Figure 11 shows the trend of FDI inflows and it can be seen that in the late 80's FDI inflows were relatively low in Tanzania compared to the selected countries, but there was a huge rise of FDI inflows from 1999. If well put into use, economic diplomacy could help Tanzania attract more FDI inflows.

d. Last but not least is the need to consolidate existing markets and explore new markets for our employment of Tanzanians in the global market. This would require inter alia, an effort to move up on the value chain of Tanzania's workers to include engineers, IT professionals and so on. As the demand for unskilled manpower wanes, the private sector needs to focus on creating the necessary pool of such skilled manpower for the high-end employment market.

4.3. Industrial Development in Tanzania

The pre-independence production structure of Tanzania was dominated by raw materials for the sole purpose of exportation. Shockingly, some of the imported products in Tanzania were manufactured from the very raw materials that it initially exported. It was, thus, not by coincidence that Tanzania's manufacturing sector had to then start from scratch so to speak. Job creation, accordingly, through the manufacturing sector was not a priority for the colonial

masters. Indeed, the independent Tanzania inherited a very nascent industrial base not worthy a salt.

For instance, soon after independence in the year 1961, Tanzania had only 220 industrial establishments which employed at least 10 persons each with fixed assets not exceeding 200,000/= Tanzanian Shillings which presently could categorised under the MSME. Total manufacturing employment was about 20,000 and its contribution to the GDP was merely 4.3 percent. It is of no wonder, therefore, that industrialisation was one of the main Agenda of the first phase Government of Tanzania and has remained so to the present time, serve for the policies and strategies which have varied overtime.

The first Government phase had two distinct periods in industrial development. The first phase was from 1961-67, a period of private sector-led import substitution manufacturing industries in which consumer goods, mainly textiles and food, were the dominant products. The private sector-led industrialisation, however, was seen to be too slow in terms of growth and africanisation and thus did not concur well with the spirit of independence. With the proclamation of the policy of Ujamaa (socialism) and Self Reliance, the product mix changed, not only that but also privately owned firms were nationalised and consequently ownership in industrialisation strategy, that was led by the public sector, was adopted and implemented.

A decade after Independence, Tanzania's industrial development fortunes grew astronomically such that by 1970 the country had attained self-reliant in fabrics (manufactured 58 Million M2); approximately 7,000 trademarks had been registered and over 2,000 industrial firms had already been established which is far above the 220 inherited industrial firms at independence; and. Likewise, there was a satisfactory growth of the sector in terms of production and industrial workforce at approximately 10 percent and 12 percent per year respectively. This shows that the Post-Independence industrialisation policies and strategies paid off.

The impressive industrial workforce growth was in conformity with the early industrial policy and strategies which widened and deepened light manufacturing activities which were inherited at independence. A large part of the productive forces that existed then were mainly consumer goods such as food, clothing, beer, tobacco products, pharmaceuticals, footwear, glassware, soaps and household plastics. The printing and publishing industry also showed tremendous growth.

The production process of these products demanded labour intensive operations and thus approximately 200,000 people out of a population of then nine million people, both direct and indirect (Skarstein & Wangwe, 1986). Likewise, towards the end of the decade of independence, the production of intermediate products such as building materials like cement, chipboard and steel frames, took on increasing importance. Such positive developments were implemented in the framework of five years development plans (from 1964 to 1969 followed by the five year plan from 1969 to 1974 (Skarstein & Wangwe, 1986) such strategy was regarded as Import Substitution Industrialization Strategy).

The Five Years Development Plans aimed at promoting growth through increasing investment and as a result, it enabled Tanzania to pursue a progressive and systematic industrial development path. Such a contention is accounted by the fact that the Plans influenced the Government to form a robust, elaborate and dynamic institutional framework as illustrated below:

- The National Development Corporation (NDC) which was tasked to oversee and coordinate a wide range of feasibility studies and industrial investments, mainly of capital and intermediate nature in order to support goods import substitution. It, therefore, served as the Government's investment arm;
- The National Insurance Corporation (NIC) established in 1964 and was a compulsory savings facility for employees and workers. The National Bank of Commerce (NBC) was established in 1965 and together, the NBC and NIC, were critical institutions in fundraising for industrial related projects in which NBC's profits were returned back into the industrial sector and for similar reasons, NIC bought government bonds;
- The Small Industries Development Organisation (SIDO) was formed in 1973 for the purpose of establishing linkages between the rural sector and industrial development for achieving a decentralized small-scale industrial development at local levels for the sole purpose of making it possible for the products to be consumed near the place of their production in order to avoid unnecessary transport costs as well as job creation distributive initiative. The Plan also envisaged industrial development to be supported by several types of artisans' productive activities, which is to trigger the input-output linkages.
- Last but not least, the National Vocational Training Division in 1974 which still exists to date with a more robust mandate now known as Vocational Education and Training

Authority (VETA). The rising demand for skilled workforce mainly arising from increased diversification and investment led to the establishment of this institution.

Studies show that Tanzania's economy was substantially impacted (positively) through the implementation of the above Development Plans. In mid 1960s and up to 1972, the rate of industrial growth was more rapid than the rate of growth of the economy as a whole (Mussa, 2014). Between 1964 and 1972 the growth of manufacturing value added (MVA) more than doubled, indicating an average annual growth rate of more than 10 percent while manufacturing growth rate increased from 10.2 percent in 1962 to 17.1 percent in the year 1966. The contribution of industrial sector to GDP increased from 4.3 percent in 1961 up to 12.8 percent in 1965. On the other hand, industrial employment rose sharply from 6.2 percent in 1964 to the highest level of 24.1 percent in 1968. The outstanding performance was attributed mainly by more effective utilization of industrial capacity (Mussa, 2014).

The manufacturing sector was, therefore, at the core of structural change, consistently creating higher levels of output and employment opportunities, which led to unprecedented growth in incomes. Additionally, through manufacturing sector there was a greater opportunity not only to rebalance the country's economy towards higher value-added production but it also provided a relatively wide employment base along with higher labour productivity, apart from it helping to create a domestic market for both agricultural and industrial products through increased wages and incomes.

From 1974 onwards, however, industrial growth generally dropped as a result of global crises which caused a shortage of foreign exchange for the importation of capital goods, spares for the industry and more critical-intermediate inputs. At a time, the import substitution strategy had shifted the structure of imports in favour of intermediate inputs and capital goods. Such a production structure had a built-in vulnerability because it could not withstand external shocks. Thus, the drastic deterioration of balance of payments with consequential import restrictions in 1974 and 1975 adversely affected industrial growth (Mussa, 2014).

In 1975 Tanzania's Government embarked upon a long term Basic Industrial Strategy (BIS) as a response to the challenges cited. The primary objective of BIS was to increase linkages in various sectors in order to achieve a greater degree of economic self-sufficiency and independence. Industries that catered for the basic needs of the majority of Tanzanians were the first set of industries. Steel and iron, metalwork and engineering and industrial chemicals were among the priority sectors of the second set, it basically constituted the base of

industrial production which could use domestic material resources to produce and supply capital as well as intermediate goods to industries of the first mentioned set.

Therefore, BIS aimed at achieving maximum independence from highly developed economies and, instead, it was promoting more of South-South intra-trade cooperation, that is cooperation among the developing countries. Unlike the early phase of post-independence job creation and industrial development initiatives where general product mix was pursued, in this phase a resource based sectoral industrial development was adopted. More emphasis was put on value addition of all raw materials before being exported, initially targeting sisal, cashew kernel, leather, shoes and twine. For this reason, the formation of sector organizations such as Tanzania Leather Associated Industries (TLAI), Textile Corporation (TEXCO), Tanzania Karatasi Associated Industries (TKAI) and National Chemical Industries (NCI) was done to carter for this sectoral approach.

It was a great misfortune that these ambitious initiatives were constrained by the global political and socioeconomic environment. Industrial growth started to deteriorate for the first time in 1974 and between 1975 and 1981 growth rate was only about 0.6 percent. Between the years 1981 and 1985 growth rate was average of negative 3.9 percent and it was so mainly due to a serious economic crisis caused by external shocks as well as internal constraints. This resulted in massive import cuts in raw materials, spare parts and intermediate inputs (Mussa, 2014).

Declining trend of the manufacturing sector in the 1980s and 1990s was attributed to, both, factors that were internal to the sector as well as factors that were external to the sector. Such external factors that negatively affected the performance of manufacturing sector included the following:

- Expensive and Inadequate transportation systems arising from the collapse of the railway system, inefficient ports and oil crises;
- Inadequate and unreliable supply of power;
- Declining terms of trade for agricultural commodities, quality of agricultural products and low yields.

Consequently, the Tanzania's Government was compelled to drastically reduce foreign exchange allocations to the manufacturing industries (Skarstein, 1986) which negatively affected capacity utilization. By the year 1980, the foreign exchange allocations met only

about 11 percent of the actual foreign exchange requirements of the industrial sector, this led to the collapse of many industries both public and private.

In order to address the crisis, the government resorted to adopting restrictive measures including the Economic Recovery Programmes (ERPs) and Structural Adjustment Programme (SAP) which started in 1986 and by 1996 reforms via privatization, particullary in manufacturing sector, was at the highest point. Trade liberalization, which is a key ingredient of structural adjustment packages, particularly affected Infant industries by the removal of protective trade measures which resulted into enormous inflow of imports. It, therefore, had a negative impact on the incipient manufacturing sector.

From the year 1998 substantial recovery for the sector was recorded where it rose up from 5.5 percent in the year from year to 9.4 percent in 2004 and up to 9.9 percent in 2008 as well as 7.7 percent in 2013. Similarly, its contribution to export earnings increased from 0 percent in the year 1961 to 6.10 percent in 1998, 8.29 percent in 2004 to 20.73 percent in 2008 and 20.04 percent in the year 2013. The increase was attributed to the increase in investment and effective utilization of industrial capacity which is in the average of 52 percent and in other industries such as beverages and food as well as cement is in the range of between 80 percent and 90 percent (Mussa, 2014).

Similarly, employment suffered the same declining trend during the period of reform. For example in 1993, a year after effective establishment of the privatization commission, there was a massive cut downs of employees where 11,804 employees were retrenched as a result of the privatization programme. Some of the retrenched employees were, later on, redeployed by the same privatized enterprises and others by the informal sector after the rehabilitation process. However, although it was necessary, privatization on its own was not a sufficient condition for sustainable structural transformation and industrial development.

It was in this context that the third phase government came up with the Tanzania Development Vision 2025. Besides Tanzania Development Vision 2025, Tanzania's Industrial Development was also guided by the the Basic Industry Strategy (BIS) which had expired in 1995 and was replaced by Sustainable Industrial Development Policy (SIDP 1996-2020) which was launched during the second half of the 1990s (Mussa, 2014). The main aim of SIDP was not to simply act as a replacement for the expired BIS, but it was also aimed to accomplish the government's decision of phasing out its involvement in direct investment in productive activities and, instead, to let the private sector become the main player in the

economy. In order to accomplish these policy objectives, the SIDP was to be implemented in three main phases, namely:

Short Term Priority Programme 1996-2000 (Phase I)

- Focused on rehabilitating and consolidating existing industrial capacities through capital, financial and management restructuring.
- The provision of fiscal and monetary incentives, simple, stable and transparent regulatory framework as the means of creating and sustaining an enabling environment.
- More emphasis on agro-processing industries so as to raise up the agro-processing activities in which Tanzania has a comparative advantage.

Medium Term Priority Programme 2000-2010 (Phase II)

- Creation of new capacities in activities with clear competitive advantages for the promotion of exports through use of Export Processing Zones (EPZs).
- Carrying out techno-economic preparations for exploitation of iron ore deposits.
- Promotion of Intermediate goods, Industries light capital goods and machine making

Long Term Priority Programme 2010 – 2020 (Intermediate and Capital Goods) (Phase III):

- Providing Fully-fledged investments in basic capital goods infrastructure.
- Smelting and metal products industries promotion in order to create a base for the development of intermediate and capital goods industries (Although there are vast mineral resources in Tanzania such as coal, nickel, copper, iron, gold, uranium, vanadium, titanium, and others, very few of these resources have been developed due to requirement of huge capital for infrastructure development)

Current Situation

The current approach to industrial development is based on the Tanzania Development Vision (TDV), 2025 in which the fourth phase government industrial development process is designed on five years development plans (FYDP), a mixture of private sector-led industrialization and public-private sector partnership which is resembles the first phase government's methodology in economic management. In this context, there is a specific industrial development agenda being dealt with in each five years development plan for the

sole purpose of leading Tanzania into a middle income industrialised country status as follows:

- FYDP I which is determined to Remove binding constraints to growth (soft and hard infrastructure, markets and electricity);
- FYDP II where industrialisation is to be made one of the pillars of political and socio-economic development (Intensified industrial development and promotion for structural change-Light manufacturing and resource based strategic industries); and
- FYDP III which will focus on promoting competitiveness of the manufacturing sector and a substantial improvement in Tanzania's share in regional and global trade.

This clear focus of the Long-term Perspective Plan (LTPP) will place industrialization at the core of Tanzania's future growth agenda. Such a shift in focus to a 'semi-industrialized' economy from an 'agricultural economy' was essential for the ailing industrial sector (Mussa, 2014).

Apart from the LTPP, the Government is, currently, implementing an Integrated Industrial Development Strategy (IIDS) 2011-2025 to further SIDP's implementation and to enable the realization of the targets and objectives stipulated in the Tanzania's Development Vision 2025. The objectives of the IIDS 2025 are therefore:

- To establish an internationally competitive business environment by strengthening the back-up institutional framework, forming industrial accumulation, bringing about concentrated infrastructure development and by promoting internationally competitive enterprises and industries. All of which will, together, make the industrial sector the real driving force of economic growth;
- To make Tanzania the industrial and logistics hub of the Eastern and Central Africa region, through the improvement and extension of existing development corridors and establishment of an import and export platform at the waterfront; and
- Last but not least, to promote rural industrialization, through an agricultural-development led industrialization approach.

The major instruments of IIDS include the accumulation and concentration of industrial firms through cluster development, aided by Special Economic Zones (SEZ). There are three planned waterfront SEZs: one for Mtwara SEZ which is being developed as the "Minerals Corridor", the Tanga corridor which will serve the areas of northern and north-western

Tanzania up to Rwanda, Uganda and the Great Lakes; the second for Dar es Salaam linked with the Central Railway Line to constitute the “Logistics Corridor”; and Tanzania-Zambia Railway Authority (TAZARA) to constitute the “Agricultural Corridor”. At the district and regional level, these corridors will link Micro Industrial Parks at the district level and Regional SEZs (Mussa, 2014).

5. RESULTS AND DISCUSSION

5.1.Unfettered Economy

As discussed in previous chapters, Adam Smith points out that on the supply side, business profits are invested in new, more efficient, and more specialized techniques of production. The resulting increase in productivity increases actual output for a given level of capacity utilization. On the demand side, the expansion of capacity generally generates additional employment. On the demand side, when wages are sticky downward, the average standard of living will be pushed up by the increased employment. Given access to goods, a higher standard of living leads to a greater demand for goods, and so more purchases. Such a growth of a middle-class labor force is Adam Smith's most important aspect of the concept of market expansion. So in this case, the costs of production and labor force in Tanzania have to be low which will lead to more profits and, thus, leading to more investment, innovation and employment in the industrial sector.

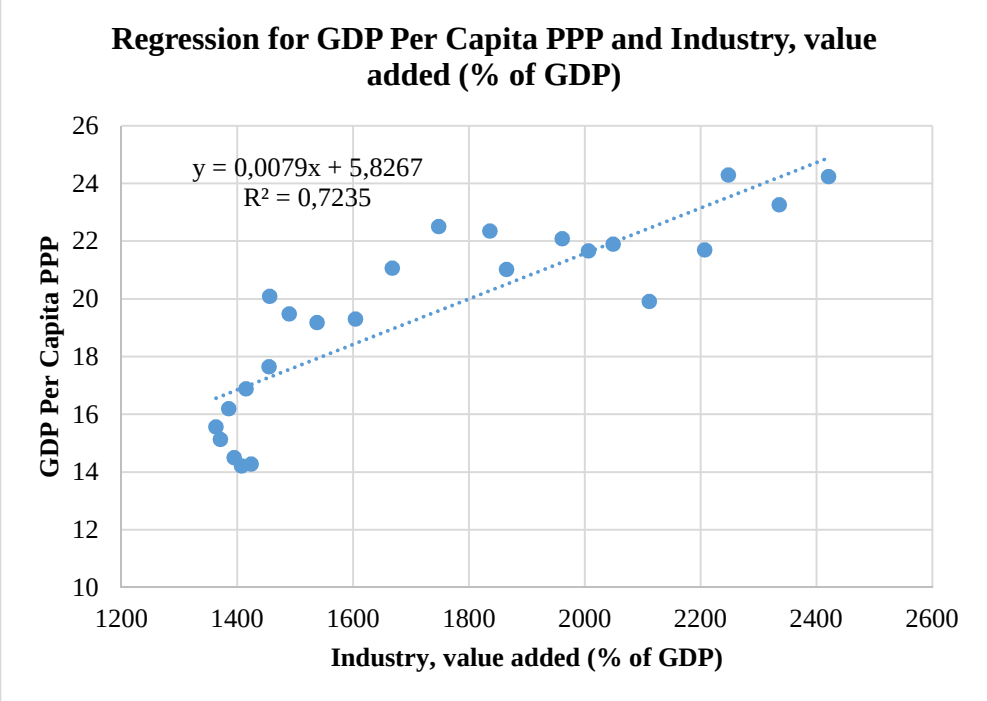


Figure 12: Regression for GDP Per Capita PPP and Value added industry (% of GDP) 1991 - 2014
Source: Researcher's own finding (Data from World Bank)
Note: y = 0.0079x + 5.8267; R = 0.85; R^2 = 0.72

What R^2 (coefficient of determination) tells us is the changes in the dependent variable Y (value added industry) that are explained by changes in the independent variable X (GDP Per Capita PPP).

What R (correlation coefficient) tells us is how strong the linear relationship is. The value of R is between +1 and –1. If it is positive then its implication is that there is covariance that the value of y increases when x is increasing. If it is negative then it means that as one variable (y) increases, the other variable (x) decreases.

As shown in Figure 12, the coefficient of determination R^2 = 0.72, shows that the test for explanatory power of the model is 72 percent while the remaining 28 percent is being explained by other variables or factors not included in the model, which are taken care of by stochastic or error terms.

Similarly, Figure 12 and Appendix A show a correlation results between GDP Per Capita PPP and value added industry (% of GDP) in Tanzania. The finding reveals a positive correlation between and GDP per capita PPP and Industries value added in the country. This signifies, holding other factors constant, an increase in GDP per capital may well spur Industrial value added in the Tanzania. In other words, by implication a change in the level of GDP per capita will bring a corresponding change of the values added industries in the positive direction.

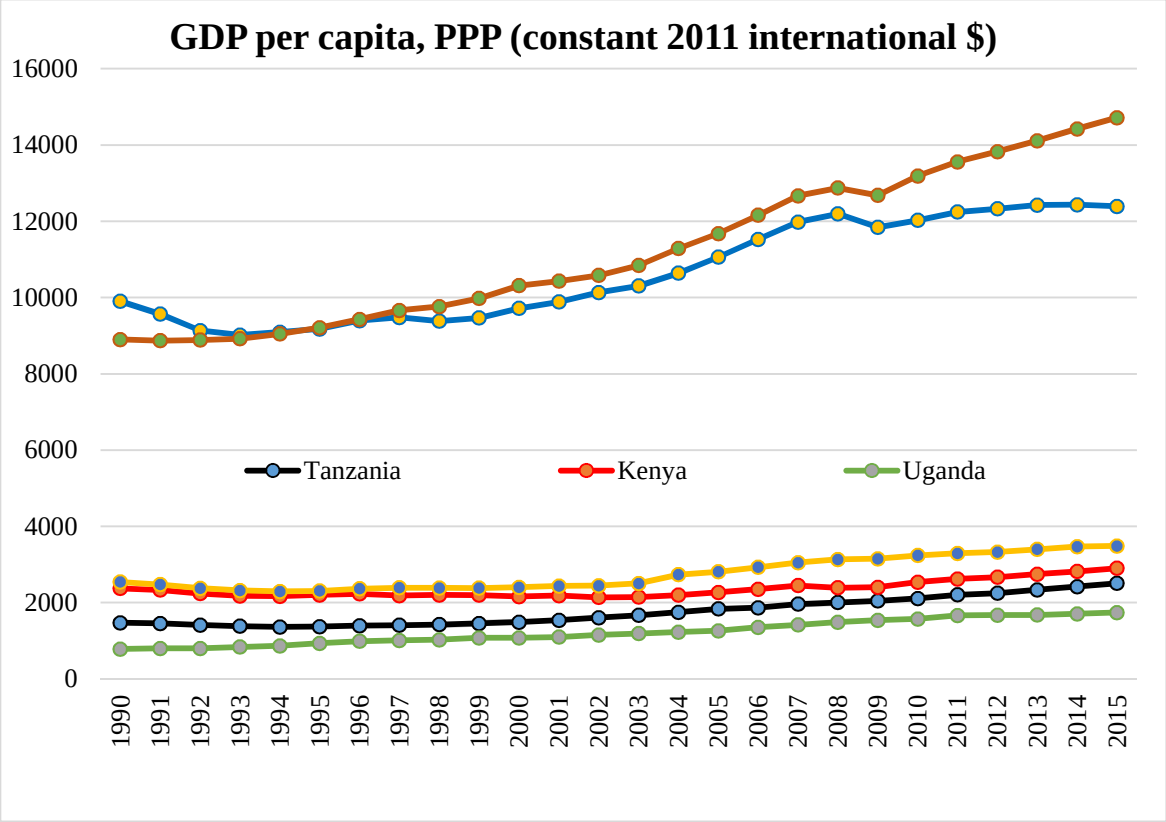


Figure 13: GDP per Capita, PPP (Constant 2011 International $), 1990-2015

Source: Researcher's analysis based on World Bank

From Figure 13 we can see that Tanzania's GDP per Capita, PPP is only higher from that of Uganda whilst it is lower than those of Kenya, South Africa, Sub-Saharan Africa as a whole and the whole world at large. While the economic implication of this is that the country is poor, when it comes to industrialization it implies that cost of materials and capital are more likely to be cheaper in Tanzania compared to the rest with an exception of Uganda which is a good thing for industrial investments in Tanzania since the investors will be able to make profits and invest in more sophisticated and advanced investments, investment leads to an expansion of the labor force, which increases demand, thus increasing profits.

Table 3: Minimum Wages in Tanzania with Effect from July 2013

Sector	Area	Minimum Wage per Month ('000 Tanzanian Shillings)
Health Services		130
Agricultural Services		100
Trade, Industries and Commercial Services	Trade, Industry and Commerce	115
	Financial Institutions	400
Communication Services	Telecommunications Services	400
Communication Services	Broadcasting and Mass Media, Postal and Courier Services	150
Mining	Mining and prospecting licenses	400
	Primary Mining licenses	200
	Brokers licenses	200
Private schools services (Nursery, Primary and Secondary schools)		140
Domestic and Hospital Services	Domestic Workers employed by Diplomats and Potential businessmen	150
	Domestic Workers employed by entitled officers	130
	Domestic Workers other than those employed by Diplomats and potential businessmen and entitled officers who are not residing in the household of the employer	80
	Other domestic workers	40
	Potential and Tourists hotel	250
	Medium Hotels	150
	Restaurants, Guest Houses and Bars	130
Private Security Services	International or potential security Companies	150
	Small companies	100
Energy Services	International Companies	400
	Small Companies	150
Transport Services	Aviation Services	300
	Clearing and Forwarding	300
	Inland Transport	200
Construction Services	Contractors Class I	325
	Contractors Class II-IV	280
	Contractors Class V-VII	250
Fishing and Marine Services		200
Other sectors not mentioned above		100

Source: Wageindicator, 2017. Note: 1 USD = 2185.80 Tsh therefore 1Tsh= 0.0006 USD

Table 3 shows minimum wages from different sectors in Tanzania. Most of the minimum wages are low so according to Adam Smith since prices are downward, the increased employment will push up the average standard of living. Given access to goods, a higher standard of living leads to a greater demand for goods, and so more purchases. This growth of a middle-class labor force is Adam Smith's most important aspect of the concept of "market expansion".

Although these findings shows Tanzania is performing poorly economically, when it comes to industrialization this holds a different implication. Since the costs of production and labor are low, investors will more likely make profits, profits will lead to investment in new techniques which lead to lower costs which lead to more profits. And as seen from the Loop in Figure 1 investment leads to an expansion of the labor force, which increases demand, thus increasing profits. Production will, therefore, increase exponentially.

5.2.The Role of Agriculture

In developed countries, cereal crops are usually harvested using advanced machines, typically using a combine harvester which cuts threshes, and winnows the grain all at once during the harvest. In most industrialized countries, particularly in Canada and the United States, farmers usually deliver their newly harvested grain to a storage facility or a grain elevator that consolidates the crops of many farmers. In developing countries, on the other hand, a variety of harvesting methods are used in cereal cultivation, mainly depending on the cost of labour, from small combines to hand tools such as the cradle or scythe. Over the past century, crop production systems have rapidly evolved and have resulted in significantly increased crop yields, but consequently they have created undesirable environmental side-effects such as pollution from chemical agrochemicals and fertilizers, soil degradation and erosion and a loss of bio-diversity. Other factors such as the green revolution, has led to stunning progress in increasing cereals yields over the last few decades. This progress, however, is not equally dispersed across all regions. Sustainable progress depends on maintaining agricultural education and research. The cultivation of cereals depends partly upon the development of the economy and it, therefore, varies widely in different countries. The level of production depends on the amount of rainfall, the nature of the soil, irrigation, quality of seeds, and the applied techniques to promote growth (indexmundi, 2016).

According to the World Bank, cereal yield (kilogram per hectare) in Tanzania, was last measured in 2013 at 1417.96 (Trading Economics, 2017). Cereal yield, measured as kg per hectare of harvested land, includes maize, rice, wheat, barley, oats, buckwheat, millet, rye, sorghum and mixed grains. Production data on cereals relate to crops harvested for dry grain only. Those cereal crops that are harvested for hay or harvested green for food, silage or feed and those used for grazing are excluded from the list (Trading Economics, 2017).

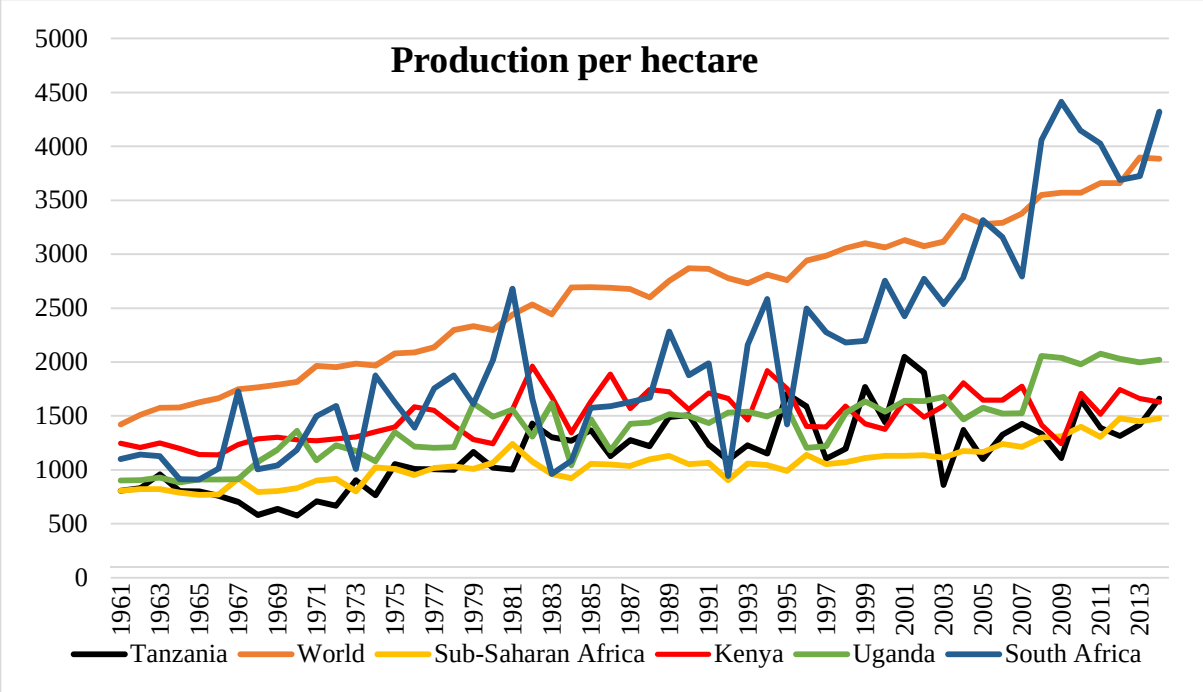


Figure 14: Production per Hectare, 1961-2013
Source: Researcher's analysis based on World Bank

From Figure 14 one can note that food production per hectare is relatively low in Tanzania. It was at its lowest around 1966 to 1972 and there was also a drop in 2003. Production increased in 1999 to 2001 but still it was relatively lower than that of South Africa and the rest of the world at large. In comparison to the average production in Sub-Saharan Africa, Tanzania is performing relatively well. Nevertheless, this is not as good as it sounds for it is still below the global benchmark and even compared to its neighboring Uganda and Kenya.

If anything, Tanzania should focus in the development and mechanizations of agricultural sector to have a positive multiplying effect. As illustrated in previous chapters, if food production cannot match the growth in urban population, then there will be a natural limit to the urban population growth process, which in turn limits the labor supply. Also, an increase in population, as prompted by industrialization, leads to a greater requirement for agricultural land, which might cut off the supply of raw materials needed for further growth of the industrial sector, economy and the population.

Food Prices

Food prices in Tanzania have been rising consistently. This can be good for local farmers (since their income is rising) but it is not very good for Industrialization, food has to be

affordable to carter to the increasing demand brought forth by the increasing labour force and population growth.

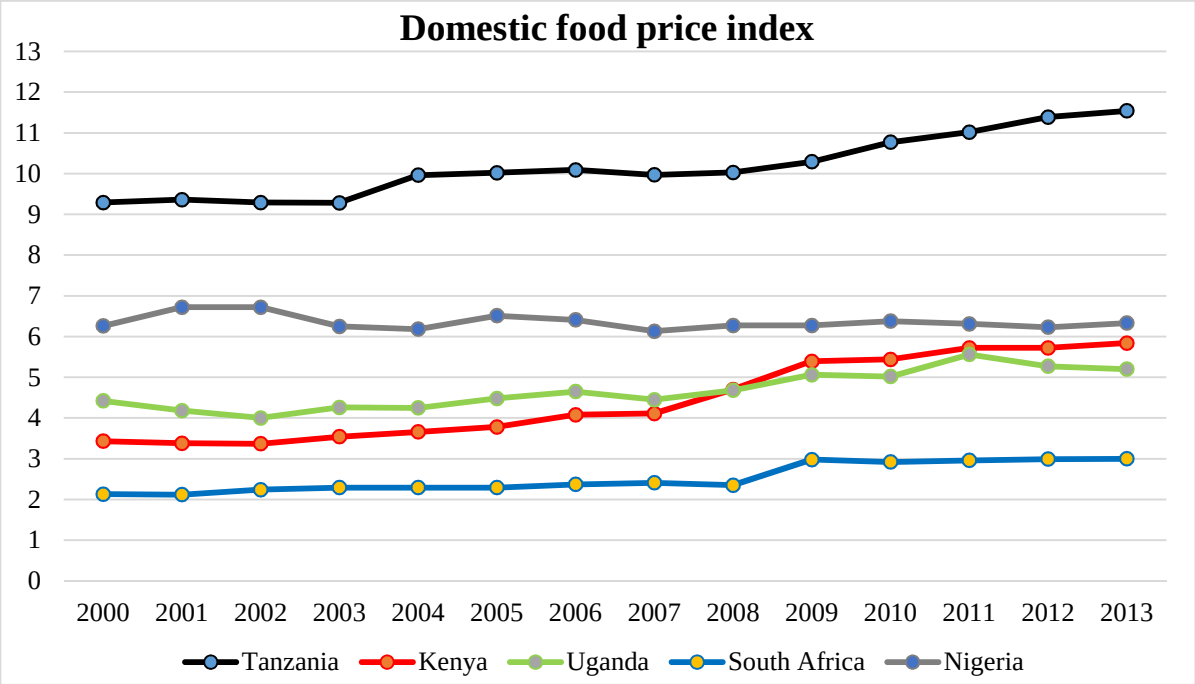


Figure 15: Domestic food price index, 2000-2013
Source: Researcher's own finding (Data from FAOSTAT, 2017)

Figure 15 shows that food price index in Tanzania is very high compared to the rest of the countries used in the figure. This is bad for industrialization as with an increase in population food prices might further inflate, which will cut real wages, aggregate demand, and economic and population growth. Therefore agricultural innovation and investment is necessary to provide low-priced food to the cities of Tanzania which is still a developing nation. If food prices will drop, people will spend less money on food and have enough money left to purchase other products thus expanding the market for domestic produced industrial products.

5.3. Labour Supply and Standard of Living in Urban Population

As discussed in the third chapter, a growing urban population provides the necessary labor for the continuance of the process of industrialization and further population growth. In this context, urban population refers to people living in urban areas as defined by national statistical offices. Explosive growth of cities globally signifies the demographic transition from rural to urban, and is connected with a move from an agriculture-based economy to mass technology, industry, and service. The majority of the world's population, for the first time ever, lives in a city, and this proportion continues to rise. Approximately one hundred years ago, 2 people out of 10 lived in an urban area. By 1990, the global population that lived

in a city was less than 40 percent, but as of early 2010s, more 50 percent of all people live in an urban area. It is estimated that by the 2030, out of every 10 people 6 will live in a city, and also by 2050, such a proportion will increase to reach 7 out of 10 people (Indexmundi, 2017).

Statics by World Bank Staff estimates based on United Nations, World Urbanization Prospects, indicated that Tanzania ranked number five as the countries with a large growth of urban population only preceded by Oman, Rwanda, Burkina Faso and Burundi.

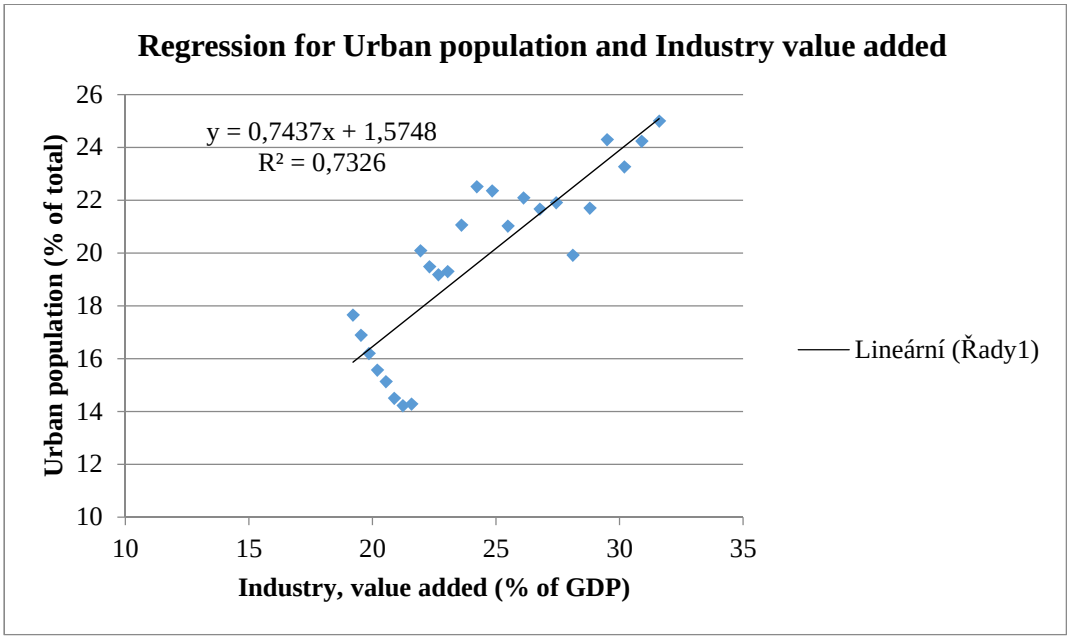


Figure 16: Regression for Urban population (% of total population) and Industry, value added (% of GDP), 1991 to 2015
Source: Researcher's analysis based on World Bank

Note: $y = 0.7437x + 1.5748$; $R = 0.86$; $R^2 = 0.73$

Figure 16 shows a correlation results between the variables GDP Per Capita PPP and Industry value added (% of GDP). The estimated result indicated that (as shown in Appendix B) R is positive (0.86) which means that Industries value added (% of GDP) and urban population (% of total population) are positively correlated. The implication of this is that when a change in the level of urban population will bring a corresponding change of the values added industries.

The coefficient of determination $R^2 = 0.73$, shows that the test for explanatory power of the model is 73 percent while the remaining 27 percent is being explained by other variables or factors not included in the model, which are taken care of by stochastic or error terms.

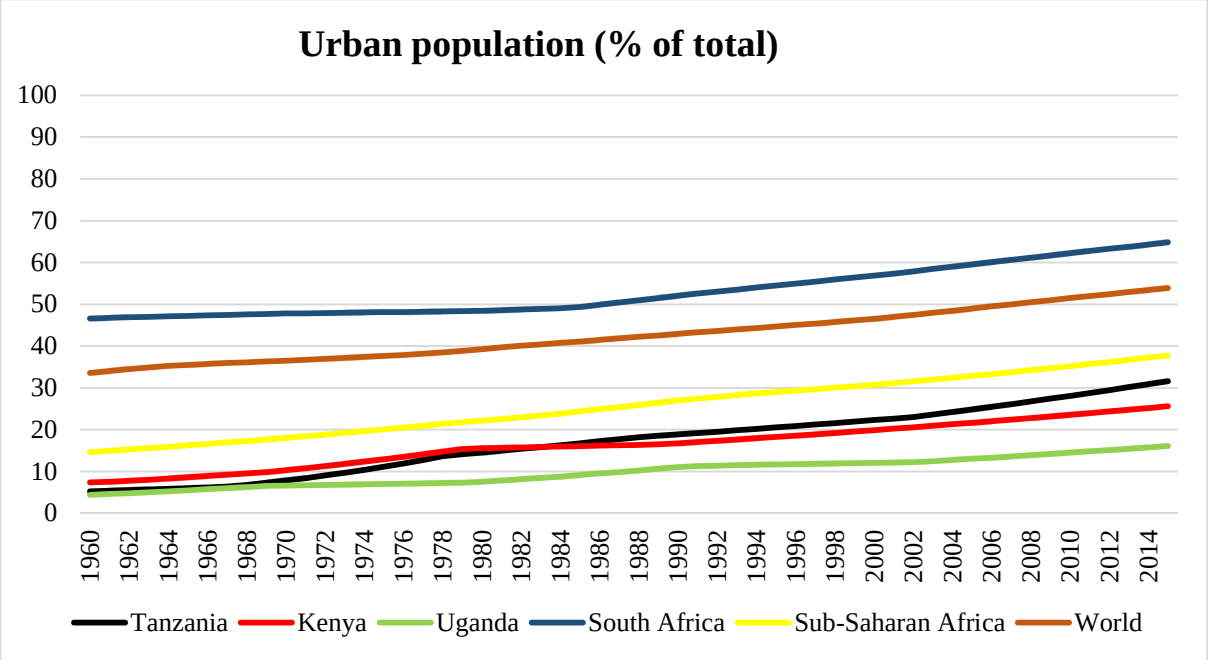


Figure 17: Urban Population (% of Total Population), 1960-2014
Source: Researcher's analysis based on World Bank

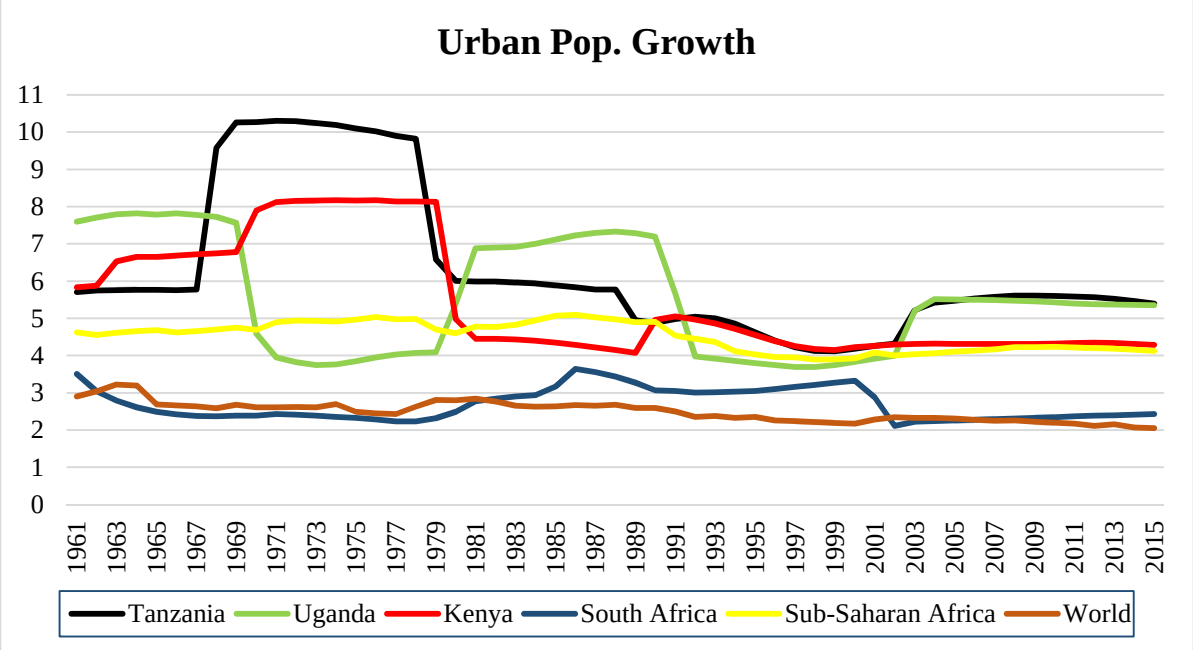


Figure 18: Urban Population Growth (% total population), 1961-2015
Source: Researcher's analysis based on World Bank

It can be seen from the urban population chart that Tanzania total percentage of urban population is lower than that of South Africa, Sub Saharan Africa and the World at large. However, it is higher than its neighboring Uganda and Kenya. Figure 18 shows urban population growth from 1961 to 2015. The figure shows that urban population growth in Tanzania has been fluctuating overtime but overall it has been higher than that of its

neighboring Kenya, Uganda and South Africa as well as Sub Saharan Africa and the World at large. Urban population growth shot up from 1967 to 1980. This was probably exacerbated by the Arusha Declaration, a development blueprint/policy on socialism and self-reliance, which was officially exercised since 1967.

This is a good thing since it implies that there would be enough labor supply to the, nearly, established industrial factories. Also, as shown in the previous sub-chapters, salaries and Purchasing Power Parity (PPP) in Tanzania have been low, which implies that, according to Deane (1965), there is likely more access to an abundant supply of labor at a relatively low price - is immensely encouraging to potential Investors.

The question remaining is whether this labor force will be willing to work in the impersonal and often wretched conditions of the factory. This can be explained by the unemployment rate. Unemployment Rate in Tanzania decreased from 10.70 percent in 2011 to 10.30 percent in 2014. From the year 2001 until 2014, the average rate of unemployment in the country was 11.46 percent, reaching an all-time high record of 12.90 percent in 2001 and a low record of 10.30 percent in 2014 (Trading Economics, 2017). With such high unemployment rate, more people will be willing to work in factories, thus assuring enough labor supply for the potential industries.

5.4.Energy Sector and Resources

5.4.1. Energy Sector Description

Findings show that biomass largely dominates the energy sector in Tanzania, which accounts for 88 percent of a total 20.7 million tons of oil equivalent (MTOE) of the total supply of primary energy in 2011 (IEA, 2014). Fuel imports represented 50 percent of total imports to Tanzania by the year 2015 (World Bank, 2016). Energy consumption per capita was 0.48 tons of oil equivalent (TOE) in 2011, which is one of the world's lowest rates and only two-thirds of the average consumption in the developing countries of sub-Saharan Africa (AfDB, 2015).

The residential sector accounts for most of the used energy, majority of which consists of agricultural waste and biofuels; 80 percent of biomass used in the residential sector is for day to day household cooking, whereby almost half of annual charcoal consumption occurs in Dar es Salaam (the major city). Petroleum products accounted for 8.1 percent of total final consumption, whilst electricity accounted for only 1.9 percent (AfDB, 2015).

Electricity in Tanzania is provided by a central grid, owned by the state utility Tanzania Electric Supply Company Limited (TANESCO), and by isolated mini grids in remote areas. The completion of a process of interconnecting the grids is slated by 2019, together with the reinforcement and upgrading of actual lines.

To date, the production of electricity has been dominated by large hydro. In recent years, however, their contribution to the total supply has dramatically fallen due to extensive droughts in the country. This has forced the utility to use, at a considerable financial cost, extensive load shedding, thermal power plant for base load and emergency power installations. Currently, there is a long-term strategy to expand production and transmission capabilities, and installed peak capacity is predicted to increase seven-fold by 2035 (AfDB, 2015).

Although the demand for electricity and its access is still very low, it has been fast growing. Recent findings show that the share of access to electricity is 36 percent (GoT 2014), and the government of Tanzania is committed to an accelerated electrification program to add over 250,000 customers a year. It is also forecasted that demand will increase due to the energy requirements for industry and mining and to catch up with actual unmet necessities.

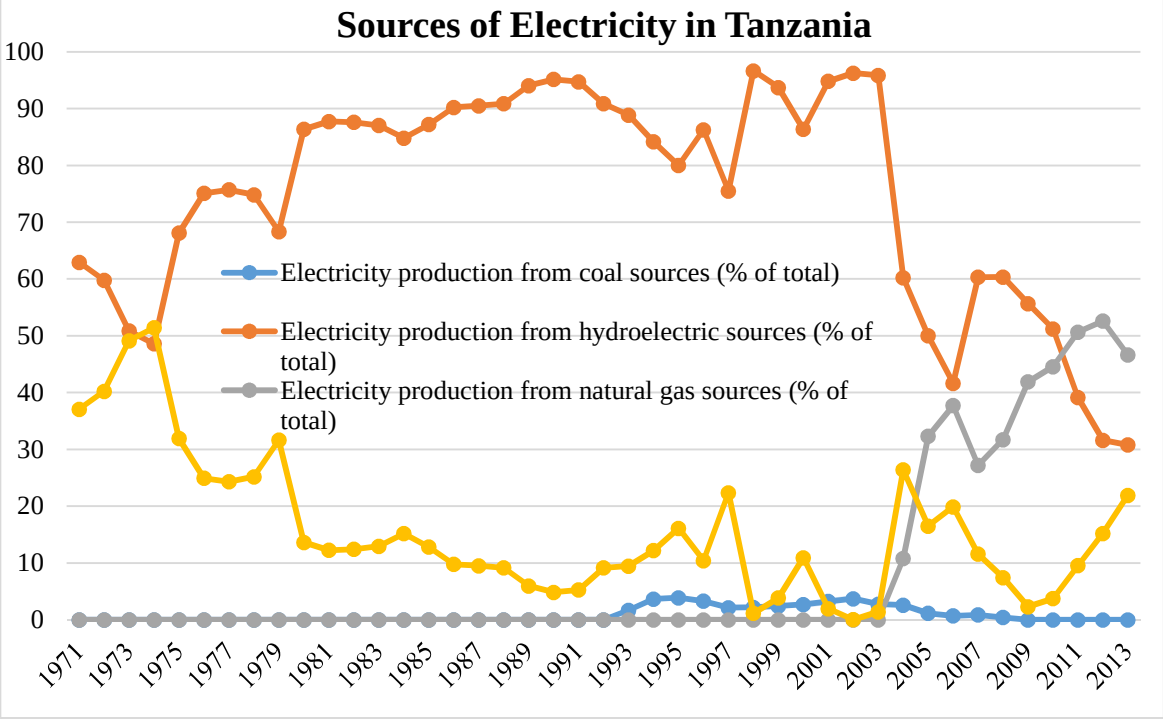


Figure 19: Sources of Electricity in Tanzania (% of total electricity), from 1971-2013
Source: Researcher's analysis based on World Bank

5.4.1.1.Electricity Demand.

Per capita electricity consumption in Tanzania is still very low, 104.79 kWh per year in 2014 (MEM), which is less than half of the average consumption of low-income states. That said, consumption is increasing rapidly owing mainly to a growing population and accelerating productive investments (AfDB, 2015). The Power System Master Plan (PSMP of 2010–35) forecasts that Tanzania's electrification status will rise to at least 75 percent by 2035 and at the same time, demand from connected customers will increase significantly since Tanzania is expected to reach a middle-income status by then as stipulated in the Tanzania National Development Vision 2025 (Ibid).

Additionally, TANESCO anticipates major demand increases from several liquefied natural gas (LNG) plants, mining operations, factories and water-supply schemes. It is projected that peak demand capacity will increase rapidly, from around 1,000 MW in 2013 to about 4,700 MW by 2025 and to 7,400 MW by 2035. Production, likewise, is projected to increase ten-fold, from 4,175 GWh in 2010 to about 47,723 GWh in 2035 (AfDB, 2015).

5.4.1.2.Electricity Supply

As of March 2013 Tanzania's installed electricity generation capacity was 1,564 MW, of which 1,438.24 MW are available from the main grid, the balance of 125.9 MW are accounted for by Small Power Projects (SPPs), imports and mini grids. Approximately 65 percent of grid generation capacity is from thermal (32 percent from oil and 33 percent from natural gas), whilst 35 percent is from large hydropower (AfDB, 2015). The rest comes from small renewable-energy power and imports (Table 4).

Table 4: Power Generation Capacity (March 2013)

Source	TANESCO	IPP	EPP	SPP	Total	Percent
Hydropower	553.0	-	-	-	553.0	35
Small hydro (<10 MW)	8.8	-	-	4.0	12. 8	0.8
Oil (Jet-A1 and diesel)	88.3	163.0	205.0	-	456.3	29
Gas	252.0	249.0	-	-	501.0	32
Biomass	-	-	-	27.0	27.0	1.7
Imports	14.0	-	-	-	14.0	0.9
Total	916	412	205	31	1564.1	100
Percent	59	26	13	2	100	

Source: TANESCO, 2013

Note: EPP= Emergency Power Producer, IPP= Independent Power Producer, SPP=Small power Producer

Private sector's contribution to electricity supply in Tanzania is significant and encouraged. Only 59 percent of total electric capacity is supplied by TANESCO, while Independent Power Producers and Emergency Power Producers provide 26 percent and 13 percent respectively, of which they sell wholesale to TANESCO (AfDB, 2015).

Small Power Producers are independent producers with a capacity inferior to 10 MW. SPPs account for 2 percent of total capacity. They may either sell electricity wholesale to TANESCO or to retail consumers. Additionally, private, diesel-based captive generation is estimated at about 300 MW nationally, with costs exceeding $35 per kWh (AfDB, 2015).

A share of total capacity by large hydropower declined by nearly two-thirds between 2002 and 2006 (from 98 percent to 40 percent), and now stands at 35 percent of available capacity, with output declining as a result of extended droughts (Ibid).

This situation has necessitated extensive load shedding and the running of expensive thermal power plants as base load. The 2012 Power System Master Plan (PSMP) foresees an addition between 2013-2017 of a 2,168 MW gas power plant, 400 MW of coal, 100 MW of wind, 60 MW of heavy fuel oil (HFO), 60 MW of solar, 30 MW of cogeneration and 11 MW of small hydro (AfDB, 2015).

Most are expected to be IPP projects. SPP projects are excluded and the expected impact of the Scaling up Renewable Energy Programme. Due to the uncertainty of the resource, geothermal is excluded from PSMP projections. The PSMP covers only grid-connected projects, while that of off-grid systems planning is being covered under the Rural Electrification Investment Prospectus.

As a consequence of the aforementioned issues, particularly due to the high costs of emergency generation, TANESCO is facing some devastating revenue shortfalls, which, in turn, is impacting its creditworthiness.

5.4.1.3.Electricity Distribution.

Tanzania's electricity system includes the main grid, covering large urban centres and main routes, private diesel generation and several independent mini-grids in rural areas and townships far from the central grid. Additionally, TANESCO imports power from Zambia and Uganda. TANESCO owns Transmission and distribution lines in the entire country. In some cases, however, SPPs are in charge of isolated micro- and mini-grids (AfDB, 2015).

Several development projects are in place to interconnect the isolated grid, to upgrade and extend the distribution and transmission sectors to cope with the growing demand and supply, to rise international trade in electricity with neighbouring countries and to improve the general reliability of the power system. The network reached its limit capacity on several lines and is therefore being upgraded and expanded. Tanzania's Five Year Development Plan 2011-2016 includes ten network projects for a total investment of almost 4 trillion Tanzanian Shillings (around US$2,421 million); the PSMP foresees the reinforcement of the regional network integration (AfDB, 2015).

Table 5: SWOT analysis of Tanzania power supply, 2013

Strengths	Weaknesses
Abundance of internal resources Large investment planned IPPs allowed SPPs for off-grid and grid generation	Difficulty coping with electricity demand Financial situation of TANESCO Widely dispersed rural population Domestic energy and energy gender issues
Opportunities	**Threats**
Sustained economic growth Regional integration	Climate change Fossil fuel (gas and coal) costs

Source: AfDB, 2015

5.4.1. Natural Gas

Since 1952, Tanzania has been exploring for oil and gas. According to the data available, in 1974 the first natural gas discovery was made at Lindi Region on the Songo Songo Island followed by a second discovery in 1982at the Mnazi Bay, Mtwara Region. In 2004 the Songo Songo natural gas was commercialised while that of Mnazi Bay in 2006.

Tanzania is a holder of East Africa's biggest natural-gas reserves after Mozambique. It has proven natural gas reserves of 57 trillion cubic feet (Ford, 2016), with not less than 49.5 trillion cubic feet of such reserves far offshore in the Indian Ocean (Katakey, 2015). Tanzania's government through the Tanzania Petroleum Development Corporation (TPDC), in partnership with the BG Group (a division of Royal Dutch Shell), Ophir Energy, Exxon Mobil and Statoil, plans to build an onshore liquefied natural gas export terminal at Songo Songo Island in Lindi (African Influence Exchange, 2016).

The first offshore discovery of natural gas in Tanzania was made in 2010 (Katakey, 2015). Other finds have been made, ever since, by several petroleum prospecting companies, which in 2014 decided to build a liquefaction facility targeting primarily the Asian market in Lindi (Holter, 2014). In August 2016, Tanzanian President John Magufuli publicly urged government bureaucrats to fast track the project so that construction processes could start promptly (Ng'wanakilala, 2016).

Currently, exploration activities are taking place onshore and shallow waters as well as deep offshore and inland rift basins. Until December 2012, 26 Production Sharing Agreements were signed with 18 oil exploration companies. Over 110,000 km of 2D seismic data have been acquired onshore, offshore, shelf as well as from inland rift basins.

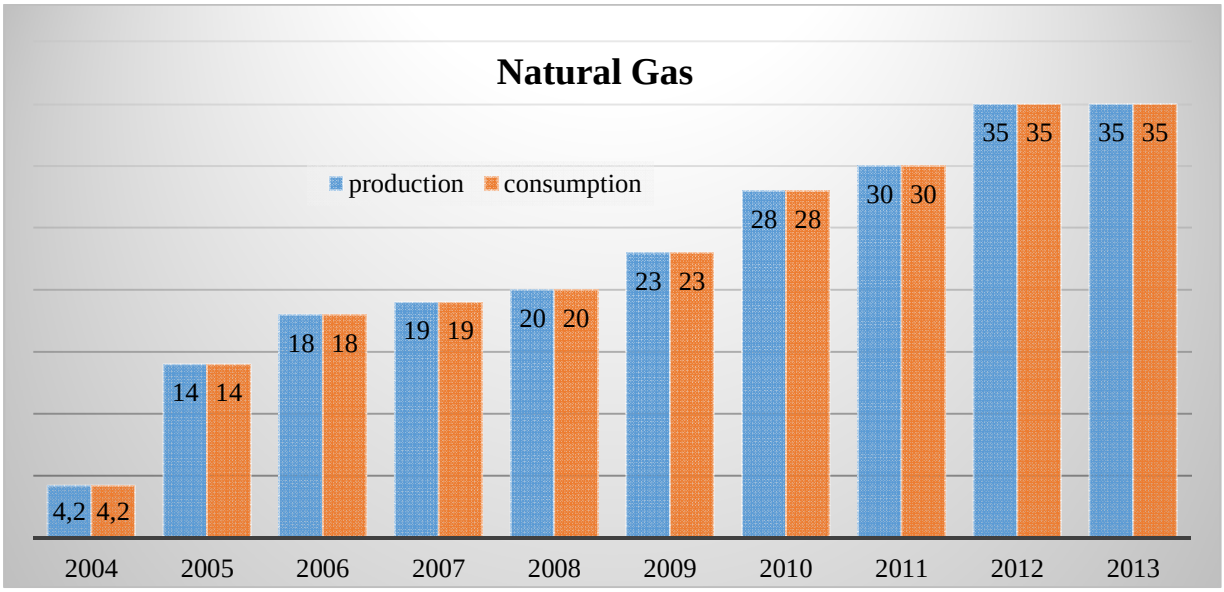


Figure 20: Tanzania's Natural Gas Production and Consumption (% of total Gas) 2004-2013

Source: Researcher's analysis based on Indexmundi

By February, 2013 data for a total of 21,632 square kilometers of 3D seismic have been acquired from the deep sea. Between 1952 and 2013, a total of 67 wells for both exploration and development have been drilled, of which 14wells are in the offshore basins and 53 are in onshore basins (URT, 2013). In May 2016, the government of United Republic of Tanzania announced its plan to build a gas pipeline to neighboring Uganda.

5.4.2. Coal in Tanzania

Coal is a, somewhat, black or dark brown sedimentary rock which is combustible, resulting from the partial decomposition of vegetable matter under varying degrees of increased pressure and temperature and away from air over a long period of time period (millions of years). In Tanzania Coal is used as a fuel and in the production of coke, water gas, coal gas and many coal-tar compounds.

Coal extraction and exploration in Tanzania have been significantly low over a couple of years until recently where the interests of using coal as a source of power production has risen among the government and private stakeholders. This is due to the increasing demand of reliable electricity by new investors (for example Dangote cement factory) since hydroelectricity has been extremely unpredictable.

Tanzania possesses considerable resource of coal that have low sulphur. Coalfields with the highest potential are in the Ruhuhu Basin (Ketawaka-Mchuchuma), Songwe Kiwira fields and Ngaka fields in the South-West of Tanzania. A total of approximately 1.5 billion tones in reserves have so far been identified (TMAA, 2017). The National Energy Policy of Tanzania of 2015, according to geological information, indicates that the country's coal reserves potential could be 5 billion tones. Currently, coal is exploited in small scale at Tancoal Energy Limited Mine at Ngaka in Ruvuma region and Kiwira Coal Mine in Mbeya region (TMAA, 2017).

Despite its abundance, coal has been scarcely used as a source of energy in Tanzania, but there is a potential of its maximum exploitation in the near future.

5.5. SWOC Analysis for Tanzania's Industrial Diplomacy

Following the carried analysis and attained results, the feasibility of industrial diplomacy in Tanzania can be summarized by the following SWOC analysis (Strength, weaknesses, opportunities and threats).

On the strength side, Tanzania has industrial policies that were established since the advent of its independence in 1961 which were then improved to suit the changing environment and those that were irrelevant were removed and replaced by new policies. They also have a new foreign policy that focuses on economic diplomacy thus complementing the country's industrial aspirations. Tanzania also has enough human capital, as portrayed in the descriptive analysis, urban population is huge in the country and it is growing at a fast pace. This population can serve as source of labor for the anticipated factories as well as markets for the industrial products. Tanzania is a resource rich country, apart from other mines Tanzania also has high coal and natural gas reserves which could all be used to produce electricity at cheap cost thus ensuring cheap and reliable electricity to the foreseen industries. Last but not least, the current administration is committed towards the achievement of industrializing the country as it has this as its main agenda.

Table 6: SWOC Analysis for Tanzania's Industrial Diplomacy

STRENGTHS	**WEAKNESSES**
• Long established industrial policies • Human capital • Governments' commitments • Ubiquitous natural resources including coal and gas	• Flawed policy execution • Poor land utilization • Poor transport and communication systems • Low agricultural output per hectare
OPPORTUNITIES	**CHALLENGES**
• Cheap labor • Approximately 43 million hectares of arable land • Demand for industrial products • Country's strategic location • Inflows of FDI and aid • Technology transfer and spillover	• Unskilled labor • Inadequate and unreliable electricity • Bureaucracy and corruption • Ease of doing business • Financial constraints

Source: Researchers' own findings

With regards to its weaknesses, despite having long established policies, the country's implementation of such policies have rather been less effective. Also the country has been

underutilizing its fertile land, despite having 43 million hectares of arable land at their disposal, only 10 million hectares of it is being used for agriculture (AgriSol, 2017) and even that one is underutilized mainly due to lack of access to modern farming methods, machinery, seeds and storage facilities. Such weaknesses contributes to its low production per hectare compared to other countries thus resulting to food shortages and even land competition. Transport and communication systems in Tanzania are also very poor. This is mainly due to poor transport infrastructures and unreliable electricity.

When it comes to opportunities, Tanzania has cheap labour at its disposal. The findings show that the country has a growing urban population and the minimum wages are low. Although it may appear to be a bad thing, cheap labour is good when it comes to attracting foreign investors in industrial sector. Also Tanzania is located in a strategic position, that it has ports which serves as a centre for importation of foreign goods and it can thus be used for importation of machinery for industrial establishments. There is as well large arable land of 43 million hectares which could be used for food production of which, if effectively utilized, could produce enough food for the growing population and it also means that the likelihood of land competition between industrial investors and farmers is immensely reduced by this fact. There is also an increasing demand for the industrial products. As a result of globalization, there is an opportunity to benefit from the transfer of technology and technological knowhow from more advanced countries. As mentioned earlier, Tanzania's strategic location is an opportunity that can be utilized. It is surrounded by land locked countries and also it is a member of East African Community (a regional economic integration) with a population of almost 173,583,000 people (IMF, 2017) which could serve as potential market for the manufactured goods and other industrial products.

There are challenges as well towards the pursuit of industrial diplomacy. Firstly, lack of skilled human capital that could serve as a source of labor to the anticipated industries. For example as of 2013 Tanzania's total population was 50,213,457 people whereby only 248,239 people were enrolled in secondary vocational (World Bank, 2017) which is only 0.49% of the whole population. Due to high dependence on hydroelectricity, power supply in Tanzania is quite unreliable, often characterized by consistent power shortages. This is a big challenge that is yet to be fully addressed and could serve as a bottle neck for industrial investment. Red tapes, bureaucracy escalated by corruption are other challenges which often discourage investors. According to Transparency International, Tanzania is ranked 116 out of 176 countries in corruption perception index of 2016 with a score of 32 out of 100

(Transparency International, 2017). The current government under president. Magufuli is putting a great effort to address these challenges. Corruption in Tanzania, however, is deep rooted thus deemed difficult to excavate overnight. Because of the aforementioned hurdles, it is difficult to start and do business in Tanzania. According to World Bank's doing business report on the ease of doing business, Tanzania is ranked 132 out of 190 countries and 135 in terms of starting a new business (World Bank, 2017). Last but not least is a financial challenge. Tanzania is among the least developed countries. Addressing majority of its challenges and executing its industrial aspirations demands for deep pockets of which it lacks.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1. Conclusion

The overall objective of this thesis was to explore the feasibility of industrial diplomacy in Tanzania. Specific objectives of this study have been achieved based on the following findings:

This study follows a particular line of reasoning by beginning with dentitions of main concepts. Diplomacy was introduced and different definitions by different scholars were provided. A distinction between foreign policy and diplomacy was made whereby the former is broader than the later as it represents the objective, principles and attitudes struck by one State towards another; diplomacy, however, is a key instrument employed for conveying and giving effect to the spirit of foreign policy. The tasks and strategies of diplomacy were also provided to further clarify the concept. Economic Diplomacy, which is the main focus of the current Tanzania's foreign policy was also elaborated so were its major thrusts. The study then introduced us to Tanzania's foreign policy and the declaration of the pursuit of Industrial Diplomacy by Tanzania's minister for Foreign Affairs. It then traced the evolution of Tanzania's Industrial Policy.

Based on previously defined context, in which this study is framed, a conceptual framework that allows analysis of the interrelationship between variables was developed. The line of reasoning is based on the premises that: in a well-integrated economy profits will be harnessed by the investors thus leading to an expansion of labor force, which will increase the demand thus increasing further profits. Also on the premise that agriculture is an important factor for economic growth and sufficient supply of food.

Regression as well as descriptive analysis were then conducted and the findings were discussed. The study revealed that there is a strong relationship between the rising urban population and the contribution of value added industries in the national GDP as well as the relationship between GDP per capita PPP and value added industries respectively. It also revealed that food production per hectare in Tanzania is very low, both compared to its neighbouring countries and the world benchmark at large.

Tanzania ranked number five as the countries with a large growth of urban population. This shows that there will be sufficient labour supply to the expected industries and since the wages are low and unemployment rate is high, people will most likely be willing to work in factories for better payments and better standard of living.

Tanzania is a resource rich country. Their usage, however, is still poorly low. Despite having coal natural gas reserves and sufficient wind power, Tanzania's electricity has largely been water driven (hydro-electricity). Due to high dependence on hydro-electricity the total supply of electricity has fallen dramatically in recent years due to extensive draughts and has quite often lead to frequent power shortages, which discourage foreign investors.

6.2. Recommendations

Industrialization is not only just a matter of having sound policies, but the internal socio-economic conditions should also be able to compliment industrialization. Based on the findings, the following are my recommendations:

As noted earlier, food production per hectare in Tanzania is very low, both compared to its neighbouring countries and the world benchmark at large. The country should, therefore, focus on agricultural innovation for that might decrease the risk of food shortage which might be brought forth by competition of land requirements for agriculture versus land requirements for industrial raw materials (which, according to Adam Smith, is the single biggest stumbling block to industrialization). Additionally, agriculture investment will sparkle off a series of innovations in land extension, drainage and other farm productivity related elements. In turn, it will increase food productivity to cater for the growing urban population and decrease food prices as well due to increased food supply. When food prices decline, real wages rise, and more of one's income can be spent on non-food items.

Despite the existence of relatively large and growing urban population that could serve, both, as source of labour and market for the manufactured goods, the Government of Tanzania should make sure that vocational trainings are more accessible and affordable to its community (urban community in particular) in order to prepare them for the foreseen industrial labour demand. If this is not done with precision, there is a risk of those jobs being grabbed by the citizens of its neighbouring countries who will be more qualified.

Last but not least was the role of mineral raw materials. Tanzania is rich in mineral resources. Efficient resource usage will improve industrial activities due to more reliable electricity also indirectly though the improvement of transport and communication systems thus enhancing quick transportation of materials and processed goods this is especially important now as Tanzania anticipates to construct a standard gauge railway with the length of 2,561 km connecting its main port of Dar es Salaam to land-locked neighbouring countries, including Uganda, Democratic Republic of the Congo, Rwanda and Zambia. The current administration

is pushing for the usage of natural gas and coal as alternatives to high dependence on hydroelectricity and petroleum. This is a reliable option than relying on hydroelectricity which is unpredictable due to water scarcity and cheaper than resorting to the usage of imported oil which is quite expensive.

REFERENCES

AfDB. (2015). *Renewable Energy in Africa: Tanzania Country Profile.* Côte d'Ivoire: African Development Bank Group.

AfDB, OECD, & UNDP. (2014). *African Economic Outlook 2014: Global Value Chains and Africa's Industrialization.* Paris: OECD Publishing.

AgriSol. (2017, May 01). *Agriculture in Tanzania*. Retrieved from AgriSol Energy Tanzania Limited: http://www.agrisoltanzania.com/tanzania.html

Akpuru, A. (1998). *Fundamentals of Modern Political Economy & International Economic Relations.* Owerri: Data Globe Nigeria.

Banks, W. (2014). *Fuel imports (% of merchandize imports).* Retrieved from The World Bank: http://data.worldbank.org/indicator/TM.VAL.FUEL.ZS.UN

Berridge, G. (2001). *A Dictionary of Diplomacy.* Hampshire UK: Palgrove Publishers.

Deane, P. (1965). *The First Industrial Revolution.* Cambridge: Cambridge University Press.

Economics, T. (2017, February 13). *Cereal yield (kg per hectare) in Tanzania*. Retrieved from Trading Economics: https://goo.gl/wLOq0Y

Economics, T. (2017, February 27). *Tanzania Unemployment Rate*. Retrieved from http://www.tradingeconomics.com/tanzania/unemployment-rate

Embassy, T. (2016). *Economic Diplomacy*. Retrieved 11 09, 2016, from The Embassy of United Republic of Tanzania in Rome: https://goo.gl/IP5Pja

Exchange, A. I. (2016, February 09). *Tanzania LNG project makes progress*. Retrieved from MINING.com: http://www.mining.com/web/tanzania-lng-project-makes-progress/

Eze, M. O. (2011). *Economic Diplomacy and Conduct of Nigeria's External Relations: Analysis of National Economic Empowerment and Development Strategy (NEEDS).*

FAOSTAT. (2017, February 26). *Crops*. Retrieved from Food and Agriculture Organization of the United Nations: http://www.fao.org/faostat/en/#data/QC

Ford, N. (2016, August 30). *Gas fuels Tanzania, Mozambique growth*. Retrieved from The African Report: https://goo.gl/kSvYyz

Gascoigne, B. (2001). *History of The Industrial Revolution*. Retrieved 10 30, 2016, from History World: https://goo.gl/B6zsoL

Gilboy, E. (1967). *Demand as a Factor in the Industrial Revolution in The Causes of the Industrial Revolution in England.* Mthuen and Co. Ltd.

Government of Tanzania. (2013). *Vision 2025: Big Results Now, Presentation of the results of the Energy Lab.* Dar es Salaam: GoT.

Hartwell, R. M. (1967). *Introduction in The Causes of Industrial Revolution in England.* Methuen and Co., Ltd.

Holter, M. (2014, February 14). *Statoil, BG to Build Tanzania LNG Plant in Lindi, Minister Says*. Retrieved from Bloomberg: https://goo.gl/Gbc9WG

Homer, J. B. & Alfred, P.S. (1982). Theories of the Industrial Revolution: A Feedback Perspective. *DYNAMICA*, 8(1), 30-35.

Huria, A., & Brenton, P. (2015). *Export diversification in Africa: The Importance of Good Trade Logistics.* Washington,DC: World Bank.

IBRD-IDA. (2017, February 26). *World Development Indicators*. Retrieved from The World Bank: https://goo.gl/mVW3Dt

IEA. (2014). *Energy Balance of Tanzania*. Retrieved from International Energy Agency: https://goo.gl/2RF7aZ

IMF. (2012). *Regional Economic Outook.* Washington, DC.

IMF. (2017, May 01). *World Economic Outlook Database, April 2016*. Retrieved from International Monetary Fund: https://goo.gl/iD95VM

indexmundi. (2016, December 27). *Tanzania - Cereal Yield (kg per hectare)*. Retrieved from indexmundi: https://goo.gl/HOas4B

Indexmundi. (2017, February 03). *Urban Population Growth (annual %) - Country Ranking*. Retrieved from Indexmundi: https://goo.gl/kaZz5e

John Page, U.-W. (. (2014, November 20). *Learning to Compete: Industrialization in Africa and Emerging Asia*. Retrieved October 31, 2016, from Brookings: https://goo.gl/7OJ5va

Katakey, R. (2015, June 19). *Tanzania Sees Decision on $ Billion LNG Project in Three Years*. Retrieved from Bloomberg: https://goo.gl/S320c9

Mathias, P. (1972). *Who Unbound Prometheus? Science and Technical Change 1600-1800 in Science, Technology and Economic Growth in the 18th Century.* London: Methuen and Co. Ltd.

Mc.clelland, D. (1961). *The Achieving Society.* New York: Van Nostrand and Co., Inc.

Mtulya, A. (2015, November 21). *Magufuli: My Priorities.* Retrieved from The Citizen: https://goo.gl/oukf2Jl

Mussa, U. (2014, November 11). Industrial Development And Its Role in Combating Unemployment in Tanzania: History, Current Situation and Future Prospects.

Musson, A. (1972). *Introduction in Science, Technology, and Economic Growth in the 18th Century.* London: Methuen and Co., Ltd.

Ng'wanakilala, F. (2016, August 23). *Tanzania's President Magufuli orders officials to speed up LNG project*. Retrieved from The East African: https://goo.gl/vvgLGN

Ng'wanakilala, F. (2017, January 23). *Tanzania seeks Turkish loan for railway, Erdogan raises cleric's network.* Retrieved from Reuters: https://goo.gl/P8UyFg

Nicolson, H. (1963). *Diplomacy.* New York: Oxford University Press.

Okano-Heijmans, M. (2016). Economic Diplomacy. In C. M. Constantinou, P. Kerr, & P. Sharp, *The SAGE Handbook of Diplomacy* (p. 553). London: SAGE Publications Ltd.

Okogwu, E. L., & Akpuru, A. (2004). *Nigerian Diplomacy & the Conflict of Laws: an Insight into the Practice of Nigeria's Foreign Policy.* Nigeria: Willyrose & Appleseed Publishing.

Pike, J. (2015, 05 10). *Tanzania - Foreign Relations*. Retrieved 11 09, 2016, from GlobalSecurity.org: http://www.globalsecurity.org/military/world/tanzania/forrel.htm

Rostow, W. W. (1960). *The Stages of Economic Growth (2nd Edition).* Cambridge: Cambridge University Press.

Rush, J. (2016, April 21). *Manufacturing more than Doubles in Sub-Saharan Africa, Despite Fall In Share Of GDP.* Retrieved from Overseas Development Institute: https://goo.gl/kbnEC2t

Saner, R., & Yiu, L. (2001). International Economic Diplomacy: Mutations in Post-modern Times. *Discussion Papers in Diplomacy Netherlands Institute of International Relations "Clingendael"*, 13.

Skarstein, R., & Wangwe, S. M. (1986). *Industrial Development in Tanzania: Some Critical Issues.* Dar es Salaam: Tanzania Publishing House.

Söderbom, M. (2015, December 14). *The global economy: Can African firms break in?* Retrieved 10 31, 2016, from Brookings: https://goo.gl/wAQH52

Staff, H. (2009). *Industrial Revolution*. Retrieved 10 30, 2016, from History.com: http://www.history.com/topics/industrial-revolution

TMAA. (2017, January 02). *Minerals found in Tanzania: Coal*. Retrieved from Tanzania Minerals Audit Agency: http://www.tmaa.go.tz/minerals/view/coal

Transparency International. (2017, April 27). *Corruption Perceptions Index 2016*. Retrieved from Transparency International: https://www.transparency.org/news/feature/corruption_perceptions_index_2016

UNIDO. (2016). *Industrialization in Africa and Least Developed Countries.* United Nations Industrial Development Organization.

United Nations. (2016, August 09). *Industry, Innovation and Infrastructure: Why it matters*. Retrieved from Sustainable Development Goals: https://goo.gl/OXFa8X

United Republic of Tanzania. (2013). *The National Natural Gas Policy of Tanzania.* Dar es Salaam: Ministry of Energy and Minerals.

World Bank. (2017, April 27). *Economy Rankings*. Retrieved from Doing Business: http://www.doingbusiness.org/rankings

World Bank. (2017, April 27). *World Development Indicators*. Retrieved from The World Bank IBRD-IDA: https://goo.gl/jUpzTJ

WorldBank. (2016, January 02). *Fuel Imports (% of merchandise imports)*. Retrieved from The World Bank: https://goo.gl/jBvVRt

Wrigley, E. A. (1967). *The Supply of Raw Materials in the Industrial Revolution in The Causes of Industrial Revolution in England.* London: Methuen and Co. Ltd.

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

Appendix A: Regression Analysis for GDP per Capita PPP and Industry Value Added (% of GDP) 1991-2014

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.85059
R Square	0.723504
Adjusted R Square	0.710935
Standard Error	1.736344
Observations	24

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	173.5583	173.5583	57.56702	1.41E-07
Residual	22	66.32763	3.014892		
Total	23	239.886			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	5.826735	1.839406	3.167726	0.004458	2.01204	9.64143	2.01204	9.64143
GDP per capita PPP	0.00787	0.001037	7.587293	1.41E-07	0.005719	0.010022	0.005719	0.010022

Appendix B: Regression for Urban Population (% of total) and Industry, Value Added (% of GDP), 1991-2015

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.855908
R Square	0.732578
Adjusted R Square	0.720951
Standard Error	1.76734
Observations	25

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	196.7998	196.7998	63.00635	4.9E-08
Residual	23	71.84032	3.123492		
Total	24	268.6402			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	1.574755	2.315656	0.680047	0.503263	-3.21554	6.365054	-3.21554	6.365054
Urban population (% of total)	0.743695	0.093692	7.937654	4.9E-08	0.549879	0.937512	0.549879	0.937512

Appendix C: Production per Hectare

Year	Tanzania	World	SSA	Kenya	Uganda	South Africa
1961	805.70	1,421.62	805.84	1,244.70	902.30	1,099.10
1962	831.30	1,510.86	821.99	1,206.70	903.70	1,142.10
1963	958.60	1,576.09	821.70	1,249.70	926.60	1,128.00
1964	804.40	1,576.95	789.58	1,199.60	884.40	913.90
1965	801.40	1,625.02	767.41	1,143.00	910.50	911.40
1966	760.20	1,665.76	771.99	1,139.90	908.90	1,010.40
1967	702.50	1,748.67	919.27	1,235.30	913.10	1,725.60
1968	581.10	1,765.71	794.03	1,286.70	1,074.50	1,006.00
1969	638.50	1,789.44	802.60	1,303.00	1,185.50	1,041.10
1970	573.80	1,816.39	829.32	1,278.20	1,362.60	1,187.00
1971	708.10	1,965.60	900.77	1,270.20	1,087.90	1,498.20
1972	668.00	1,953.47	917.27	1,286.50	1,227.60	1,593.90
1973	903.00	1,985.44	799.71	1,306.30	1,173.50	1,007.50
1974	764.60	1,966.87	1,022.47	1,352.20	1,079.80	1,875.80
1975	1,052.20	2,080.39	1,008.00	1,396.80	1,350.80	1,624.40
1976	1,007.60	2,088.68	953.14	1,582.80	1,217.20	1,391.50
1977	1,005.90	2,135.93	1,016.45	1,550.80	1,205.40	1,752.00
1978	999.60	2,296.37	1,031.64	1,409.50	1,210.10	1,876.20
1979	1,166.30	2,331.57	1,007.45	1,282.70	1,613.70	1,609.60
1980	1,020.20	2,297.42	1,064.54	1,241.70	1,491.00	2,017.30
1981	1,003.10	2,438.73	1,239.84	1,561.60	1,561.70	2,680.30
1982	1,429.50	2,534.30	1,075.90	1,962.70	1,309.00	1,659.80
1983	1,300.90	2,443.63	960.13	1,675.90	1,617.30	960.20
1984	1,270.70	2,691.80	923.48	1,343.10	1,041.90	1,083.90
1985	1,366.80	2,695.37	1,055.75	1,633.80	1,469.50	1,575.90
1986	1,126.60	2,690.09	1,050.11	1,886.20	1,181.30	1,589.40
1987	1,274.30	2,677.50	1,035.18	1,568.50	1,427.50	1,628.70
1988	1,220.10	2,600.42	1,098.37	1,745.60	1,438.30	1,671.50
1989	1,489.20	2,755.00	1,130.66	1,723.00	1,515.80	2,281.90
1990	1,506.50	2,870.17	1,053.16	1,561.80	1,497.60	1,877.30
1991	1,233.90	2,862.93	1,063.95	1,712.60	1,434.10	1,988.70
1992	1,087.40	2,776.90	904.98	1,661.10	1,530.10	943.80
1993	1,227.40	2,729.99	1,060.07	1,461.20	1,541.00	2,159.00
1994	1,151.90	2,810.58	1,044.06	1,918.20	1,495.00	2,585.50
1995	1,701.60	2,759.20	991.02	1,753.10	1,571.20	1,422.10
1996	1,587.50	2,941.19	1,137.83	1,402.40	1,204.90	2,495.80
1997	1,102.30	2,986.77	1,053.98	1,397.10	1,218.10	2,276.70
1998	1,195.80	3,057.71	1,071.55	1,590.00	1,526.40	2,182.20
1999	1,769.10	3,102.46	1,108.91	1,427.70	1,633.90	2,196.00
2000	1,442.30	3,062.32	1,130.20	1,375.00	1,539.40	2,755.30
2001	2,047.40	3,130.56	1,129.46	1,640.00	1,641.10	2,423.60
2002	1,902.90	3,074.12	1,134.58	1,488.50	1,638.80	2,771.80
2003	859.60	3,115.57	1,112.12	1,594.10	1,677.60	2,537.10

2004	1,370.60	3,357.39	1,175.21	1,806.30	1,468.00	2,782.70
2005	1,101.60	3,278.95	1,165.99	1,646.30	1,573.80	3,314.50
2006	1,326.70	3,292.56	1,238.59	1,646.70	1,522.90	3,159.10
2007	1,427.30	3,377.68	1,213.59	1,773.40	1,526.00	2,792.60
2008	1,333.90	3,548.20	1,298.79	1,417.70	2,055.80	4,061.50
2009	1,110.40	3,570.95	1,310.51	1,242.70	2,038.30	4,412.60
2010	1,647.90	3,571.43	1,400.72	1,710.10	1,978.40	4,143.00
2011	1,390.40	3,660.61	1,303.82	1,514.60	2,077.60	4,024.00
2012	1,314.80	3,660.68	1,476.78	1,744.80	2,028.60	3,689.40
2013	1,418.00	3,897.15	1,451.43	1,661.50	1,998.30	3,724.90
2014	1,660.00	3,886.19	1,476.15	1,627.70	2,019.30	4,320.40

Source: World Bank (IBRD-IDA, 2017).

Appendix D: GDP per Capita, PPP (Constant 2011 International $), 1990-2015

Year	Tanzania	Kenya	Uganda	South Africa	SSA	World
1990	1,473	2,376	783	9,904	2,542	8,902
1991	1,455	2,332	800	9,569	2,476	8,871
1992	1,415	2,240	800	9,133	2,377	8,887
1993	1,385	2,178	839	9,019	2,320	8,919
1994	1,363	2,170	866	9,092	2,296	9,048
1995	1,371	2,202	936	9,178	2,306	9,210
1996	1,395	2,233	990	9,395	2,366	9,429
1997	1,407	2,187	1,010	9,479	2,389	9,665
1998	1,424	2,204	1,029	9,382	2,389	9,765
1999	1,456	2,200	1,078	9,466	2,381	9,980
2000	1,490	2,158	1,078	9,718	2,403	10,316
2001	1,538	2,184	1,098	9,888	2,439	10,432
2002	1,604	2,140	1,155	10,133	2,447	10,585
2003	1,668	2,147	1,189	10,305	2,504	10,842
2004	1,748	2,198	1,228	10,641	2,736	11,286
2005	1,836	2,268	1,263	11,060	2,810	11,680
2006	1,865	2,352	1,353	11,526	2,929	12,161
2007	1,961	2,448	1,418	11,982	3,051	12,668
2008	2,007	2,390	1,491	12,197	3,133	12,875
2009	2,049	2,405	1,539	11,842	3,149	12,680
2010	2,111	2,539	1,573	12,029	3,238	13,190
2011	2,207	2,623	1,665	12,244	3,293	13,558
2012	2,248	2,670	1,674	12,330	3,326	13,827
2013	2,336	2,748	1,678	12,426	3,400	14,115
2014	2,421	2,819	1,708	12,434	3,471	14,423
2015	2,510	2,901	1,738	12,393	3,488	14,717

Source: World Bank (IBRD-IDA, 2017).

Appendix E: Domestic Food Price Index

Year	Tanzania	Kenya	Uganda	South Africa	Nigeria
2000	9.29	3.43	4.42	2.13	6.26
2001	9.36	3.38	4.18	2.12	6.72
2002	9.29	3.37	4	2.24	6.72
2003	9.28	3.54	4.26	2.29	6.25
2004	9.96	3.66	4.25	2.29	6.18
2005	10.02	3.78	4.48	2.29	6.51
2006	10.09	4.08	4.65	2.37	6.41
2007	9.97	4.11	4.45	2.41	6.13
2008	10.03	4.7	4.68	2.35	6.27
2009	10.29	5.39	5.06	2.98	6.27
2010	10.77	5.44	5.02	2.92	6.38
2011	11.02	5.72	5.56	2.96	6.31
2012	11.39	5.72	5.27	2.99	6.23
2013	11.54	5.84	5.2	3	6.33

Source: FAOSTAT, 2017.

Appendix F: Urban Population (% of Total Population)

Year	Tanzania	Kenya	Uganda	South Africa	Sub-Saharan Africa	World
1960	5.25	7.36	4.42	46.62	14.63	33.56
1961	5.39	7.57	4.62	46.79	14.95	34.07
1962	5.55	7.77	4.83	46.91	15.26	34.52
1963	5.70	8.04	5.05	47.02	15.59	34.91
1964	5.87	8.32	5.27	47.13	15.92	35.30
1965	6.03	8.61	5.51	47.25	16.26	35.53
1966	6.20	8.90	5.76	47.36	16.60	35.73
1967	6.37	9.21	6.01	47.48	16.95	35.94
1968	6.80	9.53	6.28	47.59	17.30	36.13
1969	7.31	9.85	6.56	47.70	17.67	36.34
1970	7.85	10.30	6.66	47.81	18.03	36.53
1971	8.43	10.78	6.74	47.87	18.43	36.71
1972	9.05	11.28	6.81	47.93	18.84	36.92
1973	9.70	11.81	6.89	47.99	19.25	37.15
1974	10.40	12.35	6.96	48.05	19.66	37.43
1975	11.15	12.91	7.04	48.11	20.09	37.65
1976	11.94	13.50	7.12	48.17	20.53	37.90
1977	12.77	14.11	7.20	48.23	20.96	38.15
1978	13.66	14.75	7.28	48.29	21.40	38.48
1979	14.14	15.40	7.36	48.35	21.79	38.88
1980	14.56	15.58	7.53	48.43	22.15	39.28
1981	14.98	15.68	7.83	48.59	22.56	39.70
1982	15.41	15.78	8.15	48.76	22.98	40.08
1983	15.85	15.88	8.47	48.92	23.42	40.42
1984	16.31	15.98	8.81	49.09	23.89	40.78
1985	16.77	16.08	9.15	49.37	24.39	41.13
1986	17.24	16.18	9.51	49.91	24.92	41.49
1987	17.73	16.28	9.88	50.44	25.43	41.85
1988	18.22	16.38	10.27	50.97	25.95	42.22
1989	18.57	16.49	10.67	51.51	26.46	42.57
1990	18.88	16.75	11.08	52.04	26.99	42.93
1991	19.21	17.04	11.34	52.55	27.44	43.29
1992	19.54	17.34	11.42	53.04	27.87	43.62
1993	19.87	17.65	11.50	53.52	28.30	43.98
1994	20.20	17.95	11.58	54.00	28.66	44.34
1995	20.54	18.26	11.66	54.49	29.02	44.70
1996	20.89	18.58	11.75	54.97	29.37	45.06
1997	21.24	18.90	11.83	55.45	29.72	45.42
1998	21.59	19.22	11.91	55.93	30.06	45.78
1999	21.95	19.55	12.00	56.41	30.41	46.15
2000	22.31	19.89	12.08	56.89	30.77	46.54
2001	22.67	20.24	12.17	57.37	31.18	46.98
2002	23.04	20.59	12.25	57.90	31.59	47.48

2003	23.61	20.95	12.48	58.45	32.01	47.98
2004	24.22	21.31	12.76	58.99	32.43	48.48
2005	24.85	21.68	13.03	59.54	32.87	48.99
2006	25.48	22.05	13.31	60.08	33.32	49.49
2007	26.12	22.42	13.60	60.62	33.78	49.99
2008	26.78	22.80	13.89	61.15	34.26	50.49
2009	27.44	23.18	14.19	61.69	34.74	50.99
2010	28.11	23.57	14.49	62.22	35.23	51.48
2011	28.80	23.97	14.80	62.75	35.73	51.98
2012	29.49	24.37	15.12	63.27	36.23	52.46
2013	30.20	24.78	15.44	63.79	36.73	52.94
2014	30.90	25.20	15.77	64.30	37.23	53.40
2015	31.61	25.62	16.10	64.80	37.74	53.86

Source: World Bank (IBRD-IDA, 2017).

Appendix G: Urban Population Growth (% total population)

Years	Tanzania	Uganda	Kenya	South Africa	Sub-Saharan Africa	World
1961	5.71	7.60	5.83	3.51	4.62	2.90
1962	5.75	7.71	5.87	3.04	4.56	3.04
1963	5.76	7.80	6.53	2.79	4.61	3.22
1964	5.77	7.82	6.65	2.61	4.65	3.20
1965	5.77	7.78	6.65	2.49	4.68	2.69
1966	5.76	7.82	6.68	2.42	4.62	2.67
1967	5.77	7.78	6.71	2.38	4.65	2.64
1968	9.57	7.72	6.74	2.37	4.70	2.59
1969	10.26	7.56	6.78	2.38	4.75	2.68
1970	10.27	4.59	7.90	2.39	4.69	2.61
1971	10.30	3.95	8.12	2.43	4.89	2.61
1972	10.29	3.83	8.16	2.42	4.94	2.62
1973	10.24	3.74	8.16	2.39	4.93	2.61
1974	10.19	3.77	8.17	2.36	4.91	2.70
1975	10.10	3.85	8.17	2.33	4.96	2.49
1976	10.02	3.95	8.17	2.29	5.03	2.45
1977	9.90	4.03	8.14	2.23	4.98	2.43
1978	9.82	4.07	8.13	2.23	4.98	2.63
1979	6.58	4.09	8.13	2.32	4.70	2.81
1980	6.01	5.38	4.97	2.49	4.59	2.80
1981	5.98	6.88	4.45	2.77	4.78	2.84
1982	5.99	6.90	4.45	2.85	4.77	2.76
1983	5.96	6.91	4.43	2.90	4.83	2.65
1984	5.94	7.00	4.40	2.93	4.95	2.63
1985	5.88	7.12	4.34	3.17	5.07	2.64
1986	5.83	7.23	4.29	3.64	5.10	2.67
1987	5.78	7.30	4.22	3.56	5.03	2.65
1988	5.78	7.33	4.15	3.44	4.97	2.68
1989	4.95	7.28	4.07	3.27	4.89	2.59
1990	4.88	7.19	4.96	3.06	4.91	2.59
1991	4.98	5.67	5.05	3.05	4.53	2.50
1992	5.04	3.98	4.97	3.00	4.45	2.35
1993	5.00	3.92	4.86	3.02	4.36	2.38
1994	4.85	3.86	4.71	3.04	4.12	2.32
1995	4.63	3.80	4.55	3.05	4.03	2.35
1996	4.41	3.74	4.39	3.10	3.96	2.26
1997	4.23	3.69	4.25	3.16	3.95	2.24
1998	4.12	3.69	4.17	3.21	3.89	2.22
1999	4.12	3.74	4.15	3.27	3.90	2.19
2000	4.19	3.83	4.23	3.32	3.93	2.18
2001	4.26	3.92	4.26	2.88	4.08	2.28
2002	4.32	4.00	4.29	2.11	4.00	2.35
2003	5.21	5.20	4.31	2.22	4.04	2.33

2004	5.42	5.52	4.32	2.24	4.07	2.32
2005	5.47	5.50	4.31	2.26	4.11	2.31
2006	5.53	5.50	4.31	2.27	4.13	2.28
2007	5.58	5.49	4.31	2.29	4.16	2.25
2008	5.61	5.48	4.31	2.31	4.23	2.26
2009	5.61	5.45	4.31	2.33	4.23	2.23
2010	5.60	5.43	4.32	2.35	4.23	2.20
2011	5.58	5.40	4.34	2.37	4.22	2.17
2012	5.56	5.38	4.34	2.39	4.20	2.11
2013	5.53	5.37	4.34	2.40	4.18	2.15
2014	5.46	5.36	4.31	2.41	4.16	2.07
2015	5.39	5.36	4.28	2.43	4.13	2.05

Source: World Bank (IBRD-IDA, 2017).

Appendix H: Sources of Electricity in Tanzania (% of total)

Year	Coal sources	Hydroelectric sources	Natural gas sources	Oil sources
1971	0.00	62.93	0.00	37.07
1972	0.00	59.78	0.00	40.22
1973	0.00	50.86	0.00	49.14
1974	0.00	48.60	0.00	51.40
1975	0.00	68.09	0.00	31.91
1976	0.00	75.08	0.00	24.92
1977	0.00	75.69	0.00	24.31
1978	0.00	74.82	0.00	25.18
1979	0.00	68.36	0.00	31.64
1980	0.00	86.36	0.00	13.64
1981	0.00	87.74	0.00	12.26
1982	0.00	87.59	0.00	12.41
1983	0.00	87.04	0.00	12.96
1984	0.00	84.82	0.00	15.18
1985	0.00	87.19	0.00	12.81
1986	0.00	90.23	0.00	9.77
1987	0.00	90.49	0.00	9.51
1988	0.00	90.86	0.00	9.14
1989	0.00	94.04	0.00	5.96
1990	0.00	95.15	0.00	4.85
1991	0.00	94.73	0.00	5.27
1992	0.00	90.86	0.00	9.14
1993	1.68	88.85	0.00	9.48
1994	3.65	84.17	0.00	12.18
1995	3.90	79.99	0.00	16.11
1996	3.31	86.28	0.00	10.41
1997	2.14	75.51	0.00	22.36
1998	2.19	96.65	0.00	1.16
1999	2.43	93.71	0.00	3.86
2000	2.71	86.37	0.00	10.92
2001	3.23	94.79	0.00	1.97
2002	3.72	96.25	0.00	0.04
2003	2.75	95.86	0.00	1.39
2004	2.58	60.25	10.78	26.39
2005	1.15	50.01	32.32	16.51
2006	0.70	41.65	37.73	19.90
2007	0.86	60.33	27.20	11.57
2008	0.43	60.36	31.72	7.43
2009	0.00	55.68	41.89	2.32
2010	0.00	51.21	44.58	3.74
2011	0.00	39.13	50.66	9.54

2012	0.00	31.62	52.60	15.21
2013	0.00	30.80	46.63	21.92

Source: World Bank (IBRD-IDA, 2017).

Appendix I: Tanzania's Manufacturing Value Added (annual % growth) and Industry, Value Added (% of GDP).

Year	Manufacturing, value added (annual % growth)	Industry, value added (% of GDP)
1991	1.86	17.65
1992	-4.05	16.89
1993	0.63	16.20
1994	-0.19	15.57
1995	1.63	15.14
1996	4.82	14.50
1997	5.00	14.22
1998	8.00	14.28
1999	6.04	20.09
2000	4.80	19.48
2001	4.96	19.18
2002	7.45	19.30
2003	9.01	21.06
2004	9.41	22.51
2005	6.95	22.35
2006	8.43	21.02
2007	11.51	22.08
2008	11.38	21.67
2009	4.69	21.90
2010	8.95	19.91
2011	6.94	21.70
2012	4.11	24.30
2013	6.48	23.27
2014	6.81	24.23
2015	6.54	-

Source: World Bank (IBRD-IDA, 2017).

Appendix J: Foreign Direct Investment, Net Inflows (% of GDP)

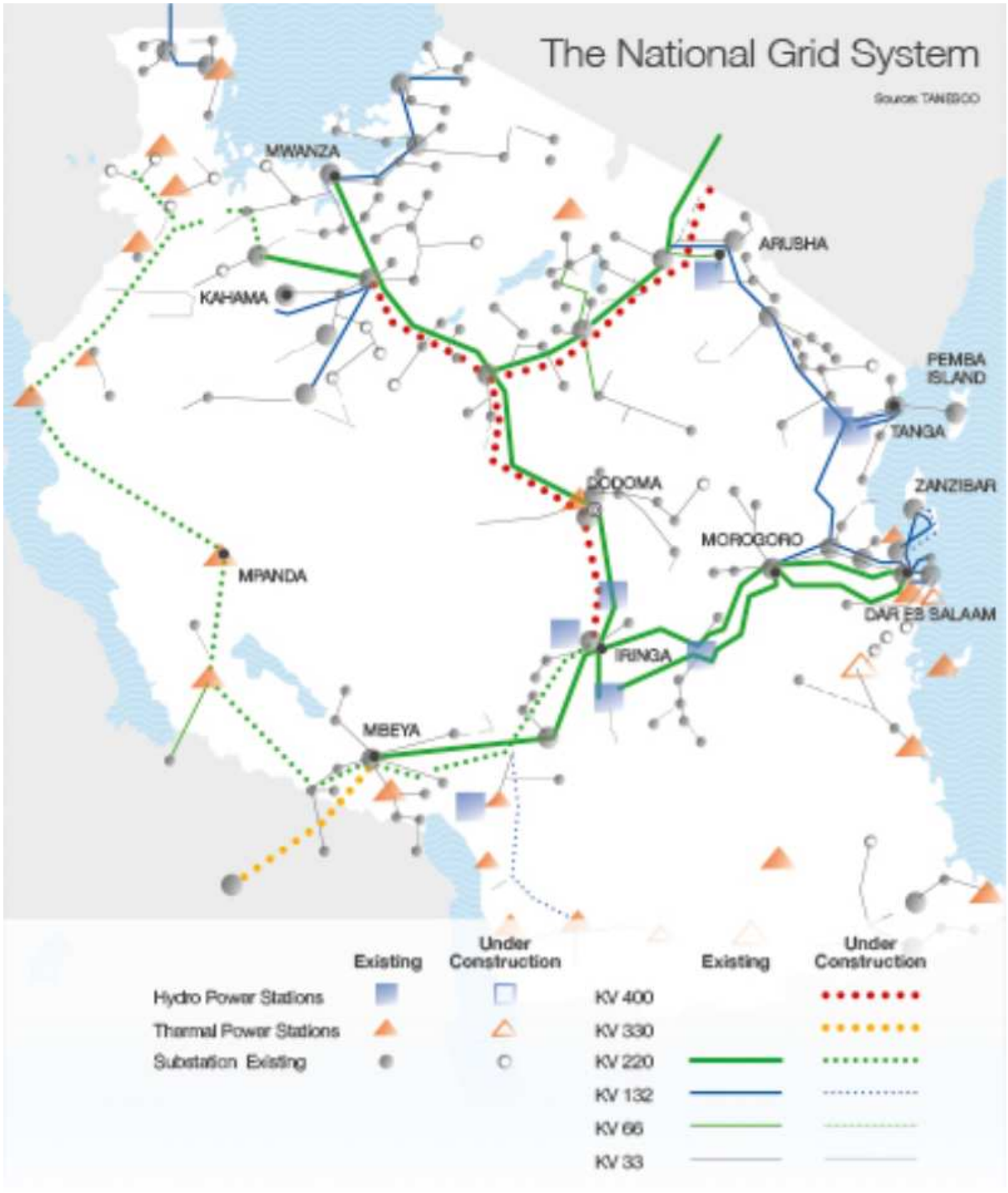
Year	Tanzania	Kenya	Uganda	South Africa	Nigeria
1988	0.07	0.00	0.07	0.14	1.63
1989	0.13	0.75	-0.03	-0.16	7.78
1990	0.00	0.67	-0.14	-0.07	1.91
1991	0.00	0.23	0.03	0.21	2.60
1992	0.26	0.08	0.10	0.00	3.06
1993	0.48	2.53	1.70	0.01	8.52
1994	1.11	0.10	2.21	0.27	10.83
1995	2.28	0.47	2.11	0.80	3.78
1996	2.31	0.90	2.00	0.55	4.55
1997	2.05	0.47	2.79	2.50	4.30
1998	1.84	0.19	3.19	0.40	3.28
1999	5.33	0.40	2.34	1.10	2.80
2000	4.55	0.87	2.59	0.71	2.46
2001	5.29	0.04	2.59	5.98	2.70
2002	3.66	0.21	2.99	1.28	3.17
2003	2.73	0.55	3.19	0.45	2.96
2004	3.45	0.29	3.72	0.31	2.13
2005	5.53	0.11	4.21	2.53	4.44
2006	2.17	0.20	6.48	0.23	3.34
2007	2.70	2.28	6.45	2.20	3.63
2008	5.05	0.27	5.12	3.45	3.94
2009	3.33	0.31	4.63	2.58	5.05
2010	5.77	0.45	2.69	0.98	1.63
2011	3.63	0.33	4.37	0.99	2.15
2012	4.60	0.32	5.13	1.17	1.53
2013	4.71	0.67	4.39	2.24	1.08
2014	4.24	1.54	3.81	1.65	0.82
2015	4.30	2.27	3.84	0.50	0.65

Source: World Bank (IBRD-IDA, 2017).

Appendix K: Tanzania's Location in Africa

Source: Tanzania Yachts, 2012

Appendix L: Tanzania's Grid System



Source: The business year, 2014