

# **South Africa's industrialisation strategy and import substitution**

**Francis Malesela Maleka**

A research report submitted to the Faculty of Commerce, Law and Management of the University of Witwatersrand, Johannesburg in 50% requirement of the requirements of the degree of Master in Management (in the field of Public and Development Management)

June, 2017

## **ABSTRACT**

The role of the state and how it drives industrialisation has received renewed attention in the wake of the global economic meltdown. The purpose of this study was to determine if industrial policy implementation in South Africa is geared towards import substitution, with specific focus on the plastics sector. The study was undertaken as a qualitative research with one on one semi structured interviews with policy makers and analysts from Department of Trade and Industry (DTI), independent research body The Centre for Competition Regulation and Economic Development (CCRED), independent consultant and representative of industry from Plastics SA and documentary analysis of strategic documents from CCRED, DTI and Industrial Development Corporation (IDC). Industrialisation in the plastics sector has in the main been export oriented the study found. Furthermore, the study found that there is a need to target plastics sub sectors with high value to spur the growth of the plastics sector and create much needed jobs. Financial incentives are available to the sector but accessed mainly by fewer big firms.

## **ACKNOWLEDGEMENTS**

I wish to express my sincere acknowledgements to all those who gave valuable advice and input for this research report. A special word of thanks to all those who availed themselves for the interviews and all those who provided valuable information as I compiled this report.

I wish to specifically thank my supervisor Mr Dikgang Motsepe for his guidance, patience and invaluable advice, always with a smile. I remain deeply indebted.

My family, friends and relatives had to learn to live without me. I thank you for your support and sacrifices. I appreciate how you lifted me up when the task overwhelmed me.

My special word of appreciation and thanks to the South African Communist Party for the financial support and the endless time off work to allow me to complete this Master's Degree.

## **DECLARATION ON PLAGIARISM**

I declare that this report is my own, unaided work. It is submitted in partial fulfilment of the requirements of the degree of Master of Management (in the field of Public and Development Management) in the University of Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other university.

---

Francis Malesela Maleka

23 June 2017

## Table of Contents

ABSTRACT.....	2
ACKNOWLEDGEMENTS.....	3
DECLARATION ON PLAGIARISM.....	4
<b>CHAPTER 1.....</b>	<b>7</b>
1.1 INTRODUCTION AND BACKGROUND.....	7
1.2 PROBLEM STATEMENT.....	8
1.3 PURPOSE STATEMENT.....	9
1.4 RESEARCH OBJECTIVES.....	10
1.5 RESEARCH QUESTION.....	10
1.6 STUDY OUTLINE.....	11
<b>CHAPTER 2.....</b>	<b>12</b>
LITERATURE REVIEW.....	12
2.1 INTRODUCTION.....	12
2.2 THEORETICAL FRAMEWORK.....	13
2.3 IMPORT SUBSTITUTION AS A MODEL FOR INDUSTRIAL DEVELOPMENT.....	15
2.4 SUPPORT MEASURES FOR IMPORT SUBSTITUTION INDUSTRIALISATION.....	20
2.5 TARGETING IN INDUSTRIAL POLICY.....	22
2.6 CONCLUSION.....	24
<b>CHAPTER 3.....</b>	<b>25</b>
3.1 RESEARCH STRATEGY.....	25
3.2 RESEARCH DESIGN.....	26
3.3 SAMPLING.....	26
3.4 DATA COLLECTION METHODS.....	28
3.5 DATA PRESENTATION AND ANALYSIS.....	29
3.6 DATA VALIDITY AND RELIABILITY.....	30
3.7 ETHICS.....	30
3.8 CONCLUSION.....	31
<b>CHAPTER 4.....</b>	<b>32</b>
PRESENTATION OF THE RESULTS.....	32

4.1	INTRODUCTION .....	32
4.2	RESULTS .....	32
4.3	CONCLUSION.....	45
	<b>CHAPTER 5.....</b>	<b>47</b>
	DISCUSSION OF THE RESULTS .....	47
5.1	INTRODUCTION .....	47
5.2	SOUTH AFRICA’S INDUSTRIALISATION BROADLY AND IMPORT SUBSTITUTION IN THE PLASTICS SECTOR.....	47
5.3	SUBSECTORS TARGETED FOR LOCAL PRODUCTION IN ORDER TO REPLACE IMPORTS .....	51
5.4	SUPPORT PROVIDED TO THOSE BUSINESSES INVOLVED IN PRODUCTION OF PRODUCTS AIMED AT REPLACING IMPORTS.....	53
5.5	CONCLUSION.....	56
	<b>CHAPTER 6.....</b>	<b>57</b>
	CONCLUSIONS AND RECOMMENDATIONS .....	57
6.1	CONCLUSIONS OF THE STUDY .....	57
6.2	RECOMMENDATIONS OF THE STUDY.....	58
	<b>REFERENCES.....</b>	<b>60</b>

# Chapter 1

## 1.1 Introduction and Background

There is renowned focus on the response of countries to challenges they are faced with in the new era with respect to how they respond to provide sustainable solutions to their economic woes. Lessons have been drawn from various phases that have underpinned the wave of development globally, starting from the first generation industrialisation, the efforts of Latin American countries, post liberation interventions in Africa and the Asian development trajectory.

What the experiences point to is the central role played by manufacturing in driving development and subsequently how it contributes to technological advances and that it ought to be the main backbone of the services sector in any economy (Su & Yao, 2016). Furthermore, the development of Asian countries demonstrated that it was indeed possible for the least developed countries to harness their industries, catch up with developed countries and utilise state intervention through import substitution industrialisation effectively. The World Bank Report of 1991 and 1993 respectively paid attention to the matter of state intervention in developing industry with the 1991 report downplaying the role of the state in driving growth in Asian countries whilst the 1993 report acknowledged the role played by the state but argued that it was within a context of a market friendly environment (Singh, 2011).

South Africa has long identified the need to respond to its own challenges in the National Industrial Policy Framework adopted in 2007 aimed at promoting labour intensive industries (DTI, 2014). The NIPF was subsequently followed by an Industrial Policy Action Plan which is defined as a programmatic expression of the NIPF (DTI, 2014). These efforts at industrialisation strategy were preceded by the adoption of the Integrated Manufacturing Strategy (IMS) in 2002. The study sought to establish the orientation of the industrialisation strategy driven by DTI with a specific focus on the plastics sector. Furthermore, the question of how support measures are provided was interrogated and a determination was made on

which sub-sectors are targeted to drive industrial growth in the plastics sector and possible import substitution industrialisation.

## **1.2 Problem Statement**

With the deteriorating global economic outlook since the 2008 financial crisis, the question of industrialisation has been put back quite forcefully on the agenda of policy makers. This question arises with a growing interest in how the agenda of free trade has collapsed in developing countries and advantaged developed countries. Development of domestic markets and domestic productive capacity has received renewed interest.

South Africa has continued to face a stubborn challenge of the balance of payments accounts. The current account deficit as a percentage of GDP was at -6.6% for 2007, -6.8 for 2008, -3.9 % for 2009 and it stood at -2.8% for 2010 (OECD, 2015). As for the years 2012 and 2013 the current account deficit as a percentage of GDP stood at -5,2% and -5,8% respectively before revisions to comply with the IMF Sixth Edition of the Balance of Payments and International Investment Position Manual (South African Reserve Bank, 2014). According to the South African Reserve Bank (2016, p. 33) “on an annual basis, the deficit narrowed from 5,4 percent of GDP in 2014 to 4,4 percent in 2015”. In the main what has been driving the balance of payment accounts deficit in the last few years are payments made to foreign direct investors (Strauss, 2015). This point to the urgent need of building domestic industrial capacity and thus Import Substitution Industrialisation. What is clear based on these is that South Africa has a structural crisis. Given this it is difficult for the economy to respond positively to abate the crisis of unemployment, poverty and inequality. There is a need to drive structural changes in an economy like ours for it to produce jobs and the role of industrial policy in this regard is quite important (Salazar-Xirinachs, Nübler & Kozul-Wright, 2014)

Globally manufacturing is increasingly reliant on plastics as input with industries like automotive, construction, furniture and packaging using more plastic material in their products (Malikane, Roberts & Sikhweni, 2000). The plastic sectors footprint in manufacturing touches the petro chemicals sector (Plastics SA, 2014) and is itself an input to



various other sectors. According to Plastics SA (2014) the industry employed almost 60 000 people by 2013 in mainly SMME's with its contribution to the Gross Domestic Product (GDP) standing at 1,6% or R50 billion coming by market sectors such as rigid packaging (both rigid and flexible), building and construction, electric and electronics, engineering, agriculture, automotive and transport, houseware, furniture, medical, clothing and footwear, sports and leisure and others. This study is about an important sector to the economy and the country given the critical backward linkages it has with the petro chemicals sector, serving as an input to other sectors, contributing significantly to economic growth and employment creation. The plastics sector has a GDP multiplier effect and employment multiplier that stood at 2,7 and 3,5 respectively in 2013 (Plastics SA, 2014). The growth of the plastic sector is central to the country's efforts to fight unemployment, poverty and inequality.

In the plastics sector South Africa has been a net importer since 2001 with import penetration on the overall sector standing at 30% by 2012 and standing at above 70 % in the electrical, automotive and medical sub-sectors (DTI, 2015). The challenge of reducing the reliance of the South African economy on imports remains a huge one. Heavy reliance on imports means that the economy remains highly vulnerable to external shocks and foreign events (Balassa, 1983). In this regard Import Substitution Industrialisation, referred to as Import Replacement in other quarters to move away from an ideologically obligating concept of Import Substitution Industrialisation, is of critical significance for policy makers. As South Africa industrialises it is not clear what does it produce and whether the output of that production is for domestic consumption or not?

### **1.3 Purpose Statement**

The purpose of the research was to determine if industrial policy implementation in South Africa is geared towards import substitution, with specific focus on the plastics sector. It was necessary to determine the orientation of the industrialisation strategy as the country is battling with a crisis of continuously exporting raw materials, importing finished goods and experiencing growing import penetration in the plastics sector. Literature suggests that to

develop industry targeting can be useful in the development of sectors. The study considered the implementation of import substitution industrialisation in the plastics sector, which subsectors are targeted and what type of support is provided to businesses involved in those sub sectors.

## **1.4 Research Objectives**

The objective of the study was to establish whether South Africa's industrialisation strategy pursues import substitution, with specific focus on the plastics sector. The study further sought to determine measures provided to support firms driving import substitution industrialisation. In doing so, the study considered the targeted sub sectors for import substitution.

## **1.5 Research Question**

The primary research question was to establish whether South Africa in its industrial policy is pursuing measures to develop industrial capacity to replace imports with specific focus on the plastics sector. Furthermore, the research was guided by the following secondary research questions:

- a. What are the measures that exist to support industrialisation broadly and import substitution specifically?
- b. Which subsectors are being targeted for local production to replace imports?
- c. What support is being provided to those businesses involved in production of products aimed at replacing imports?

## 1.6 Study Outline

The study has six chapters, structured as follows:

Chapter One provides an introduction and background which guides the reader in relation to the topic of the study. The problem statement, purpose statement, research objectives and research questions are outlined in this chapter.

Chapter Two is the literature review wherein the theoretical framework of the study is outlined, import substitution industrialisation as a model of industrial development is discussed, various support measures for the success of import substitution industrialisation are discussed and lastly the question of targeting in Industrial Policy.

In Chapter Three the research strategy and design is outlined, the sampling methodology used is discussed and the methods of data collection are outlined. The chapter introduces the reader to the techniques and methods of data analysis and presentation. Issues of validity and reliability of the data are discussed and furthermore, the chapter outlines how ethical matters were dealt with.

Chapter Four is the presentation of the results.

Chapter Five includes the discussion of the results arranged around key themes related to the research question.

Chapter Six serves as a concluding chapter wherein conclusions of the study and the recommendations are tabled.

## **Chapter 2**

### **Literature Review**

#### **2.1 Introduction**

The question of economic development, poverty alleviation and fighting rising levels of unemployment continues to preoccupy society in general. These questions are not new and have been central issues of consideration since modernity itself. Civilization and its interface with question of production and the organization of production have been debated for as long as humanity has existed.

With the advent of a different appearance of organisation of society in the form of democracy and globalization, humanity in general has had great expectations to advance in the wake of changed relations amongst human beings in the world. At the centre of democracy is the vexed question of how do governments leverage on human capabilities to produce the requisite goods and services to advance the course of humanity. How do governments interact with other governments using the products of her people to further advance their interest?

We look at how governments, working with the private sector, adopt a fused range of measures to utilize the natural resources of the country to let the people feel the benefits of living in a free world. In this regard, we study how in pursuit of economic growth, fighting poverty and unemployment industrialisation has become a key issue for policy makers who seek to address these social phenomena. Industrialisation is referred to as a process by which a country builds its capacity to produce goods and service with manufacturing playing a central role in driving industrial growth (Szirmai, 2012).

According to Szirmai (2012) England was the leader in industrialisation. Most countries in Latin America have also been preoccupied with the issues of industrialisation in the wake of the disastrous effects of World War II (Baer, 1972). In the wake of the success of the East Asian countries with respect to their economic development the issue of industrialisation saw a phenomenal rise after it had receded and given way to the theory of laissez faire approach

with respect to the economy. We are now in the phase where the question is no longer whether we should industrialise or not but how do we industrialise.

Literature responds to these issues by posing two broad approaches. One is the approach of Import Substitution Industrialisation which in the main is about building domestic manufacturing capacity to replace imports (Baer, 1972; Hirschman, 1968). The second broad approach is the approach of Export Oriented Industrialisation which means that it is export trade that drives industrial development and because states are not good they must not interfere with trade and must provide neutral incentives to industries (Grabowski, 1994). My focus is on Import Substitution Industrialisation and its potential to drive industrial development.

I further looked at literature the measures that need to be adopted in support of Import Substitution Industrialisation. It is not enough to adopt policy; it must be accompanied by practical measures to support it for it to succeed.

## **2.2 Theoretical framework**

State intervention in the economy has been a subject of intense theoretical debate from the days of the publication of the most famous text by Adam Smith titled *The Wealth of Nations* (Lin & Monga, 2011). No other question has attracted zealous interest in the field of economic theory than the one of state involvement in the economy and how states can shape development (Rodrik, 1991). Answers to the question are informed in the main by the theoretical premise and lens that participants in the debate have assimilated.

One school of thought that has influenced the response is from the classical school which has as its central argument the fact that markets are capable of running smoothly with inherent mechanisms such as competition keeping producers in check and its working should be left purely to its ability to self correct even if it was to go wrong (Chang, 2014). Government intervention, according to Chang (2014) through measures such as protectionism, regulation of the economy and regulation of trade are opposed by those who are informed by the

classical school of thought with the theory of comparative advantage as developed by Ricardo central to what informs free trade. “The classic maxim ‘laissez faire et laissez passer, le monde va de lui-meme’ or ‘let do and let alone and the world goes by itself’” (Dunning, 1997, p. 50) can be attributed to this theoretical tradition. It is however argued by Dunning (1997) that the development of theoretical entry points to this question must be understood in the context of the maturity of production networks and that this view gained traction when production was undertaken by small firms and when markets were geographically spread and independent.

The second theoretical school of thought, neo-classical, is premised on the idea that generally the markets and individuals know what they doing and should not be interfered with unless justified by market failure (Chang, 2014). In this case intervention is agreed to but only on a temporary basis to correct the imbalances created by markets. Embedded in this school of thought is the argument that government must intervene, albeit minimal, in order to provide public goods. The role of government from this school of thought entails basic bare minimums such as maintaining macroeconomic stability, providing infrastructure that supports business activities, upgrading the quality of labour through relevant measures, control price distortions and address questions of redistributive efficiency (Wade, 2003). Because of the integral understanding of market failure, which happen due to what is termed externalities, in this school of thought targeted interventions aimed at changing the output and profile of sectors through industrial policy is not wholly embraced (Wade, 2003).

The third theoretical approach, which served as the theoretical axis to this study, is the developmentalist tradition or school of thought. According to this school of thought the progress of economies and specifically those of poorer countries will not happen if left to the whims of the market (Chang, 2014). State intervention according to this school of thought is important and can be through forms of a range of tools similar to those adopted in industrial policy.

## **2.3 Import Substitution as a model for Industrial Development**

Most countries faced with the challenge of having to uplift their economic status and contribute to the well being of their people have pursued industrial development. Various strategies and models have been adopted to lift industrial output in countries. A process by which countries pursue various policies, mechanisms and build institutions in order to be able to produce goods and services aimed at uplifting the standard of the living for the people is referred to as industrialisation (Hobohm, 2001).

The process of industrialisation was pioneered by Great Britain in the 19<sup>th</sup> Century followed by other world superpowers in Europe like Belgium, Switzerland and France, with manufacturing being central to driving it (Szirmai, 2012). Other countries that followed in pursuing industrialisation albeit much later was the USA, Germany and Japan (Szirmai, 2012).

Industrialisation didn't kick off in countries in Africa, Latin America and Asia and this in can be attributed to the process of colonialism which accorded countries in those areas, referred to as countries in the periphery in literature, a specific role in the international division of labour (Baer, 1972; Hirschman, 1968). In the process of colonialism, the colonised countries had to specialize in exporting raw materials for industrial development needs of the colonisers whilst they imported finished goods and services from them for consumption (Ogujiuba, Nwogwugwu & Dike, 2011; Szirmai, 2012; Nzau, 2010). Essentially what this meant is that the developing countries were bypassed by the early attempts at industrialisation except for the few like Brazil, Argentina, Chile, Mexico, India, China and South Africa wherein the efforts where quite not strong (Szirmai, 2012).

This situation resulted in the colonized countries being purely dependent on the colonisers to drive their economic interest and development.

Hence when challenges emerged to the system mainly due to economic recession and world wars, there was a huge shortage of imports in the colonised territories or former colonised countries, thus leading to a situation where the countries started to adopt measures to develop their own local industry to be able to meet their local needs especially with respect to food

and hence the emergence of Import Substitution Industrialisation (Baer, 1972; Hirschman, 1968). Hirschman (1968, p. 5) further attributes the emergence of Import Substitution Industrialisation to other factors like “balance of payment difficulties, wars, gradual growth of income, and deliberate development policy”.

The view advanced by Hirschman (1968) of Import Substitution Industrialisation being a deliberate development policy in the main captures the spirit and intent of many countries as they adopted Import Substitution Industrialisation. Developing countries took up deliberate measures to free themselves from the stranglehold of the developed countries and hence most of them advanced Import Substitution Industrialisation I wish to suggest. In the current era of globalisation the necessity for import substitution has arisen, informed by the ever growing geo-political tensions and the need for greater sovereignty within a globalised world, in countries such as Russia (Lavrikova & Averina, 2015). However, we do know from literature that necessarily Import Substitution Industrialisation didn't emerge from developing countries but was advanced initially by the countries that pursued early industrialisation who even destroyed industry in colonized countries, as was the case with the cotton industry in India that was destroyed by measures adopted by the British (Baer, 1972).

Countries in Latin America, Africa and Asia could no longer depend on the international economic system for provision of goods and services for their consumption. They pursued import Substitution Industrialisation aimed at creating national industries that would produce goods locally to substitute for the imports, and gain greater economic independence away from already industrialised countries (Alexander, 1967; Baer, 1972; Mendes, Bertella & Teixeira, 2014; Ogujiuba et al, 2011; Nzau, 2010). According to Silva (2007, p. 69) “Import Substitution industrialization was not born as a cohesive development model; it gradually emerged as a response to the socioeconomic model and political problems of the times”. Therefore, context is very important with respect to Import Substitution Industrialisation.

A range of activities usually accompany the implementation of an Import Substitution Industrialisation strategy, ranging from heavy protection of local industry through policy instruments such as tariffs, quota, currency devaluation, differentiated exchange rates and subsidies (Adewale, 2012; Grabowski, 1994). These measures are aimed at the development



of local industry and insulate it from unfair competition from the developed countries or already industrialised countries.

There are important phases in literature with respect to import substitution industrialisation that links to the point raised above about gradual emergence of the model. As pointed out by Alexander (1967), Hirschman (1968), Ogujiuba et al (2011) and Nzau (2010) Import Substitution Industrialisation can be broken down into distinct phases which involves production of consumer goods whilst reliant on imported inputs firstly, secondly the elimination of imported inputs by locally producing such inputs and lastly by eliminating any form of reliance on imported goods by eliminating them. Because of these distinct yet related phases it is crucial therefore that there is a clearer appreciation of the “linkages argument” (Hirschman, 1958, as cited in Chang, 2013). In this case therefore the integral linkages between the inputs and the ultimate product, and how sometimes the actual product of a specific sector is an input in another sector, what is called “forward and backward linkages in Industrialisation Process” (Ogujiuba et al, 2011, p. 9) is very critical. Unless there are strong linkages Import Substitution Industrialisation will not succeed or rather will not eliminate completely reliance and dependence on imports.

As countries go through the various phases of import substitution industrialisation, from low value added goods production, e.g. in textile, food and beverages, to high value added goods production for example like automobile, industry will be developing and a country will experience structural changes. Because of this upward mobility on the value chain manufacturing will be strengthened whilst there will be spillages into sectors like services which will result in structural changes in the economy.

These phases provide an important framework for analyzing how Import Substitution Industrialisation did fair in countries that it was implemented in. The success of Import Substitution Industrialisation is not cast in stone or rather preordained. Relying on the work of Silva (2007) there will always be limits and tensions in relation to the execution of an Import Substitution Industrialisation Strategy with respect to inflation, new investments and fiscal pressures. It is not given that if Import Substitution Industrialisation was successful in one context it will be successful in another context and it has been criticized for having not worked in other settings. Furthermore, the World Bank Report of 1981 blamed the failure of

Import Substitution industrialisation to ignite industrial growth on the price distortions it created (Ogujiuba et al, 2011).

Turning to the actions of countries in less developed countries when implementing Import Substitution I will pay attention first to the actions of East Asian and South-East Asian countries. The importance of specific context and country specific circumstances come to the fore once more in this regard. In pursuing the cause of industrial development East Asian countries didn't stay in a particular phase for longer and were moderate in their implementation of measures such as interest rates, currency valuation and protectionism whilst countries in South-East Asia displayed the opposite with respect to period of pursuing a particular phase and going extreme with policy measures (Ranis, 1992). Another critical issue of observation with respect to the implementation of Import Substitution Industrialisation in East Asian and South-East Asian countries is how quickly they transit from primary import substitution to exports (Ranis, 1992).

Secondly there is ample evidence in literature as argued by Aryeetey and Moyo (2012) and Mendes et al (2014) that at independence there was some sort of industrialisation efforts already underway in Africa. However most African countries like Tanzania, Zambia, Nigeria, and Kenya when they gained independence implemented Import Substitution Industrialisation and later followed by countries such as Ghana and Madagascar (Mendes et al, 2014). The focused implementation of Import Substitution Industrialisation resulted in the rise of manufacturing sector in Zambia, whilst it had little impact on industrial growth in Kenya and no impact in Tanzania on the one hand; and on the other hand, resulted in a decline in the reliance on imported inputs in Zambia whilst it was high in Kenya and fell marginally in Tanzania (Gulhati, 1981). This points out to the correctness of the proposition that the implementation of Import Substitution Industrialisation doesn't yield same outcomes if applied in different settings and context. It also raises critical questions with respect to whether there has been an implementation of Import Substitution Industrialisation to reach a point where reliance on imports was completely eliminated.

These experiences further corroborate the importance of appreciating that differences in approach and country specific context have a bearing on whether Import Substitution industrialisation will result in industrial development. In the short term, there might be

increased manufacturing activity but there must be a consistent evaluation of linkages to ascertain that reliance on external inputs is eliminated. The inconsistencies in performance do not necessarily negate the significance of Import Substitution Industrialisation. There is a range of support measures and mechanism that are requisite if Import Substitution Industrialisation is to succeed.

East Asian countries were successful because they also focused on investment in education in order to prepare the requisite skills for the up scaling of manufacturing capabilities, had a bureaucracy that was committed to implementing the objectives of development and they were able to appreciate changes in the production structure of the global economy to make adjustments (Ogujiuba et al, 2011). Furthermore, according to Rodrik (1995) both Taiwan and Korean governments from the beginning had an advantage that they were insulated from undue influence and thus they could administer incentives without the programme falling prey to rent seeking conduct over and above their focus on education. African countries can benefit a great deal from these lessons as they execute their Import Substitution Industrialisation. Political and social support to the programme of industrial development through a programme such as Import Substitution Industrialisation is extremely important (Ogujiuba et al, 2011) and must consistently be mobilised. The role of the state or government, working with the private sector, in comparison to how Industrialisation was pursued in East Asian is important if we are to succeed in industrialising in Africa in general and in South Africa in particular.

Given the historical situation spoken to above, South Africa remains a country locked into a path of exporting raw minerals and importing finished goods for domestic consumption. This is evidenced by the crisis that South Africa faces in relation to the current account deficit since we are import dependent, something that we have already explained why it is not desirable. This means we remain vulnerable to global shifts in focus with respect to countries that we import from. Therefore, a drive to replace imports and reserve the local market for products produced locally is relevant in the context of South Africa in order to secure her independence.

The comparisons with East Asian countries has further demonstrated that even those who wish to argue that the focus should be on exports, a country is able to export finished goods

and services contingent to building its own internal capacity to produce such goods (Ranis, 1992) and gone through the phases (Alexander, 1967; Hirshchman, 1968; Ogujiuba et al, 2011; Nzau, 2010) as referred to in literature, thus signaling the significance of Import Substitution Industrialisation in industrial development. Literature also shows that manufacturing sector remains important even when there are signals of structural changes where the services sector seems to be capturing a bigger share of GDP and outgrowing manufacturing sector as such growth of the services sector draws from services provided to manufacturing (Hobohm, 2001). A successful services sector develops on the backbone of services around manufacturing and not in isolation.

## **2.4 Support Measures for Import Substitution Industrialisation**

The implementation of Import Substitution Industrialisation process whilst it was preferred by many developing countries is not a straightforward process. Clearly, for its success, one need to adopt a set of policy instruments that will support the programme; set up relevant institutions and finance the programme. It is not enough to just adopt policy. It must be supported. The support accorded to a policy of import substitution industrialisation can be characterised as “tariff protection and other non-tariff import control measures” (Oyejide, 1973, p. 331). Import Substitution Industrialisation relies on a range of activities and instruments for its success (Adewale, 2012; Grabowski, 1994). In a country like Japan support measures included “trade protection (tariffs and quotas), net transfers to sector (subsidies less taxes), sectoral corporate tax breaks and government loans” (Beason & Weinstein, 1996, p. 286). Other measures can include investment in infrastructure like roads and education that is expensive for firms to invest in on an individual basis, co-ordinating availability of information and providing cutting edge research about sectors (Mingo & Khanna, 2013). The success of import substitution is also contingent on factors such as the size and buying power of the market (Ogujiuba et al, 2011).

Tariffs, quotas and incentives, referred to collectively as support measures, are important in aiding the allocation of resources to specific sectors since it wouldn't happen in the ordinary course of events if left to the market thus increasing outputs in those targeted sectors and directing firms towards local production (Karayiannis-Bacon, 1976; Veloso & Soto, 2001).

When resources are directed towards a specific sector through support measures what it allows, according to Beason & Weinstein (1996), is for firms to address questions of technological advancement, if one chooses to elevate a Schumpeterian theoretical premise, or to address issues of economies of scale if one ennobles the Marshallian theoretical approach. Evidently support measures are provided predicated on the endogenous growth theory perspectives in support of the balanced role of the state in the economy and how it must intervene to lift up economic performance, recognizing the existence of external factors but internalizing them (Pio, 1994). What support measures do is that they minimize the risks and provide private investors with subsidies thus attract entrepreneurs to get involved in production with comfort. The entrepreneurs who were reluctant to go into industry will likely, in the presence of support measures, enter the sector and invest (Mingo & Khanna, 2013).

An implementation of Import Substitution industrialisation raises critical policy questions around provision of protection to industry, increasing savings and investment and how planning in the economy must be carried out (Bruton, 1998). Protection of industries can lead to poor innovation and technological advancement in those industries as the protection offered cushions firms because they are insulated from throat cut competition and may lead to inefficiencies as the question of economies of scale is ignored (Ogujiuba et al, 2011). Furthermore, Lavrikova and Averina (2015) brings to the fore the question of structural change of the economy as opposed to the catch up logic which means trying to perfect what exists as opposed to using import substitution to break new ground. Clearly the temptation of developing countries trying to mimic the developed countries is one critical blind spot to be addressed in order to safeguard success. In the main where import substitution industrialisation failed was because of the poor understanding of the above mentioned factors. Core issues like “value added protection, advantages of a fairly uniform tariff rate across the board, real exchange rates” (Bruton, 1998, p. 910) were unknown to policy makers and even policy analysts of the time. Planning in most of the countries that implemented import substitution industrialisation was lacking in capacity and power and thus could be ignored by other powerful role players (Bruton, 1998).

No country has undergone a process of industrialisation without measures to protect and support their industries in order to grow as can be seen with how Britain implemented protection measures to catch up with Holland, Germany in order to catch up with Britain, the United States in order to catch up with both Britain and Germany, Japan itself adopted protective measures and so did Taiwan and Korea (Wayde, 2003). The state cannot stand by and hope the market will do something to advance industrial development; it has to intervene and provide support (Mazzucato, 2014).

The key issue that arises out of this is what package of measures South Africa has adopted in pursuing an import substitution industrialisation.

## **2.5 Targeting in Industrial Policy**

In arguing for a sectoral industrial policy and thus supporting the need to focus on manufacturing by intervening in sectors via industrial policy, Wade (2003) argues that it is critical to have sectoral policies aimed at making sure that resources are channelled to producers in those sectors to achieve results that in the ordinary wouldn't be achieved if all was left to the will of the market. One critical issue in implementing industrial policy is targeting which is defined as the act of focusing on specific industries or sectors in order to address their problems for enhanced economic performance (Chang, Andreoni, & Kuan, 2013). We live in a world of finite resources and therefore each time a policy is adopted according to Chang, Andreoni, & Kuan (2013) implied in that policy are tradeoffs that consequently means policy makers have to make choices. Targeting allows for easier monitoring of the policy, assessing whether policy goals are met and because of its dedicated focus it ensures that implementation is well directed and thus funding can also be allocated in a manner that results in huge savings (Chang, 2013).

What emanates from literature is that industrialisation cannot be applied in aggregate or general terms. It must be well targeted. It is generally accepted that a country like Japan pursued industrialisation through targeting sectors which were identified as having potential for high growth, however the work by Beason and Weinstein (1996) concludes that targeting in Japan was done to address ailing sectors that were experiencing poor output to get them

back on track for high productivity albeit they argue with little success. Once targeted and support in the form of measures articulated above is provided to a sector, the idea is that production will rise in that sector and problems that hinder production will be addressed.

Korea drove its programme through targeting of sectors that also had high growth and high productivity potential and provided them with support (Chang, 1993). Korea had an overarching strategic programme and individual sectors, with connections and properly sequenced to achieve overarching strategy, where prioritized over different five year plans and the requisite support given to the targeted sectors to grow through various government departments, agencies and funding agencies. One further observes from the work of Kim (1995) that Korea even when it aggressively drove exports, it did that by continuously selecting industries that were to be protected and imports were restricted and allowed only for the development of the export base and what was considered strategic. Once a firm moved to produce in the sectors targeted for import substitution in Korea, it would enjoy support through government procurement which assured market access, hefty financial incentives and trade barriers were used as well for support purposes (Kim, 1995). Added to prioritising sectors, Chang (1993) also stipulates how Korea addressed the question of cost of production in intervening and directing its targeted efforts towards firms thus showing the extent targeting was carried out even at a firm level. Whilst addressing economies of scale might direct targeting towards bigger firms' literature also supports targeted support towards small and medium size firms given that they are labour intensive in their nature and thus contribute more in terms of employment and thus contribute more towards alleviating poverty, inequality and addressing the question of social stability (Aremu & Adeyeni, 2011; Chimucheka, 2013; Kyaw, 2008; Quader & Abdullah, 2010; Sinha, 2003). Furthermore, small and medium size firms are seen to be more flexible and capable to responding dynamically to ever changing economic conditions owing to their decision making processes that are seen as faster (Kyaw, 2008). Chimucheka (2013) and Quader and Abdukah (2010) further argues that small and medium size firms contribute innovative ideas that are needed in the development of industry and new idea that leads to development of new products or improvements on already existing products.

It is necessary that there is a proper understanding in targeting of the relationship between comparative advantages that the country has and how it targets big firms as a condition

towards the success of targeting in small and medium sized firms (Sinha, 2003). According to Sinha (2003) in countries like Taiwan, Thailand, India and Nepal small and medium sized firms were central in driving manufacturing activities. Targeting small and medium is important given the specific significant role they play in providing industrial backward linkages as import substitution is executed (Fjose, Grunfeld & Green, 2010). According to Yamazwa (1994) small and medium sized firms provide the necessary inputs to big industrial role players and can be useful in knowledge and technological transfer, including transfer of industries, from multinational companies and thus Japan developed active legal intervention to promote their development. Small and medium sized firms are regarded as driving innovation, being more labour intensive and absorbing more people with low skills into employment; and whilst they might not sufficiently provide advantage regarding economies of scale they nonetheless provide agility and greater adaptability to messages from the market (Hu & Schive, 1998; Sinha, 2003). In targeting it is important to appreciate that it's not just the size of the firms that matters but its potential to drive industrial development given the forces at play. For this reason, it is worth appreciating that at some stage big firms of today like Microsoft, Vodafone, Google and Amazon.com started as small firms (Kyaw, 2008).

## **2.6 Conclusion**

What the literature review revealed is that there is space in the process of industrial development for pursuing an Import Substitution Industrialisation approach. This study sought to understand what kind of an approach South Africa has adopted in its industrialisation and find out if there was an appetite for an uptake of Import Substitution in having a shot at building South Africa's plastics sector.

Literature has also raised the critical issue of how support measures are provided to firms and sectors. The study sought to explore how support measures were being provided to the plastics sector in the context of South Africa's industrialisation drive. Furthermore, issues of targeting and making sure those minimal resources at disposal of countries are directed at specific sectors or firms were reviewed. The study wanted to determine which subsectors were targeted in the plastics sector for industrial upgrading.



## Chapter 3

### 3.1 Research Strategy

The research aimed to determine how South Africa pursued her industrialization and whether import substitution industrialisation was an option for the country. Specific sector of interest was the plastics. Given the focus the study sought to understand and describe import substitution in South Africa, support measures that drive such and whether there was targeting for sub sectors. In this regard since the study is about understanding the processes (Wagner, Kawulich & Garner, 2012) around import substitution industrialisation we will adopt a qualitative research approach. The qualitative approach was used because the main aim of the study was to deepen the understanding around an intricate question of import substitution industrialisation and be able to unpack how it is carried out through sorting out lots of related information (Babbie, Babbie, Vorster, Payze, & Mouton, 2001; Creswell, 2012). Polkinghorne (2005, p. 139) further states, “the focus of qualitative inquiries is on describing, understanding, and clarifying human experiences”. It was useful to undertake a qualitative research approach especially because the study was meant to examine complex issues in detail (Creswell, 2012). “Qualitative studies aim to provide illumination and understanding of complex psychosocial issues and are most useful for answering humanistic 'why?' and 'how?' question” (Marshall, 1996, p. 522). Given the developments worldwide with respect to global trade, a discredited view on industrialisation, its reported failure in Latin America and in early days of liberation in Africa, the topic we sought to understand was not an easy one.

The qualitative research strategy allowed greater focus, detailed examination and a flexible approach (Anderson, 2010) to the problem that South Africa has in relation to reliance on importing finished goods in the plastics sector and explored in detail the support measures to targeted sub sectors. The approach further allowed for us to generate the actual experiences (Anderson, 2010) of policy makers and policy analysts regarding the import substitution

industrialisation, which sub sectors are targeted and which products do they produce and what support is available. The strategy furthered allowed for gathering of quality information within limited time frame in a less costly manner.

### **3.2 Research Design**

The study aimed to understand how policy practitioners in and outside government understand the phenomenon of import substitution industrialisation and how it is being practiced specifically in the plastics sector. It is about the behaviour of policy makers in securing less reliance on imports in the economy in the context of the National Industrial Policy Framework and Industrial Policy Action Plan. The study therefore used phenomenology as its research design.

As stated by Wagner, Kawulich and Garner (2014, p. 132) “phenomenology purely and simply describes a person’s experience, i.e. how he or she experiences something, it does not attempt to explain the experiences”. The aim was to deeply understand the understanding of policy makers in relation to the necessity to address the social questions of poverty, unemployment and inequality and how they interpret reality in addressing those questions (Babbie et al, 2001).

### **3.3 Sampling**

A non-probability sampling technique which is characterised by its non-randomness and inclusion in the sample based on availability and willingness to partake in the study (Wagner, Kawulich & Garner, 2012) was used.

Given the time frames within which the study had to be undertaken and limited financial resources available for the study project one undertook a purposive sampling method focusing on particular group of people who by employment were deemed to possess the best knowledge to answer the research question. Informed by the study being undertaken under a

phenomological approach the sampling was narrower and comprised of those who had experienced the phenomenon of study (Creswell, 2012). The sample was drawn from a list of policy makers and policy analysts from Department of Trade and Industry (DTI), research bodies attached to academia called CCRED, an independent consultant in the sector with previous experience in government and independent policy development and relevant industry body, Plastics SA, in order to achieve representativeness.

The target was to interview 7 participants comprised of government officials, development agencies supporting industrial development, independent policy analysts and industry role players. One should bear in mind the proposition advanced by Bryman (2015) in relation to fixing the sample size as it is important that interviews are carried out till there can be no possibility of new permutations coming through in relation to the research question. For the purposes of this study we believed we will achieve “theoretical saturation” (Bryman, 2015, p. 417) with 7 participants. Interviews were sought with Deputy Director General in DTI responsible for Industrial Development: Policy Development Division (IDPDD), and relevant IDC officials from the divisions of the IDC responsible for plastics sector to establish whether the industrialisation programme pursues import substitution industrialisation, what measures exist for support and which subsectors are targeted for import replacement. I interviewed the Deputy Director General in DTI responsible for Industrial Development: Policy Development Division (IDPDD). I also sought interviews with two officials at the plastics desk at Department of Trade and Industry and they were granted. Furthermore, I interviewed two independent analysts for their insight and critique in relation to the countries industrialisation programme and its implementation. The one is attached to the Centre for Competition, Regulation and Economic Development (CCRED) at University of Johannesburg. The centre has conducted relevant research for the DTI and the City of Johannesburg in the sector. The second independent analyst has a trade union background in the sector, worked in government and is attached to TIPS as a Research Fellow. The voice of industry and its assessment of the drive for import substitution industrialisation, its view on support measures were canvassed through interviews with the head Policy and Advocacy at Plastics SA. The relevant official at IDC was not able to offer us an interview ostensibly constrained by corporate guidelines of the institution.

### **3.4 Data Collection Methods**

For the purposes of this study two methods of data collection were used, i.e. interviews and document analysis.

The primary data collection method that was used by the study is the semi-structured one on one interview. An interview is basically described as a two way conversation between the researcher and the participant, with the participant doing most of the talking and the interviewer listening, where questions are asked but not in a rigid and dogmatic manner that allows the researcher to solicit view of the participant (Babbie et al, 2001; Wagner, Kawulich & Garner, 2012). With semi structured interviews there are main question that focuses the interview on the main research focus whilst allowing for additional matters to be considered in discussion albeit diverting from the actual question that shed further light into the subject of study (Gill, Stewart, Treasure & Chadwick, 2008). Whilst for the study I was the key instrument to collecting data (Creswell, 2012), I developed an interview guide that was informed by the research questions and drawing heavily from the literature review in Chapter 2 and further adopt a questioning strategy which eliminates closed questions and long wounded questions (Wagner, Kawulich & Garner, 2012). All interviews, with the full permission of the participants, were recorded via audio in order to protect “against bias and provides a permanent record of what was and was not said” (Gill et al, 2008, p. 293).

Secondly document analysis was used a secondary data collection method. This method of data collection as stated by Bowen (2009) was more useful given the staff turnover that exists in the fluid labour market of our country and in government departments in particular to close the information gap that might exist. It is a useful method since it provides the necessary context, additional information in relation to answers from other sources and allows for monitoring of progress or lack thereof (Bowen, 2009). The research reports produced by the CCRED for City of Johannesburg titled Industry Nodes and Cluster Development in the City of Joburg: Background Report on the Plastics Cluster and one produce for DTI titled Report for the plastics Conversion Industry Strategy were analysed. From the IDC the annual

Economic Trends reports were analysed for the years 2011 to 2016 excluding 2013 for which the report analysed was titled South African economy: An overview of key trends since 1994. Strategic documents from DTI which provided insight into the performance of the current incentive scheme analysed were The Industrial Development Incentive Administration Division (IDAD) 2012-13 Incentive Performance Report and Performance of IDAD Incentives Programme. This simply implies that the study used public and where public documents are not made public necessary requests were made and the DTI duly shared a research report that was compiled by CCRED meant as a base document for their plastics sector strategy with an understanding that it was purely for use for this study project only (Wagner, Kawulich & Garner, 2012)

The data collection method was not a once off activity; it was as iterative as possible and it allowed for the study to be as comprehensive as possible (Polkinghorne, 2005).

### **3.5 Data Presentation and Analysis**

Since the study is a qualitative research, data analysis was undertaken simultaneously with data collection much to the benefit of the data collection process itself (Merriam, 2002). After each interview the data was transcribed, reviewed and a process of coding begun and the process were iterative after each interview allowing for refinements. Data is stored electronically in computer files (Creswell, 2012) since all interviews were recorded by audio. Thematic analysis was used to approach data analysis which is defined as “a general approach to analysing data that involves identifying themes or patterns in the data” (Wagner, Kawulich & Garner, 2012, p. 231). For consistency purposes, only one person collected the data, transcribed and analysed the data (Bradley, Curry, & Devers, 2007).

The themes to analyse the data were structured to respond to themes emerging or grouped around the primary research question which is whether South Africa pursues import substitution and further themes which speaks to issues of support measures to support industrialisation, sub sectors targeted to replace imports and support made available to firms. Data is presented in the form of a narration with tables and figures used (Creswell, 2012) to present the findings of the study.

### **3.6 Data Validity and Reliability**

Two methods of data collection were used to address the question of validity and reliability in the research. Using two data collection methods allowed the study to triangulate data thus contributing to increased levels of trustworthiness and credibility of the study (Wagner, Kawulich & Garner, 2012). This is best explained as “multiple operationalism, the use of several methods at once so that the biases of any one method might be cancelled out by those of others” (Seale, 1999, pp. 472 – 473). Furthermore, triangulation is important because “by examining information collected through different methods, the researcher can corroborate findings across data sets and thus reduce the impact of potential biases that can exist in a single study” (Bowen, 2009, p. 28).

In addition to data triangulation, a proper audit trail that details how data was collected and the rigour followed to reach our findings was kept (Merriam, 2002). Once all the recordings were listened to and answers were interpreted they were verified with those interviewed to ascertain that the way their responses have been recorded was a true reflection of what they said in the interviews. According to Wagner, Kawulich & Garner (2012, p. 138) “it is very heartening for a qualitative researcher to hear that his/her understanding and interpretation captured the views and perceptions of participants correctly”. Accurate transcripts of the interviews and one that also reflect the process to address questions of validity are kept (Creswell, 2012) in the audit file.

### **3.7 Ethics**

The study addressed ethical issues by verbally obtaining informed consent of participants, informing them that their participation is voluntary and purely for academic purposes and no one will be coerced to participate in the project (Creswell, 2012; Wagner, Kawulich & Garner, 2012).

### **3.8 Conclusion**

The strength of the study is the ability to generate in depth view in relation to the research question posed regarding the implementation of import substitution industrialisation, the targeted products and how support is provided to businesses involved. Literature review has pointed out to different ways that import substitution can be pursued using different support measures.

Because of the sampling methods used the outcomes of the study will not be generalized. With respect to data collection efforts will be undertaken to triangulate data to eliminate bias whilst measures will also be adopted to ensure that the interpretation of the data represents the views of the participants. Official, public and private documents will be used for the quality of the data generated through document analysis. Ethical issues will also be addressed by ensuring that participation is voluntary and confidentiality is exercised.

## Chapter 4

### Presentation of the Results

#### 4.1 Introduction

The results of the research are presented in this section following the sequence in which the questions appeared in the interview guide that was used during the one on one semi structured interviews. Responses to each question are presented in categories representative of sectors that the respondents were drawn from, meaning they are grouped into responses from government, experts and industry representative. Having listened to the audio recordings and read the transcripts one was in a position to offer a summary statement of the responses as can be seen below. I held one on one interviews with the participants and transcribed the interviews. Their responses to the questions posed to them during the one on one semi-structured interviews are presented below.

#### 4.2 Results

##### 4.2.1 **The question of industrialisation has gained huge momentum and is back on the agenda of policy makers. What is your reflection on SA's industrialisation drive?**

###### Responses from Government

The responses from government officials at Department of Trade and Industry (DTI) interviewed indicated that some believe that the country is on the right path with the current plan that has been adopted, a far cry from the days of the having sector strategies as stand alone. However, whilst agreeing on the significance of the plan, other officials raised critical issues for consideration on South Africa's industrialisation drive to date. Implementation of



the plan was sighted as one area where there are glaring weaknesses. Other areas indicated included poor financing, with the budget not aligned to the plan, poor programme alignment and coherence in government broadly. The plan therefore was described as good on paper but facing challenges in implementation.

### Responses from experts

Both experts interviewed indicated that the country is not winning in its industrialisation drive given the ongoing decline in the share of manufacturing in the GDP and a loss of industrial capacity.

There is a good plan in the form of IPAP, according to the expert from The Centre for Competition, Regulation and Economic Development (CCRED), which tends to identify the right things but whether those things are implemented or not is in doubt. An example cited was that since inception IPAP has identified high pricing of polymers as hindering the development of the plastics sector and to date the matter has not been resolved for the benefit of the sector. Industrial policy implementation requires a stronger institutional capacity, an area that government lacks in significantly. The plan for instance as drafted by DTI often prioritise certain issues, as in the case of Plastics DTI prioritized interventions in the petrochemicals but was not a priority of the Department of Energy, pointing to poor synchronization within government.

The independent researcher pointed that a deep seated understanding of the sector, the entire value chain and linkages is a prerequisite for those employed in government positions to drive programmes and that understanding is often absent amongst current incumbents. Furthermore industrial policy requires the patience to implement things over a number of years. It shouldn't be a once off effort. Co-ordination was specifically pointed out as an important attribute that lacks inside government in driving industrialisation. It was further

pointed out in their response that we live in a globally complex world and that the current world trade regime hasn't created a favourable position for driving industrialisation.

Despite the responses that were critical of the Industrialisation drive both the experts agreed that there are exceptions to the rule as certain things happen as witnessed in the auto sector and the clothing and textile sector. A lot of progress has been registered in both sectors which show that there is potential to achieve something if focused.

### Responses from Industry

The industry representative interviewed from Plastics SA indicated in the response that as industry they support the need to build and strengthen our industrialisation capacity, with dedicated focus on manufacturing sector, so that we cannot merely become a consuming nation. A focus on manufacturing would also help with job creation. Whilst there is an Industrial Policy Action plan which is broadly supported by industry, the question is how it is implemented. Role players in the plastics industry are struggling to identify good examples of IPAP's implementation successfully in the plastics sector.

#### **4.2.2 One major area of debate amongst practitioners is the orientation of the industrialisation strategy, whether it is outward oriented or import substitution. How would you characterise SA's industrialisation effort?**

### Response from Government

The view from government officials from DTI is that whilst in some cases it could be important to drive an import substitution industrialisation, South Africa's industrialisation effort has mainly looked at the situation in a balanced way, given that the domestic market is small. Secondly enhancing productivity and competitiveness is driven by an ability to be able

to compete in exports markets. To drive import substitution requires that a country has a clear vision for industrial development broadly and a proper master plan to be followed it was indicated in the responses of DTI officials. Piece meal approaches must be avoided at all cost they warned.

Already in sectors such as clothing and textile there is a process to drive dual focus, it is about replacing imports but at the same time competing in export markets. Whilst in other sectors such as auto and mining there is more room to use localisation to drive industrial development it hasn't been pursued effectively resulting in a loss. If localisation was used more in those sectors it could have driven import replacement in those designated products.

Certain sectors it was stated are more prone to lend themselves to an import substitution programme given the complexities around transportation as is the case with transporting volatile substances such as ethylene which is used in the plastics value chain. Considerations must also be given to natural resources endowment, existing industrial capacity and domestic demand when industrialising. For the purposes of import substitution, over and above the above-mentioned, secure investment and technological capabilities are important. The globalized world that countries currently operate in makes it quite complex for them to pursue a pure import substitution model given the existing concentration of production globally, the intellectual property regime that exist and the technology and software intensity it was indicated in the response from DTI officials.

#### Response from experts

The experts from CCRED highlighted the fact that the question of import orientation or export orientation is a moot point. South Korea and Taiwan have proved that one doesn't have to choose import substitution over export orientation. You can support industries to produce for domestic markets whilst simultaneously you still require them to be able to export. With a small domestic market to reach economies of scale export market is crucial.

What is important is for the country to find a package of measures that best works for it and it can include both import and exports.

The independent consultant, who gave answers taking into consideration the interest on plastics, pointed out that the issue of import substitution was significant but firstly the domestic market is limited and given the geographic location of the country, we do not have immediate access to bigger markets even in Southern Africa. Economies of scale are also very important in modern commodity production. Given our geographic location, at some stage what has been produced will be consumed in the domestic market and leftovers will need to be exported and this puts at a disadvantage with transport costs. In many instances the responses indicate that we do not have access to right set of raw materials. Where import substitution must be undertaken, the question must be answered, across sectors, at what cost because there will be a demand for huge subsidies towards factories who must step in.

#### Response from Industry

The responses from Plastics SA indicated that the country is much more focused on exports with the recent adoption of the National Export Strategy. Essentially this is implemented to move the country from a defensive position into an offensive position with the recognition that as the economy grows and it produces more products there is a need to export especially in the context of the emphasis on regional integration. The demand for African countries to increase trade amongst themselves means that South Africa needs to keep an eye on that market as well and hence the drive towards more of exports.

Import replacement sometimes is often quite difficult to implement given issues of costs involved in production, high labour cost and low competitiveness and the regulatory burden that exist in South Africa that firms must comply with.

#### **4.2.3 What is your view, given the high trade deficit in the plastics industry and higher import penetration, about the suitability of import substitution in the plastics sector?**

Responses from government

The government officials from DTI interviewed expressed a great sense of support for import substitution in the plastics sector. It was further indicated that some imported plastics products in the country have entered our points of entry having been wrongfully declared to custom officials. However, the capacity to be able to partake in high value sector was questioned given the poor availability of raw material supply.

If South Africa wanted to drive an import substitution in the plastics sector, the limited supply of raw materials would have to be addressed. In this regard, it was highlighted that the continued domination of SASOL of the feedstock was undesirable and that its monopoly had to be addressed and that furthermore new petrochemical refinery plants will have to be build to ensure diversified supply of the raw materials needed for diversified production output in the plastics sector. Unless the raw material feedstock was diversified we will only continue to excel in the low value but high volumes sub sector it was stated. Lack of investment in the petro-chemical industry has meant that South Africa's downstream industries that were to benefit from the by-products of such investments haven't been able to. The inability of SASOL to see through its then mooted Mafutha project and the poor progress on PetroSA's Project Mthombo have all been a blow to the rapid diversification of raw materials to downstream plastics industries.

The responses from DTI government officials also pointed to the fact that South Africa experienced a huge flow of imports in high value but lower volumes sub sectors whose growth will be driven by developing proper linkages with other sectors such as auto sector since plastic is an input to those sectors. Demand for plastics in high value sectors is

influenced by other sectors other than plastic. Unless those linkages are strengthened, import substitution might just be in oversubscribed sub sectors such as packaging.

#### Responses from experts

The expert from CCRED indicated that it is critical to address the high import penetration in the plastics sector but that was not the silver bullet. Issues of competitiveness of our firms would have to be resolved as the idea is not to provide support and protection to inefficient industries. The issue of the supply of raw material and the import parity pricing by SASOL needs to be addressed in order for import replacement to be effective including investment in state of the art machinery and technological advances, improving the skills set of labour including ensuring that graduates from our TVET Colleges can operate the latest machinery, increased management capacity of firms.

The independent expert pointed to the fact that as a country we are not competitive in plastic conversion since we do not have access to cheap and diverse raw material given SASOL's monopoly position, we do not have a supply of cheap electricity, the country doesn't have access to affordable equipment and labour costs are slightly higher. It is a good idea to consider import substitution but an answer again would have to be provided to the question, at what cost?

#### Responses from Industry

The Plastics SA responses showed that whilst import substitution is desirable especially because in some instances imports are in areas where the country has capacity to produce, it must be understood that it all comes down to the question of cost. If it is cheaper to import than to produce something, a manufacturer will import it. Industry does have an Import

Substitution Programme. What is required though is a broader Import Substitution Strategy of the country, which will be financed by government.

It was further indicated that government and industry needed to work together to find a comprehensive long term multi pronged solution to addressing the troublesome question input costs. Amongst others will have to be addressing the question of the cost of raw material and that on its own according to industry will not solve the situation. Part of the comprehensive solution must include addressing the regulatory burden that companies in the plastics sector are faced with, as this on its own constitutes 15% of input costs. The questions of availability of latest machinery and technology to be able to compete as well were deemed as important as the skills to operate them. All these matters need to be addressed continuously for the import substitution to be a success if it were to be implemented.

#### **4.2.4 What type of support measures have been pursued in driving industrialisation in the plastics sector?**

Response from Government

The DTI officials indicated that measures that have been extended thus far included the use of industrialisation financing through incentives available through DTI, i.e. the Manufacturing Competitiveness Enhancement Programme (MCEP) and the Manufacturing Investment Programme (MIP) and other agencies such as IDC which administers the Industrial Financing Loan Facility (IFLF) and National Empowerment Fund, utilizing designations as part of localisation for public sector procurement, using tariffs as per the WTO guide, using standards to fend off the flooding of cheap imports and an establishment of a risk engine jointly with the revenue service to stave off imports flooding our country entering through wrong declarations. The approach of using tariffs was characterised as adopting a strategy to block imports, however successful it is and it may be; it runs out of steam when it is just done for its sake.

Going forward it is intimated that government may consider a plastic sector specific incentives scheme such as currently rolled out in the auto sector and clothing and textile sector.

Whilst the question of designation or localisation remains a policy instrument at the disposal of government, it was mentioned that to date only one plastic product, the wheelie bin, has been designated thus far. There is consideration to designate other products like pipes used for construction and syringes used in the public health system. The contention was that public consumption of plastics product was minimal and in some cases what made designations complex was the fact that plastic was an intermediary and not the final product. A case in point being when you procure water, the complexity is that the process targets water, not the packaging or the origin of the bottle its is packaged in thus complicating the use of designations in that case.

Clusters are also being used to cut cost related to access to machinery needed for production, make available pooled resources for research and development and lastly clusters are being used to increase collaboration for testing purposes. A proposal to create a training, research and development and testing centre working with Plastic SA has been developed and funding hasn't been allocated yet. In this way, a shared pool of skills made available to firms albeit care must be paid to possibilities of collusion when encouraging collaboration. Putting plastics firms in Industrial Development Zones is quite important in reducing operating costs for companies.

The responses further indicated that there is a need to review operating model for firms in South Africa as most of the expenses goes into paying CEO's huge salaries, a model that is best suited for first world environment. Given our conditions it maybe that firms have to look at this aspect of huge executive pay in order to ensure that there is sustainability in their business operations.



## Response from experts

Both experts agreed that incentives have been used but indicated that the DTI was best placed to comment on the incentives and their use.

The sector expert from CCRED also indicated that given the unique nature of the sector, clusters are very important since they do not only address the operational costs but can address other issues affecting workers such as continuous training and skills upgrade and access to transport. To run an effective and efficient operation the plant must be operating for 24 hours meaning there will be a need to run shifts. When the firms are in clusters workers can access transport from a central place during the changeover of shifts thus lowering the cost of travel to work for workers. The supply of electricity especially at municipal level and how they service substations to ensure constant supply to firms is quite important for the sector and for productivity and it is one measure of support regarded as peripheral but requires attention as most firms cannot afford generators. The responses further indicated the value of designations given the consumption of plastic products by the public sector.

## Response from Industry

The responses from Plastics SA showed that there are financial incentives that are available through DTI however close to 85% of the members of Plastics SA do not qualify for the incentives as they do not meet the requirements in relation to transformation. Most of these members are small and medium sized firms that are untransformed. The bigger firms in the meantime do access the financial incentives offered under the DTI incentives scheme since they meet the requirements.

Designations have also been used in the sector but thus far only one plastic product has been designated, the wheelie bin. The industry has been informed by DTI that there is a decision to designate pipes. Plastics SA is currently awaiting a formal communiqué in this regard. Industry fully supports the designation. Designations must be used more as they provide an opportunity for local manufacturer by extending support to them especially with the guaranteed take up from government.

Clusters have also been used to extend support albeit clusters within plastics have to be understood in context of how in high value sub sectors plastic is an intermediary and not the final product. In that regard the best working clusters are arranged following linkages. Those in the auto sector want to be located within auto sector for purposes of proximity. Those in clothing and textile need to be in close proximity to the cluster of clothing and textile so that they just put their products on a conveyor belt to next door. Plastics SA is working with the City of Ekurhuleni to establish some clusters along sub sectors and hopefully this will continue to provide the much needed support to industry.

#### **4.2.5 Which sub sectors of the plastics sector are targeted to drive industrial growth?**

Response from Government

The government officials from Department of Trade and Industry interviewed stated that the automotive interior and exterior sub sector (dashboards, carpets, car bumpers, fuel tank, mirror caging, foam used in car seats), medical sub sector (syringes), and construction sub sector (pipes) provided a great opportunity for targeting industrial growth and reversing the high percentages of import penetration in those sectors.

Opportunities in the auto sector existed because of more and more demand of cars that consume less fuel thus plastic products are needed more in the sector and they are regarded as high value. With the medical subsector it was actually pointed out that the little capacity that

the country had was lost and work is underway to revive the sub sector given the volumes of consumption in public hospitals and in the casing of testing kits like the ones used for blood tests and home pregnancy tests.

#### Response from experts

The independent consultant cautioned that governments inherently do not possess the requisite capacity for targeting. However, it was highlighted that if subsectors were to be targeted it will have to be within sophisticated plastic products that require more engineering and design work, that is high value sub sectors. Furthermore, for targeting to work in some high value products there would have to be an intervention with regards to linkages since in those cases plastic is an intermediate. In this regard, it was pointed out that we have a viable auto sector but they all use different plastic types for their plastic inputs. It could be that government looks at what Brazil did with compelling the auto sector to use specific engine types that fuelled the domestic industry. Given that from the beginning South Africa didn't make this demand on the auto sector it is going to prove quite complex but it could be done but it was necessary to strengthen South Africa's plastics automotive interior and exterior sub sector.

Targeting can also work if we targeted entrepreneurs since we are experiencing a shortage of them. Nothing in building a solid industrial structure substitutes shop floor experience and up scaling that experience and translating it to managing a firm. Lastly in continuing to give broad guidelines to how we can target best it was suggested that possibly sub-sectors that could be targeted should be of commodities in the plastics sector that are difficult to transport.

The expert from CCRED indicated in the responses that if we have to target then we will have to look at the trade balance per subsector and go for those that are experiencing higher import penetration. The construction sub-sector given how badly exposed the subsector is

especially with pipes; home ware sub sector, a subsector in which the country has some capacity but firms are just closing could also be targeted.

#### Response from Industry

The response from industry body states that in driving targeting a broader value chain analysis must be undertaken so as to correctly appreciate the potential of each subsector. There are subsectors with potential for growth that could and should be targeted and they include the medical subsector, the construction subsector driven by the infrastructure programme for pipes and the furniture sub sector for plastic related type of furniture.

The auto motive sector does have high growth potential and could be targeted but the biggest hurdle remains the production specifications and guidelines that are issued by multinational companies. Most local manufacturers don't have access to those specifications and are deemed to not be meeting the standards. It could be quite beneficial that the country negotiates a tailor made dispensation that allows South African companies to be able to produce for the auto sector or find creative mechanism to gently nudge the companies to make available such specifications and guidelines. In calling for a tailor made dispensation it must not be understood to suggest lowering standards as we do have South African manufacturers that out performs their European counterparts.

#### **4.2.6 What shortcomings have been experienced and which areas need improvement with respect to support measures?**

##### Response from Government

Poor co-ordination, institutional capacity, financing, corruption and rent seeking behaviour were indicated as areas where challenges have been experienced and improvement was

necessary to make sure that support measures put forward can succeed by the DTI officials. Furthermore, it was highlighted that government needs to be bold and take decisive measures to change the face of the whole petro-chemical sector to bolster performance of the plastics sector. The fact that designations mainly touched on public sector procurement and there were no powers a yet to extend it to deal with private sector procurement was also highlighted as an issue to be addressed.

#### Response from experts

The questions on implementation of plans and their monitoring, a focused strengthening of institutional capacity of the state and co-ordination inside government were raised as critical shortcoming to be addressed.

#### Response from Industry

Industry body would like to work with government to find innovative solutions to the challenges facing the industry. Most importantly the issue of the regulatory burden which at the moment constitutes 15% of input costs has to be addressed with the aim of lessening the cost, the question of tariff codes to fend off dumping has to be given attention and government working together with industry must find a creative way to provide incentives as a tool to facilitate the much needed transformation of the sector.

### **4.3 Conclusion**

We have presented in this chapter the responses of the participants that were interviewed. What seems to emerge from the response is an indication that the country has good plans and it is on the right path with respect to industrialisation but poor execution has amongst other

led to decline of manufacturing as a percentage of GDP. Participants are not out and out opposed to import substitution, however raised various issues that act as barriers. That includes availability of diverse raw material feedstock, pricing of the current raw material and a limited domestic market. Further issues of skills and stable supply of electricity were highlighted. Participants expressed support for targeting with sub sectors with high value and that requires sophisticated engineering design are targeted. Participants also pointed to a combination of support measures ranging from financial incentives, the use of designations, clusters, tax allowances measures and a joint risk engine with SARS to fight off the flood of cheap imports into the country.

## **Chapter 5**

### **Discussion of the Results**

#### **5.1 Introduction**

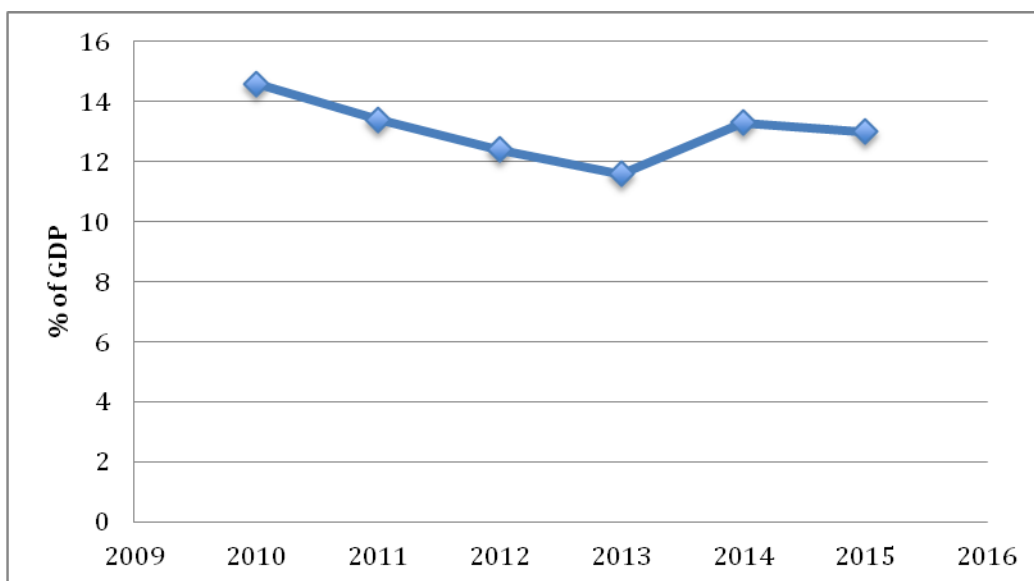
In this chapter results of the study are discussed guided by the primary research question and the subsequent secondary research questions. The responses of the respondent were analysed through identification of common themes in providing answers to the primary and secondary research question. Furthermore, the evidence from documentary review is used to contextualise the analysis and triangulates responses from the participants.

#### **5.2 South Africa's industrialisation broadly and import substitution in the plastics sector**

There is broad support across all respondents for the need to industrialise and build our manufacturing capacity in order to create jobs and move the country away from one that just consumes imports. However, most respondents were critical of South Africa's lack of a coherent overarching vision with respect to industrialisation. South Africa's industrialisation drive is anchored around IPAP which is acknowledged as a good plan, raising correct issues, but does not make the cut for an overarching strategy. There is doubt amongst all respondents about single mindedness when it comes to implementation of the plan. The danger with poorly focused plans was raised in literature review when Chang (2013) argued for focused policy interventions that could be easily monitored. In many respects the respondents indicate that our manufacturing capacity as a country is still performing poorly and in fact losing with respect to its overall contribution to GDP. There is poor institutional capacity to drive industrialisation, the country hasn't committed resources enough to industrialisation and poor policy coherence in government doesn't help drive forward IPAP. Issues that came up in literature review about the success of industrialisation were the question of political will and

broader social supported, commitment to implementation, a strong implementation arm with right capacity to read shifts in the environment and direct planning accordingly (Ogujiuba et al, 2011). The issue of differences in implementation, lack of policy coherence and poor funding suggest politically there is no commitment and as pointed out in literature review under such conditions industrialisation doesn't flourish.

**Figure 1: Annual Manufacturing as % of GDP 2010 - 2015**



*Source: IDC (2011; 2012; 2013; 2014; 2015; 2016)*

Figure 1 above corroborates the idea that implementation of IPAP hasn't been quite successful albeit it has halted the situation from deteriorating for the worse given the economic meltdown of 2008. From 2010 to 2015, manufacturing as a percentage of GDP averaged 13, 05%, a far cry from it contributing 20, 9% of GDP in 1994 (IDC, 2013). The muted performance of the manufacturing sector as can be witnessed gives further credence to respondent's view that we have lost the battle and that in many respects we are deindustrialising. The figures must also be understood in context of the challenges imposed by the 2008 global economic meltdown.



With respect to import substitution in the plastics sector most respondents expressed support for it but immediately raised issues that might hinder the implementation of import substitution. The cost of raw materials needs to be addressed and this has been on the agenda for far too long. The call to break up the monopoly of SASOL to address its pricing was also an issue that was raised to support possible import substitution industrialisation in the plastics sector. Addressing production cost is a critical aspect of laying a foundation for a successful industrialisation drive as witnessed by the example of how Korea advance hefty subsidies to cover production costs (Chang, 1993) and lift production output. Whilst desirable, it was highlighted that the domestic market was limited and therefore it would necessarily be required that import substitution be implemented with an eye on the export market with much emphasis on the issue of regional trade. Production only for a limited domestic market can be difficult as modern day commodity production requires economies of scale and it can also stunt competitiveness of the sector. These were highlighted in the literature review wherein Ogujiuba et al (2011) raised the question of the size and buying power of markets. Other constraints such as the secure supply of electricity, addressing availability of machinery and access to latest technology and improving the skills base were raised as requisite to the success of import substitution in the plastics sector.

A brief documentary analysis of IPAP in relation to its Key Action Programme (KAP) and targeted outcomes resulted with the table below:

**Figure 2: Summary of IPAP’s KAP and Targeted Outcomes**

	<b>KAP</b>	<b>Targeted Outcome</b>
<b>2010</b>	PP beneficiation	Increased export, investment and employment opportunities
<b>2011</b>	PP beneficiation	Increased export, investment and employment opportunities
<b>2012</b>	PP and PVC beneficiation	Achieve local production of at least half the demand.
<b>2013</b>	PP beneficiation	An increase in local production to meet at least half of the total domestic demand.
	Plastics trade policy measures	Eliminate illegal imports and encourage local manufacturing
<b>2014</b>	Development of plastic production and innovation cluster	A Sustainable plastic cluster with access to markets.
	Plastics trade policy measures	A Sustainable plastic cluster with access to markets.
<b>2015</b>	Development of a plastics production and innovation cluster	A sustainable plastic cluster with access to markets.
	Promotion of the integration of plastics products in identified key sectors and cross-cutting area.	Enhanced integration of key intermediate plastic products into other industrial sectors’ production and value-adding processes.
<b>2016</b>	Plastics Exporter development programme	Increased exports of value added plastics products supported by an export development programme.
	Combating customs fraud	Reduced mis-declaration and under-invoicing of imports

*Source: Adapted from CCRED (2016)*

What Figure 2 above shows are the Key Action Programme (KAP) contained in IPAP from 2010 in relation to the plastics sector and the targeted outcomes from 2010 till 2016. Whilst there is a warming up to the idea of import substitution in the plastics sector including the

adoption of a strategic imperative on import replacement by Plastics SA (Plastics SA, 2016), the idea doesn't seem to find expression in IPAP. Clearly with respect to the plastics sector IPAP has been focused on building exports capacity. It appears that the notion of being aggressive and not being defensive seem to be the underlying official approach. However, the literature review laid bare that focusing only on exports is unhelpful as one can only perform well in exporting based on having built the requisite domestic production capacity (Ranis, 1992). It is for this reason that import substitution remains an important policy intervention.

### **5.3 Subsectors targeted for local production in order to replace imports**

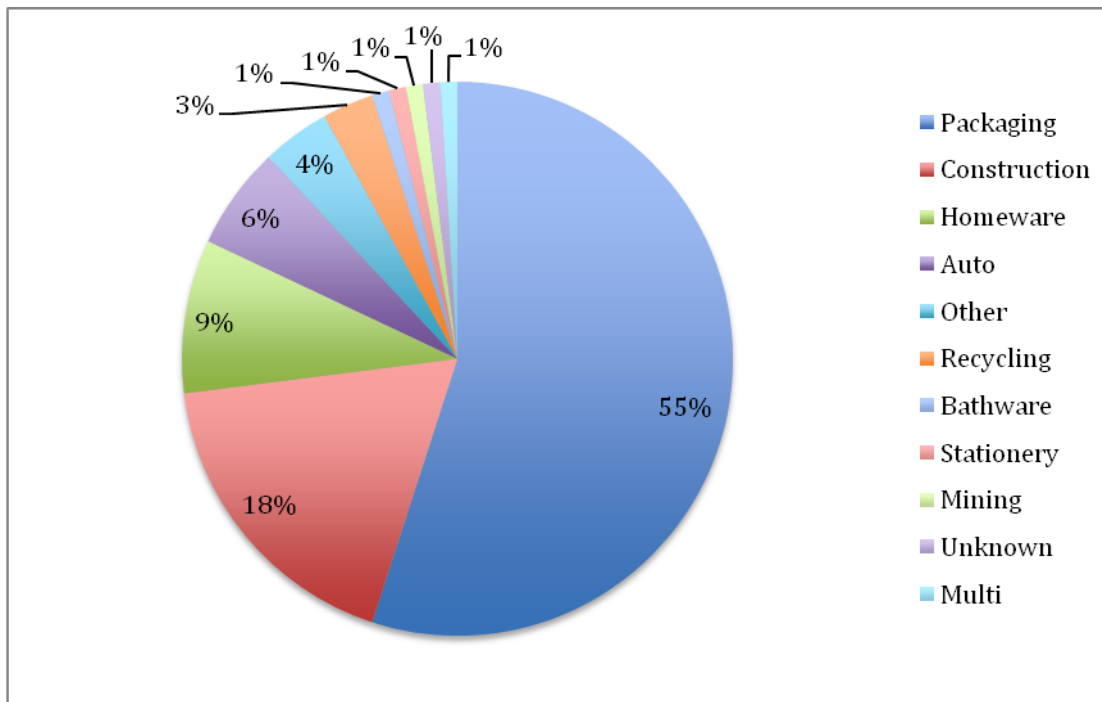
The respondents in the main approached the question of targeting, bar one, by selecting areas of high import penetration and suggested that those areas be targeted. The one respondent raised caution that government inherently does not have the right capacity to target. What most respondent indicate is that there is a need to target high value sectors with medical subsector, construction and auto sector the most commonly mentioned. Houseware and household plastic furniture was mentioned by the expert from CCRED and by industry respectively. Lessons from low value sectors will be significant in order to excel with high value production taking it phase by phase (Alexander, 1967; Hirshchman, 1968; Ogujiuba et al, 2011; & Nzau, 2010) and in this regard the capacity in low value sub sectors such as packaging must be harnessed for going up the value chain in well structured phases. Furthermore, CCRED expert alluded to packaging still being significant and that it must not be discarded. All respondents further highlighted the need to address the skills needs, access to technological advances and latest machinery if the country is to attain desired outcomes in the high value sub sectors. Ogujiuba et al (2011) demonstrated in the literature review how East Asian countries succeed by investing in education and producing skills that allowed them to move up the industrial scale.

What all respondents agree on is that there is a need to appreciate that in high value and sophisticated engineering in order to replace imports there is a need to strengthen linkages with other sectors, as those plastic products are intermediaries to other sectors. The question

of a correct appreciation of the forward and backward linkages and its significance (Hirschman, 1958, as cited in Chang 2013) in advancing import substitution industrialisation is quite central.

It is interesting to note, as indicated in Figure 3 below, that whilst respondents agree on the need to target high value sectors which have suffered the most import penetration the funding has not necessarily gone to those sectors historically. Packaging, which is low value but high volumes subsector has been the biggest beneficiary of grants receiving 55% of the grants followed by construction (18%), homeware (9%) and auto (6%) subsectors. These strengthens the respondents view about poor programme alignment.

**Figure 3: Allocation of grants by sub-sector (in terms of value)**



*Source: Adapted from CCRED (2014)*

Issues of the cost of supply of raw material were also raised by most respondents strongly calling for the question of pricing to be addressed as it made it difficult for firms to operate.

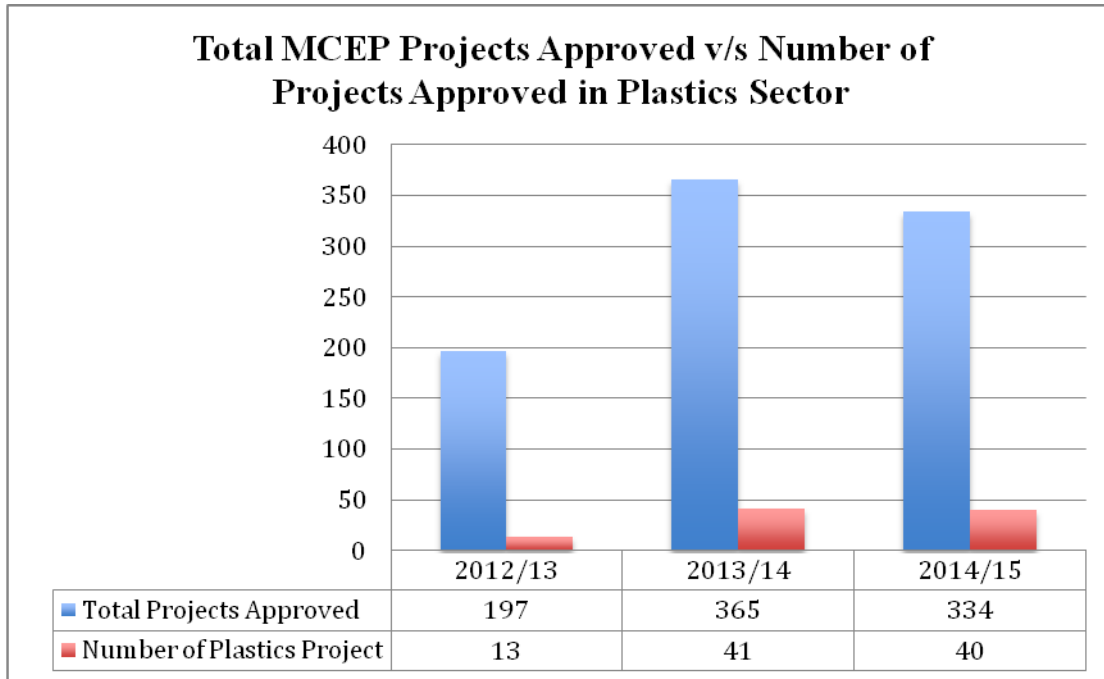
To penetrate the other sub-sectors diversification of supply of raw material beyond the current offering by SASOL was raised with a call for the country to consider enhancing further its refinery capacity so that other inputs could be available. In this regard the independent researcher raised quite strongly the issue of targeting entrepreneurs so that we can drive more people with the relevant experience. In this regard both experts interviewed were critical of how BEE in many cases has not been helpful in the development of industrial capacity.

#### **5.4 Support provided to those businesses involved in production of products aimed at replacing imports**

According to the respondents support is provided in the form of incentives that are offered by DTI and IDC, utilising designations to require local content when certain goods are procured, launching a joint initiative with SARS on the risk engine in order to combat misleading declarations at the ports of entry and using clusters to lower operational costs of firms in the plastic sector. These types of support measures are consistent with those identified in the literature review as having been adopted by countries such as Japan and Korea and others that pursued industrialisation (Beason & Weinstein, 1996; Oyejide, 1973). Industry response however raised a concern that most of the small firms in the sector did not qualify for incentives as they do not meet the requirements set out specifically one related to transformation. From literature review it is argued that support measures mitigate against the risk that entrepreneurs must take in going into business (Mingo & Khanna, 2013) and therefore if smaller firms in the industry are not accessing the financial incentives it means the entrepreneurs still bear the risk burden excessively. Small and medium sized firms play an important role in backward linkages (Fjose, Grunfeld & Green, 2010) as they provide inputs to bigger firms (Yamazawa, 1994) and this could mean limited potential to build strong intermediaries.

Various DTI reports into the performance of the MCEP were reviewed and produced the results as follows:

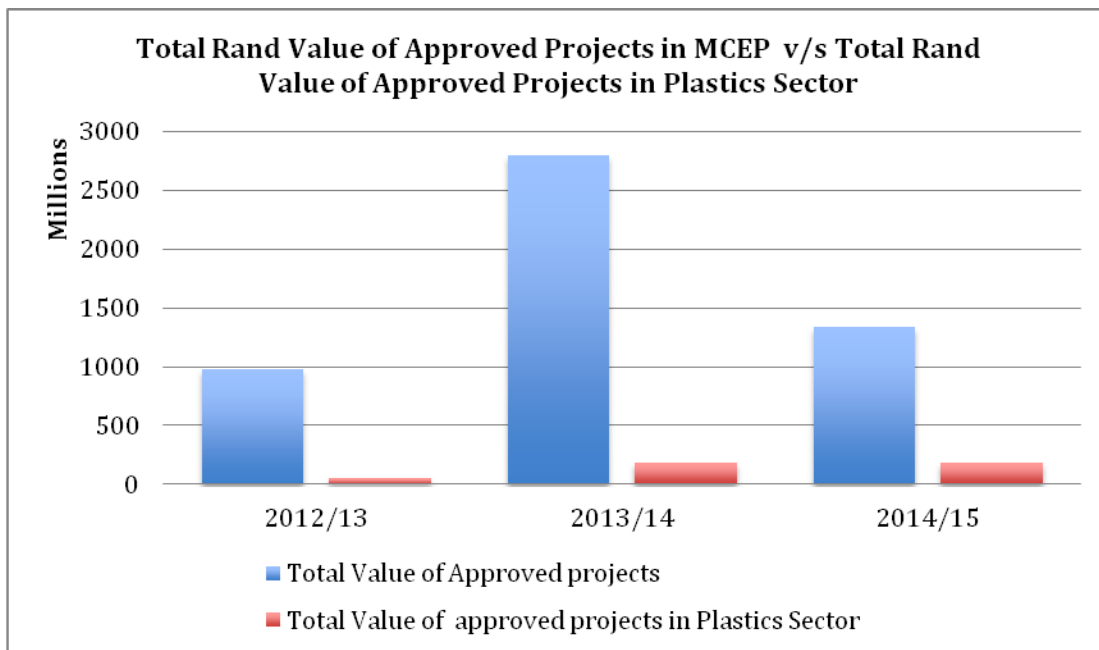
**Figure 4: Total MCEP Projects Approved v/s Number of Projects Approved in Plastics Sector**



Source: DTI (2016), DTI (2013)

Figure 4 show that since the inception of MCEP in May 2012, in the financial year 2012/13 of the 197 approved projects only 13 of those projects where from the plastics sector, whilst in the financial year of 2013/14 of the total 365 approved projects only 41 of those are from the plastics sector and for the financial year 2014/15 only 40 projects from the plastics sector formed part of the 334 total approved projects. What this corroborates is the view by industry that most of their members do not qualify given the low figures of approvals for plastics sector.

**Figure 5: Total Rand Value of Approved Projects in MCEP v/s Total Rand Value of Approved Projects in Plastics Sector**



Source: DTI (2016), DTI (2013)

Figure 5 shows that in the financial year 2012/13 of the total value of R 983 million approved for disbursement only R 48 million was for the plastics sector, of the R 2,8 billion approved in the financial year 2013/14 only R 184 million was approved for the plastics sector whilst for the financial year 2014/15 only R 178,5 million was approved for the plastics sector from a total approval of R 1,34 billion. I argue that whilst in principle funding is available, the funding approved for the plastics sector, despite it being a priority sector in IPAP, remains miniscule.

Figure 6 below shows that in the financial year 2014/15 a total of R 76.47 million was approved through the tax allowance scheme 12I for the plastics sector with 95% of the money being general tax allowances and the other 5% being allowances dedicated for training. Once

more the use of tax allowances seems minimal as argued by industry that most firms do not use the available incentives.

**Figure 6: 12I Tax Allowance per Sector**

	Projects Approved	Projected Investment	Tax Allowance	Training Allowance
2014/15	2	207.87m	72.75m	3.72m

*Source: DTI (2016)*

## 5.5 Conclusion

In this chapter, we have analysed the results of the study guided by the primary and secondary research question and using documentary evidence to provide context. South Africa's industrialisation drive is deeply challenged with poor co-ordination, poor resourcing and poor commitment to implementation despite the existence of a lauded plan. With specific focus on the plastics sector South Africa's approach to industrialisation is export-oriented. The resources allocated so far have not been directed to the high value sub sectors which are important sub sectors when one must undertake industrial targeting. Support has been extended to firms in the plastics sector by means of financial incentives on the DTI MCEP administered scheme, through designations, defensive measures of tariffs including strengthening ports control and tax allowances.



## Chapter 6

### Conclusions and Recommendations

#### 6.1 Conclusions of the Study

- a. South Africa has a great transversal Industrial Policy Action Plan that is lauded in all corners however its implementation is found wanting and has only stabilized the manufacturing sector. There are major concerns with respect to financing the plan, aligning programmes to the aims and goals of the plan, and the institutional capacity to execute is weak the study has found.
- b. Import substitution industrialisation is broadly supported by government officials, by experts and industry but has not found resonance in government policy, in industry interventions and in how financial incentives are distributed.
- c. There is a huge problem with respect to raw material feedstock supply to the plastics sector with the dominance of SASOL untenable and suffocating further development and diversification of the plastics sector and possible import substitution in other sub sectors. The study further found that other issues such as stable supply of electricity, access to machinery and latest technology and lack of relevant skills were acting as barriers.
- d. Targeting has not been adequately utilized and there is a poor appreciation of the forward and backward linkages in the plastics sector. There is poor inter sectoral industrial upgrade collaboration.
- e. The study further showed that funding and various incentives have not been deployed to enhance import substitution and most members of the industry are not able to fully tap in and benefit from such resources. Designations have not been adequately used to drive

industrial growth of the plastics sector. Capacity at our ports is very weak which allows for illegal dumping or wrong declarations to come through.

## **6.2 Recommendations of the Study**

- a. Consistent with what we found in literature, for industrialisation and import substitution industrialisation specifically to succeed the country needs to adopt a firm, coherent overarching vision, finance it, ascertain that there is alignment of government programmes and develop proper institutional capacity to drive the programme. A policy and institutional overhaul is hereby recommended.
- b. It is recommended that the country should adopt an overarching sector by sector import substitution industrialisation strategy based on evidence of natural endowments capacity, potential spin offs and existing industrial capacity in order to minimize our excessive reliance on imports and address the crisis of the balance of payments accounts. An adoption of such does not preclude those sectors from participating in export markets but for strategic national interest they are encouraged first and foremost to produce for the domestic market.
- c. A dedicated or tailor made incentives schemes for the plastics sector similar to the ones in the automotive and clothing and textiles sectors is hereby proposed.
- d. It is recommended that other measures within the legal framework and trade rules be found to push forward the agenda of developmental pricing for raw materials. Furthermore, the country must diversify the supply of raw material. In this regard the conclusion of projects aimed at expanding our refinery capacity is quite urgent to lower input cost and diversify raw material feedstock.
- e. The supply of stable electricity supply needs to be addressed with municipalities to ensure that industry remains competitive.

- f. A national plastics research hub, providing latest training drawing on available public higher education and assisting TVET's colleges to upgrade their curriculum and teaching methods should be financed and rolled out as proposed.
- g. Inter sectoral collaboration is crucial for the development of the plastics sector. In this regard, government must tighten local procurement conditions for sectors that use plastics products as inputs to compel them to buy good produced locally.
- h. In relation to the auto sector the study recommends that conditions are strengthened to allow for South African plastic producer to access the production specifications to allow for the plastics sector to participate as suppliers.
- i. It has become urgent that the mooted establishment of a medical firm to produce requisite products need in the medical sub sector is concluded so as to leverage public procurement in this regard.
- j. All outstanding designations must be concluded urgently in order to spur growth in the sector. It is further recommended that designations for stationery and plastics furniture must be enacted to leverage public procurement. Private sector procurement and consumption must also be tapped in giving due regard within the law for local procurement regulations to be mandatory for public sector procurement.
- k. Capacity at our points of entry must be strengthened in order to enhance enforcement and implement tariff codes properly. The existing risk engine mechanism with SARS must be strengthened to stave off the flood of illegal imports.

## References

Adewale, R. A. (2012). Does Import Substitution Industrialisation Strategy Hurt Growth? : New Evidence from Brazil and South Africa. *African and Asian Studies*, 11, pp. 288 – 314. DOI: [10.1163/15692108-12341235](https://doi.org/10.1163/15692108-12341235)

Alexander, R, J. (1967). The Import-Substitution Strategy of Economic Development. *Journal of Economic Issues*, 1 (4) pp. 297-308. Accessed via <http://www.jstor.org/stable/4223869>

Anderson, C. (2010). Presenting and Evaluating Qualitative Research. *American Journal of Pharmaceutical Education*, 74(8), p. 141. Accessed via <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2987281/>

Aremu, M.A., & Adeyemi, SL. 2011. Small and Medium Scale Enterprises as A Survival Strategy for Employment Generation in Nigeria. *Journal of Sustainable Development*, 4(1), pp. 200 - 206 Accessed via <http://0-search.proquest.com.innopac.wits.ac.za/docview/859014527/fulltextPDF/23B49C6990F9477DPQ/1?accountid=15083>

Aryeetey, E., & Moyo, N. (2012). Industrialisation for Structural Transformation in Africa: Appropriate Roles for the State. *Journal of African Economics*, 21(Suppl 2), pp. ii55-ii85. Accessed via [http://0-jae.oxfordjournals.org.innopac.wits.ac.za/content/21/suppl\\_2/ii55.full.pdf](http://0-jae.oxfordjournals.org.innopac.wits.ac.za/content/21/suppl_2/ii55.full.pdf)

Balassa, B. (1983). Policy responses to external shocks in sub-Saharan African countries. *Journal of Policy Modeling*, 5(1), pp. 75-105. [doi:10.1016/0161-8938\(83\)90023-6](https://doi.org/10.1016/0161-8938(83)90023-6)

Babbie, E.R., Babbie, E., Vorster, J.H., Payze, C., & Mouton, J. (2001). *Practice of business and social research* (8<sup>th</sup> ed.). Cape Town: Oxford University Press Southern Africa

Baer, W. (1972) . Import Substitution and Industrialization in Latin America: Experiences and Interpretations. *Latin American Research Review*, 7(1), pp. 95-122. Accessed via [http://isites.harvard.edu/fs/docs/icb.topic925740.files/Week%203/Baer\\_Import.pdf](http://isites.harvard.edu/fs/docs/icb.topic925740.files/Week%203/Baer_Import.pdf)

Beason, R., & Weinstein, D. E. (1996). Growth, economies of scale, and targeting in Japan (1955-1990). *The Review of Economics and Statistics*, 78(2) pp. 286-295. Accessed via <http://0-www.jstor.org.innopac.wits.ac.za/stable/pdf/2109930.pdf>

Bowen, G. A. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal (RMIT Training Pty Ltd Trading As RMIT Publishing)*, 9(2), pp. 27-40. DOI:10.3316/QRJ0902027

Bradley, E. H., Curry, L. A., & Devers, K. J. (2007). Qualitative Data Analysis for Health Services Research: Developing Taxonomy, Themes, and Theory. *Health Services Research*, 42(4), pp. 1758-1772. DOI:10.1111/j.1475-6773.2006.00684.x

Brown, J (1993). The role of the state in economic development: theory, the East Asian experience, and the Malaysian case. Staff Paper No.2 Asian Development Bank. Accessed via <https://www.adb.org/sites/default/files/publication/28148/es52.pdf>

Bruton, H. J. (1998). A reconsideration of import substitution. *Journal of economic literature*, 36(2), pp. 903-936. Accessed via <http://0-www.jstor.org.innopac.wits.ac.za/stable/pdf/2565125.pdf>

Bryman, A. (2015). *Social research methods*. Oxford, United Kingdom: Oxford University Press

CCRED. (2014). *Report for the plastics Conversion Industry Strategy, Prepared for the Department of Trade and Industry*

CCRED. (2016). *Industry Nodes and Cluster Development in the City of Joburg: Background Report on the Plastics Cluster*. Accessed via <https://static1.squarespace.com/static/52246331e4b0a46e5f1b8ce5/t/5881a8eb9f7456d5330a>

[d538/1484892403085/CCRED-](https://doi.org/10.1080/09500804.2014.943885)

[CoJ\\_Understanding+Economy+Plastics+Sector+Background+Report.pdf](#)

Chang, H. J. (1993). The political economy of industrial policy in Korea. *Cambridge Journal of Economics*, 17(2), pp. 131-157. Accessed via <http://0-cje.oxfordjournals.org.innopac.wits.ac.za/content/17/2/131.full.pdf>

Chang, H.J. (2014). *Economics: The user's guide*. United States: Bloomsbury Publishing PLC.

Chang, H. J., Andreoni, A., & Kuan, M. L. (2013). International industrial policy experiences and the lessons for the UK. Accessed via [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/277162/ep4-international-industrial-policy-experiences.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/277162/ep4-international-industrial-policy-experiences.pdf)

Chimucheka, T. (2013). Overview and Performance of the SMMEs Sector in South Africa. *Mediterranean Journal of Social Science*, 4(13), pp. 783 - 795 Accessed via <http://www.mcser.org/journal/index.php/mjss/article/view/1667/1671>

Creswell, J.W. (2012). *Qualitative inquiry and research design: Choosing among Five approaches* (3<sup>rd</sup> ed.). Los Angeles: SAGE Publications

DTI. (2013). *The Industrial Development Incentive Administration Division (IDAD) 2012-13 Incentive Performance Report*. Accessed Via [Http://Led.Co.Za/Sites/Default/Files/Cabinet/Orgname-Raw/Document/2014/Inc\\_Perf\\_Report2013.Pdf](http://Led.Co.Za/Sites/Default/Files/Cabinet/Orgname-Raw/Document/2014/Inc_Perf_Report2013.Pdf)

DTI. (2014). *Industrial Policy Action Plan: Economic sectors and employment cluster, IPAP 2014/15 - 2016/17*. Accessed via <http://www.gov.za/sites/www.gov.za/files/IPAP2014.pdf>

DTI. (2016). *Performance of IDAD Incentives Programmes*. Accessed via [https://www.thedti.gov.za/parliament/2016/Incentive\\_presentation\\_12022016.pdf](https://www.thedti.gov.za/parliament/2016/Incentive_presentation_12022016.pdf)

Dunning, H. (1997). Governments and the macro-organization of economic activity: an historical and spatial perspective. *Review of International Political Economy*, 4 (1), pp. 42 – 86. DOI: 10.1080/096922997347850

Fjose, S., Grunfeld, L., & Green, C. (2010). SMEs and growth in Sub-Saharan Africa. MENON Business Economics. Accessed via <http://www.norfund.no/getfile.php/Documents/Homepage/Reports%20and%20presentations/Studies%20for%20Norfund/SME%20and%20growth%20MENON%20%5BFINAL%5D.pdf>

Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of data collection in qualitative research: interviews and focus groups. *British Dental Journal*, 204(6), pp. 291-295. DOI:10.1038/bdj.2008.192

Grabowski, R. (1994). The Import Substitution, Export promotion, and the State in Economic Development. *Journal of Developing Areas*, 28(4), pp. 535 – 554. Accessed via <http://www.jstor.org/stable/4192386>

Gulhati, R. (1981). Industrial Strategy for Late Starters: The Experience of Kenya, Tanzania and Zambia. *World Bank Staff Working Paper No. 457*. Accessed via [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2002/11/28/000178830\\_98101903410713/Rendered/PDF/multi0page.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2002/11/28/000178830_98101903410713/Rendered/PDF/multi0page.pdf)

Hirschman, O, A. (1968). The Political Economy of Import-Substituting Industrialization in Latin America. *The Quarterly Journal of Economics*, 82(1), pp. 1 – 31. Accessed via <http://www.jstor.org/stable/1882243>

Hobohm, S. (2001). Small and Medium-Sized Enterprises in Economic Development: The UNIDO Experience. *Journal of Economic Cooperation*, 22(1), pp. 1-42. Accessed via <http://www.library.sesrtcic.org/files/article/157.pdf>

Hu, M., & Schive, C. (1998). The changing competitiveness of taiwan's manufacturing SMEs. *Small Business Economics*, 11(4), pp. 315-326. Retrieved from <https://0-search.proquest.com.innopac.wits.ac.za/docview/220945354?accountid=15083>

IDC. (2011). *Economic Trends: Key trends in the South African economy*. <https://www.idc.co.za/images/download-files/research-reports/Key-trends-in-SA-economy-2nd-quarter-2011.pdf>

IDC. (2012). *Economic Trends: Key trends in the South African economy*. Accessed via [https://www.idc.co.za/images/download-files/research-reports/economic trends q2 2012 idc research information.pdf](https://www.idc.co.za/images/download-files/research-reports/economic_trends_q2_2012_idc_research_information.pdf)

IDC. (2013). *South African economy: An overview of key trends since 1994*. Accessed via <https://www.idc.co.za/reports/IDC%20R&I%20publication%20-%20Overview%20of%20key%20trends%20in%20SA%20economy%20since%201994.pdf>

IDC. (2014). *Economic Trends: Key trends in the South African economy*. Accessed via [https://www.idc.co.za/images/download-files/research-reports/Economic Trends Key trends in SA economy March 2014.pdf](https://www.idc.co.za/images/download-files/research-reports/Economic_Trends_Key_trends_in_SA_economy_March_2014.pdf)

IDC. (2015). *Economic Trends: Key trends in the South African economy*. Accessed via [https://www.idc.co.za/images/download-files/research-reports/key\\_trends\\_sa\\_economy\\_mar\\_2015.pdf](https://www.idc.co.za/images/download-files/research-reports/key_trends_sa_economy_mar_2015.pdf)

IDC. (2016). *Economic Trends: Key trends in the South African economy*. Accessed via [https://www.idc.co.za/images/download-files/economic-overviews/RI-publication-Keytrends-in-SA-economy\\_March2016.pdf](https://www.idc.co.za/images/download-files/economic-overviews/RI-publication-Keytrends-in-SA-economy_March2016.pdf)

Karayiannis-Bacon, H. (1976). Tariff protection and import substitution in post-war Greece. *World Development*, 4(6), pp. 529-542. [https://doi.org/10.1016/0305-750X\(76\)90037-1](https://doi.org/10.1016/0305-750X(76)90037-1)

Kim, K. S. (1995). The Korean Miracle (1962–80) Revisited: Myths and realities in strategies and development. In *Asian industrialization and Africa* (pp. 87-143). Palgrave Macmillan UK.



Kyaw, A. 2008. Financing Small and Medium Enterprises in Myanmar. *IDE Discussion Paper* No. 148. Accessed via [http://ir.ide.go.jp/dspace/bitstream/2344/742/3/ARRIDE\\_Discussion\\_No.148\\_kyaw.pdf](http://ir.ide.go.jp/dspace/bitstream/2344/742/3/ARRIDE_Discussion_No.148_kyaw.pdf)

Lavrikova, Y. G., & Averina, L. M. (2015). Strategic framework for implementing the potential of import substitution on the example of railway engineering. *Ekonomicheskie i Sotsialnye Peremeny*, (39), pp. 85-99A. DOI: 10.15838/esc/2015.3.39.7

Lin, J., & Monga, C. (2011). Growth Identification and Facilitation: The Role of the State in the Dynamics of Structural Change: Rejoinder. *Development Policy Review*, 29(3), pp. 304-310. Accessed via <http://0-web.a.ebscohost.com/innopac.wits.ac.za/ehost/pdfviewer/pdfviewer?sid=196feb3d-e039-4da8-9329-5c0e4f6ee092%40sessionmgr4007&vid=3&hid=4101>

Malikana, C., Roberts, S., & Skhweni, N. (2000). Competition and market structure in the plastics sector: a preliminary analysis. *Trade and Industrial Policy Secretariat Working Paper*. Accessed via [www.tips.org.za/files/333.pdf](http://www.tips.org.za/files/333.pdf)

Marshall, M. N. (1996). Sampling for qualitative research. *Family practice*, 13(6), pp. 522-526. DOI: 10.1093/fampra/13.6.522

Mazzucato, M. (2014). *The Entrepreneurial State: Debunking Public vs. Private Sector Myths*. London, New York, Delhi: Anthem Press

Mendes, A. F., Bertella, M. A., & Teixeira, R. P. (2014). Industrialization in Sub-Saharan Africa and import substitution policy. *Brazilian Journal Of Political Economy / Revista De Economia Política*, 34(1), pp.120-138. Accessed via <http://0-content.ebscohost.com/innopac.wits.ac.za/ContentServer.asp?T=P&P=AN&K=94810746&S=R&D=a9h&EbscoContent=dGJyMNHr7ESep7Q4zdnyOLCmr06ep7VSsq4TbSWxWXS&ContentCustomer=dGJyMPGrsUyvr7ZNuePfgeyx44Dt6fIA>

Merriam, S.B. (2002). *Qualitative research in practice: examples for discussion and analysis*. Jossey-Bass Inc Pub.

Mingo, S., & Khanna, T. (2013). Industrial policy and the creation of new industries: evidence from Brazil's bioethanol industry. *Industrial and Corporate Change*, 23 (5), pp. 1229-1260. DOI: 10.1093/icc/dtt039

Nzau, M. (2010). Africa's Industrialization Debate: A Critical Analysis. *The Journal of Language, Technology & Entrepreneurship in Africa*, 2(1), pp. 146 - 165. Accessed via <http://www.ajol.info/index.php/jolte/article/viewFile/51996/40631>

OECD. (2015). *Country statistical profile: South Africa*. DOI:10.1787/csp-zaf-table-2015-2-en

Ogujiuba, K., Nwogwugwu, U., & Dike, E. (2011). Import Substitution Industrialization As Learning Process: Sub Saharan African Experience As Distortion Of The "Good" Business Model. *Business and Management Review* , 1(6), pp. 08 – 21. Accessed via <http://www.businessjournalz.org/bmr>

Oyejide, A. (1973). Tariff Protection and Industrialization via Import Substitution: An Empirical Analysis of the Nigerian Experience. *The Bangladesh Economic Review*, 1(4), pp. 331 – 340. Accessed via <http://www.jstor.org/stable/40795740>

Pio , A. (1994). New Growth Theory and Old Development Problems: How Recent Developments in Endogenous Growth Theory Apply to Developing Countries. *Development Policy Review*, 12(3), pp. 243 – 352. DOI: 10.1111/j.1467-7679.1994.tb00068.x

Plastics SA. (2014). Plastics Industry Report on Beneficiation. *Portfolio Committee: Trade and Industry*. Accessed via [https://www.thedti.gov.za/parliament/2014/Plastics\\_part2.pdf](https://www.thedti.gov.za/parliament/2014/Plastics_part2.pdf)

Plastics SA. (2016). An Annual Review. <http://www.plasticsinfo.co.za/wp-content/uploads/2016/11/ebook%202016.pdf>

Polkinghorne, D. E. (2005). Language and meaning: Data collection in qualitative research. *Journal Of Counseling Psychology*, 52(2), pp. 137-145. DOI:10.1037/0022-0167.52.2.137

Quader, S.M, & Abdullah, M.N. 2008 . Constraints to SMEs: A Rotated Factor Analysis Approach. *MPRA Paper No. 26135*. Accessed via [http://mpra.ub.uni-muenchen.de/26135/1/MPRA\\_paper\\_26135.pdf](http://mpra.ub.uni-muenchen.de/26135/1/MPRA_paper_26135.pdf)

Ranis, G. (1992). East and South-East Asia: Comparative Development Experience. *The Bangladesh Development Studies*, 20(2/3) Trade, Macroeconomic Policy and Adjustment in Developing Countries, pp. 69-88 Accessed via <http://www.jstor.org/stable/40795439>

Rodrik, D. (1995). Getting Interventions Right: How South Korea and Taiwan Grew Rich. *Economic Policy: A European Forum*, (20), pp. 53-97. Retrieved from <http://0-content.ebscohost.com.innopac.wits.ac.za/ContentServer.asp?T=P&P=AN&K=0392913&S=L&D=eoh&EbscoContent=dGJyMMvl7ESeqK44y9fwOLCmr0%2Bep65Ss6%2B4SbCWxWXS&ContentCustomer=dGJyMPGrSuyvr7ZNuePfgex44Dt6fIA>

Rodrik, D., (1997). The ‘paradoxes’ of the successful state. *European Economic Review*, 41(3), pp. 411-442. doi:10.1016/S0014-2921(97)00012-3

Salazar-Xirinachs, J., Nübler, I., & Kozul-Wright, R. (2014). Industrial policy, productive transformation and jobs: Theory, history and practice. *Transforming Economies: Making industrial policy work for growth, jobs and development*. Geneva, International Labour Office. Accessed via [http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms\\_242878.pdf](http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_242878.pdf)

Seale, C. (1999). Quality in qualitative research. *Qualitative inquiry*, 5(4), pp. 465-478. Accessed via <http://0-qix.sagepub.com.innopac.wits.ac.za/content/5/4/465.full.pdf>

Silva, E. (2007). The Import-Substitution Model: Chile in Comparative Perspective. *Latin American Perspectives*, 34(3) Contested Transformation, pp. 67-90. Accessed via <http://www.jstor.org/stable/27648023>

Sinha, A. (2003). Experience of SMEs in South and South-East Asia. *Washington, DC SEDF and World Bank*. Accessed via <http://bei-bd.org/wp-content/uploads/2015/03/whc4f4baa444ad1e.pdf>

Singh, A. (2011). Comparative advantage, industrial policy and the World Bank: Back to first principles. *Policy Studies*, 32(4), pp. 447-460. Accessed via <http://0-web.a.ebscohost.com/innopac.wits.ac.za/ehost/pdfviewer/pdfviewer?vid=3&sid=a8fab4ca-653f-42ab-a001-7c8da9c6bf7c%40sessionmgr4009&hid=4206>

South African Reserve Bank. (2016). *Quarterly Bulletin*. Accessed via <https://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/7195/02Quarterly%20Economic%20Review%20-%20March%202016.pdf>

Strauss, I. (2015). Understanding South Africa's current account deficit: The role of foreign direct investment income. *African Economic Brief*, 6 (4), pp. 1-14 Accessed via [http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/AEB\\_Vol\\_6\\_Issue\\_3\\_2015\\_Understanding\\_South\\_Africa's\\_current\\_account\\_deficit\\_The\\_role\\_of\\_foreign\\_direct\\_investment\\_income\\_-\\_06\\_2015.pdf](http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/AEB_Vol_6_Issue_3_2015_Understanding_South_Africa's_current_account_deficit_The_role_of_foreign_direct_investment_income_-_06_2015.pdf)

Su, D., & Yao, Y. (2016) Manufacturing as the Key Engine of Economic Growth for Middle-Income Economies. ADBI Working Paper 573. Tokyo: Asian Development Bank Institute. Accessed via <http://www.adb.org/sites/default/files/publication/184350/adbi-wp573.pdf>

Szirmai, A. (2012). Industrialisation as an engine of growth in developing countries, 1950–2005. *Structural Change and Economic Dynamics*, 23 (4), pp. 406–420. Accessed via [http://ac.els-cdn.com/S0954349X1100018X/1-s2.0-S0954349X1100018X-main.pdf?\\_tid=367082f0-0adb-11e5-94ab-00000aacb35f&acdnat=1433437413\\_bb69b0b1ce6c00e8b9d431a346b4e319](http://ac.els-cdn.com/S0954349X1100018X/1-s2.0-S0954349X1100018X-main.pdf?_tid=367082f0-0adb-11e5-94ab-00000aacb35f&acdnat=1433437413_bb69b0b1ce6c00e8b9d431a346b4e319)

Veloso, F., & Soto, J. M. (2001). Incentives, infrastructure and institutions: perspectives on industrialization and technical change in late-developing nations. *Technological Forecasting and Social Change*, 66(1), pp. 87-109. [http://0-dx.doi.org/innopac.wits.ac.za/10.1016/S0040-1625\(99\)00065-7](http://0-dx.doi.org/innopac.wits.ac.za/10.1016/S0040-1625(99)00065-7)

Wade, R. (2003) *Governing the market: Economic theory and the role of government in east Asian industrialization ; with a new introduction by the author. 2nd edn.* United States: Princeton University Press.

Wagner, C., Kawulich, B., & Garner, M. (2012) *Doing social research: A global context.* London: McGraw Hill Higher Education.

Yamazawa, I. (1994). Promotion of SMEs for industrial Upgrading in ASEAN. *ASEAN Economic Bulletin*, 11 (1), pp. 16 – 24. Accessed via <http://0-www.jstor.org.innopac.wits.ac.za/stable/pdf/25770516.pdf>