

**African industrial policy in an era of expanding global  
value chains: the case of Ethiopia's textile and leather  
industries**



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**This dissertation is submitted for the degree of  
Doctor of Philosophy  
July 2017**



## Summary

Throughout the history of capitalism, the process of industrialisation has been recognised as the engine of economic development. No region in the world ‘suffers’ more acutely from a lack of industrialisation than Africa, clearly highlighting the need for industrial policy. However, the formulation of such policies is not straightforward in the current era of globalised production. In recent years, a debate has taken hold over whether the geographical expansion and increased fragmentation of production networks—often referred to as the expansion of global value chains (GVCs)—calls for new approaches to industrial policy in developing countries. By drawing on the case of Ethiopia, this dissertation demonstrates that industrial policy in developing countries needs no new ‘magic bullet’ in the era of expanding GVCs.

The dissertation applies a funnelling technique, meaning that each chapter builds on information presented and arguments made in the preceding chapters.

Chapter 2 contextualises the importance of manufacturing and industrial policy for economic development in Africa. The chapter argues that the manufacturing sector continues to play an integral role in the process of economic development, and discusses the role of the state in the process of industrialisation, arguing that there are strong justifications for intervention through industrial policy.

Chapter 3 looks at how the expansion of GVCs affects the productive structures of developing countries, particularly those in Africa, and asks if industrial policy has to change in this new global production environment. I argue that the fundamental problems of participating in GVCs are the same as when countries like South Korea and Taiwan industrialised between 1960 and 1990, although on a different scale.

Chapter 4 analyses Ethiopia’s industrialisation trajectory and GVC-oriented industrial policies in the textile and leather industries. This analysis is based on 6 months of fieldwork in Ethiopia, where I carried out several interviews with stakeholders in the private and public sector and collected and collated datasets on industrial performance in collaboration with government agencies. While the findings of this chapter make an original empirical contribution to explaining the specific case of Ethiopia, the insights provided by the analysis offer broader conceptual conclusions as well.



## Declaration

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the Preface (at the end of this declaration) and specified in the text.

It is not substantially the same as any that I have submitted, or, is being concurrently submitted for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my dissertation has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text.

It does not exceed the prescribed word limit for the relevant Degree Committee.

Chapter 2 of this dissertation includes some material that I used in a draft for chapter 2 of 'Chang, H-J., Hauge, J. and Irfan, M. (2016). *Transformative Industrial Policy for Africa*. Addis Ababa: UNECA.'



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## Glossary

ACET	African Center for Economic Transformation
AfDB	African Development Bank
AGOA	African Growth and Opportunity Act
BDVC	Buyer-driven value chain
CBE	Commercial Bank of Ethiopia
CMT	Cut-make-and-trim
DBE	Development Bank of Ethiopia
EBA	Everything But Arms
EC	European Commission
EDRI	Ethiopian Development Research Institute
EIC	Ethiopian Investment Commission
EIIDE	Ethiopian Industrial Inputs Development Enterprise
EOI	Export-oriented-industrialisation
EPRDF	Ethiopian People's Revolutionary Democratic Front
EPZ	Export processing zone
ETIDI	Ethiopian Textile Industry Development Institute
FDI	Foreign direct investment
FT	The Financial Times
GRD	Grand Renaissance Dam
GRIPS	National Graduate Institute for Policy Studies
GTP	Growth and Transformation Plan
GTPII	Growth and Transformation Plan II
GVC	Global value chain
HIP	Hawassa Industrial Park
HIPC	Heavily-Indebted Poor Country
HOS	Heckscher-Ohlin-Samuelson
IDPC	Industrial Development Parks Corporation
ILO	International Labour Organisation
IMF	International Monetary Fund
ISI	Import-substituting-industrialisation
LDC	Least developed country

LIDI	Leather Industry Development Institute
MDG	Millennium Development Goal
MoFED	Ethiopian Ministry of Finance and Economic Development
MoI	Ethiopian Ministry of Industry
MVA	Manufacturing value added
NBER	National Bureau of Economic Research
OBM	Original brand name manufacturing
OEC	Observatory for Economic Complexity
OECD	Organisation for Economic Cooperation and Development
OEM	Original equipment manufacturing
ONS	UK Office for National Statistics
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
PDVC	Producer-driven value chain
PPP	Purchasing power parity
PRSP	Poverty reduction strategy paper
PVH	Philip Van-Heusen
RCM	Reciprocal control mechanism
SAP	Structural adjustment programme
SDG	Sustainable Development Goal
SDPRP	Sustainable Development and Poverty Reduction Programme
SOE	State-owned enterprise
SSA	Sub-Saharan Africa
TNC	Transnational corporation
TPLF	Tigray People's Liberation Front
TVET	Technical Vocational Education and Training
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNIDO	United Nations Industrial Development Organisation
WDI	World Development Indicators
WTO	World Trade Organisation
WW2	World War 2



## Acknowledgements

The intellectual journey I have been on for the past four years would not have been nearly as inspiring or rewarding had it not been for my PhD supervisor, Ha-Joon Chang. I could not have asked for a better mentor. He has given me the space and freedom to explore half-baked ideas, yet whenever I asked for feedback on my work, has impressively found the time to dissect my drafts down to the last hyphens and semi-colons that I had mistakenly left out. He also invited me to work together on projects that have been closely aligned to my PhD research, which obviously benefitted my work tremendously. There is no way I can thank Ha-Joon enough.

I owe a great deal of gratitude to Gracelin Baskaran. Grace helped me prepare for almost every single presentation and lecture that I have given in relation to my PhD research. She has also been my ‘second set of eyes’ in these last few months—reading through the last drafts of my chapters, giving me useful advice on content, structure and grammar.

My research in Ethiopia benefitted tremendously from the help of individuals at various government agencies there. When approaching them, I was almost always welcomed with open arms, and they took time off their hectic schedules to let me conduct in-depth interviews with them. In many instances, they directed me to relevant sources of information and introduced me to other helpful contacts. In particular, I received instrumental help from people at the Ethiopian Prime Minister’s Office, the Ethiopian Ministry of Industry, the Ethiopian Investment Commission and the Ethiopian Textile Industry Development Institute. The Ministry of Industry did me an incredible service by helping me putting together a time-series dataset on the export performance of the textile and leather industries, at the aggregate level, product level, and firm level. I also have to thank three research assistants at Addis Ababa University who helped me scan through more than 10 years of newspaper archives.

My affiliation with the French Centre for Ethiopian Studies (CFEE) and the Institute for Ethiopian Studies (IES) at Addis Ababa University greatly eased some of the administrative issues of being a foreign researcher in Ethiopia. Dr. David Ambrosetti at CFEE and Dr. Ahmed Hassen at IES promptly helped me with all my queries.

Numerous friends have provided me with encouragement and stimulating intellectual conversations. Jose Miguel Ahumada served as an excellent Development Studies encyclopaedia, but above all, has been a close friend. Vincent Hardy has widened my social science horizons, and boldly joined me for my first research trip to Ethiopia, where we together carried out a project on the role of labour in Ethiopia’s industrialisation process. I would also

like to thank several other close friends in Cambridge who have provided me with emotional and intellectual support. They are, in alphabetical order, Roman L. Eliassen, Anne Henow, Jens Van't Kloster, Vasiliki Mavroeidi, Natalya Naqvi, Ivan Rajic, Joao Silva and Jack Wright.

Basketball has been my 'escape' from the intellectual world. Both on and off the basketball court, several members of the Cambridge University Basketball Club have reminded me that there are other things to life than industrial policy in Africa. The point guard of our team, Jack Clearman, has been a great teammate and friend. I would like to thank him for all the excellent passes on the basketball court and invaluable companionship during bus rides and mountain hikes in Ethiopia.

My family has been incredibly supportive. I am thankful for my mother, who raised me with a sense of courage to pursue my interests and encouraged me to pursue intellectual endeavours. My father has been instrumental in my academic journey, reading my work and providing valuable feedback. I am grateful to my three siblings and stepmother, who have been a source of support throughout the years.



# Chapter 1

## Introduction

### 1.1 Background to the topic and chapter structure

This dissertation is about industrial policy in Africa. Do I focus on any African country in particular? The short answer to this question is yes, I focus on Ethiopia. The more detailed answer is that this dissertation is also a story more generally about industrial policy in Africa. In some ways, one could argue that this makes little sense. Industrial policy is about policies formulated at the *national level* to develop the productive structure of a country's economy (a more detailed definition of industrial policy will be set out in chapter 2). Studying the challenges of formulating industrial policy in 54 countries, each with different geographic, demographic, social and cultural characteristics, is far beyond the scope of any research project. In fact, one can make a strong case that 'within-country-diversity' in Africa is greater than in any other continent, making the study of industrial policy in the African context a greater challenge than any other such 'continent-centric' study. For example, the number of languages spoken in Africa, both native and official, is estimated to be between 1500 and 2500. In Europe, one would struggle to make such a list of languages exceed 100.

But in other ways, studying industrial policy in 'all of' Africa actually makes some sense. While, ultimately, industrial policy should look different from country to country, regardless of whether this is in Africa or elsewhere, countries with similar production characteristics share somewhat similar industrialisation challenges and, therefore, similar industrial policy challenges. In Africa, the production characteristics of all countries are strikingly similar—the lack of internationally competitive manufacturing industry across the entire continent is so severe, you would struggle to name any internationally competitive manufacturing firm of significant size with national origin in an African country. So, the fact that parts of this dissertation focuses on Africa as a whole is most importantly the result of an observation that many countries in Africa share similar production characteristics.

Moreover, for those interested in economic development in low-income countries, there is a very interesting debate to be had right now in the African context, given the emergence of the 'Africa rising' narrative. In short, this narrative postulates that since the early 2000s Africa

has broken with its past of underdevelopment and lackluster growth, and that the rise in economic growth rates is signifying a future of economic prosperity.

Chapter 2 of this dissertation takes a critical look at the ‘Africa rising’ narrative, and, by doing so, contextualises the importance of manufacturing and industrial policy for economic development in the African context. While we should not discount positive developments in Africa, we will see that the ‘Africa rising’ narrative is mostly hype. Even the foundation on which the narrative is based on—accelerating GDP growth—is shaky. As measured by per capita GDP growth rates (instead of total GDP growth rates) we will see that Africa is still underperforming compared to other regions of the developing world, such as Latin America and East Asia. Unsurprisingly, poverty rates and vulnerable employment rates in Africa are disturbingly high.

I will suggest that a big part of the explanation for persistent underdevelopment in Africa is the lack of structural transformation—the move away from a production structure dependent on primary commodities<sup>1</sup> towards higher-productivity activities, most importantly manufacturing activities. While it is generally well known that Africa is lacking a productive manufacturing sector, chapter 2 will carry out a detailed analysis of the manufacturing performance of Africa. How dismal is Africa’s manufacturing performance really and to what extent are the aggregate numbers representative of individual countries’ performance?

Chapter 2 will also feature a theoretical and empirical investigation of the relationship between growth of the manufacturing sector and economic development. If one takes a stance that the process of industrialisation is vital to the process of economic development, such an investigation is necessary. Although most people do have an understanding of economic development as a process of industrialisation (this is why we often use the terms ‘developed country’ and ‘industrialised country’ interchangeably), this view is becoming increasingly challenged. Some scholars now claim that the traditional view of the process of industrialisation is outdated, and that, given the increased scope for productivity growth of services, we are now seeing the rise of ‘post-industrial’ societies. While this line of argument is mostly applied to the industrialised countries, some even claim that African countries can skip the industrialisation phase and ride on a wave of services-led growth instead.

While there are disagreements as to how important manufacturing is for the process of economic development, few people dismiss the importance of manufacturing altogether. However, how to go about achieving industrialisation, more specifically the role of the state in

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<sup>1</sup> Goods in a raw and unprocessed state, such as natural resources and unprocessed agricultural goods.

doing so (i.e. industrial policy), has been a highly controversial debate for centuries. The last part of chapter 2 will move on to this debate, suggesting that there are plenty of rationales for industrial policy. The main theories of industrial policy will be discussed and buttressed by examples, referring especially to the many industrial policy interventions by the ‘Asian tigers’ between approximately 1960 and 1990.<sup>2</sup> The chapter will also discuss Africa’s industrial policy experience. Although today’s evidence suggests that Africa has by and large been unsuccessful with industrial policy, we will see that the period of more state intervention and explicit attempts of industrial policy—in the 1960s and 1970s—yielded higher economic growth rates than any subsequent period of less state intervention—particularly that of complete state dismantling in the 1980s and early 1990s. This suggests that African states are far from incapable of formulating successful industrial policy, which, in fact, many Western economists often accuse them of because of things like despotism, corruption, ethnic fractionalisation and bureaucratic inefficiency.

But what exactly should industrial policy in Africa look like? While I will argue (and have hinted) that this should and will differ from country to country, I will also suggest that there are plenty of lessons to be learned from successful industrial policy experiences in the past. However, in recent years, a debate has emerged on whether industrial policy in developing countries needs a fundamental ‘rethink’ because of global changes in production networks, and if, consequently, past experiences of industrial policy hold less validity for today’s developing countries trying to catch up to the global technological frontier.

Since the early 1990s, production has become more globalised, driven by falling transport costs, advances in information and communication technology, and lower trade and investment barriers. There has been a significant increase in offshoring from high-income to low-income countries and, consequently, foreign direct investment (FDI) flows in the same direction. Developing countries’ share of world FDI inflows surged from 17 per cent to 43 per cent between 1990 and 2015 (UNCTAD STAT, 2017). We are basically seeing tasks and activities within production networks becoming increasingly geographically dispersed. This has led to complex, borderless business networks and production systems, popularly referred to as global value chains (GVCs).

Chapter 3 of this dissertation will address if and how the expansion of GVCs affect the industrial policy challenge in developing countries, particularly those in Africa. A popular view

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<sup>2</sup> The ‘Asian tigers’ is a reference to Hong Kong, Singapore, South Korea and Taiwan. I will put more emphasis on examples of industrial policy from South Korea and Taiwan, as Singapore and Hong Kong are considered more ‘special cases’.

is that, because of the expansion of GVCs, industrial policy in developing countries today has to focus more on inserting the respective country into the ‘niches’ of GVCs, rather than building vertically integrated industries. Baldwin (2011, p.3) states that, “Before 1985, successful industrialisation meant building a domestic supply chain. Today, industrialisers join supply chains and grow rapidly because offshored production brings elements that took Korea and Taiwan decades to develop domestically”.

I will argue that this perspective—which will be referred to as the ‘GVC lens’, a term that scholars of this view have ascribed to themselves (e.g. Milberg et. al., 2014)—rightly emphasises the benefits that GVC participation can bring about but has largely neglected important literature on industrial policy that focuses on the development of domestic productive capabilities through FDI attraction and participation in international trade.

For example, during South Korea’s and Taiwan’s industrialisation process between 1960 and 1990, GVCs, although not as prominent as they are today, certainly existed and useful lessons can be learned about the way these countries selectively induced foreign firms to transfer technology to domestic firms, source inputs locally in certain sectors and generally utilised GVCs and international trade for the purpose of enhancing domestic productive capabilities. The study of these ‘early’ GVC-oriented policy experiences have been largely neglected by the GVC lens. By reviewing this neglected literature and neglected GVC-oriented industrial policies in chapter 3, I suggest a new framework for industrial policy in an era of GVC expansion. This framework emphasises, most importantly, that a balance needs to be struck between niche specialisation in GVCs and building vertically integrated industries. The main conclusion is that niche specialisation is not enough in order for industrialisation to be successful in the long term. History show us that countries that have been truly successful with GVC participation have managed to build up capabilities in production activities that focus on more than simple niche specialisation in GVCs, which is usually characterised by low value-added assembly tasks.

Chapter 4 sheds light on the aforementioned topics of the dissertation through an in-depth study of Ethiopia. I chose to study Ethiopia for primarily three reasons: 1) It has been Africa’s fastest growing economy for over a decade now, impressively so without being dependent on natural resources, unlike many other fast-growing African economies. This statistic alone makes it a unique and curious case for a development economist interested in Africa. 2) Ethiopia’s government considers industrial policy as one of the most important facets of its economic development agenda, as evidenced by its commitment to industrialisation in its 5-year development plans, by its explicit emulation of East Asian industrialisation experiences

(most importantly South Korea and China), and by its investment in infrastructure aiming to create a conducive environment for the manufacturing sector to grow. 3) GVC participation plays an integral role in Ethiopia's industrialisation drive. In its two most highly prioritised industries, the textile and the leather industries, the country is inserting itself into GVCs by attracting foreign companies to set up manufacturing operations in Ethiopia, focusing mainly on apparel and footwear production.

The chapter is divided into two parts. The first part discusses economic growth, industrialisation and industrial policy in Ethiopia. The manufacturing sector is growing fast in Ethiopia but it constitutes a very small share of GDP, so small that other factors must have been important drivers of economic growth. We will see that state-led investments in infrastructure have been the most important stimulus for the economic boom. But what, then, explains the buzz around industrialisation in Ethiopia? The explicit commitment by the ruling party to an industrialisation path, in the image of the East Asian industrialisation experience, is part of the reason. Another part of the reason are all the industrial policies that the government has been putting in place to create a conducive environment for the manufacturing sector to grow. This section will also discuss these policies.

The second part of the chapter moves on to the relevance of GVCs to Ethiopia's industrialisation process. As mentioned, GVC participation and FDI attraction have become the centrepiece of policies to develop Ethiopia's two most highly prioritised manufacturing industries. This section examines Ethiopia's motivation behind developing these industries; the structure of the value chains in today's global context and the GVC-oriented firms in Ethiopia; Ethiopia's export performance in these industries; the GVC-oriented policies that the Ethiopian government has formulated to develop these industries; the results that the GVC participation strategy has produced in terms of the development of domestic productive capabilities; and key challenges for further growth of the industries through the GVC participation strategy.

Chapter 5 provides the conclusion of the dissertation. It summarises the main findings of the chapters and suggests related directions of research that this dissertation does not have scope for.

## **1.2 Methodological issues**

### **1.2.1 General choice of methodology: qualitative versus quantitative methods**

The methods of investigation applied for this dissertation are qualitative. The reason for this is that the nature of the research is more suitable for some facets of qualitative methods, in particular historical-comparative research and case-study approach methods, than quantitative methods. Let me explain why in greater depth.

Many of the causal processes that are theorised and empirically verified throughout this dissertation are concerned with countries as a unit of study. In particular for this dissertation, questions that emerge through such a focus are: what has been the efficacy of industrial policy in a certain country?; what can African countries learn from past experiences of industrial policy?; what is the relationship between the level of economic development and the productive structure of the economy across countries?; how has the participation in global value chains affected productive structures of developing countries? Some scholars attempt to answer these questions using quantitative methods—specifically by cross-country regression analysis or panel data regression analysis (this is cross-country regression analysis over time, in the cases where countries are units of study). However, there are shortcomings to this approach. Normally, to achieve statistical significance in quantitative studies using countries as units of analysis, one must include an enormous number of countries in the sample. For example, in quantitative studies examining the relationship between trade openness and growth, the number of countries included in the samples have typically ranged between 80—in the case of studying only least developed countries—and all the countries in the world that there is data availability for—in the case of studying all countries in the world (e.g. Dollar (1992), Frankel and Romer (1995) and Yannikaya (2002)).

This limits the understanding one can develop of each case, and consequently compromises the strength of conclusions. For example, the World Trade Organisation (WTO) justifies its mandate of lowering trade barriers worldwide on the sound positive relationship between trade openness and economic growth documented by cross-country regression studies. Most of these studies are only strongly conclusive on the fact that trade volumes correlate positively with economic growth (Hauge, 2011), while the correlation between trade policies

and trade restrictions with economic growth is more uncertain.<sup>3</sup> While one can argue that this is a measurement flaw and can be corrected by more accurate indicators, it is equally a flaw of the inability of such an approach to investigate specific cases and countries that are important to inform such a question. For example, many qualitative investigations into important cases of high economic growth rates and international trade integration, such as South Korea and Taiwan between 1960 and 1990, have revealed that relatively protectionist trade policies were formulated in tandem with policies for increased trade integration. This suggests that the relationship between trade openness and economic growth is more complex than what most quantitative analyses have concluded on this matter. This is one of the reasons why qualitative methods, for a dissertation like this, is more useful. In particular, the case study method, which is the central method applied in this dissertation.

A second problem that quantitative methods encounter specifically in political economy research is the limitations and the measurement problems that come with the need for quantifying all variables, probably more so in the context of Africa than anywhere else. Take the example of datasets on corruption. There is no straightforward way of measuring corruption based on direct observations, so the most commonly used datasets on corruption are a selection of opinion surveys: businesspeople are called up and asked how corrupt they think country X is on a scale from one to ten. According to Jerven (2015), these datasets are hugely subjective, and often false, as businessmen in poorer countries tend to be foreign and therefore overstate the level of corruption in those countries. Another overlooked problem is that of missing data, or things that are understudied because they cannot be recorded. For example, the economics literature on Africa pays far too little attention to the importance of small-scale activities in rural areas, simply because there are not enough quantitative records of that (Jerven, 2015). The difficulty of quantitatively measuring variables that essentially are unquantifiable (or, at best, very challenging to quantify) combined with the lack of data, especially in the African context, has led many quantitative economics researchers to use proxies instead, like ‘assassinations’ as a proxy for political stability and ‘elections held’ as a proxy for the democracy. In some instances, proxies can be a smart shortcut, but researchers often lose sight of the levels of abstractions they make. For example, Ethiopia has held parliamentary elections since 1995, but the country can hardly be described as democratic. The same could be said of Singapore under the rule of Lee Kuan Yew. Thus seen, not all that can

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<sup>3</sup> There have been attempts to quantify protectionist policies using various proxies for protectionism, such as black market exchange premiums, monopolisation of export sectors, and even dummy variables for socialism, but these are normally more inconclusive and have more measurement problems than the studies only looking at trade volumes (Hauge, 2011).

be counted counts, and not all that counts can be counted, especially in the context of African political economy.

In fact, no region has ‘suffered’ more than Africa from the insistence of using quantitative methods in economics research. In the 1990s, a predominance of economics research that examined causes of African underdevelopment did so through the search for the African ‘dummy’ by using cross-country regression analysis. The lack of economic growth in African countries had to be explained by the ‘meta-structural’ impediments that African countries shared in common, whether it was ‘bad’ institutions, lazy culture, too much ethnic diversity, natural resource abundance and/or geographical conditions non-conducive to growth, such as being landlocked or being stuck in a climate where tropical diseases are rife.

According to a review of this growth regression literature, 145 explanatory variables were found to be statistically significant (Durlauf et. al., 2005), so correlations were definitely found. The above theories of causation were suggested in support of the correlations, but some of these theories have been flat-out contradicted. For example, Ethiopia, Africa’s fastest growing economy in the past 15 years, started growing fast *after* it became landlocked (it lost its access to the sea after the secession of Eritrea). Another star performer is Rwanda, who would quite possibly be blamed for too much ethnic-based strife had it failed to recover from its 1994 genocide. A more blatant rejection of the regression explanations for underdevelopment in Africa is the fact that many of the supposed meta-structural impediments to growth have persisted throughout the entire post-independence era but Africa’s growth performance has fluctuated substantially. In the 1960s and 1970s, GDP per capita in Africa grew at an annual rate between 1 and 2 per cent, at a negative rate of 0.4 per cent in the 1980s and 1990s, and then at above 2 per cent since the 2000s. (Chang et. al., 2016).

In fact, history shows us that many of the most successful cases of economic growth have defied these meta-structural impediments to economic development (Chang. et. al., 2016). For instance, hardly any of the Asian tigers can be said to have had ‘good’ institutions during their early phases of industrialisation. Additionally, Chang (2002) points out how many of the rich countries today had all sorts of ‘wrong’ institutions when they were at the stage of development of what we today consider developing countries. Moreover, some economic success stories, like Austria and Switzerland, were landlocked and still are. Uzbekistan, the most economically successful post-Soviet republic, is double-landlocked (this means that all its neighboring countries are also landlocked). This suggests that many of the causal explanations for African underdevelopment are not theoretically robust—they simply show

correlations. In fact, establishing historical causality is close to impossible by simply using quantitative methods.

This is why qualitative methods come in handy. Qualitative methods are not as easy to define as quantitative methods, but an easy way to describe them would simply be those that are not quantitative, i.e. those that do not test theories through statistical procedures that examine the relationship between numbered variables. Compared to quantitative research, qualitative research tends to have more open-ended and emerging questions, a more flexible structure, and focus more on rendering the complexity of the situation (Creswell, 2009).

In particular, a methodological staple of this dissertation is historical-comparative methods. In simple terms, I like to refer to this as looking both ‘backwards’ and ‘sideways’. This means that causal processes are established by comparing social processes across time and places through more thorough case study investigations than what quantitative methods would allow for. These methods are most often found in sociology, but nowadays largely missing in research questions related to economics. The historical aspect of this method will feature heavily, drawing upon a worldview originating back to the 19<sup>th</sup> century German historical school of economics. This school, whose methods can be found in the works of, among others, Friedrich List, Gustav von Schmoller and Karl Polanyi, believed that history is a key source of knowledge in understanding human actions and economic matters. Its approach to research involves searching for consistent historical patterns, constructing theories to explain them, and applying these theories to contemporary problems, while taking into account changes in technological, institutional and political circumstances (see Chang (2002) for a more detailed discussion on the historical method).

The case study approach is also central to this dissertation. While the case study approach could be considered part of this broader category of historical-comparative research, the case study approach deserves a detailed discussion, especially seeing that the most comprehensive chapter of this dissertation is an application of the case study approach—it is a case used to shed light on broader questions of investigation. The section below discusses the case study approach, particularly the sources of evidence used to investigate the case of Ethiopia, and the usefulness and challenges of this approach.

## **1.2.2 The case study approach in the context of Ethiopia**

The chapter on Ethiopia serves as a case to contextualise in depth the issues raised in previous chapters, particularly building on chapter 3. While the findings of the research relating to this chapter should be understood as a contribution to a better understanding of a particular case, it does not preclude insights of broader conceptual interest.

In social science research, there are several valuable features of the case study approach (for detailed discussions on the case study approach, see for example Ragin, 1987; George and Bennet, 2005; and Flyvbjerg, 2006). First, the case study approach allows hypotheses and theories to emerge from the researcher's immersion in the case, rather than from a position of detachment. Second, case studies are often the best way to answer questions of how and why a particular outcome has come about, i.e. how to trace and identify causal processes. Third, by anchoring theoretical propositions in a concrete empirical context, case studies avoid the problem of 'conceptual stretching': a case is examined as whole rather than as a combination of variables.

While the case of Ethiopia is certainly unique, readers of this chapter will hopefully be able to draw some lessons from a study of it for other low-income countries that are trying to structurally transform their economy, and that are also in the process of making the transition towards a capitalist, market-oriented economy.

### *1.2.2.1 Methodological challenges and choice of methods in the case study approach*

One of the great strengths of the case study approach is that it allows the researcher to draw on a variety of sources. The variety of sources is not only a strength but also arguably needed if one applies the case-study approach method, as the approach relies heavily on qualitative data that has an inevitable subjective bias. To mitigate this bias, data should be contextualised by drawing on many sources and by triangulating different accounts. The different sources of evidence I collected and the triangulation technique I applied will be discussed further below. First, let us discuss why drawing on such a large variety of sources is particularly useful in the Ethiopian context, where numerous methodological challenges present itself.

First of all, in Ethiopia, as in many other low-income countries, publicly available data is limited and sometimes unreliable (Jerven, 2013, writes extensively about this). Second, when approaching a very specific topic (e.g. how do GVC oriented industrial policies in country X look like?) in a low-income country—where resources for independent research is nowhere

near that of an industrialised country—the existing literature is scarce to start off with. Third, many Ethiopian researchers tend to shy away from political economy research, as they consider this an invitation for trouble. The ruling party in Ethiopia controls nearly every aspect of economic and social life, so, consequently, the direction of social science research in Ethiopia is more politically sensitive than in most other countries, especially since 2005, when the ruling party’s discourse became more hegemonic. In this sense, being a foreign researcher can be advantageous. But being a foreign researcher brings a host of additional challenges. One is language. The language barrier is higher than in other parts of Africa, so academics restricted to English inevitably miss parts of the picture. There is also a level of scepticism towards foreign researchers among some government officials and party members, which can only be overcome by building trust over time. It is therefore no coincidence that many foreign academics that are well-known for their research on Ethiopia have followed Ethiopia since the days of the uprising against the Derg regime.

In an attempt to overcome/minimise these challenges, I collected several types of case study evidence over the course of fieldwork: elite interviews, documentary evidence, archival records, and direct observations at numerous factories and industrial sites. I visited Ethiopia three times between April 2015 and December 2016 (April to June 2015, December 2015 and October to December 2016), which together summed up to 6 months of fieldwork. Most research was carried out in and around Addis Ababa, as all the government offices and the main industrial sites currently in operation are near or in the capital city. Some important firms are headquartered far beyond the metropolitan borders of Addis Ababa (for example in Adwa or Mekelle, in northern Ethiopia), but they tended to have offices or representatives in Addis Ababa that I could approach. However, I did make some longer trips, including a trip to Hawassa Industrial Park, Ethiopia’s flagship apparel park project, and to a large state-owned textile factory in Kombolcha.

Interviews were the key source of evidence. I carried out over 60 interviews with people in the government, private sector, private sector associations and non-profit sector (e.g. international organisations, research institutes and universities). Both the choice of subjects and the choice of questions were obviously linked to my dissertation’s focus on industrial transformation, industrial policy, and participation in global value chains, focusing particularly on the textile and leather industries.

Interviewees in the government apparatus included representatives of the Prime Minister’s Office, the Ministry of Industry, the Industrial Parks Development Corporation, the Ethiopian Investment Commission, the Central Statistics Agency, the Ethiopian Inputs

Industrial Supply Enterprise, The Leather Industry Development Institute, and the Ethiopian Textile Industry Development Institute. Interviewees from the private sector included owners, general managers, and deputy managers of companies in the textile and leather industries. As I was investigating firms that are participating in global value chains, I sought out those firms that are export-oriented or on the verge of becoming so, typically the largest players in the country in their respective industries, as measured by export revenues, that are or have the potential of having the largest economic impact in Ethiopia. These included both domestic firms and foreign firms. 15 firms in the leather industry were interviewed, while 19 firms in the textile industry were interviewed. I should emphasise that because I generally interviewed the largest firms in the country and because few firms dominate the respective industries (as will be evidenced in the chapter), these interviews should be understood as a very importance source of evidence. Interviewees from private sector associations included representatives of the Ethiopian Chambers of Commerce, the Ethiopian Leather Industry Association, the Ethiopian Textile and Garments Industry Association, the Investor's Association at Hawassa Industrial Park, and one industry association that requested full anonymity. Interviewees in the non-for-profit sector included representatives of the World Bank, the UK Department for International Development, and the Ethiopian Development Research Institute.

The interviews were semi-structured, meaning that they were guided conversations with a loose structure, as new questions often emerged from answers and information that were close to impossible to anticipate before the interviews, rather than structured queries (the actual chapter will reveal more closely the type of questions that were asked). An attempt was made to ask questions in an unbiased manner, so as to not reveal any preconceived notion of the answer. As certain interview groups tended to hold similar, and often subjective and biased, views, an attempt was made to triangulate the interviews, meaning that I surveyed groups of people who held different opinions. In this respect, interviewing representatives from the private sector, private sector associations, and the international donor community served as an excellent contrast to the interviews with government officials. Quite often, I made an effort to ask for relevant contacts at the end of an interview. Thus, the frequency of interviews, knowledge of how to go about securing them, and level of trust between myself and certain government agencies followed a clear 'snowballing' pattern: my most productive trip was by far the third one, between October and December 2016.

Interviews with government officials and the non-for-profit sector followed no numerical sampling aim—the aim with these type of semi-structured interviews was to get as familiar as possible with the overarching questions of my dissertation concerning the case of

Ethiopia, and to gradually identify new and important questions that would be difficult to anticipate before the interviews. It was however important to cover the most important agencies involved in industrial policy formulation. The list of government agencies mentioned above was therefore very carefully targeted. Interviews with firms in the private sector did, however, follow a loose sampling aim. As my chapter on Ethiopia makes aggregate claims about the GVC-oriented oriented segment of both the textile and leather industries, it was important that my interviews covered a sample that was representative of such claims. While it would be very challenging to interview managers and owners of every single GVC-oriented firm in the two industries, my sample (a total of 34 firms) covered well over 80 per cent of all the GVC-oriented firms of significant size in both industries (an exact number would be difficult to provide, as new firms, especially foreign ones, establish themselves every few months). The length of fieldwork largely reflected the level of satiation with the quality and quantity of interviews. I did not end my fieldwork until I recognised a high degree of repetition among interview subjects and until I had covered large enough firm samples in the respective industries.

Many of the interviews with firm representatives were conducted in factories (which in some instances were located in industrial parks), and in multiple instances, I was given the chance see the factory floor and stages of the production process. This can be quite useful. For instance, this helped me understand better which stages of the production process and parts of the value chains were more labour-intensive and which were more capital-intensive. It also helped me identify gaps in technological capabilities between firms, particularly foreign versus domestic firms.

Documentary evidence, including newspaper archives, also served as a key data source. Ethiopia has a long tradition of bureaucracy as well as love for the written word. While far from all of it is published in English, an impressive amount of it is. I gathered hard copies of as many brochures, leaflets and publications as I could during my interviews (especially with government officials), which turned out to be very valuable, as it turns out much of it is not available online. The Ministry of Industry also did me an incredible service in making me a tailored time-series dataset on the export performance of the textile and leather industries, at the aggregate level, the product level, and the firm level. Moreover, with the help of three research assistants based at Addis Ababa University, I scanned through relevant articles of the three most relevant weekly English language newspapers— Reporter, Capital, and Fortune— dating between the years 2004 and 2016. These newspaper articles were a great source of

confirming and tracing the exact dates of investment decisions by foreign firms, and the establishment and restructuring of certain government agencies.



## Chapter 2

# **‘Africa rising’—fact or myth? Contextualising the importance of manufacturing and industrial policy for economic development in Africa**

### **2.1 Introduction**

This is a fascinating time to study economic development in Africa. Against the backdrop of unprecedented economic growth for almost two decades, the narrative of a booming Africa, known as ‘Africa rising’, has become so widespread, trendy and glorified, that the phrase even has its own Wikipedia article now. As Taylor (2015, p.1) accurately observes, “Barely a week passes by without some new official report, media article or conference eulogising the continent and its growth figures.” The hype surrounding Africa’s growth is undeniably accentuated by the chance to finally provide a contrasting narrative to the ‘African growth tragedy’ that prevailed for long. A telling example is the special issue on Africa published by *The Economist* in May 2000, in which it dubbed Africa as ‘the hopeless continent’ because of brutality, despotism and corruption, “Acts not exclusively African...but African societies, for reasons buried in their cultures, seem especially susceptible to them” (The Economist, 2000, p.1).

This stance was supported by (if not based on) the views of many development economists in the 1990s, who searched for the African ‘dummy’ through cross-sectional regression analysis (see Jerven, 2015)—African underdevelopment had to be explained by what African countries shared in common. Several explanations were offered: ‘bad’ institutions, lazy culture, too much ethnic diversity, and geographical conditions non-conducive to growth. While economic underdevelopment has indeed persisted in most African countries throughout the post-independence era, there are reasons to be sceptical of the explanations offered through the quest for the African dummy. For example, Jerven (2015) points out numerous statistical problems with the regression approaches, and Chang et. al. (2016) show through a historical analysis of successful growth experiences that ‘good’ institutions, geography and culture are by no means a precondition for economic development.

Therefore, it is refreshing to see a counter-narrative to the to the ‘African growth tragedy’, a counter-narrative which definitely has more to show for itself than just economic

growth. In many African countries, impressive strides have been made especially in the areas of health, education and political freedom. But there are several accounts on which the basis of the ‘Africa rising’ narrative can be criticised. In fact, there are good reasons to call into question the entire narrative, particularly because almost all African countries are still lacking what has historically been the main ingredient for rapid productivity growth and economic development: an internationally competitive manufacturing sector. This chapter aims to contextualise both the importance of manufacturing and policies to promote the manufacturing sector (i.e. industrial policy) for Africa.

This first part of this chapter, section 2.2. will take a critical look at the ‘Africa rising’ narrative. We will see that Africa, as measured by various indicators, on aggregate is far from ‘rising’—GDP per capita growth rates have been and are still low (and at that, mostly driven by primary commodity exports), and poverty and vulnerable employment rates are disturbingly high compared to other regions of developing countries.

The second part of this chapter, section 2.3, suggests that economic underdevelopment in Africa can largely be explained by the lack of structural transformation—the move away from a production structure dependent on primary commodities towards most importantly manufacturing activities – and that it is pertinent for development economists who study Africa to devote attention to this issue. The section will investigate both empirical evidence and theoretical underpinnings of the manufacturing sector as the main driver of economic development. How ‘true’ is it that the process of industrialisation has been the main engine of economic development for catch-up economies throughout the history of capitalism? Given the increased scope for productivity growth of services and the rise of the ‘post-industrial’ society, does this still hold? After discussing the general importance of manufacturing for economic development, particularly in the African context, the chapter will move on to take a detailed look at the state of the manufacturing sector in Africa in section 2.4. How dismal is Africa’s manufacturing performance really, and to what extent are the aggregate numbers representative of individual countries’ performance?

While sections 2.2, 2.3 and 2.4 will establish a strong case for the need for structural transformation in Africa, section 2.5 will move on to a more contested issue, which is how to go about achieving structural transformation, more specifically the role of the state in achieving this and to what extent policies should follow market signals or try to alter them, i.e. what role is there for industrial policy? Particularly in Africa, where the state has been one of the most demonised social institutions, rationales for state intervention for the purpose of industrialisation (which are largely lacking in mainstream economic theory) need to be

properly discussed. While history is rife with state failures, this section will provide reasons to believe that industrial policy has an invaluable part to play for economic development in Africa.

## **2.2 The ‘Africa rising’ narrative: the arguments and their fallacies**

### **2.2.1 The arguments**

Quite probably, the colloquial use of the term ‘Africa rising’ was sparked by the cover of an issue of *The Economist* in 2011, featuring those exact words (yes, the magazine seemingly turned around). In 2012, Time magazine also ran the phrase on its cover. According to Akwagyiram (2013), bloggers are now calling ‘Africa rising’ a meme. Backed up by more analytically rigorous accounts (e.g. Andersen and Jensen, 2013; McKinsey, 2010; Radelet, 2010; Robertson et. al., 2012), a number of arguments underpin this narrative of a continent on the rise.

The clearest observation that the economic prospects for Africa have improved is the turnaround in economic growth. After the ‘lost’ decades of the 1980s and 1990s (during which GDP was declining), economic growth in Africa has picked up. Between 2000 and 2015, annual GDP growth in Africa has been 4.6 per cent on average (UNCTAD STAT, 2017). And while primary commodity exporting countries are somewhat pulling up these aggregate growth rates, the turnaround in growth is surprisingly widespread across the continent (Devarajan and Fengler, 2012).

Second, it is argued the political domain in Africa has become more open after the end of the Cold War, and that authoritarian (or even dictatorial) governments have been forced to give way to more democratically accountable regimes. From 1989 to 2003, the number of democracies in Africa increased from 3 to 23 (Radelet, 2010).

Third, some claim that a technological revolution has taken hold across the continent, most dramatically illustrated by an increase in the use of cell phones. In the mid 2000s, practically no one in Africa had cell phones. As of 2013, there were more cell phones than adult people on the continent (Fengler and Rowden, 2013). The increased availability of such devices and other ICT devices has made it easier for people to participate in social and political life, especially in remote villages. These devices have also had a big impact on people’s economic lives by, for example, increasing the efficiency of storing and spending money and making it easier for farmers to market their crops.

Fourth, there has been a significant improvement in social indicators. Malaria death rates, child mortality rates and infant mortality rates have fallen. Immunisation and vaccination rates have improved. People are becoming better educated—between 2000 and 2008, secondary school enrolment increased by nearly 50 per cent (Fengler and Rowden, 2013).

Fifth, there has been a significant drop in the level of violence. Between 2002 and 2011, Africa's share of worldwide violent conflicts dropped from 55 per cent to 24 per cent (Africa Progress Panel, 2012). Especially West Africa and the Great Lakes region have become more peaceful.

Sixth, spatial and demographic developments are supposed to bode well for the future of African economic growth. Today, over 41 per cent of Africans live in cities, a figure which is increasing by about one percentage points every two years. Sustainable economic growth has historically been positively correlated with increasing urbanization because cities provide better operating environments for businesses and provide better services for people than rural areas. Africa also looks to be reaping a demographic dividend, with an increasing ratio of people in the working population per 'dependent'. In 2010, Africa's share of the population eligible for work (ages 15-64) was estimated at 42 per cent (460 million out of a total of 1.1 billion). This share is predicated to increase to 50 per cent in 2030 (Fengler and Rowden, 2013).

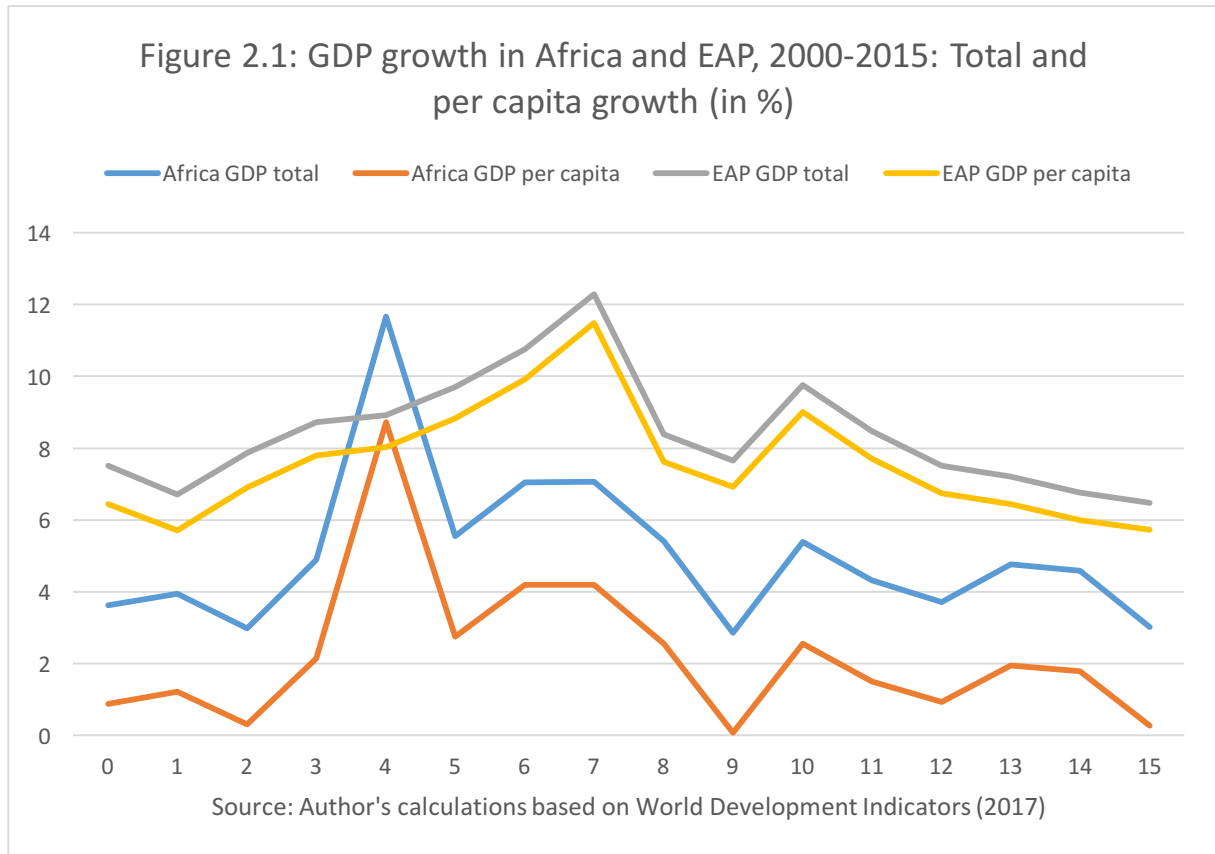
Many of these developments are decidedly good, especially the improved state of health and education and the reduction in violent conflicts. However, a more nuanced analysis shows that these arguments miss out on a number of important points.

## **2.2.2 Their fallacies**

### *2.2.2.1 The illusion and fragility of economic growth*

A common mistake many people make when measuring economic growth rates is looking at the growth of total GDP rather than the growth of GDP per capita. The former is an important indicator of changes to the size and international significance of an economy, while the latter is a more reliable indicator of economic development. In theory, a country's GDP can grow, without more output being produced per person. This commonly happens in countries with high birth-rates—the population of the country grows, and GDP consequently grows. But people are not necessarily better off. So if we are interested in finding out if people are better off, materially, as measured by GDP growth, we should look at GDP per capita growth. In Africa, a significant part of the growth can be attributed to high birth-rates. Figure 2.1 compares

GDP growth rates in Africa and the East Asia and Pacific region, another fast-growing region, between 2000 and 2015 (the period of Africa’s ‘rise’), excluding high income countries in both regions.<sup>4</sup>



The figure reveals a clear discrepancy in total GDP growth and GDP per capita growth in Africa. In the period under consideration, the average GDP per capita growth rate in Africa was 2.25 per cent, less than half of the total GDP growth rate. To put this number in perspective, the per capita growth rate of the East Asia and Pacific region in the period of Africa’s ‘rise’ was 7.6 per cent, well over 3 times that of Africa. Insofar as the ‘Africa rising’ narrative is based on economic growth, Africa’s per capita growth figure alone completely debunks the narrative. A per capita economic growth rate of 2.25 per cent is hardly impressive for

<sup>4</sup> Excluding high-income countries in Africa hardly makes a difference, as there are none apart from the Seychelles, which has a tiny population (roughly 100,000). It makes a difference in the EAP region, as it excludes Japan, Singapore and South Korea. The rest of the countries in the EAP region are Cambodia, China, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, Papa New Guinea, the Pacific Islands (a group of 10 countries with a total population of 2.3 million people), Philippines, Thailand, Timor Leste and Vietnam.

developing countries that are supposed to be on a trajectory of economic development.

One might, of course, point out that the average growth rate for Africa obscures the fact that some countries have growth exceptionally fast. This is correct, to an extent. The average per capita growth rate in the five fastest growing economies in Africa for the period under consideration (Angola, Ethiopia, Mozambique, Nigeria and Rwanda<sup>5</sup>) at 4.8 per cent (WDI, 2017) differs significantly from the average continental performance. And some of these countries, like Ethiopia and Rwanda, are growing at impressive rates without being dependent on natural resources. Still, the average growth rate of these very fast-growing economies falls well short of that of the East Asia and Pacific region by roughly three percentage points.

The fact that recent growth in Africa, especially in per capita terms, has not been as spectacular as the advocates of the ‘Africa rising’ story make it out to be is problematic enough, but the bigger problem is that even this relatively modest growth performance is unlikely to be sustained in the long run in most countries. As Arbache and Page (2009) rightly point out, the improved economic performance in Africa after 1995 can be mainly attributed to the reduction in the frequency of growth declines and the increase in growth accelerations of resource-dependent countries (with a few exceptions, as mentioned in the above paragraph). The problem is that, with the end of China’s super-growth and thus the commodity price boom of the early 2000s, the prospect for growth of Africa’s resource dependent economies is dimming, and, together with it, the prospect for the whole continent. These resource-dependent economies account for over 60 per cent of the continent’s total GDP, with the combined GDP of the two largest of the continent, Nigeria and South Africa, alone accounting for roughly 30 per cent (IMF, 2017). Furthermore, some of the really large resource-dependent economies, like Angola, Algeria, Nigeria and Sudan, are close to entirely resource dependent (see footnote 18).

Given all these factors, the continent’s good growth performance can easily evaporate. Some would say it already is evaporating. After primary commodity prices started tumbling in 2014 (especially oil prices), Africa’s resource dependent countries have been in big fiscal trouble. Onigbinde (2015) observed that in the summer of 2015, 23 of Nigeria’s 26 states had not paid their civil servants for months, while spending for capital projects had been frozen for up to a year in some cases. According to Pilling (2016), Angola recently turned to the IMF for

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<sup>5</sup> Disregarding Equatorial Guinea, a country of roughly 1 million people whose per capita income increased 56-fold in 15 years (between 1995 and 2010, from \$371 to \$20,703) due to the finding of a massive oil reserve.

a three-year bailout programme, and South Africa's mining sector has lost 61,000 jobs since 2012.

#### 2.2.2.2 *Quality of growth: the negligible impact on employment and poverty*

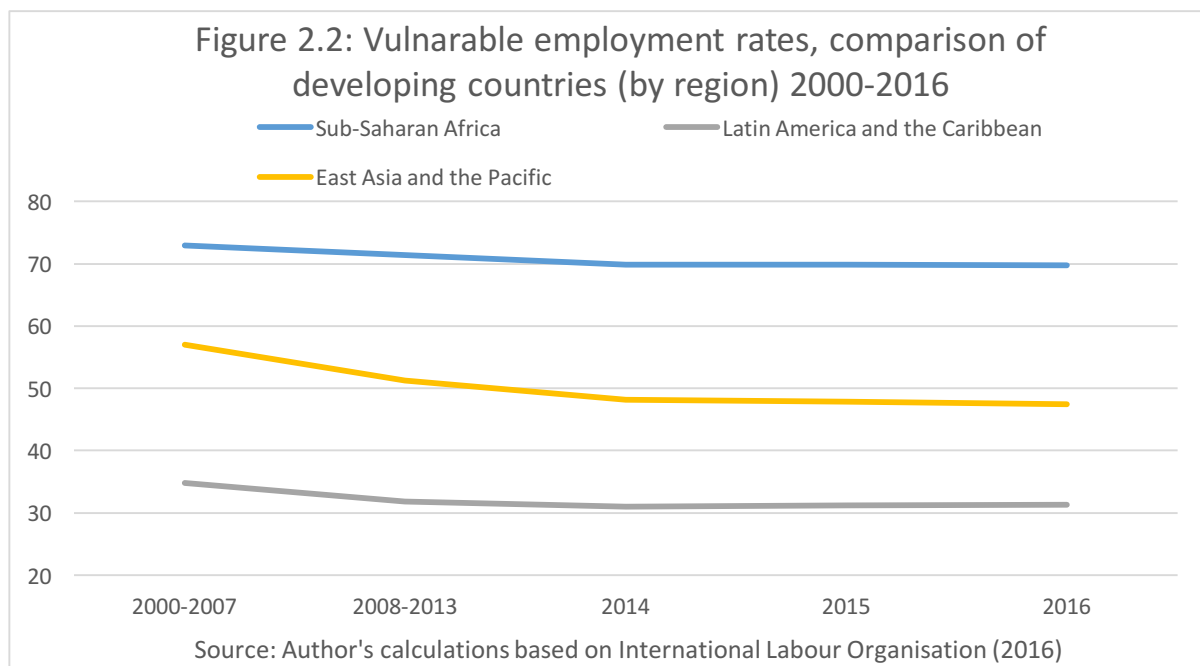
It is not just that economic growth itself is not that high. The bigger problem is that the growth has mainly been a result of a primary commodity price boom (and increased discoveries of primary commodities). Consequently, economic and social progress as measured by other commonly used indicators, such as employment generation and poverty reduction, have been marginal.

Most people who enter the labour market in Africa, particularly in Sub-Saharan Africa<sup>6</sup> (SSA), end up in vulnerable jobs, such as informal jobs and undeclared work. Figure 2.2 compares the vulnerable employment rate across developing regions in the world. In 2016, the vulnerable employment rate in SSA was 69.7 per cent, by far the highest of all developing regions in the world, and a lowly 3.2 percentage points lower than the average between 2000 and 2007. Other developing regions showed a larger reduction in this rate over the same time period. The East Asia and Pacific region reduced it from 57 per cent to 47.4 per cent, and even Latin America and the Caribbean, whose economic growth rate has been lower than that of SSA in this period, reduced it by 3.5 percentage points.

These numbers resonate with a report published by *The Economist* in 2014 on the dismal state of 'decent' job creation in Africa, which noted that a given firm in Africa typically has 24 per cent fewer people on its books than equivalent firms do elsewhere because so many people are informally employed in African firms (The Economist, 2014). Hence, the coming wave of young people eligible for work might simply not be able to find jobs other than dubious ones in the informal sector or toiling for their families. The supposed demographic dividend awaiting Africa might therefore turn out to be a demographic disaster.

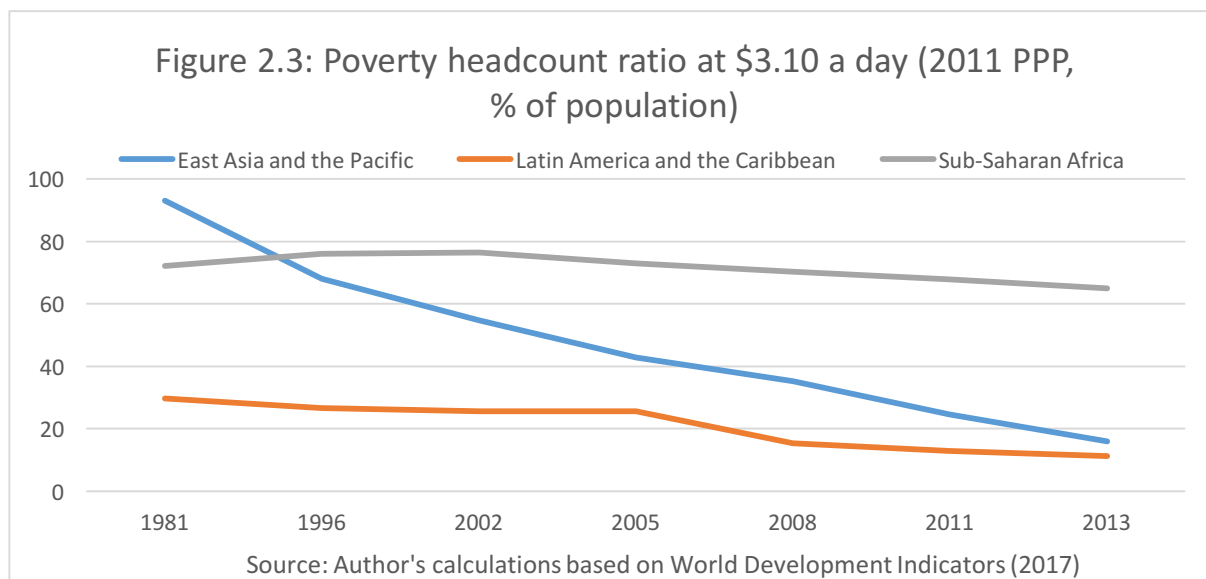
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<sup>6</sup> When presenting aggregate data on Africa in this chapter, I have not always been able to collect the relevant data for the entire continent, although I have made my best effort to do so. This is because in certain databases, development statistics are aggregated for SSA rather than Africa. Consequently, some 'aggregate Africa' data in this chapter will be represented by SSA rather than Africa.



An even more dire picture emerges if we look at rates of extreme poverty. It is true that the poverty situation has improved slightly since the dawn of Africa's 'rise'. From 2002 to 2013, the population share in SSA living on less than \$3.10 a day (PPP, in 2011 prices) was reduced from 76.5 per cent to 65 per cent (see Figure 2.3). However, over a longer period of time, this figure has not changed much—in 1981 (earliest data available) it registered 72.2 per cent. The East Asia and Pacific region has dramatically reduced this rate, from 92.1 per cent in 1981 to 16 per cent in 2013. The same goes for countries in Latin America and the Caribbean, where it stayed above 20 per cent until 2002, before falling to 11.3 per cent in 2013.

Unsurprisingly, Africa has therefore increased its share of world poverty. In 1999, Africa accounted for 21 per cent of the world's poverty. By 2008, that figure had reached 29 per cent (as other developing countries slashed their poverty rates during that period, as can be seen from Figure 2.3), despite the fact that the continent accounted for only 15 per cent of the world's population (Africa Progress Panel, 2012).



## **2.3 Explaining persistent underdevelopment in Africa: the importance of manufacturing for economic growth and development**

As seen, ‘Africa rising’ is little more than a hype and there are good reasons to believe that it has to do with the lack of structural transformation—the move away from dependence on rudimentary agriculture and natural resources to most importantly manufacturing activities. The share of manufacturing in economic output in Africa is around 11 per cent, currently the lowest of all developing regions in the world (Chang et. al., 2016). Before looking more thoroughly at manufacturing performance in Africa (considering several measures, and also the degree of homogeneity between countries), it is useful to explore why the manufacturing sector is considered to be such a strong driver of economic development, and if current technological trends are challenging this traditional view.

### **2.3.1 Practically all countries that have transitioned from ‘poor to rich’ have done so through a process of industrialisation**

Obviously, the arguments supporting the manufacturing sector as the main driver of economic development are rooted in the clear observation that, throughout the history of capitalism, practically all countries that have transformed their economies from low to high income have done so through a process of industrialisation.

Between 1750 and 1950, the West's (and Japan's) gradual establishment as world economic hegemon—starting with the industrial revolution in Great Britain in the late 18<sup>th</sup> century, when the country hosted major technological breakthroughs in textile production and steam power—was also a process of establishing itself as the world's manufacturing hegemon. In 1750, Europe, North America and Japan constituted only 27 per cent of manufacturing production in the world,<sup>7</sup> but by 1900, those regions made up 90 per cent of world manufacturing production (Bairoch, 1982). The West's industrialisation drive made a significant contribution to economic growth as well. Between 1820 and 1950, per capita GDP in the West grew at an average rate of 1.08 per cent per year, compared to only 0.29 per cent per year in the rest of the world.<sup>8</sup> In the early 20<sup>th</sup> century, the world was clearly divided into two groups of economies: one was rich and industrialised, the other was poor and dependent on agriculture and natural resources. Industrialisation came to be seen as the main driver of economic development.

After WW2, the world's manufacturing landscape started to change. As developing countries were given more autonomy in steering policies towards their own development objectives, they implemented policies to promote industrialisation. As a result, a significant share of the world's manufacturing production has relocated to these countries, particularly to East Asia. The 'star' performers include Hong Kong, Singapore, South Korea and Taiwan, whose pace of industrialisation and economic growth between roughly 1960 and 1990 was unprecedented in history, and still is. Since then, they have been followed by countries like China, Indonesia, Malaysia, Thailand and Vietnam.

According to a study of 'growth miracles' by the World Bank in 2008, only 13 economies in the world have grown at an average annual rate of 7 per cent or higher since 1950. Only two countries, both with small populations and highly idiosyncratic structures—Botswana and Oman<sup>9</sup>—are among the group of 13 that have not grown through a process of industrialisation (World Bank, 2008a). A similar study has been carried out by Ocampo et. al. (2009). They constructed a sample of 57 developing and transition economies grouped into 12 regions, and looked at the relationship between the production structure of the economy and economic growth in the period 1970-2007. They found that annual GDP growth rates were

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<sup>7</sup> In the 17<sup>th</sup> and first half of the 18<sup>th</sup> century, global manufacturing was dominated by China (porcelains and silks) and India (cotton textiles) (Nayyar, 2013).

<sup>8</sup> The West includes Western Europe, Western Offshoots, Eastern Europe, Former USSR and Japan. The rest of the world includes Asia, Africa and Latin America. Calculations are made from the Maddison Online Database with 1996 Geary-Khamis dollars.

<sup>9</sup> Botswana has amassed its wealth from precious stones (diamonds), while Oman has done so through oil.

positively correlated with an increase in industry's share of GDP in all regions that went through sustained periods of growth.

The relationship between growth of the manufacturing sector and long-term economic growth has in fact been documented as robust by many more scholars (e.g. McMillan and Rodrik, 2011; Nayyar, 2013; Rodrik, 2007; Szirmai, 2009; Szirmai and Verspagen, 2011). Thus seen, it is not surprising that no country, except a few states exceptionally rich in oil (e.g. Brunei, Kuwait, Qatar) or very small financial havens (e.g. Monaco, Lichtenstein), has achieved high and sustainable standards of living without developing a significant manufacturing sector.<sup>10</sup> This is probably why the terms 'industrialised country' and 'developed country' are often used interchangeably.

### **2.3.2 Theoretical underpinnings**

The early theoretical arguments linking the manufacturing sector to economic growth were motivated by the observation of structural change taking place in countries going through the industrialisation process in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries. These scholars observed that a transfer of labour from agriculture to industry resulted in an increase in overall productivity and per capita economic growth because labour productivity seemed to be much higher in industry than in agriculture (e.g. Chenery, 1960; Fei and Ranis, 1964; Lewis, 1954).

But why is productivity higher in manufacturing? Part of the answer can be found in Nicholas Kaldor's three growth laws, which are perhaps the most classic endorsements of manufacturing as the engine of economic growth. The three laws postulate the following: 1) The growth of GDP is positively correlated with the growth of the manufacturing sector, in part explained by the absorption of surplus labour from agriculture to industry; 2) The productivity of the manufacturing sector is positively correlated with growth of the manufacturing sector (also known as Verdoorn's law). This is attributed to the increasing returns to scale of the manufacturing sector, both static and dynamic. The former refers to output level or sector size, while the latter signifies the effect of learning by doing, which is a function of both cumulative past output and/or cumulative production experience over time. 3) The productivity of non-manufacturing is positively correlated with the growth of the

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<sup>10</sup> Neither Botswana nor Oman are mentioned, as their current level of GDP per capita arguably does not qualify for having achieved 'high and sustainable standards of living'.

manufacturing sector, because of technological spillover effects from the manufacturing sector to other sectors (Kaldor, 1966).

The superior productivity potential mentioned in Kaldor's second law is an important point. Economies of scale are more easily achieved in the manufacturing sector as manufacturing activities lend themselves more easily to mechanisation and chemical processing than do other types of economic activities. The ease of spatially concentrating manufacturing production is also an important factor behind the greater productivity potential. Agriculture is more constrained in terms of space, soil and climate. And some services activities are, by their very nature, impervious to productivity increases. Chang (2014) provides the example of consuming music: if a string quartet trots through a 27-minute piece in nine minutes, we will not say that its productivity has trebled.

It is also important to emphasise the third law, as many people tend to forget that productivity growth in other sectors are often a result of innovations in the manufacturing sector. The world's most productive agricultural economies are heavy users of chemicals, fertilisers, pesticides and agricultural machinery, while the world's most productive service economies rely on top-tier computer technology, transport equipment and, in some instances, mechanised warehouses. These spillovers also take form through organisational innovations that originate from the manufacturing sector. For example, many fast food restaurants use assembly techniques in their kitchens, and some even deliver food on a conveyor belt ('YO! Sushi' being the famous example). For another example, large retail chains often apply modern inventory management techniques that were developed in the manufacturing sector (Chang et al., 2016).

The importance of the manufacturing sector for a country's entire innovation infrastructure cannot be highlighted enough. Even in advanced countries, where manufacturing production is supposed to have been on the decline since the early 1990s, the bulk of innovation happens in the manufacturing sector. In the US, industry still employs 64 per cent of all scientists and engineers, and the manufacturing sector accounts for 70 percent of industrial R&D (Bonvillian, 2012)—in essence, many services 'import' technology from the manufacturing sector. This means that the demise of manufacturing would greatly diminish the size and also efficiency of the overall innovation infrastructure. Berger (2015) points out that in many industries, it is difficult to separate the manufacturing and services segments of the value chains (i.e. separating production from R&D and design). For example, in solar power, the most promising R&D and innovation involves cheaper and more efficient ways of manufacturing photovoltaics. The innovation *is* in the manufacturing. She predicts that only

those countries that can build powerful links between laboratory research and manufacturing will have the strongest innovation economies.

Pisano and Shih (2012) argue that the US is already starting to lose its innovation infrastructure (mainly through outsourcing manufacturing activities) through the gradual decline of its 'industrial commons', which they define as, "The R&D and manufacturing infrastructure, know-how, process-development skills, and engineering capabilities embedded in firms, universities, and other organizations that provide the foundation for growth and innovation in a wide range of industries" (Pisano and Shih, 2012, p.2). For example, the initial offshoring of consumer electronics production from the US to then-little-known Japanese companies such as Sony and Matsushita, led to the relocation of R&D in consumer electronics to Japan—and later South Korea and Taiwan—because it made sense to tightly coordinate the transfer of learning between the manufacturers and the designers and somewhat co-locate the production, design and R&D environment (and also because these East Asian countries pushed for it through industrial policy). As consumers demanded ever smaller, lighter and more powerful computers and cell-phones, electronics companies were pushed to innovate in batteries. In the process, East Asia became the hub for innovation in the design and manufacturing of compact, high-capacity, rechargeable lithium ion batteries, a technology that was invented in America (Pisano and Shih, 2012). Plenty of other high-tech activities in the US have now been 'lost' to these countries in the process of offshoring, including LCDs for monitors, TVs and handheld devices; desktop and notebook PCs; hard disk drives; and integrated circuit packaging. The main point is that if you lose manufacturing production through the process of offshoring, you stand at high risk of losing R&D as well.

On the flip side, these East Asian countries have gradually built up their innovation infrastructure through the process of industrialisation, and it is by no means coincidental that these countries have also been some of the world's fastest growing economies as they built up their innovation infrastructure, as already evidenced. So from an innovation standpoint, there are good reasons why African countries should pursue manufacturing development. But there are many more reasons why, especially for African countries, pursuing a manufacturing development strategy is sensible.

### 2.3.3 Why a manufacturing development strategy is sensible particularly for Africa

African countries are often characterised by dependence on primary commodities, so the arguments supporting a manufacturing-based development strategy for African countries are particularly related to the many macroeconomic benefits of diversifying and transforming their production structure towards more manufacturing (in addition to the abovementioned arguments).

First, as famously postulated by the Prebisch-Singer hypothesis, the terms of trade for countries that predominantly export primary commodities has tended to deteriorate over time, making the prospect of economic development based on primary commodity exports dim in the long run (Spraos, 1983, provides a comprehensive review of the subject). There are a number of reasons for this. First, agricultural products are characterised by a lower income-elasticity of demand (known as Engel's law). Therefore, as the world economy grows (and as incomes grow), the relative demands for those products fall. Second, countries specialising in producing manufactured goods—and therefore tend to be net importers of primary commodities—have the ability to come up with synthetic substitutes for primary commodities, as indeed happened with products like guano, saltpetre and natural dyes. This reduces demand for primary commodities and thus drive their prices down. Third, primary commodity industries are characterised by competitive markets more so than manufacturing industries. This means that primary commodity producers (mostly based in developing countries) have to pass on all the surpluses generated by productivity growth to consumers, while manufacturing producers (mostly based in richer countries) can appropriate such surpluses more easily by charging customers higher prices, as many of them operate in oligopolistic markets.

Second, diversifying towards more manufacturing will reduce the macroeconomic risks associated with dependence on primary commodities. At least since the 1970s, prices of primary commodities have been much more volatile than manufactured goods.<sup>11</sup> The recent downturn in primary commodity prices, in part discussed earlier in this chapter, is a perfect example. This makes macroeconomic management and stabilisation policies a more difficult task, especially for countries whose export revenues are highly dependent on primary

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<sup>11</sup> The price volatility of primary commodities can in part be explained by their sensitivity to global supply and demand changes. The end of international commodity agreements in the 1980s, which aimed to stabilise commodity prices through supply management schemes and marketing boards, has also had an impact. Nissanke (2010) points out that after the global downturn in equity markets in 2002, futures and derivatives markets have expanded to target commodities as part of their portfolio diversification strategy. Therefore, the presence of traders with little interest in physical trading, so-called noise traders, have increased. These traders are known to make asset prices more volatile than what 'pure market fundamentals' would imply.

commodities. Moreover, the relative ease of collecting tax revenues from international trade combined with the fact that alternative tax handles are lacking in African countries, means that African fiscal revenues are especially vulnerable to fluctuations in prices of their exports. We already saw how Nigeria struggled after its fiscal revenues fell massively with the fall in global oil prices. In fact, the strong positive relationship between a country's export diversification and pace of economic growth, especially in the transition phase from low to middle income, has become such a stylized fact in the field of development economics (see Hesse, 2008), that a country's export basket composition, rather than its level of income, is often used to determine its level of economic development (e.g. Hausmann et. al., 2005).

Third, and less talked about than the two aforementioned arguments, is the fact that the manufacturing sector tends to be the strongest driver for paid employment, particularly in developing countries (ILO, 2014a). As mentioned earlier, the majority of Africa's labour force is stuck in vulnerable jobs—non-contractual arrangements in the informal sector, mostly in subsistence agriculture. Most manufacturing jobs (at least those in exporting firms) in developing countries are offered through formal channels and provide a much steadier stream of income. They are also usually subject to labour laws and minimum wage legislation. As we will see in chapter 4, Ethiopia's drive to industrialise is largely motivated by the need to create more formal employment opportunities.

### **2.3.4 Manufacturing versus services: have we entered the post-industrial society?**

The services sector has come to dominate the economic structure of many economies in the latter half of the 20<sup>th</sup> century and even more so in the 21<sup>st</sup> century, both in terms of output and employment. There is therefore a growing belief that we have now entered a 'post-industrial society', in which services are gradually taking over for manufacturing as a source of productivity growth and economic development. This is especially apparent in industrialised economies, where, as mentioned, the manufacturing sector seems to be shrinking. Michael Porter, one of the most well-known advocates of the post-industrial society discourse, has argued that services are where the high value is today:

We used to think of services as flipping hamburgers, now we have to think of services as rocket science. Services are where the high value is today, not in manufacturing. Manufacturing stuff per se is relatively low value. That is why it is being done in China or Thailand (McCormack, 2006, p.1).

Also in some African countries, services based growth strategies—especially those centred on growth of the tourism and telecommunications sectors—rather than manufacturing based growth strategies, have become a more common strategy to diversify away from dependence of primary commodities (see ACET, 2014; UNECA, 2015).

There are good reasons to take the post-industrial society discourse seriously. First, given massive increases in firm size, it is now more profitable to procure some services from specialist providers rather than produce them within a manufacturing firm (the latter largely being the case in the past). Telecommunications, finance, and business services are now organised in a way that resembles the manufacturing sector, as scale economies and technological advances are more easily incorporated into these services to increase efficiency. In some digitalised services, especially in advanced economies, marginal costs of providing an additional unit of service have come close to zero, making scale economies even more prevalent than in the manufacturing sector. For example, media streaming services, such as Netflix and Spotify, can deliver their services around the globe in a flash and have already proven their tremendous potential for scale economies. In 2016, Netflix had 93.8 million paying subscribers, while Spotify had 40 million paying subscribers. Only 6 years before that, both services had a marginal subscriber base (Statista, 2017).

Second, the revolutions in ICT and transport technology have made more services tradeable. The poster child of services-based trade success is the UK, where trade in services now account for 19.4 per cent of GDP—roughly 50 per cent higher than the world average (WDI, 2017)—thanks to growth in trade of mainly financial and business services. India is another country often cited as having achieved success through exporting services, like software, accountancy and the reading of medical scanning images. A third example is Rwanda, a country that in the last 10 years has increased its foreign exchange earnings considerably through the expansion of tourism services, such as gorilla viewing. In fact, Rwanda, and many other African countries, like Uganda, Tanzania and Tunisia, report that tourism is the top single earner of foreign exchange for their respective countries.

Third, it is not improbable that in the future we will see a type of ‘Engel’s law’ whereby the income elasticity of demand for manufactured goods on a global scale becomes significantly lower than that of services, as world incomes rise. Especially in the more affluent parts of the world, we are seeing that the consumption of services is increasing with rising incomes. One aspect is ‘servicising’ what used to be our daily tasks: people are eating out, or ordering take-away rather than cooking themselves, and we have the option of getting others to clean for us, walk our dogs, and take care of our children. In the end, the same amount of

goods is consumed, but an extra layer of services is being added to the 'consumption basket'. Another aspect is simply having more available income and being able to spend more on services. For example, spending money on 'experiences' rather than 'things' has become fashionable among the millennial generation.

However, there are good reasons to be sceptical of the post-industrial society discourse. First, too often, services are equated with 'knowledge' work and manufacturing is stereotyped as low value 'grunge' work. It is dangerous to generalise in either direction. Burger-flipping, on the one hand, and the design of space rockets, on the other hand, are services that surely do not generate the same amount of value. Likewise, the assembly of an Apple iPod is a manufacturing activity that might not generate much value, but the manufacturing of its display module and its multimedia processor chip does. Manufacturing is just as much of a 'knowledge' sector as services is. Moreover, the amount of value that accrues to an activity in the value chain is often an outcome of market position and power, rather than the complexity of the activity. As we will see in the next chapter, the huge chunk of revenue generated in business-related services by retailers and brand names in the fast-moving consumer goods sectors (the most prominent example being clothes) has a lot to do with the global reach and market power that these companies, like Nike and Walmart, have attained over the years.

Second, it does not always make sense, or is not always possible, to look at the value and productivity generation of manufacturing and services separately. There is a massive interdependence between the two. As we have already seen, productivity growth in the services sector would not be possible without inputs from the manufacturing sector. And many services that have grown rapidly in the last few decades are heavily dependent on manufacturing firms as their customers. These include banking, communications, insurance, construction and consulting (equally, manufacturing operations run smoothly thanks to these services). Even more importantly, producer services, such as transport, design, retail, supply chain management and engineering, are by definition linked to the production of goods. A country can to some extent specialise in exporting these services, but there are still huge benefits of co-locating them within national boundaries. This means that those countries which lose their manufacturing bases are likely to lose many of their important services as well.

Furthermore, in certain manufacturing industries, it does not make sense to separate manufacturing, R&D and design activities. Pisano and Shih (2012, p.66) presents a framework that explains in which industries it makes sense to co-locate these activities. Basically, in industries where major manufacturing process innovations are evolving rapidly and can have a huge impact on the product, it makes sense to integrate R&D, design and manufacturing.

Examples of industries where the risk of separating these activities are “enormous” include biotech drugs, nanomaterials, electrophoretic displays and superminiaturised assembly. Examples of industries where outsourcing makes sense include desktop computers, consumer electronics, active pharmaceutical ingredients and commodity semiconductors. There is an additional, but subtler and less visible ‘symbiosis’ between these activities: many of the people who work in process R&D and product design have technical manufacturing experience, obtained either through higher education or work experience.

Third, low tradability characterises most services because they require consumers and producers to be in the same location, like cleaning, grooming, public utilities or education. No one has yet invented ways to provide a haircut or house cleaning long-distance. This means that countries that rely on their services sector for economic growth will eventually struggle with trade balance constraints. Services have in fact been stuck at around 20 per cent of international trade since the 1990s. The UK has had a negative trade balance of £4 billion since 2014, because its trade surplus in services cannot make up for its trade deficit in goods (ONS, 2017). Between 2004 and 2011, in India, which, like the UK, is also supposed to be a model of service-based economic development, trade surplus in services covered only 17 per cent of its trade deficit in goods (Chang, 2014).

Fourth, the decline of the manufacturing sector is partly an illusion. Much of the apparent fall in the manufacturing sector’s share of GDP in advanced economies is due to the decline in the prices of manufactured goods, relative to the prices of services. This is thanks to faster productivity growth in the manufacturing sector. Think about how computers and mobile phones have become cheaper (holding the quality constant), compared with the cost of getting a haircut or eating out. When this relative price effect is taken into account and the shares of different sectors are recalculated in constant prices, as opposed to current prices, the share of manufacturing has not fallen very much in most high-income countries. In some of them, like the US, Switzerland, Finland and Sweden, when calculated in constant prices, it has actually increased (Chang, 2014).<sup>12</sup> The growth of the services sector is also a bit of an illusion. A lot of services that are now supplied by independent companies at home or abroad used to be provided in-house in manufacturing firms (for example, catering, security guards, some design

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<sup>12</sup> The relative price decline of manufactured goods is also a result of price increases of services. Because the services sector has lower potential for productivity growth, income growth in advanced economies, combined with the fact that many services are not tradable, has led to higher wages and prices in the services sector (Baumol, 1967), as well as an increased employment share (Rowthorn and Wells, 1987). Thus, there is good reason to believe that growth of the services sector has come about as a result of economic growth, and not the other way around, as indeed some people argue.

and engineering activities). In that sense, there has not been a big restructuring of the advanced economies, but more a change in the way we count/measure certain economic activities.

## **2.4 Africa's manufacturing performance**

### **2.4.1 Aggregate manufacturing performance**

As mentioned earlier, the share of manufacturing in economic output in Africa is currently the lowest of all regions of developing countries in the world, at around 11 per cent. This actually represents a gradual decay of the manufacturing sector in Africa, which at its height in 1975 made up 14.7 per cent of GDP (De Vries et. al., 2013). Page (2012) interestingly compares the state of value addition across all sectors in African countries to that of a range of countries in Asia—China, India, Indonesia, Korea, Malaysia, Phillipines and Thailand—when they reached lower middle-income status, set as a benchmark of \$996 per capita in 2009.<sup>13</sup> The most striking finding is in the manufacturing sector, whose share both in employment and in value added in a 'typical' lower-income African country is about half of the benchmark value.

Some, however, present a brighter outlook for African manufacturing. Te Velde (2016) points out that manufacturing output in SSA grew from \$73bn in 2005 to \$98 billion in 2014, and that manufacturing exports doubled from 50\$m to over \$100m in the same time period. Based on these figures, he calculates that manufacturing value added (MVA) in SSA has grown at a rate of 3.5 per cent a year, faster than the global average.

But there are some shortcomings to Te Velde's choices of measurement. Just like in the case of economic growth, the growth of the manufacturing sector as measured by absolute output can simply be a result of growing populations, which seems to be the case, as evidenced by the fact that MVA as a share of GDP has been declining in Africa<sup>14</sup> (and in the next subsection, we will also see that per capita MVA figures support this conclusion). Comparing Africa's manufacturing growth to that of the global average is also slightly misleading, as one would expect the manufacturing sector to be shrinking in industrialised countries, and growing in developing countries, given current global economic trends and the stylised trajectory of structural transformation (as already discussed). This is indeed the case: industrialised economies' share of world manufactured exports decreased from 84 per cent in 1990 to 62 per

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<sup>13</sup> Lower middle-income status is defined by the World Bank as falling in the range \$996-\$3,945, at 2009 prices.

<sup>14</sup> From 2005 to 2014 (the exact time period that Te Velde looks at) MVA as share of GDP in SSA declined from 11.2 per cent to 10.8 per cent (WDI, 2017).

cent in 2013, while the equivalent share for developing countries increased from 16 per cent to 38 per cent (UNIDO, 2016a). A better comparison would therefore be across the developing world only. Table 2.1 compares changes in the manufacturing output share in world total of several regions of developing countries. All regions have increased their manufacturing output share, as expected. But SSA has, by far, experienced the smallest gain: a change from 0.67 to 0.69 per cent is in fact negligible.

<b>Table 2.1: Manufacturing output shares in world total, 1990 and 2011, and gain or loss</b>			
<i>Region</i>	<i>1990 (%)</i>	<i>2011 (%)</i>	<i>Gain or loss (percentage points)</i>
South-East Asia	2.71	5.2	2.49
South America	4.59	6.9	2.32
North Africa and the Middle East	3.41	4.77	1.35
South Asia	1.39	2.52	1.13
Central Asia	0.19	0.37	0.18
Central America	0.13	0.24	0.11
Sub-Saharan Africa	0.67	0.69	0.02

Source: UNIDO (2016a)

Looking at the technology composition of manufacturing output in Africa also gives cause for worry. Table 2.2 compares manufacturing output in different technology groups—resource-based (RB), low-technology (LT) and medium - and high-technology (MT / HT)—across regions of developing countries. By far, Africa has the highest dependence on resource-based manufacturing, at 44.7 per cent of total manufacturing output. While resource-based manufacturing can sometimes contribute to the development of productive capabilities (see Kjollestrom and Dallto, 2007), they usually involve low value addition, make exporting countries more vulnerable to commodity price fluctuations and exhibit lower productivity growth than manufacturing with higher technology intensity.

Compared to 1990, Africa has actually increased its dependence on resource-based manufacturing, and also decreased the share of low technology manufacturing in its MVA. This is also worrying, as the low-technology category is often characterized by high labour intensity, something African countries need to focus on given the surge of people that will enter the labour force in years to come.

<i>Region</i>	<i>1990</i>			<i>2013</i>		
	RB	LT	MT / HT	RB	LT	MT / HT
Africa	42.2	36.1	21.7	44.7	32.9	22.4
Asia and Pacific	29.8	24.2	46.1	25.1	25.6	49.3
Latin America	34.3	24.8	40.9	37.9	29.1	33

Source: UNIDO (2016a)

#### **2.4.2 Degree of homogeneity/heterogeneity in manufacturing performance within Africa**

Seeing that there are as many as 54 countries in Africa, it is worth looking at the degree of homogeneity/heterogeneity between the countries. Table 2.3 presents indicators of manufacturing performance of each African country,<sup>16</sup> ranked in order of highest to lowest MVA per capita in 2015. Three indicators have been chosen for each country, based on data availability: MVA per capita, MVA as share of GDP and the rank in UNIDO's competitive industrial performance (CIP) index. The CIP is an index-based indicator, based on three dimensions: capacity of a country to produce and export manufactured goods, a country's

<sup>15</sup> See UNIDO (2016a, p.235) for a description of the technology classification groups. A simple typology of these technology classification groups can be described as follows: resource based—food, beverages and basic metals; low technology—textiles, apparel and fabricated metal products; medium technology—chemicals, machinery & equipment and motor vehicles; high technology—radio, TV & communication equipment, medical, precision & optical instruments and other transport equipment.

<sup>16</sup> Excluding South Sudan, which is not yet recognised as independent from Sudan in the statistical databases used.

technological deepening and sophistication and world impact of a country's manufacturing sector.<sup>17</sup>

The table does indeed show some degree of heterogeneity. Per capita MVA in 2015 ranged from \$1,307 (Mauritius) to \$2 (Somalia). Also, SSA is clearly less industrialised than North Africa. Furthermore, within SSA, if we exclude South Africa, all the countries with high MVA scores have very small populations—Mauritius (1.3 million), Swaziland (1.3 million), Seychelles (100,000), Namibia (2.4 million), Botswana (2.1 million) and Gabon (1.8 million). The remaining countries in SSA all have an MVA per capita lower than \$300, which is essentially a negligible manufacturing base. To put this number in perspective, MVA per capita in 2015 was \$1,323 in Brazil, \$2,020 in China, \$9,595 in Germany, \$8,514 in Japan, \$3,591 in the UK and \$6,056 in the US (UNIDO STAT, 2017). Excluding the African countries with the highest MVA scores might seem like an attempt of identifying homogeneity simply by removing heterogeneity, but the total population of these 41 remaining African countries exceeds 900 million, which is 94 per cent of SSA's total population, and 80 per cent of Africa's total population.

If we look at all the countries' CIP rank, a more worrisome trend emerges. Out of 143 countries ranked, not a single African country ranks in the top 40, and if we exclude South Africa, not a single African country ranks in the top 65. The reason that some countries score high on MVA per capita and MVA as share of GDP relative to their CIP rank (like, for example, Mauritius and Swaziland) is because of the lack of technological sophistication and diversification. They are generally countries who produce a high volume of manufactured goods relative to their size, but tend to be highly dependent on few products with low technological sophistication.

Another prominent feature observable from Table 1 is the sound correlation between MVA per capita and GDP per capita. No countries in Africa with an MVA per capita lower than \$200 have managed to exceed GDP per capita of \$2,000 without being dependent on minerals or oil.

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<sup>17</sup> For more information on the CIP index, see UNIDO (2016, pp.197-199).

**Table 2.3: The manufacturing idiosyncrasies of African economies**

<i>Country</i>	<i>MVA per capita 2015 (constant 2005 \$)</i>	<i>MVA per capita 2005 (constant 2005 \$)</i>	<i>MVA as % of GDP, 2015</i>	<i>CIP rank</i>	<i>GDP per capita, 2015</i>	<i>Populati on (2014 est.)</i>	<i>Resource dependent</i> <sup>18</sup>
Mauritius	1307	1192	14	82	9,252	1.3	
Swaziland	1040	1072	32	88	3,200	1.3	
South Africa	971	952	12	41	5,723	53.5	Y
Seychelles	917	856	7	N/A	15,476	0.1	
Tunisia	703	684	17	87	3,872	11.2	
Namibia	644	648	11	84	4,673	2.4	Y
Botswana	487	414	6	79	6,360	2.1	
Gabon	485	396	5	114	8,266	1.8	Y
Egypt	468	442	16	71	3,614	84.7	
Morocco	421	405	13	67	2,878	34	
Angola	302	258	7	N/A	4,101	6.3	Y
Libya	256	759	4	N/A	6,179	6.3	Y
Nigeria	255	149	10	110	2,640	183.5	Y
Algeria	207	181	4	87	4,206	40.6	Y
Cape Verde	200	185	5	133	3,080	0.5	
Cameroon	186	171	14	107	1,217	23.4	Y
Cote d'Ivoire	167	172	12	93	1,398	21.3	
Lesotho	145	131	12	N/A	1,066	2.1	
Sudan	143	148	10	N/A	2,414	39.6	Y
Congo	129	106	4	102	1,851	4.7	Y
Zambia	120	107	9	109	1,304	15.5	Y
Kenya	118	110	11	113	1,376	46.7	
Senegal	116	120	11	106	899	15	
Sao Tome and Principe	103	95	8	N/A	1,669	0.2	
Mauritania	97	86	7	N/A	1,243	4.1	
Ghana	95	85	5	119	1,369	27	
Zimbabwe	84	85	10	N/A	924	15	
DRC	69	56	16	N/A	456	71.2	Y
Mozambique	62	50	12	120	529	27.1	Y
Uganda	61	65	9	129	705	40.1	

<sup>18</sup> A country is classified as resource dependent if 25 per cent or more of its exports have been made up of fuels and/or mining products since the year 2000. Some countries in the table have extremely high resource dependence (over 80 per cent of exports are natural resources). These include Angola, Algeria, Equatorial Guinea, Guinea, Libya, Nigeria and Sudan.

Guinea-Bissau	61	60	12	N/A	572	1.8	
Tanzania	56	48	7	121	878	52.3	
Madagascar	56	55	14	123	401	24.2	
Benin	55	53	7	N/A	762	10.9	
Central African Republic	54	81	18	139	323	4.8	
Burkina Faso	49	39	7	N/A	589	17.9	
Chad	47	42	6	N/A	775	13.6	Y
Malawi	46	46	10	135	371	17.3	
Togo	45	45	8	N/A	559	7.2	
Equatorial Guinea	42	32	0	N/A	14,439	0.8	Y
Comoros	40	42	5	N/A	717	0.7	
Mali	38	33	6	N/A	724	16.3	
Djibouti	35	30	2	N/A	1945	0.9	
Rwanda	32	29	5	136	697	12.4	
Guinea	28	27	6	N/A	531	12.3	Y
Burundi	26	23	12	140	277	10.8	
Gambia	25	27	5	141	471	2	
Eritrea	22	22	6	141	844	6.7	
Niger	21	17	5	126	358	19.3	
Ethiopia	18	12	4	138	619	98.9	
Liberia	17	14	5	N/A	455	4.5	Y
Sierra Leone	8	10	2	N/A	653	6.3	Y
Somalia	2	2	2	N/A	549	25.5	

Source: Author's calculation based on UNIDO STAT (2017), Chang et. al. (2016), and WDI (2017)

## **2.5 The role of the state in achieving structural transformation: introducing industrial policy**

This chapter has so far made it clear that structural transformation of the economy is one of the most acute development challenges in Africa. With most importantly a negligible manufacturing base, almost all African countries are at the lower rung in the process of catching up with the global technological frontier. This section will move on to a more contested issue, which is how to go about achieving structural transformation—more specifically the role of

the state in achieving this and to what extent policies should follow market signals or try to alter them —arguing that there are many rationales for industrial policy.

Rigorous reviews and discussions on industrial policy in the developing country context have been published in recent years (albeit with slightly different angles), for example by Chang et.al. (2016), Oqubay (2015) and Wade (2015). Some reflections by these reviews on why and how to do industrial policy will feature in this section, but others will not. The aim of this section is not to cover the entire literature on industrial policy, but rather to carry out a distinct review of the topic, and present justifications for industrial policy that will serve the discussions in subsequent chapters well.

The various theories of industrial policy will be buttressed by examples, that will range from 19<sup>th</sup> century to late 20<sup>th</sup> century developing countries. While the range of examples might be a bit of an eclectic mix, almost all of the examples are of countries when they were in their ‘catch-up’ phase, i.e. when they were trying to catch up to the global technological frontier and had to compete with more industrialised nations. An attempt has been made to illustrate the various industrial policy tools with the most relevant examples, partially or fully successful with the implementation of such tools. Heavy emphasis has been put on the growth experience of the Asian tigers in the post-WW2 era, as these were countries whose pace of economic growth and industrialisation were unprecedented throughout the history of capitalism, and still are.

The last part of the section will discuss Africa’s experience with industrial policy in the post-independence era. While that experiment by and large failed, the period of more state intervention in the 1960s and the 1970s yielded higher economic growth rates than any subsequent period, especially that of market liberalisation in the 1980s and 1990s, suggesting that a rejuvenation of industrial policy in Africa is far from unfeasible.

An important caveat should be mentioned. Formulating successful industrial policy is not only about using the right tools, but also about the determinants of state effectiveness. There is a vast literature on those determinants, but this will not be addressed here. The reason is that the eventual aim of this thesis is to analyse the consequences that an external change (i.e. the globalisation of production) has on the *tools* of industrial policy, and if African countries now need to do things differently given this change.<sup>19</sup>

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<sup>19</sup> Although external changes can affect state effectiveness (for example, Acemoglu and Robinson (2001) argue that different types of colonisation have produced different political institutions in developing countries, and Wade (2015) argues that external military threats shaped the East Asian development states) there is little evidence (or literature) on the link between the expansion of global production networks and state effectiveness.

### 2.5.1 What is industrial policy?

Clearly, a definition of industrial policy is useful before discussing why it is needed and how it is done. It might seem obvious that industrial policy is a policy aiming to develop the industrial sector, but the concept is not as straightforward as many people think, nor do everyone apply the same definition.<sup>20</sup> Chang (1994) uses a debate surrounding the post-WW2 Japanese development experience to illustrate how the adoption of different definitions can result in divergent interpretations of how important industrial policy is for economic development: opponents of industrial policy pointed out that subsidies and government loans to industries in Japan were relatively small, and hence claimed that industrial policy played a minor role in Japan's growth success. Proponents of industrial policy, who usually understand industrial policy in a broader sense than just subsidies and government loans to industry, argued that the Japanese 'administrative guidance' system, which played a vital part in Japan's industrialisation effort, was part of industrial policy, and hence claimed that industrial policy played a huge role.

But even among proponents of industrial policy, or at least among those who think that industrial policy plays an important part in promoting economic development, there are unresolved debates on the extent to which industrial policy should be (and/or can be) 'horizontal'—aiming to benefit all industries equally, like public investments in education and infrastructure—rather than 'vertical'—aiming to benefit some sector(s) more than others. For example, Ethiopia has recently invested massively in big infrastructure projects, such as the railway that connects Addis Ababa to Djibouti, and the Grand Renaissance Dam, a hydropower dam on the Nile that will stand as one of the 10 largest hydropower dams in the world when it is finished in 2017/2018. Should these infrastructure projects be considered horizontal or vertical industrial policy? Or are they industrial policy measures at all?

The European Commission's (EC) understanding of industrial policy from 2002 is a good example of a horizontal definition: "Industrial policy is horizontal in nature and aims at securing framework conditions favourable to industrial competitiveness. Its instruments, which are those of enterprise policy, aim to provide the framework conditions in which entrepreneurs and business can take initiatives, exploit their ideas and build on their opportunities" (EC, 2002,

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<sup>20</sup> For a more detailed discussion on various definitions of industrial policy than the scope of this dissertation has room for, see Chang (1994, p.58) and Warwick (2013).

p.3).<sup>21</sup> The EC would most likely understand Ethiopia's infrastructure investments as measures of horizontal industrial policy.

This thesis will stick more closely to a view of industrial policy as detailed in Chang et. al. (2016, p.26), which is, “*A policy that deliberately favours particular industries—or even firms—over others, against market signals, usually to enhance efficiency and to promote productivity growth for the targeted industries as well as for the whole economy, but also to manage the industries’ decline smoothly*”. Because most policy choices have some discriminatory effects that lead to implicit targeting, this definition tries to mend a problem with the horizontal view of industrial policy. For example, when we educate engineers, we do not produce generic engineers but rather engineers in a specialised area. Likewise, physical infrastructure (like railways) is location-specific, so it affects different sectors in different ways.<sup>22</sup> With this definition of industrial policy, the Ethiopian infrastructure projects would again be considered industrial policy, but the implicit targeting is taken into account. This is not to say that *all* policies inevitably target. Policies that concern basic education and health should not be considered industrial policy. One could arguably make a case that in some way or another, basic health and education policies target a sector—for example, a government programme to distribute mosquito nets in a Tanzanian mining community with the intended effect of reducing malaria death rates could potentially benefit the mining industry in the country—but then the term industrial policy would practically be synonymous with ‘development’ policy, losing its meaning and usefulness. The line has to be drawn somewhere. Policies that clearly have no intention of targeting industrial development or favoring one industry over another, although it could, like the above example of mosquito nets, should not be considered industrial policy.

Oqubay (2015) criticises the definition in Chang (1994) for omitting structural transformation and the various stages of catching up (this criticism is being addressed here because the definition in this thesis is a refined version of the one set out in Chang (1994)). Oqubay defines industrial policy as, “A strategy that includes a range of implicit or explicit policy instruments selectively focused on specific industrial sectors for the purpose of shaping structural change in line with a broader national vision and strategy” (Oqubay, 2015, p.18). Similarly, Wade (2015) calls for making production transformation clearly formulated in the

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<sup>21</sup> Admittedly, the EC underlines the importance of needs and characteristics of individual sectors, and concludes that industrial policy “brings together a horizontal basis and sectoral applications” (EC, 2002, p.3).

<sup>22</sup> See Chang et. al. (2016, 27) for more examples of how some industrial policies that are traditionally thought of as horizontal inevitably target specific sectors.

definition of industrial policy. He argues that because industrial policy is understood as targeted efforts to change the production structure of an economy in order to accelerate economic development, it should more accurately be called “production transformation policy” (Wade, 2015, p.68). However, in the definition this thesis will stick to, the process of structural change (or production transformation if you will) is implicit in the wording ‘enhance efficiency’ and ‘promote productivity’. Thus seen, the definitions in Chang et. al. (2016), Oqubay (2015) and Wade (2015) don’t differ in any significant way, although the two latter ones make the goal of structural/production transformation more explicit.

### **2.5.2 Why is industrial policy necessary?**

From the analysis earlier in this chapter and the discussion in the previous section, it might seem obvious that most African countries need industrial policy. The definitions of industrial policy that have been outlined have variations, but they all put weight on economy-wide productivity growth (admittedly, some definitions are more contentious than others, in that they emphasise selectivity and market interventions). To claim that African economies need more productivity growth is hardly controversial. But how to go about this, more specifically the role of the state in achieving this, has been a highly controversial issues for centuries. This section will discuss when and why state intervention for the purpose of industrialisation is necessary.

#### *2.5.2.1 The infant industry argument: the most important justification for industrial policy in developing countries*

The concept of industrial policy can be traced back to the infant industry argument, first proposed by a Founding Father and the first Secretary of the Treasury of the United States, Alexander Hamilton (1755-1804).<sup>23</sup> The core of his argument was that backward economies, which the US was in the late 18<sup>th</sup> century, need to protect and nurture their industries in their infancy through various policy measures until they attain international competitiveness. In his *Report on Manufactures* submitted to the US congress in 1791, Hamilton stressed the importance of government ‘patronage’ to new productive ‘pursuits’ (specifically manufacturing industry), as this can’t be attained spontaneously.

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<sup>23</sup> Chang (2002, p.25) shows that were thinkers before Alexander Hamilton who had elements of the infant industry argument in their writings, but that Hamilton was the first to systematically set it out.

The spontaneous transition to new pursuits, in a community long habituated to different ones, may be expected to be attended with proportionally greater difficulty...To produce the desirable changes as early as may be expedient may therefore require the incitement and patronage of government...To this it is of importance that the confidence of cautious, sagacious capitalists should be excited. And to inspire this description of persons with confidence, it is essential that they should be made to see in any project which is new, the prospect of such a degree of countenance and support from governments, as may be capable of overcoming obstacles inseparable from first experiments (Hamilton, 1934[1791], p.204).

Hamilton also highlighted the difficulty of competing with more advanced industrial nations. Observing that manufacturing industry in these nations had governments that provided ‘bounties, premiums and other aids’ (government support) to their national firms in order to achieve a competitive edge, he explicitly advocated an emulation strategy.

But the greatest obstacle of all to the successful prosecution of a new branch of industry in a country in which it was before unknown, consists, as far as the instances apply, in the bounties, premiums, and other aids which are granted, in a variety of cases, by the nations in which the establishments to be imitated are previously introduced. It is well known (and particular examples, in the course of this report, will be cited) that certain nations grant bounties on the exportation of particular commodities, to enable their own workmen to undersell and supplant all competitors in the countries to which those commodities are sent. Hence the undertakers of a new manufacture have to contend, not only with the natural disadvantages of a new undertaking, but with the gratuities and remunerations which other governments bestow. To be enabled to contend with success, it is evident that the interference and aid of their own governments are indispensable (Hamilton, 1934[1791], p.205).

Whereas Hamilton didn’t properly theorise the infant industry argument, his ideas were developed by Friedrich List (1789-1846), who presented a theoretical framework in his *National System of Political Economy* (List, 2005 [1841]). List, like Hamilton, believed that infant industries could not be developed without a strong, supportive government. He argued that the government not only had the right, but also the duty, to promote economic activities that could increase the wealth and power of a nation, and that the promotion of such activities necessitated the protection of infant industries and jumping ahead of current comparative advantage.

The infant industry argument has met resistance. The Classical economist David Ricardo (1772-1823) outlined a theory in *The Principles of Political Economy and Taxation*, first published in 1817, in support of free trade and against protectionism. The theory of comparative advantage, as it is called, postulates that countries will benefit from *free*

international trade, with each country specialising in the production and export of goods with the least relative cost of production, i.e. its comparative advantage (Ricardo, 2004 [1817]).<sup>24</sup>

#### 2.5.2.1.1 Contemporary controversies

The debate between the supporters of free trade versus the supporters of the infant industry argument has held sway for centuries. In today's discussions, plenty of guns are aimed at the proponents of industrial policy, although not always in a convincing manner. Wade (2015) quotes an interview with ex-World Bank economist William Easterly, during which he was pressed by the interviewer as to why the typical developing country had better economic performance in the 1960s and 1970s, when governments intervened more heavily than in any later period. Easterly responded, "It is a bit of a mystery why they did well...the growth had a lot of mystery for me...it is mysterious to those who advocate hands-off markets" (Wade, 2015, p.67).

But the theory of comparative advantage still seems to hold a convincing case for many. It has become immensely popular, so much so that the WTO makes the case for its mandate—which is lowering trade barriers worldwide—based on it:

Simply put, the principle of 'comparative advantage' says that countries prosper first by taking advantage of their assets in order to concentrate on what they can produce best, and then by trading these products for products that other countries produce best. In other words, liberal trade policies—policies that allow the unrestricted flow of goods and services—sharpen competition, motivate innovation and breed success (WTO, 2016).<sup>25</sup>

The debate is highly relevant in today's African context, where one of the most pressing challenges policy makers face is whether to conform or defy comparative advantage when formulating their industrialisation strategies. After the rapid growth and industrialisation spurts of the Asian tigers in the post-WW2 era, a strong case has been made *for* industrial policy—the basis for success in these countries was the guiding hand and interventionist policies of the state (see for example Amsden (1989), Chang (1994) and Wade (1990)).

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<sup>24</sup> David Ricardo did not aim to refute Alexander Hamilton (and he didn't have the chance to refute List, as he wrote before him). Ricardo was more concerned about the benefits of free trade and international division of labour whereas Hamilton talked more about the importance of the development of national productive capabilities. But clearly, they held opposing views: one argued for protectionism, the other against it.

<sup>25</sup> The case for free trade also has a strong support base outside 'policy circles', some prominent examples being Bhagwati (2004), Irwin (2002), Lal (1983) and Wolf (2005).

But others have been drawing on the same East Asian experiences to make a case for export-oriented, market-friendly policies with low price distortions and reliance on comparative advantage (see for example World Bank (1993) and Lin (2010)). However, neither World Bank (1993) nor Lin (2010) neglects the importance of government intervention. For example, with reference to the East Asian countries, World Bank (1993, p.6) writes:

In each of these economies the government also intervened to foster development, often systematically and through multiple channels. Policy interventions took many forms: targeted and subsidized credit to selected industries, low deposit rates and ceilings on borrowing rates to increase profits and retained earnings, protection of domestic import substitutes, subsidies to declining industries, the establishment and financial support of government banks, public investment in applied research, firm – and industry specific export targets, development of export marketing institutions, and wide sharing of information between public and private sectors.

It is clear that the debate is not a black-and-white one. The differences of the sides in the debate as it is currently carried out come out well in Lin and Chang (2009), an article entitled *Should Industrial Policy in Developing Countries Conform to Comparative Advantage or Defy it? A Debate Between Justin Lin and Ha-Joon Chang*. Both Lin and Chang agree on the end goal—which is the development of productive capabilities, primarily through industrialisation—and that the state should play a role in this process. Yet, there are clear differences in opinion.

Lin argues for a facilitating state that helps the private sector exploit comparative advantage. He claims that successful development experiences show that industrialisation is a process of climbing the ladder, not jumping the rungs. According to Lin, technological upgrading happens in line with nations' current factor endowments. So, for example, if a country were well endowed with labour and short on capital, that country would be wise to specialise in labour-intensive activities. He goes on to argue that when surplus earned from a country's current endowment structure is reinvested, this allows both human and physical capital to be accumulated, transforming both the endowment and industrial structure towards more capital-intensive intensive activities. Lin's notion does not build directly on Ricardo's version of comparative advantage, but more on the Neoclassical version—the Heckscher-Ohlin-Samuelson (HOS) model. The difference between the two is that, while Ricardo's version assumes that nations' sources of comparative advantage lies in differences in technology, the HOS model defines comparative advantage based on factor endowments—land, labour and capital. All countries are assumed to have the same level of technology in the HOS model.

Chang argues that there is no guarantee that a country with the ‘correct’ ratio of certain factor endowments for an industry will enter that industry, or put in different terms, move physical and human capital accumulated from one activity to another. “Blast furnaces from a bankrupt steel mill cannot be remoulded into a machine making computers. Steel workers do not have the right skills for the computer industry” (Chang’s words in Lin and Chang, 2009, p.489). There is nothing natural about entering any sort of industry, whether it is capital-intensive or labour-intensive. Because the HOS model assumes away international differences in technological capabilities, it fails to take this into account. Even in manufacturing industries where they are supposed to have comparative advantages, like the apparel industry or the footwear industry, African countries have failed to establish themselves internationally because they lack the necessary technological capabilities to produce and export their products at a sufficient scale and of good enough quality. The main challenge is for developing countries to *change* their productive capabilities, which is why industrial policy is so important.

However, there is no denying that developing countries can more easily break into industries that have lower technological barriers. Chang argues, in line with Lin, that deviating too much from one’s current comparative advantage, whether you use the Classical version (differences in technology) or the Neoclassical version (differences in factor endowments) can have risks. That is why most countries that have successfully industrialised have put investments into industries that conform more closely to their comparative advantages at early stages of development, to quickly provide jobs and export earnings.

But what Lin fails to recognise is that many of these countries at the same time worked to defy their comparative advantage. Chang points out that Japan had to protect its automobile industry with tariffs for nearly four decades before it became internationally competitive, Nokia (the Finnish cell phone company) had to be cross-subsidised by its sister company for 17 years before it made any profit, and South Korea launched programmes to advance its shipbuilding and automotive sectors when it was still a poor country (Lin and Chang, 2009).

#### 2.5.2.1.2 Common tools to nurture infant industries: tariffs and (direct and indirect) subsidies

The main tenet of the infant industry argument is rather simple: in order to advance towards the global technological frontier in one or several industries, backward economies cannot simply rely on the market mechanism. Government support and interventions, often against market signals (i.e. industrial policy) is necessary. The list of various instruments that can be deployed to this end is possibly endless, but two commonly used tools are tariffs and subsidies.

A tariff is a tax on imports or exports (although export tax is a more commonly used term for a tariff on exports) and is perhaps the one tool most closely associated with the infant industry argument. The rationale behind an import tariff is to protect industries in their infancies against international competition, so that they have the domestic market to serve to begin with. It is the most explicit protectionist tool, and is highly controversial in international trade debates, as it works against the exports of other countries.

Protectionist policies, like tariffs, are closely associated with import-substituting-industrialisation (ISI) strategies, most prominently deployed in Latin American countries between the 1950s and 1980s. But the really ardent users of tariffs have been the rich countries of today, in particular Austria, France, Germany, Italy, Spain and the US, when trying to catch up with the industrial powerhouse of the 19<sup>th</sup> century, Great Britain. The US in particular, which the economic historian Paul Bairoch called “the mother country and bastion of modern protectionism” (Bairoch, 1993, p.30), applied high tariffs. Between 1816 and the end of WW2, the country had the world’s highest average tariff rate on imported manufactures (Chang, 2002).

A subsidy is a form of financial support provided to an economic activity with the aim of promoting that activity. Whereas tariffs are explicit trade policy measures, this does not have to be the case for a subsidy (e.g. subsidies for infrastructure investments, R&D and/or for worker training programmes). The Asian tigers, whose industrialisation spurts are by some attributed to market friendly policies, as already mentioned, were heavy users of direct and indirect subsidies during the 1960s and 1970s (even more so if we include non-fiscal subsidies, such as targeted loans from state-owned or state-directed banks, which will be discussed later in this chapter). For example, many people forget that the government of Hong Kong, the poster boy of market-led growth in the post-WW2 period, owned and controlled all land, which they used to subsidise housing construction heavily: worker’s housing typically received a 50 per cent subsidy (Amsden, 2001). For another example, in Taiwan, export subsidies on manufactured goods were among the highest in the world in the late 1960s (Wade, 1990).

One could also make a case for the importance of tariffs among some of the Asian tigers. Yet, Latin American and African countries have also applied tariffs and subsidies without being as successful. This indicates that there is more to successful industrial policy than just these tools. Wade (2012) suggests that we stop using “misleading policy dichotomies like ‘import substitution’ vs ‘export orientation’” (Wade, 2012, p.266), on which the vices and virtues of tariffs and subsidies are often loaded. He argues that we have to get down to the nitty-gritty operations of the state.

What Wade means by this is that successful industrial policy is not only about specific tools (like tariffs and subsidies) per se, but about the intricate ways the state operates with its array of incentives designed to improve the production capacity of firms or industries. In East Asia, according to Wade, this was done in two ways: ‘leading the market’—when the government makes an investment decision that private firms are hesitant to make—and ‘following the market’—when the government supports some of the bets of private firms.

POSCO, the South Korean steel-making company that is currently one of the world’s largest, is a classic example of the ‘leading’ kind. In the early mid-1960s, no private firm in South Korea wanted to undertake investments in steel (according to the World Bank, steel was not aligned with the comparative advantage of South Korea at the time), so the government took on the initial risk.

A good example of the ‘following’ kind would be some of Taiwan’s industrial policy measures. Across various industries, the Taiwanese government designed a fiscal incentive scheme to encourage firms’ bets to make products close to the global technological frontier. The government made a list of product specifications that signified eligibility for fiscal support. They constantly changed the specification of products, but at any given time, those firms who met the specifications were eligible for tax holidays and accelerated depreciation (Wade, 2012).

For Amsden (2001), Taiwan is a great example of effectively using *reciprocal control mechanisms* (RCM), whereby the government would give special favours and assistance to firms, often in the form of direct or indirect subsidies, in exchange for meeting certain performance targets—such as exporting, local content, or product specifications. In addition to Taiwan, Amsden argues that this device was key to many of the successful growth experiences in the post-WW2 era, such as Brazil, South Korea and China.

A common RCM would be to grant protection and the privilege of a certain industry to sell in the domestic market on the condition that the firms in that industry had to match imports with an equivalent value of exports (or to comply with some sort of trade balancing arrangement). The RCM has taken other forms as well. In Brazil, a condition for receiving soft loans from development banks was to employ non-familial professionals in positions of responsibility, such as chief financial officer and quality control engineer. In South Korea, the license to establish a general trading company depended on exports meeting criteria related to value, geographical diversity and product complexity. In Taiwan, cherry-picked firms would be granted facilities in science parks on the condition of spending a certain percentage of their sales on R&D and employ advanced production techniques. In China, science and technology enterprises were granted special legal status in exchange for performance standards with

respect to technically trained employment and the development of new and more advanced products (Amsden, 2001).

### *2.5.2.2 Market failures: industrial policy from the neoclassical perspective*

While the ‘historical roots’ of industrial policy can be traced back to the infant industry argument, the justification for industrial policy in government circles these days is often explained in the language of market failures. For example, when the UK Department for Business, Energy, Innovation and Skills (BEIS) asks HM Treasury to fund a certain industrial policy intervention, it is normally asked to identify the market failure that justifies the policy.<sup>26</sup>

A central tenet of neoclassical economics is that, other things equal, markets will produce the most ‘efficient’ outcomes. The idea of market failures has developed within the neoclassical tradition, most importantly by Kenneth Arrow, and is an acknowledgment that there are circumstances where markets will produce sub-optimal outcomes.<sup>27</sup>

Perhaps the most common example of a market failure is an externality. An externality is a consequence of a commercial activity that affects other parties without this being reflected in market prices. A typical case is the environment—free markets do not take into account the costs of environmental damage, as a firm’s production might result in environmental degradation without this being reflected in market prices. Such environmental damage is therefore called a negative externality. However, positive externalities are more relevant to discussions on industrial policy, the classic examples being R&D and worker training. Private firms will often under-invest in R&D and worker training from a social point of view, as some technological knowledge cannot be patented and workers can carry with them skills when changing employers. In the post-WW2 period, the lack of private sector investment in research was the principle rationale for state-funding of R&D in Europe and the US (Arnold et. al., 2014).

Another example of a market failure is market power. This is a kind of monopolisation, where first-mover advantages and the ability to build economies of scale and scope ahead of the competition are so important that it becomes a block on innovation (Aiginger, 2007). For

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<sup>26</sup> To be precise, the UK government uses the phrase ‘industrial strategy, as the term ‘industrial policy’ has become highly politically sensitive and toxic. See for example Wade (2012) and Pisano and Shih (2012) for a discussion on this.

<sup>27</sup> Of course, governments had been intervening in markets long before the neoclassical economics profession produced a reason for it.

example, if the competition in the offshore wind turbine market was fiercer (a market that is dominated by few firms), the industry might see more innovation.

A third example of a market failure is information asymmetry. High levels of specialised technical and market knowledge mean that not all private economic actors have the basis for making informed policy decisions. For example, credit constraints to potentially innovative activities can be a result of information asymmetry: some lenders do not have the expertise to understand a new technology and its application. This argument can be conceived under other categories of industrial policy as well. For example, the role of state-owned banks that provide subsidised credit was briefly discussed in the above section, and will be more comprehensively discussed in the below section on risk and uncertainty.

#### *2.5.2.3 Risk and uncertainty: the ‘deepest pocket’ argument*

The ‘deepest pocket’ argument underscores that the government has the best ability to take on investment projects that involve high risk but can potentially bring very high returns in the future. Common tools/institutions to this end are state-owned development banks that provide subsidised credit for projects with large capital outlays (as already briefly outlined), or the establishment of state-owned enterprises (SOEs). Both of these have been tremendously important in the process of ‘catch-up’ industrialisation.

##### *2.5.2.3.1 Development banks*

Development banks are banks (often state-owned) primarily concerned with the provision of long-term capital to industry. Especially in economies lacking long-term capital markets and commercial banks willing to bear the risks associated with financing ambitious industrial projects, they have become essential providers of funds for industrial development (Ocampo et. al., 2009). The usefulness of development banks became apparent as early as the 19<sup>th</sup> century during the industrialisation of Continental Europe and Japan (see for example Aghion, 1999; Gerschenkron, 1953 and Yasuda, 1993).<sup>28</sup>

For fast-growing economies in the post-WW2 era, development banks have also been crucial, or in the words of Alice Amsden, “of overwhelming importance” (Amsden, 2001,

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<sup>28</sup> Starting in France, with the creation of institutions such as the *Crédit Foncier*, the *Comptoir d’Escompte* and the *Crédit Mobilier* between 1848 and 1852 (Aghion, 1999).

p.127). Mexico's development bank, NAFINSA, accounted for about twice the value of long-term loans of all private credit institutions in 1961. In Chile, between 1961 and 1970, the fixed investments of targeted projects in the industrial sector by the Chilean development bank, CORFO, stood at 55 per cent of all fixed investment in industry. In 1957, the Korea Development Bank (KDB) accounted for 45 per cent of total bank lending to all industries in the country (Amsden, 2001).

Development banks have also played an important role in successful implementation of RCMs. In many cases, in order for the government to assess performance properly, lending arrangements from the development banks often came with thorough monitoring devices. In South Korea, the KDB undertook careful appraisal of prospective clients, examining their managerial and financial status, past performance, the merits of their proposed project and thoroughly checked up on overdue loans to prevent capital from being tied up. In India, a common monitoring and disciplining device would be for the Industrial Development Bank of India (IDBI) to insist on nominating a director to the boards of borrowing companies (Amsden, 2001, 2008).

Development banks also play a prominent role in some of today's least-developed countries that are growing fast, such as Ethiopia. The Development Bank of Ethiopia (DBE) was established in 1908, but has only recently become well known, as industries in the country that enjoy DBE loans at subsidised rates have started booming only a few years ago. The DBE provides medium - and long-term loans for investment projects that are engaged in prioritised sectors, as mapped out in the country's development plans, preferably ones that are export focused (Oqubay, 2015). Another reason why the DBE plays such an integral part in Ethiopia is that foreign banks are simply not allowed to operate in the country. And the understanding is that they will be allowed in only when domestic banks have developed the financial, managerial and technological capacity to compete against international banks.

#### 2.5.2.3.2 State-owned enterprises

Credit financing through development banks is one way of entering risky industries that requires large capital outlays and have high technological and organisational entry barriers. The establishment of state-owned enterprises (SOEs) is another way, and has been equally important for catch-up economies, if not more. An SOE is an entity created by the government in order to partake in commercial activities on the government's behalf. It can be either fully or partially owned by the government.

The Asian tigers were big fans of SOEs, although to varying degrees. As mentioned earlier, South Korea's steel-maker POSCO was established as an SOE in the late 1960s. At the time, this was quite ambitious for the country—its income was only 4 per cent of US income. But Taiwan is the country perhaps best known for hosting a huge SOE sector. From the early 1950s onwards, Taiwan had one of the largest SOE sectors outside the communist bloc and SSA (Wade, 1990). In 1952, the SOE sector in Taiwan accounted for 57 per cent of industrial production (Amsden, 1985). It gradually declined in importance, but still played an important role for a long time. Between 1950 and 1980, the average investment share of SOEs in gross fixed capital formation in Taiwan was 32 per cent, higher than that of other countries with sizeable SOE sectors in this time period, such as Singapore, South Korea and Brazil (Short, 1983).

But the establishment of SOEs have also been an important industrial policy instrument both before and after the rise of the Asian tigers. In pre-unified Germany, King Frederick the Great (1740-86) started the industrialisation process in Prussia by setting up 'model factories' in steel and linen industries. Japan did the same in the 19<sup>th</sup> and early 20<sup>th</sup> centuries in shipbuilding, mining, textiles and steel (Chang, 2002).

In many fast-growing middle-income countries today, SOEs have been supremely important. In China, many transnational corporations (TNCs) are made to form joint ventures with Chinese companies, most of which are SOEs. In Brazil, the early growth of the aircraft industry was led almost entirely by the state-owned aircraft manufacturer EMBRAER, before it was privatised in 1994. In Vietnam, the three fastest growing manufacturing industries—shipbuilding, steel and apparel—have all followed the same model of initially establishing an 'umbrella' SOE for the respective industry, responsible for setting up production facilities and coordinating investments by domestic firms (Chang. et. al., 2016).

#### *2.5.2.4 Interdependence between industries*

Because industries are interdependent, it might be necessary for the government to coordinate the operations of various industries for the purpose of economy-wide productivity growth (see Chang et. al., 2016).

One aspect of this is demand-complementarities. Obviously, industries buy and sell from each other. For example, the car industry buys inputs from the steel, the glass and the tire industry. This requires a coordination of investments between the related industries. In theory, this could happen through private contracting, but high transaction costs might inhibit this (e.g.

a buyer might not trust a credible commitment from the supplier side, or a supplier might simply not be willing to make a credible commitment). Government support is often necessary to make this happen.

A second, and less well-known, aspect of this is the need for government to coordinate competing investments. Simultaneous investments by competing firms may result in excess capacity in an industry, leading firms to scrap some production capacity, or in the worst case, result in bankruptcy. In neoclassical economic theory, this is not a problem as resources released through capacity reduction can be redeployed elsewhere. However, in reality, investments in fixed physical capital equipment or embodied in workers cannot be easily remoulded. Therefore, the government might need to step in to minimise wasteful competition. For example, in large-scale capital intensive industries in Japan and South Korea, the government let the private sector organize ‘investment cartels’.

Another highly important argument in relation to the interdependence of industries is how the government can target policies at one industry/sector, but through them, develop other interdependent industries, utilising the ‘linkages’ between industries. The linkages argument developed by Hirschman (1958) has become very important for industrial policy makers as a guiding tool for selection of industries. The argument advocates the promotion of those sectors and activities that have the most linkage effects. Hirschman distinguishes between *backward linkages* and *forward linkages*. A backward linkage happens when promotion of a certain activity stimulates supply of inputs to the promoted activity (the input-provision), while a forward linkage happens when promotion of a certain activity stimulates the purchase of outputs of the promoted activity, excluding final demand (output-utilisation).

Manufacturing activities are generally known to have a higher degree of linkages compared to other sectors (Oqubay, 2015). For example, the promotion of apparel manufacturing provides backward linkages to the agricultural sector through demand for cotton, other manufacturing activities through the demand for construction material and machinery, and services activities such as the demand for transport, consultancy and logistics services. Forward linkages in apparel manufacturing include producer services, such as marketing, branding, design, retail and distribution. As we will see in the chapter on Ethiopia, a big part of the motivation behind developing a domestic apparel industry (and leather products industry) is that it can potentially provide backward linkages to the agricultural sector.

But this is not to say that strong linkage creation and economic development cannot happen by initially promoting non-manufacturing activities, like agriculture or extractive industries. The forestry sector in Finland is an often-cited example of successful utilisation of

linkages that started by targeting a natural resource (see Jourdan et. al., 2012). Starting in the 1980s, the country managed to develop an impressive amount of linkages deriving from initially promoting sales of timber. Examples of backward linkages in the industry are machinery and equipment (for harvesting, cutting and paper manufacture), consultancy services on forest management and research institutes on biogenetics. Examples of forward linkages are production of various wood types (sawnwood and plywood) furniture (chairs, tables), and paper and cardboard (newsprint, art paper, toilet paper, packaging).

## **2.6 Africa's industrial policy experience**

As we have already seen, most countries in Africa have a negligible manufacturing base to date. But this does not mean that industrial policy has never been attempted in Africa. However, the degree of state intervention for the purpose of industrialisation has varied. Generally, the industrial policy experience in post-independence Africa can be divided into three phases; the 1960s and 1970s, with industrial policy at the fore; the 1980s and early 1990s, during which neoliberal policies dominated; and the mid-1990s to present, which has seen a more prominent role for the state, although not so much in relation to industrial policy.

### **2.6.1 1960s and 1970s: industrial policy at the fore**

In the 1960s, many African countries embarked on state-led strategies to industrialise. Industrialisation was regarded as synonymous with development at the time, especially if it was built on a socialist agenda resonating with the programmes and achievements of the USSR, and later China and India (Lawrence, 2005). The policies in Africa most notably involved ISI strategies (see Wangwe and Semboja, 2003), focusing on protecting domestic production of consumer goods that were previously imported. UNIDO and UNCTAD (2011, p.11) provide the following list of instruments that were generally applied in Africa during the ISI period:

- (a) restriction of imports to intermediate inputs and capital goods required by domestic industries;
- (b) extensive use of tariff and non-tariff barriers to trade;
- (c) currency overvaluation to facilitate the import of capital and intermediate goods needed by domestic industries;
- (d) subsidized interest rates to make domestic investment attractive;
- (e) direct government ownership or participation in industry; and
- (f) provision of direct loans to firms as well as access to foreign exchange for imported inputs.

The efforts yielded positive results for the manufacturing sector. MVA in Africa as a percentage of GDP rose from 9.2 to 14.7 per cent from 1960 to 1975. The employment share in manufacturing also increased significantly in the same time period, from 4.7 to 7.8 per cent (De Vries et. al., 2013) The increase in manufacturing production resulted in decent economic growth as well: GDP per capita grew at an average annual rate between 2 and 3 per cent in the same time period. Countries in Southern Africa—South Africa, Zimbabwe and Swaziland—were the ones industrialising most rapidly. Their activities were based around low-tech, labour-intensive industries, such as food processing, apparel and shoes.

But for many reasons, the ISI strategy was unsustainable. First, few domestic firms became competitive in the world market. Governments offered protection to domestic firms with little discrimination, no requirements for improving international competitiveness and no time limit. Actually, not a single African country generated internationally competitive industries during the ISI period (UNECA, 2011).

Second, the strategy did not lay enough emphasis on generating foreign exchange (Meier and Steel, 1987; Stein, 1992). Agriculture was neglected and too heavily taxed, thereby reducing export earnings and creating balance of payment problems for the economies that grew fast.

Third, the strategy was too intent on setting up physical production facilities, like factories, without paying enough attention to fostering entrepreneurial capabilities that would spur industrial dynamism (UNIDO and UNCTAD, 2011).

Fourth, FDI was badly managed. Foreign firms were given too favourable conditions, such as exclusive exploration rights (in the extractive industries) and sole supplier contracts to the government. Moreover, these investments were almost entirely directed to the extractive industries, limiting the creation of linkages to the domestic economy (Stein, 1992; UNECA, 2011).

Admittedly, a few countries were successful with the anti-export strategy that characterised African economies in this phase, such as Mauritius and Zimbabwe. They managed to accumulate resources from the protected industries to generate enough investments for the development of capabilities needed for exporting.

### **2.6.2 1980s and 1990s: debt crises and neoliberal reforms by the Bretton Woods institutions**

In the early 1980s, African countries started to experience severe balance of payments problems due the effects of the global oil crisis in 1973,<sup>29</sup> the global decline in other commodity prices and insufficient foreign exchange generation to meet growing import demand of domestic industries. To alleviate these problems, many African countries sought help from the World Bank and the International Monetary Fund (IMF).

These organisations did not share the view that African industry should be promoted through government intervention. As outlined in *The Berg Report* published in 1981, they firmly believed that African countries' economic performance was poor as a result of overemphasis on industry at the expense of agriculture, overvalued exchange rates, interest rate controls and trade protectionism. Furthermore, the report held the view that the comparative advantage of African countries was in agriculture, not industry, and that governments should consequently withdraw support to industry (World Bank, 1981).

The subsequent conditionalities of loans and aid to African governments—the structural adjustment programmes (SAPs)—focused heavily on reducing government intervention through trade liberalisation, privatisation of SOEs and the withdrawal of government subsidies (UNIDO and UNCTAD, 2011). The appropriate role for the state, according to *The Berg Report*, was to provide an enabling environment for the private sector to flourish by giving market forces more room in the allocation of resources. These policy prescriptions were in line with what the World Bank and the IMF recommended in more or less all developing countries at the time: limiting government intervention to macroeconomic stabilisation policy, general education and infrastructure investments, whilst relying on the 'market mechanism' to eliminate inefficiencies and direct resources to productive uses.

Neoliberal sentiments swept the world around this time, but the state had acquired a particularly bad reputation in Africa. According to Mkandawire (2001, p.293), by the 1990s, "The African state had become the most demonised social institution in Africa, vilified for its weaknesses, its over-extension, its interference with the smooth functioning of markets, its repressive character, its dependence on foreign powers, its ubiquity, its absence, etc."

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<sup>29</sup> The global price of crude oil spiked, leaving most African countries that were net importers of oil at the time at a disadvantage.

The results of the SAPs, both for economic growth and for manufacturing industry, were disastrous.<sup>30</sup> GDP per capita in Africa *declined* at an annual average rate of 1.6 per cent between 1981 and 1994.<sup>31</sup> Unsurprisingly, MVA as a share of GDP also dropped, from a high of 17.6 per cent in 1976 to 14.2 per cent in 1994 (WDI, 2017). Some sort of response was appropriate to the mounting debt of African economies, but the SAPs did not address the shortages of technical skill and industrial entrepreneurship. It undermined economic diversification and technological accumulation, and drove firms out of business. Without state support, African industry had no chance of catching up with the global technological frontier. As Lall (1995) argues, if any potential for technological accumulation lay with existing firms in Africa, this was destroyed through the SAPs. Through reliance on comparative advantage, the SAPs were supposed to attract foreign capital to gradually ensure growth of the industrial sector, but, similarly to what happened in the ISI phase, foreign capital was attracted almost exclusively to the extractive industries. Even in the agricultural sector, in which African countries were supposed to have comparative advantage, unfettered international competition created problems—Nziramasanga (1995) provides the example of the Kenyan sugar industry in the 1990s, in which both output and employment fell due to competition from imports.

Interestingly, the economic decline has been observed in all sub-regions on the continent. Mauritius, South Africa, Zambia and Zimbabwe were however exceptions. These countries actually managed to maintain or even raise their share of manufacturing in GDP. One obvious reason is that three of these four countries did not have SAPs enforced.

### **2.6.3 Mid-1990s – present: state intervention more prominent, but what about industrial policy?**

By the mid - to late 1990s, the SAPs had contributed to such a devastation of African economies that the international business media even referred to the continent as ‘hopeless’, as mentioned in the introduction of this chapter. The loans heaped onto African countries in the 1980s and early 1990s had not resulted in productive investments, and thus, by the mid 1990s, several African countries had become heavily indebted.

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<sup>30</sup> Especially the deindustrialisation impact of the SAPs has been rigorously documented (e.g. Mkandawire (2005), Mkandawire and Soludu (2003), Riddell (1990), Stein (1992)).

<sup>31</sup> 1981 has been chosen as a starting point for the period of low/negative growth in Africa, as this is arguably when economic growth significantly started to show a break for the worse in the aftermath of the international oil crisis and subsequently the SAPs.

In 1996, international donors launched the Heavily Indebted Poor Countries (HIPC) initiative to provide relief to severely indebted countries, almost all of which were in Africa. This was modified in 1999 (as it was criticized for not being flexible enough), making greater relief available to more countries, and by making relief available sooner. As a precondition to partake in the enhanced HIPC initiative, beneficiary countries were required to prepare poverty reduction strategy papers (PRSPs), in which recipient governments themselves had to detail how debt relief would be used to reduce poverty (UNIDO and UNCTAD, 2011). Compared to the SAP phase, more autonomy was given to beneficiary countries, partly because anti neo-colonialist and neo-imperialist attitudes were becoming more prevalent worldwide. Beneficiary countries were especially encouraged to invest resources in social sectors, such as education (primary and secondary) and health. Not surprisingly, the focus on social sectors of the PRSPs resonated with that of the Millennium Development Goals (MDGs)—a set of eight international development goals to be achieved by 2015, established at the United Nations Millennium Summit in 2000 (UN, 2005).<sup>32</sup>

As seen in the previous chapter, the turn of the century saw economic growth in Africa pick up, together with a range of other positive developments, like reductions in public debt, a decrease in violent conflicts and progress in public health outcomes. However, manufacturing as share of GDP in Africa remains the lowest of all developing regions in the world. Although the government has featured a more prominent role during the PRSP/MDG phase, industrial policy has taken a firm backseat because of the focus on social sector development policies.

In recent years, however, there has been talk of a rejuvenation of industrial policy in the international development community (e.g. Noman and Stiglitz, 2015; Stiglitz and Lin, 2013; Wade, 2015). As opposed to the MDGs, industrialisation is an explicit goal in one of the 17 Sustainable Development Goals (SDGs); Goal 9: build resilient infrastructure, promote sustainable industrialisation and foster innovation (UN, 2015). Structural transformation has become a buzzword in the international development community, partly thanks to the chief economist at the World Bank from 2008 to 2012, Justin Lin, who pushed for an agenda at the Bank that stressed the importance of economic diversification and transformation of production activities (see Lin, 2010), much more so than former chief economists. Other prominent economists like Ha-Joon Chang, Joseph Stiglitz, Dani Rodrik and Mariana Mazzucatto have all published recent bestselling books that explicitly support industrial policy. International organisations (other than the United Nations Conference on Trade and Development

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<sup>32</sup> Five of the eight goals centred on improvements related to poverty, health or education.

(UNCTAD), which has long been a bastion of industrial policy) like the Organisation for Economic Cooperation and Development (OECD) and the International Labour Organisation (ILO) are publishing reports that explicitly devote attention to the importance of industrial policy (e.g. OECD, 2013a; Salasar-Xirinachs, et. al., 2014). In Africa, the fastest growing economy on the continent, Ethiopia, puts industrial policy at the forefront of its development plans (see Oqubay, 2015).

But in the midst of talk of industrial policy ‘renaissance’, there is also vigorous debate on how the industrial policy environment has changed. The debate centres in particular on the increased fragmentation and globalisation of production processes, and consequently if ‘old’ style industrial policies, like those formulated by the Asian tigers, are at all applicable to developing countries today. Transnational corporations (TNCs), predominantly based in the West, are increasingly outsourcing manufacturing activities to developing countries, and therefore, from a developing country perspective, industrial policy revolving around attracting FDI is becoming a more important part the entire industrial policy discussion. Should developing countries ‘link up’ to the TNCs that invest in their home countries, carrying out exactly the type of activities the TNCs want them to carry out, or should they challenge them? How can developing countries formulate policies to transfer technology from TNCs, and incentivise them to create linkages with the domestic economy? This is the issue at hand in the next chapter.

## **2.7 Summary and conclusion**

Given the reversal of sluggish economic growth and improved political and economic climates in most African countries since the turn of the millennium, some people have enthusiastically embraced a new discourse, claiming that Africa is ‘rising’. And in many ways Africa is doing better—compared to 20 years ago, people are healthier, better educated (at least the primary school level) and there are fewer violent conflicts. However, in terms of the development of productive capabilities, the essence of economic development, ‘Africa rising’ is little more than hype. Per capita GDP growth is low, poverty rates and vulnerable employment rates are still alarmingly high, and perhaps most importantly, industrialisation is not happening.

Throughout the history of capitalism, practically all countries that have transformed their economies from ‘poor to rich’ have done so through a process of industrialisation, i.e. expanded their manufacturing sector, which has greater scope for productivity growth than do other sectors. But some people now claim that we live in the age of the ‘post-industrial society’,

in which services are gradually taking over for manufacturing as a source of productivity growth. While indeed some services now have tremendous scope for productivity growth (in particular digital ones) and some countries are basing their economic growth strategies on services (like the UK, Rwanda, and to some extent India), there are still good reasons for developing countries not to neglect manufacturing: almost all innovation is closely linked to production processes, manufacturing products remains far more tradable than services, and ultimately, most services are inherently characterised by lower productivity than manufacturing.

While the claim that African countries need more productivity growth through expanding their manufacturing sector is not highly controversial, the role of the state in achieving this is more contentious. This chapter has hopefully provided some examples of why and when state intervention for the purpose of industrialisation can be useful (i.e. industrial policy). Four justifications were discussed: industries in developing countries need government support in their infancies (infant industry argument); the market can in many instances fail to allocate resources efficiently (market failures); the government often has the best ability to take on the risk of venturing into possibly long-term profitable activities (the ‘deepest pocket’ argument); and the need to coordinate and take advantage of the interdependence between industries calls for government action (interdependence between industries).

While Africa’s experience with industrial policy has not been truly successful in the post-independence era, its period of more state intervention in the 1960s and 1970s yielded higher economic growth rates and better results for the manufacturing sector than any subsequent period, particularly that of market liberalisation and state dismantling in the 1970s and 1980s. This gives hope that industrial policy in the African context is not doomed to fail.

The next chapter turns to the emerging debate on if and how the productive structures and the industrial policy environment in developing countries has changed because of the increased fragmentation and globalisation of production processes (i.e. the expansion of global value chains), and what African industrial policy should look like in this new global production environment.



## Chapter 3

# **The expansion of global value chains: how do they affect the productive structures of developing countries—particularly those in Africa—and what are the implications for industrial policy?**

### **3.1 Introduction**

Since the early 1990s, a globalisation of production has taken place, driven by falling transport costs, advances in information and communication technology, and lower trade and investment barriers. From 1990 to 2015, the world's trade dependence ratio<sup>33</sup> increased from 19.5 per cent to 29 per cent, and world FDI inflows as share of GDP increased from 0.9 per cent to 2.7 per cent (reaching a peak of 4.7 per cent in 2007) (WDI, 2017). The increase in FDI inflows has mostly taken place in developing countries, whose share of world FDI inflows surged from 17 per cent to 43 per cent between 1990 and 2015 (UNCTAD STAT, 2017). This growth in international trade and offshoring is underpinned especially by the fragmentation of production processes and the geographical dispersion of tasks and activities within them. This has led to complex, borderless business networks and production systems, popularly referred to as global value chains.

Consider the production, assembly and retail of an Apple iPod, as outlined by Milberg and Winkler (2013): the hard drive is made by the Japanese company Toshiba, which offshores its hard drive production to companies in the Philippines and China; the display module is made in Japan, by Toshiba-Matsushita; the multimedia processor chip is made by the US company Broadcom, which offshores most of its production to Taiwan; the central processing unit is produced by the US company PortalPlayer; the Taiwanese company Inventec carries out the final insertion, test, and assembly in China; and Apple earns its profit through overseeing distribution and retail.

The expansion of GVCs across the world has invigorated industrial policy debates. International organisations are increasingly devoting attention to the topic, such as the ILO, the OECD, the UNCTAD, the United Nations Development Programme (UNDP), the United

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<sup>33</sup> This is the average of imports and exports of goods and services, as share of GDP.

Nations Industrial Development Organisation (UNIDO), the World Bank and the WTO.<sup>34</sup> Additionally, scholars who for long have been concerned with development and industrialisation issues from a GVC perspective have in recent years showed a keen interest in the implications of the expansion of GVCs on industrial policy.<sup>35</sup> These scholars are the ones most notably working together with international organisations concerned with the topic, and form a view that will be referred to as the ‘GVC lens’ from this point onwards.

The GVC lens argues for a rethink of industrial policy, questioning whether ‘old’ style industrial policies, like those implemented by the Asian tigers in their ‘miracle’ years, are at all feasible by today’s developing countries. Milberg et. al. (2014, p.152) states that:

Twentieth-century debates over the merits of industrial policy as a strategy for economic development occurred prior to the spread of these complex international production networks. Industrial policy viewed through the lens of GVCs will thus differ from traditional arguments for industrial policy. The GVC approach puts emphasis on firms rather than States, leaving the role of the State less evident than it was in earlier phases of late industrialization.

Similarly, Gereffi (2014a) argues that there is not likely to be a return of what he calls ISI and EOI<sup>36</sup> policies of old. As a result of the globalisation of production, “Companies, localities, and entire countries have come to occupy specialized niches within GVCs. Because of this, today’s industrial policies have a different character and generate different outcomes than before” (Gereffi, 2014a, p.438). In a related vein, Baldwin (2011) criticizes ‘high development theory’—explicitly referring to those theories that advocate structural transformation based on emulation of previously successful industrialisers—for not fully taking into account revolutionary transformations in industry that have occurred since the mid-1980s, and suggests that the missing element boils down to GVCs. “Before 1985, successful industrialisation meant building a domestic supply chain. Today, industrialisers join supply chains and grow rapidly because offshored production brings elements that took Korea and Taiwan decades to develop domestically” (Baldwin, 2011, p.3).

Milberg et. al. (2014) suggest several ways that industrial policy must change in the era

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<sup>34</sup> See Milberg et. al. (2014, p.152) for an overview of publications from these international organisations that concerns the topic.

<sup>35</sup> The most important publications are Baldwin (2011), Gereffi (2014a), Gereffi and Sturgeon (2013), and Milberg et. al. (2014). While many more publications in the GVC literature (and the related ‘global production network’ literature) discuss the challenges of developing productive capabilities in developing countries, the debate on if and how industrial policy has to change in the era of expanding GVCs most importantly includes contributions from these four publications.

<sup>36</sup> EOI referring to export-oriented industrialisation.

of GVC expansion: 1) industrial policy must shift from the traditional stance aimed at developing fully integrated production structures, i.e. developing the entire industry domestically, to a stance focusing on moving into higher-valued tasks associated with the industry; 2) while traditional industrial policy may have included protection of domestic industry, success in the era of GVC expansion requires easy and cheap access to imports, in particular for necessary intermediates; and 3) whereas traditional industrial policy sought to build domestic capacity in order to eventually compete with leading TNCs, industrial policy nowadays should focus more on negotiating and linking up to TNCs, as the issues facing firms and governments these days requires moving up through the chain of production of a particular commodity or set of commodities.<sup>37</sup>

But the GVC lens may be leaving out some important aspects of history. Did countries like S. Korea and Taiwan—the two most successful examples of late industrialisation before the expansion of GVCs since the 1990s—develop in a world devoid of GVCs? And did they not link up and bargain with TNCs, inserting themselves in niches of global production networks? Nike, one of today’s largest brand names in the global footwear industry (and sporting outfits and accessories industry), actually outsourced almost all of its shoe production to South Korea and Taiwan from the late 1970s to the late 1980s. Even before that, in the late 1950s, Taiwan started carrying out massive assembly operations for Japanese companies on consumer electronics, including televisions, refrigerators, air conditioners, automobiles, diesel engines, and several other items (Wade, 1990). So clearly, GVC participation played a role in these countries’ industrialisation strategy. This might actually mean that the expansion of GVCs does not require the thorough rethink of industrial policy that some people suggest and that there are still plenty of lessons to be learned from these industrialisation experiences.

Admittedly, the GVC lens does not fully neglect the role that GVC participation played in countries like South Korea and Taiwan. For example, Gereffi (1996) traces the development success of Japan, Hong Kong, South Korea and Taiwan by mastering GVC networks. Furthermore, the GVC lens’ insistence on joining supply chains rather than building them is not uniform. Milberg et. al. (2014) does indeed warn about the dangers of neglecting the development of domestic integrated production structures, explaining how “thin” industrialisation, especially in low-skill segments, can result in low value added traps.

But in approaching this discussion, the GVC lens could arguably show a better

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<sup>37</sup> The chapter actually identifies six challenges to industrial policy in the era of GVC expansion, but when addressing how industrial policy should *change*, in particular relating to the issues that will be addressed in this dissertation, they can most importantly be reduced to these three.

understanding and a more thorough review of past industrial policy experiences. It puts focus on firms rather than states, but ultimately, industrial policy is about the role of the state in the process of industrialisation, so this is a severe shortcoming. In this respect, the ‘Statist’ lens (e.g. Amsden, 1989; Chang, 1994; Wade, 1990), which has for long written about issues of industrial policy, and perhaps is the most known lens through which industrial policy is discussed, needs to be better incorporated. Among those who adopt this lens, there exists a rigorous literature on trade policies and policies for technology transfer through FDI attraction that does not use the term ‘GVC’, even though GVC participation has been important in the cases referred to in this literature. This literature seems to have been somewhat overlooked by the GVC lens but is supremely important because we can get key insights into the types of policies (through GVC participation) that have resulted in successful industrialisation—like requirements on joint ventures, R&D, skills development and local content on TNCs investing in the host economy. Part of the Statist lens also goes beyond the dichotomy of ISI and EOI, showing especially with reference to the Asian tigers how both protectionist policies and export-oriented policies often operated in tandem with and complementing each other (more on this later).

With a focus on Africa, this chapter aims to critically approach the debate on how GVC expansion affects the industrial policy challenge of developing countries. The chapter will adopt a Statist lens, as well as review the GVC lens, and use comparative-historical methods to illustrate relevant examples of GVC-oriented industrial policies. By doing this, the chapter will eventually suggest a framework for GVC-oriented industrial policies, incorporating a wider part of the literature than what has been done so far. This framework is intended for developing countries of lower income status, of which most are in Africa, hence the Africa focus. But this framework is equally relevant for low-income countries in other regions of the world, as part the motivation for choosing Africa is not that all countries are part of the same continent, but rather share similar structural production characteristics.

In section 3.2, I will discuss the definition and the history of GVCs, how to understand the GVC ‘buzz’ from a developing country perspective, and show how some of the early successful catch-up economies, South Korea and Taiwan, actually formulated GVC-oriented industrial policies, unbeknownst to many people. I will make the assertion that the GVC expansion since the 1990s (which will be referred to as the ‘GVC era’ from this point onwards) has not resulted in substantive qualitative changes in international trade but rather that substantive quantitative changes have happened, through a substantial increase in FDI inflows to developing countries and increasing power of TNCs. Therefore, the literature on industrial

policy as it relates to trade and FDI is relevant for the discussion of GVC-oriented industrial policies, and that looking at successful GVC-oriented industrial policies of catch-up economies before the GVC era can in fact be useful, although the scale of fragmentation of production networks was smaller then.

Section 3.3 will analyse in greater detail some of the issues that will be briefly outlined in section 3.2, to see more clearly which opportunities and challenges GVCs pose to African countries. The opportunities include capitalising on the increasing inflows of FDI and the chance to specialise in segments of GVCs, while the challenges are largely linked to the problem of getting stuck in low-value added activities in GVCs (no domestic linkage creation) and the massive expansion and consolidation of power by TNCs based in the West that we have seen in the GVC era.

Section 3.4 brings together the analysis in the two preceding sections and presents a framework for industrial policy. Section 3.5 concludes.

## **3.2 What are really GVCs? Understanding GVCs, measuring GVC participation and illustrating successful GVC-oriented industrial policies before the GVC era**

### **3.2.1 Understanding GVCs from a developing country (read: African) perspective**

The Duke Global Value Chains Initiative, a global hub for GVC research defines a value chain as, “The full range of activities that firms and workers do to bring a product from its conception to its end use and beyond” (Duke, 2016, p.1). These activities can be contained within a single firm or divided among different firms. The term ‘global value chains’ emerged as value chains gradually started dividing themselves among multiple firms and spread across countries and continents.

From the GVC lens (mostly so by international organisations that have published material on GVCs, development and industrialisation issues in recent years), a popular view is that through the ‘insertion’ into, ‘upgrading’ within and ‘specialisation’ within GVCs, developing countries have new avenues for development that didn’t exist before. A recent World Bank brief states that “countries that embrace GVCs grow faster, import skills and technology, and boost employment” (World Bank, 2015, p.1). One of the few substantial reports in recent years that analyses the impact of GVCs on industrialisation in Africa, the *African Economic Outlook 2014: Global Value Chains and Africa’s Industrialisation*, writes,

“The country-centric view of trade no longer reflects reality...Global value chains offer new opportunities for structural transformation in Africa” (AfDB-OECD-UNDP, 2014, p.124).

However, when one starts studying closely what *really* has changed in the GVC era, the whole buzz around this new phenomenon—and how it’s often talked about, as exemplified above—appears to be hyperbolic. There has definitely been a change, but from the perspective of developing countries, it boils down to two closely interrelated developments: 1) increased offshoring by firms in more developed countries, resulting in tremendous increases in FDI inflows, alongside with (2) increased control of global production systems by TNCs based in more developed countries, particularly in the West. Below, these two developments will be explained, before some of its challenges and opportunities will be analysed in detail in section 3.3.

### *3.2.1.1 Offshoring and FDI*

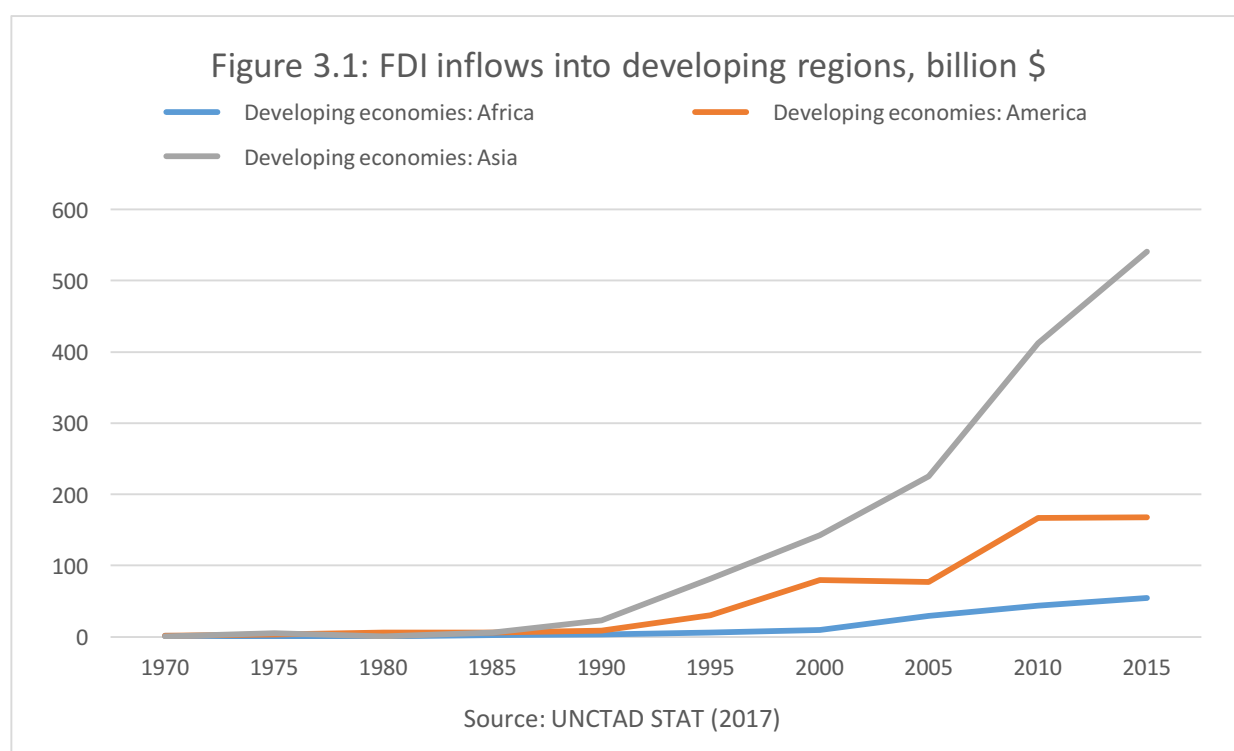
The proliferation of GVCs has largely been driven by TNCs purchasing more of their raw materials and intermediate inputs from abroad, either through outsourcing parts of their production to companies in the targeted country, or establishing their own production plant abroad to trade within the confines of their own corporation.

This became visible as early as the 1960s, when international companies sliced up their supply chains in search of low-cost suppliers in other countries (Gereffi, 2014b). It started with manufacturers offshoring their activities, typified by American outsourcing to Mexico (Maquiladoras) and German outsourcing to Central and Eastern Europe, by setting up export processing zones (EPZs) for apparel assembly (Fröbel et. al., 1981). In the 1970s and 1980s, US retailers and brand-name companies joined manufacturers in search for offshore suppliers of consumer goods, expanding operations to most notably East Asia.

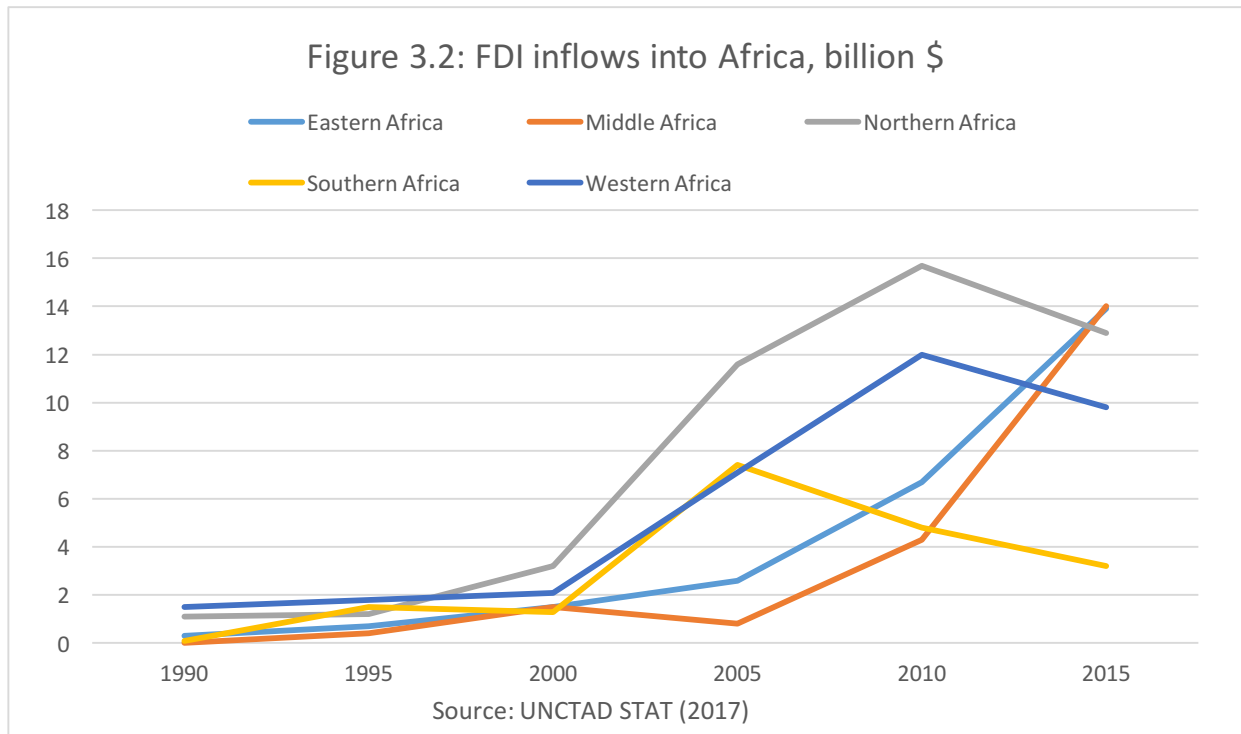
Although the motivations for offshoring have largely remained the same to date (i.e. the search for cost savings, like cheap labour, land and energy), the scale of offshoring started intensifying first in the 1990s, driven by the factors already mentioned in the introduction. From 1990 to 2015, FDI inflows into developing countries increased from \$35bn to \$764bn (from 17 per cent to 43 per cent of world FDI inflows), which represents a change in FDI inflows into developing countries as a share of developing country GDP from 0.08 per cent to 2.5 per cent (UNCTAD STAT, 2017). Internationalisation of production of goods and services are now commonplace in practically all product categories, ranging from apparel, footwear, vegetables, fruits, beverages and flowers to computers, mobile phones, automobiles, aircrafts

and professional services.

As seen from Figure 3.1, the most explosive growth in FDI inflows in developing countries has taken place in Asia. This is partly due to the vast population of the region—led by a populous and fast-growing China—but also the massive amounts of FDI attracted into Hong Kong, which stood at \$175 billion in 2015 (UNCTAD STAT, 2017). Although Africa accounts for a relatively small share of FDI inflows to all developing countries, its proportional increase has been 20-fold since 1990 (from 1.4 per cent to 4 per cent of world FDI inflows), with all sub-regions experiencing a significant increase, as seen from Figure 3.2.<sup>38</sup>



<sup>38</sup> As the figure shows, Africa didn't attract much FDI before the early 2000s. In the 1990s, civil wars were still rife and the business climate was largely underdeveloped, an image that was exacerbated in the business media (e.g. *The Economist* (2000)).



### 3.2.1.2 Increasing power of TNCs

The study of power structures in production networks is essential to GVC analysis, as it shapes the distribution of profits and opportunities for development. In this respect, a seminal contribution to the GVC literature in the mid-1990s distinguished between buyer-driven value chains (BDVCs) and producer-driven value chains (PDVCs) (Gereffi 1994, 1999). In BDVCs, large retailers and brand name merchandisers, like Wal-Mart and Nike, typically control the value chains and specify products to be produced in independent factories in developing countries. PDVCs, on the other hand, are characterised by power being held by final-product manufacturers, like the aircraft producers Boeing and Airbus, and are commonplace in industries with higher capital intensity and skill barriers.

However, the distinction between BDVCs and PDVCs is not useful in all contexts. In the apparel industry, GAP is a good example of a typical lead firm in a BDVC, without its own manufacturing facilities, but Levi-Strauss governs a vertically integrated chain (see Kaplinsky and Morris, 2001), more in line with the PDVC structure. The food industry value chain is typically classified as a BDVC, but in Africa, big companies, such as Nestle, are setting up their own production facilities, so it is increasingly acquiring the characteristics of a PDVC.

As case studies of GVCs proliferated, it became clear that the BDVC-PDVC dichotomy

failed to capture the full complexity of GVC governance structures. The framework introduced by Gereffi et. al. (2005) has helped mend this issue; it introduces 5 degrees of power exercised by lead firms through its coordination of suppliers, without direct ownership of the firms. As opposed to the BDVC-PDVC framework, this framework is less prone to typifying certain industries into a set power structure. In fact, scholars have been drawing on it to show how the form of governance can change as the industry evolves and matures.

While the GVCs that have a foothold in Africa fit into many different typologies, the common feature is that large TNCs with home bases outside the continent are gaining increasing shares of the African market. Recent major deals include Total S.A.'s (France) \$16bn investment to develop the Kaombo offshore oilfield in Angola, Skypower's (Canada) \$5bn investment to establish a solar power plant in Nigeria, and Mac Optic's (Greece) \$4.8bn investment to establish a petroleum refinery in Egypt (TIA, 2015).

The increasing presence of TNCs in Africa follows from a steady global expansion of TNCs, which has in fact been nothing short of immense. From 1990 to 2015, total assets of foreign affiliates increased from \$5 trillion to \$106 trillion (from 18 per cent to 145 per cent of world GDP), and employment by foreign affiliates increased from 21 million workers to 80 million workers (UNCTAD, 2016). Clark (2010) calculated that Wal-Mart, the world's largest retail company, ranked as China's seventh largest trading partner in 2010, ahead of the United Kingdom (Clark, 2010).

But not only have TNCs expanded across the world and grown in size, their power has also been consolidated significantly. Since the early the 2000s, practically every global industry has had only a handful of firms accounting for 50 per cent or more of the industry's global market share (Nolan, 2007).

### **3.2.2 Measuring GVC participation**

As explained, the rise in FDI is a strong indicator of the expansion of GVCs, and FDI inflows in a country can be a useful indicator of the extent to which countries (especially developing countries) participate in GVCs. UNCTAD (2013) shows an almost perfect correlation between countries' inward stock of FDI and GVC participation as measured through trade in value added (this concept will be explained below). Case studies of industries and products (like the Apple example in the introduction of this chapter) have also been used to illustrate the expansion of GVCs and the different ways that countries and companies participate in GVCs.

However, the fragmentation of production and the increasing trade of intermediate goods—goods used as inputs in the production of other goods—have spurred the development of new measures.

One reason for this is that there is increasing *double counting* in traditional trade data, in that it includes the value of intermediate goods imported at each border crossing (OECD, 2013b; UNCTAD, 2013). For example, raw material extracted in one country may be exported for processing to a second country, then exported to a manufacturing plant in a third country, which may export it to a fourth country for final consumption. The value of the raw material counts only once as contribution to GDP in the first country, but is counted several times in world exports. According to UNCTAD (2013), about 60 per cent of global trade today is in intermediate goods, so the problem of double counting has become prevalent.

Another reason for this is that the global expansion of production networks is not always captured by FDI figures. Especially in BDVCs, supplier firms are sometimes domestically owned, and do not involve FDI. This was actually the case with many light-manufacturing supplier firms in East Asia (Japan, South Korea and Taiwan) in the 1960s and 1970s, which exported their products to brand names and retailers in the US (Milberg et. al., 2014).

Measuring GVC participation through ‘trade in value added’ is a way to mend both of these problems. It takes into account both the share of foreign value added in a country’s exports—called backward integration—and the share of a country’s value added in other countries’ exports—called forward integration. The developing-country share of global TVA has increased from 22 per cent in 1990 to 42 per cent in 2010 (UNCTAD, 2013). As seen in Table 3.1, Africa’s share of this trade has increased from 1.4 per cent in 1995 to 2.2 per cent in 2011.<sup>39</sup> This 80 per cent increase is the highest growth in GVC participation of all world regions, after South Asia.

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<sup>39</sup> This low number does not reflect that GVCs are unimportant in Africa. It is rather an indication of Africa’s share of world trade, which was only 3.3 per cent in 2013.

<i>Region</i>	<i>1995</i>	<i>2011</i>
Europe	57.50%	50.90%
East Asia	14.40%	16.20%
North America	13.10%	11.80%
Southeast Asia	6%	6.80%
Latin America	3.20%	4.30%
Middle East	2.00%	3.00%
Africa	1.40%	2.20%
Russia and Central Asia	0.90%	2.00%
South Asia	0.70%	1.70%

Source: AfDB-OECD-UNDP (2014)

Although Africa's share of global trade in value added has almost doubled since 1995, does this signify a qualitative change in Africa's trade pattern? Hardly. As we saw in chapter 2, Africa's exports are still dominated by primary commodities. The difference seems to be that these exports to a larger degree than before go on to be further exported. UNECA (2015) confirms this trend: "African countries show high participation rates in GVCs, though at a very low level...the larger share of Africa's GVC participation is in forward integration, driven by exports of raw materials." (UNECA, 2015, p.172). Similarly, the increase in FDI has neither brought about any qualitative change in Africa's trade pattern. In fact, 54 per cent of Africa's inward FDI stock in 2014 went to eight of the most natural resource dependent countries on the continent<sup>40</sup> (UNCTAD STAT, 2017), clearly showing that most foreign investors are doing exactly what they have been doing during the entire post-independence era: going for the extractive industries.

So we see that the expansion of GVCs has not really changed the productive structures of African economies at all, and this is not because Africa is failing to participate in GVCs. This goes to show that we have to be careful and scrupulously analyse what increasing GVC participation *really* implies in terms of the development of productive capabilities, and that success with GVC participation for developing countries necessitates smart GVC-oriented industrial policies, as the next section will elaborate on.

<sup>40</sup> Rep. of Congo, DRC, Equatorial Guinea, Ghana, Mozambique, Nigeria, South Africa and Zambia.

### **3.2.3 Successful GVC-oriented industrial policies before the GVC era: South Korea's and Taiwan's GVC-oriented industrial policies**

Throughout the history of capitalism, no countries have grown as rapidly (from low to high-income) or industrialised as fast as South Korea and Taiwan did from roughly 1960 to 1990. As detailed through various examples in the previous chapter, these two countries are some of the most successful examples of industrial policy formulation. And because of their decently sized domestic markets, they arguably hold more general lessons for today's low-income countries than for example the two other Asian tigers, Hong Kong and Singapore, whose growth experiences had more idiosyncratic elements. Most importantly, they didn't begin from an agrarian or raw material base (unlike what most African countries are now) that is typically taken to be the starting point for industrialisation.

Another reason for selecting South Korea and Taiwan as possible case studies to emulate for African countries is that the GVC lens is scarce on case studies of successful industrial policy experiences through GVC participation pre-1990s (or rather, the GVC lens is scarce on *fully* successful industrial policy experiences, as none of the low-income countries that have experienced high growth and industrialisation starting in the 1990s or later have reached high-income status). One obvious explanation is that GVCs really started to proliferate after the 1990s and therefore, many GVC scholars find it irrelevant to look at growth experiences before that time. However, unbeknownst to many, participation in GVCs was very much a part of both South Korea and Taiwan's industrial policy, dating all the way back to the 1960s, as will be discussed below.

Admittedly, some scholars from the GVC perspective have given decent accounts of South Korea's and Taiwan's industrialisation experience. Focusing on apparel and electronics, Gereffi (1996) traces the success of various industries in Japan, and later on Hong Kong, South Korea and Taiwan to their mastering the dynamics of GVC networks, moving from: 1) the assembly of manufactured goods, using imported components, to; 2) original equipment manufacturing (OEM), whereby contractors make goods to be sold under a foreign company's brandname, to; 3) original brand name manufacturing (OBM), whereby manufacturers make goods for export and sale under their own label.

But in analysing the high growth that these countries experienced throughout the 1960s, 1970s and 1980s through participation in GVCs, industrial policy seems to be somewhat

neglected by the GVC lens, or even waived off as unimportant. With reference to the light manufacturing industries, Gereffi (1996, p.95) writes: “The East Asian NIEs tended not to use specific industrial policies to promote the booming exports of light manufacturing sectors in apparel, footwear and toys. State credit, trade, and labour intensive policies were supportive, but not determining.”

Additionally, there seems to be a well-established belief in a dichotomy between EOI and ISI among those who adopt the GVC lens (e.g. Baldwin, 2011; Gereffi, 1990, 1996, 1999, 2014a, 2014b; Gereffi and Sturgeon, 2013; Milberg et. al., 2014)—a dichotomy that in many ways is misleading, as will be explained below—with EOI being considered more successful. The GVC lens argues that the dominant mode of thinking about industrialisation processes in developing countries has undergone a gradual shift from ISI—a model primarily established in Latin America, Eastern Europe and parts of Asia in the 1960s—to an EOI model of growth as established by the Asian tigers from the 1970s. Buttressed by the neoliberal thrust of the Reagan and Thatcher governments, EOI became the prevailing orthodoxy for developing economies around the world, according to Gereffi (2014b).<sup>41</sup>

In this respect, the Statist lens, with its greater in-depth understanding of the role of the state in the East Asian countries, can provide many useful insights. Certainly, like the GVC lens, some of those who adopt the Statist lens do indeed make a distinction between ISI and EOI, and one can somewhat plausibly argue that there was a shift from more to gradually less protectionism as South Korea and Taiwan underwent industrialisation (Amsden, 1989; Wade, 1990). But at least the Statist lens shows more prominently how ISI policies were important for the two countries’ growth strategies. It does not nearly exclusively attribute their catch-up to EOI. And, unlike the GVC lens, the Statist lens breaks down important nuances during the industrialisation boom of both South Korea and Taiwan that shows how protectionist policies featured in tandem with the well-known export-oriented policies. Chang (1993) outlines many of these in South Korea: the bureaucracy retained the power to impose emergency tariffs for items with excessively high import growth; quantitative restrictions and import area diversification regulations were pervasive—as late as 1982, 93 per cent of total imports were subject to one or more such restrictions; prohibitive inland taxes were used to virtually ban the

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<sup>41</sup> It must be mentioned that although the ISI/EOI dichotomy is prevalent in the GVC lens, some of its weaknesses are pointed out. Gereffi (2014b, p.11) writes: “the development story for East Asian and other newly industrializing economies cannot be captured solely through a contrast of the ISI and EOI models, since the shift from ISI to EOI was not total or uncontested in either East Asia or Latin America. Indeed, elements of both strategies were intertwined since countries tended to move from relatively easy to more difficult phases of both ISI and EOI over time”. However, this lacks further elaboration.

import of luxury consumer goods; and subsidised credit to firms who suffered in the short term from import-substitution acted in effect as import restrictions. In Taiwan, ISI policies featured perhaps more explicitly than in South Korea. In the mid-1970s, almost half the items in the tariff schedule still carried legal rates of over 40 per cent (Wade, 1990). And, just like in South Korea, Taiwan applied a range of non-tariff barriers after starting to gradually reduce tariff rates after the mid-1970s. These included the tying of import licences to export performance; restrictions on which countries imports can come from and who can import them (origin or agency restrictions); and ‘approval’ mechanisms for import control—for firms wishing to import certain inputs, a reference check had to be made to make sure that domestic suppliers could not meet the would-be-importer on price, quality and delivery, even if origin and agency restrictions were met (Wade, 1990).

Below, more details surrounding trade, foreign investment and GVC-oriented industrial policies in South Korea and Taiwan between 1960 and 1990 will be discussed, predominantly from the Statist lens. There are several ways to go about this. One could be to focus on the evolution of specific industries in the respective countries in which the value chains were global. Another could be to focus on GVC-oriented industrial policies cutting across industries. I will use both approaches, focusing on the evolution of some of the light manufacturing industries in South Korea (which is highly relevant for African countries who are in early stages of industrialisation), and in Taiwan’s case, focusing on how the government managed FDI across several industries.<sup>42</sup> After having discussed both case studies in those contexts, I will analyse some additional trade-related considerations that were important for both countries’ industrialisation drives and closely connected to the GVC-oriented industrial policies.

The story of the two countries is not that different. Foreign capital and the participation in global production networks have been important for both. But the key that has made South Korea and Taiwan succeed with this strategy is that, unlike the failed cases of GVC participation (which we will discuss in greater detail in section 3.4), they managed, through industrial policy, to transfer technological knowhow from foreign companies, increase local content to avoid low-skilled ‘enclave’ assembly, and gradually increase domestic ownership in key sectors.

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<sup>42</sup> There are many similarities between the two countries, so this could easily have been done the other way around. Taiwan had an equally burgeoning light manufacturing sector that involved global production networks, and South Korea’s GVC-oriented industrial policies extended across a range of sectors.

### 3.2.3.1 South Korea

To some, it may seem surprising to provide South Korea as an example of GVC integration. After all, the country is generally known to have had a very restrictive stance towards foreign investors. From 1960 to 1990, FDI inflows as share of total foreign capital inflows (except foreign aid) in the country was a mere 5 per cent, among the world's lowest (Amsden, 1989; Chang, 2006). After almost half a century of Japanese colonialism, there was a strong desire to avoid foreign domination of the economy. Consequently, there was a preference for borrowing over FDI (Thurbon and Weiss, 2006). The FDI that was permitted was heavily regulated to ensure that it delivered benefits to the national economy, usually as specified by the Economic Planning Board.

However, while FDI inflows have been low in South Korea, the export-oriented light manufacturing industry is in some ways an exception, especially with respect to Japanese foreign investments. Additionally, FDI inflows do not capture all the international subcontracting practices that were prevalent in many of the East Asian countries in the 1960s and 1970s, whereby supplier firms in the value chains were domestically owned (Milberg et al., 2014). As we will see below, this type of GVC participation was important in South Korea.

#### 3.2.3.1.1 Light manufacturing: textiles, apparel and footwear

Throughout the 1960s and 1970s, the textile, apparel and footwear industry was the highest-earning merchandise export category in South Korea (Amsden, 1989, 2001).<sup>43</sup> As mentioned, FDI accounted for a small share of total foreign capital in the country, but in some light manufacturing sectors it was significant. For example, in the textiles sector (including apparel), this share amounted to 20 per cent in 1974 (Chibber, 1999). Close ties to Japan have been especially important for the industry.<sup>44</sup> First of all, Japan's own industrialisation agenda was crucial. By the late 1950s, the Japanese economy was well into its high-growth phase. Experiencing rising labour costs and thus decreasing competitiveness of its labour-intensive exports, it was looking for neighbouring countries to relocate some of these activities. Japanese capital thus started entering South Korea through direct investments, joint ventures and

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<sup>43</sup> Textiles, apparel and footwear are not necessarily grouped into an industry, although one could perfectly argue that they could be, as textiles are crucial inputs for both footwear and apparel production. But in South Korea at the time, firms in textiles, apparel and footwear tended to cluster together (Singleton, 1997).

<sup>44</sup> Although diplomatic relationships were tense between South Korea and Japan in the 1960s, capital based in Japan, both Japanese and expatriate Korean, showed an immense interest in setting up operations in South Korea (Chibber, 1999).

subcontracting (Chibber, 1999). By the mid-1960s South Korean firms were exporting all sorts of apparel, mostly to the Japanese and the US markets (Castley, 1997a), using imported inputs from Japan.

The imported inputs from Japan were crucial for export success of Korean apparel. But the way that the relationships were formed, especially through joint ventures, made it easier for the Koreans not to simply become stuck with low-value export-oriented assembly tasks in the GVC. Two aspects were important.

On the one hand, Japanese willingness to form joint ventures with a minority stake played a helping hand. Between 1962 and 1974, 52 per cent of Japanese direct investments in South Korea were with minority ownership, versus only 27 per cent of US direct investments (Lee, 1980). Joint ventures with the Japanese in which Koreans had majority stakes more easily facilitated the transfer of technological know-how (learning how to produce synthetic fibres was especially important), marketing skills and managerial techniques.

On the other hand, the Koreans gradually and systematically pushed for less Japanese involvement and a higher degree of national firm ownership (Singleton, 1997). As soon as practically possible, the Koreans invested in their own R&D facilities, and by the early 1980s, they had acquired the capability to design their own plants and had reduced import dependence by developing domestic production capabilities in synthetic fibres, petrochemicals, spinning, weaving, dyeing and knitting. It is important to emphasise that the development of the Korean textile industry should not be understood purely as a means to provide inputs to the apparel industry. Textiles, especially synthetic fibres, was (and still is) considered more technologically advanced than apparel, and contributed significantly to export earnings in South Korea, especially in light of the high protectionist barriers that the US was starting to apply on traditional cotton textiles at the time (Chibber, 1999).

The role of the state in promoting the development of domestic capabilities in light-manufacturing in the form of mutually reinforcing 'ISI' and 'EOI' policies, if you will, cannot be understated. Amsden (1989) points out that the import substitution of synthetic fibres made the textile industry more productive and less vulnerable to devaluations of the exchange rate. To compensate domestic fibre-using firms for 'forcing' them to use domestically produced fibres, the Korean government subsidised inputs and handed out subsidised credit in return for meeting export performance targets (Singleton, 1997). Other important export promotion measures included preferential loans for operation and facility expansion, general tax and tariff exemptions on some imported inputs and wastage allowances (Kim, 1980).

Another important, but often neglected, part of the story of South Korea's export

success in textiles, apparel and footwear is the attraction of Japanese trading companies. In the early 1960s, the Koreans were simply lacking experience and knowledge of foreign markets, which made facilitating cooperation with these trading companies crucial. With reference to the Japanese trading companies, Chibber (1999, pp.330-331) writes:

These trading companies established links with Korean aspirants to the lucrative export markets of the United States and provided them with essential inputs as well as the benefit of their sales and marketing networks. In turn, they were able to deliver the Korean firms as customers for capital goods to Japanese producers... This is especially true in the case of products where brand recognition and quality play a role, like synthetics, shoes, and so on—which formed the core of the Korean strategy in initial stages. In markets for these goods, not only is quality of central importance, but the initiative lies in the hands of the importer in the targeted country and not the exporter. Links to these importers, their trust, and their satisfaction reign supreme for export success.

The trading companies were especially important for establishing ties to the US markets. In 1966, Japan accounted for 82 per cent of the textile, apparel and clothing market in the US, whereas South Korea only accounted for 8 per cent. By the early 1970s, the Koreans had made their entry, accounting for 31 per cent of the US market, whereas the Japanese share had fallen to 52 per cent (Castley, 1997b). By this time, 50 per cent of South Korea's exports went to the US (Castley, 1997a).

Over the 1980s, South Korea's products became even more prominent in the US. For example, Nike, which has been one of the world's largest brand names in athletic footwear for decades, originally outsourced most of its footwear production to Japan. But as costs rose there and South Korea started to develop productive capabilities in footwear production, heavy subcontracting took place in South Korea. In 1982, 86 per cent of Nike's athletic footwear was produced in South Korea and Taiwan (Locke, 2002). This system of outsourcing and subcontracting that started in the 1970s—with especially US retailers and brand names buying finished manufactured goods from foreign suppliers—is exactly what spurred the BDVC classification in the GVC literature later on (Gereffi, 1994).

In conclusion, the story of South Korea's success in GVC participation, especially in the light manufacturing industries, is a story of transferring technological knowhow through joint ventures, pushing for increasing local content and international competitiveness through various industrial policy tools, especially tariff protection and subsidised credit, and improving access to lucrative export markets through trading companies.

### 3.2.3.2 *Taiwan*

As in South Korea, Taiwan was in need of foreign capital during its early phase of industrialisation. And, just like in South Korea, the fear of foreign domination of the economy was pervasive. But in Taiwan, foreign investment has been slightly more important and foreign borrowing less, compared to the case of South Korea (Thurbon and Weiss, 2006). Although FDI inflows only fluctuated between 4 and 8 per cent as a share of gross fixed capital formation between 1960 and 1990 (Chang and Cheng, 1992), 20-25 per cent of manufactured exports came from foreign firms in the 1970s (Lee and Liang, 1982).

The origin of foreign capital has been similar to that of South Korea, with most foreign investment coming from the US, Japan and Hong Kong. This investment has not spread equally across industries. Textiles, apparel and footwear saw a great inflow of foreign capital, but the electronics industry has perhaps been more important for Taiwan. Over half of foreign firms' exports in the 1970s were in electronics and electrical appliances, and foreign firms accounted for two-thirds or more of total exports from this industry (Wade, 1990).

The control of foreign firms operating in the domestic economy has been rigorous since the beginning of the industrialisation period, and the government has made sure to utilise these investments for the development of productive capabilities, as will be discussed next.

#### 3.2.3.2.1 Managing FDI the 'right' way

In the early 1960s, there were plenty of attributes that made Taiwan attractive to foreign investors, very similar to those of South Korea. American and Japanese firms were beginning to search for low cost labour in nearby countries to relocate production, Taiwan offered political stability and disciplined labour, and the country was linked to Japan from the colonial era and to the US as an anti-Communist outpost. But the country did a good job in wooing foreign investors as well. Among other things, they offered 100 per cent foreign ownership in certain industries, guarantees against expropriation and five-year tax holidays. Effort went into making foreign firms feel welcome; one common trick was to discover some personal connection between the firm and a senior in the Taiwan government (Wade, 1990).

Taiwan has generally had a more welcoming FDI strategy than South Korea, but the government has bargained strategically with foreign investors, even in the 1960s, when the Taiwanese stance toward foreign investors was considered relatively liberal. An oft-cited example is the permission given to the Singer Sewing Machine Company (US based) to set up

a plant in Taiwan in 1963. The permission granted by the Taiwanese government resulted in strenuous objections by more than 250 small, domestically-owned assemblers and suppliers. The government argued that inviting the American company to build a plant would save foreign exchange and improve the quality of locally made parts. To ensure this, it required that Singer locally procure 83 per cent of required parts within one year of commencing operations and that it assist Taiwan's local component producers in meeting specifications. The company did not meet the stringent local content requirements after a year, but ended up transferring a large amount of technology, upgrading the industry and boosting exports (Gold, 1986).

Another example of government-induced technology transfer through FDI attraction is the polyethylene plant built in the early 1960s by the National Distiller and Chemical Corporation (again, an American firm). To attract the company, the Taiwanese government offered a five-year tax holiday, restrictions on imports of polyethylene for three years, guaranteed supplies of ethylene (an input that goes into making polyethylene) and unlimited repatriation of profits. The Taiwanese government, in return, required that National Distiller should export any surpluses over domestic needs, not establish production facilities in downstream sectors, and transfer 50 per cent of shares to Chinese nationals after 5 years, to make it a 50-50 joint venture (Gold, 1981; Wade, 1990). The distiller plant successfully came on line in 1968.

Beginning in the 1970s, the Taiwanese government applied a slightly stricter stance toward foreign investors. FDI in labour-intensive production came to be discouraged, it was faced with higher export requirements and local content requirements, and limits were placed on the extent to which foreign firms could capitalise on their technology—typically demanding that technology could not be valued more than 15 per cent of the firm's equity contribution in the case of joint ventures, with the intention of making the foreign firm commit more equity to the project at hand, thereby carrying more of the risk (Wade, 1990). Foreign investors did not always comply with the tough bargaining. For example, the Japanese automotive manufacturer, Toyota, withdrew from a joint venture in 1984 after concluding that the Taiwanese government insisted on too stringent local content requirements and export requirements. Within eight years, 50 per cent of cars were to be exported and local content were to rise to 90 per cent (Wade, 1990).

But generally, local content policies in Taiwan have been successful, and the strategy of linking foreign firms with local suppliers through subcontracting practices became a staple of GVC-oriented industrial policies in Taiwan in the 1970s and 1980s (see Aw (2003) and Schive (1990)). Foreign firms' links with local producers were assisted by proactive industry

associations. For example, the electronics industry association TEAMA (the Taiwan Electric Appliances Manufacturers' Association) aggressively recruited members from both foreign and local firms and, with the support of the government, actively promoted the "local content programme" (Aw, 2003, p.172). Local producers wanted to take advantage of the technology, management skills and sales networks of TNCs. And foreign producers stood to benefit from the local content programme because it reduced labour costs and lead-times as long as local suppliers met quality standards. Consequently, TNCs started enthusiastically training local technicians, providing technical knowhow and management skills to suppliers and cooperated with technical schools on internship programmes (Aw, 2003).

Also starting in the 1970s, the government became more active in trying to attract R&D from foreign companies, especially in high-tech sectors. Incentives included tax write-offs for R&D and reductions in taxes on technology imports. Obligations to be met on the foreign firm side often involved establishing research departments to train local personnel in advanced technology (Wade, 1990).

In conclusion, we see that the Taiwanese government has applied a range of favourable incentives to attract FDI, but has bargained and cooperated with foreign investors to ensure transfer of technology, local content, backward linkages, and export growth.

### *3.2.3.3 Additional trade – and GVC-related considerations important for South Korea's and Taiwan's acquisition of foreign technology and industrialisation*

#### *3.2.3.3.1 South Korea's 'informal' foreign technology transfer strategies*

The above case studies of South Korea and Taiwan focused mostly on policies to transfer technologies through the attraction of FDI, in particular local content requirements and joint venture requirements. However, in South Korea, while we saw how FDI played an important role in the textile, apparel and footwear industry, it was relatively unimportant in most other manufacturing industries. This is because in these other industries, South Korea largely acquired foreign technologies through other means.

In industries such as machinery and shipbuilding, large firms relied heavily on the acquisition of foreign technology in the form of foreign technology licensing. Between 1962 and 1981, the machinery industry accounted for almost half of South Korea's foreign technology license purchases (Kim, 2002). The US was the largest recipient of royalty payments for such licenses, followed closely by Japan. However, according to Kim (2003),

reverse engineering on imported capital goods was far more important than foreign technology licensing as a source of technology transfer. During the 1970s, imports of capital goods made up more than 20 per cent of the value of total investments in South Korea. Westphal et. al. (1985) compares this rate with four other catch-up economies in the same time period—Argentina, Brazil, India and Mexico—and finds that the country closest to this rate is Mexico, whose imports of capital goods made up 13 per cent of total investments.

At the time, the international property rights regime was relatively lax, which meant that little attention was paid to the legal aspects of copying imported technology through reverse engineering. These reverse engineering practices were particularly common in electronics, chemicals, computers and pharmaceuticals.

Kim's (1980) study of consumer electronics firms in South Korea revealed that of 15 domestic black/white TV assemblers in 1975, 11 entered the industry by reverse engineering done by experienced engineers poached from firms already established in the industry. Similarly, Kim's (1988) study of 28 South Korean firms involved in computer design and computer manufacturing found that a majority of firms used reverse engineering to acquire foreign technologies. In South Korea's pharmaceutical industry, many of today's leading companies that undertake advanced R&D activities and discover new drug compounds started as importers of packaged drugs. The lax international property rights regime in the 1980s allowed local pharmaceutical companies to get around patented production processes in order to reverse engineer the products.

The Korea Institute of Science and Technology (KIST), a government supported research institute made up of mostly overseas-trained Korean scientists and engineers, played an important role in technology transfer strategies. For example, Kim (2002) shows how KIST helped Korean firms in the electronics sector negotiate royalty rates for foreign technology licenses in colour television technology, and assisted Korean firms in the chemical industry reverse engineer polyester film production technology from Japan.

#### 3.2.3.3.2 The importance of the export strategy for South Korea's and Taiwan's industrialisation

South Korea's reverse engineering on capital goods imports would not have been possible had it not been able to pay for all these imports. They were able to do so largely because of a highly targeted export strategy that ran in parallel. Some details of the export strategy have already been discussed through various examples in chapter 2 and in the section above—generally, the

government would give special favours and assistance to firms in exchange for meeting export performance targets. But South Korea's export strategy arguably became something 'bigger' than just a technical recognition of balance of payments constraints. In his 'State of the Nation Message' on January 16, 1965, President Park Chung-hee even called it the economic lifeline of the country:

To go with increased production, the government has set another major target—increased exports...In a country which depends heavily on imported raw materials for its industries, export is the economic lifeline...For many years, Korea exported only \$20m to \$30m worth of goods a year...But in the past few years, the government and people awoke from sleep and strove. Exports began to expand rapidly. Last year, our exports exceeded the \$120m mark... We have acquired the self-confidence that we, too, can successfully compete with others in the international export race (Amsden, 1989, pp.68-69).

Exports as a per cent of GNP in South Korea rose steadily from less than 5 per cent in the 1950s to approximately 35 per cent in the 1980s. In tandem, imports as a per cent of GNP rose as well (driven by the capital goods imports), albeit at a slower rate (Amsden, 1989).

In Taiwan, the export drive was also a central part of the development strategy, as already detailed to some extent in the previous chapter and the previous section. From the early 1960s, several schemes were introduced to give positive discrimination in favour of export sales (for both domestic and foreign firms). Fiscal incentives, such as exemption of income tax for five years, were handed out to manufacturing firms provided that their exports equalled 50 per cent or more of production (Lin, 1973). Concessional export credit, which had been limited in volume in the 1950s, was expanded. Other methods for stimulating exports included export credits, encouragement of export cartels, provision of marketing information and export prizes (Wade, 1990).

The export promotion strategy required a degree of liberalisation of imports of intermediate goods for export production. The system of tax rebates—which allowed exports to be exempt from taxes paid on imports used as export inputs—was amplified in the early 1960s. Exporting firms were also able to obtain import licenses needed for their own production more easily, but only if no domestic substitutes were available or if the price of domestic substitutes was 10 per cent above the price of the corresponding import (Lin, 1973). As a result of these measures, the import content of exports in Taiwan rose fast, from 12.9 per cent in 1961, to 19.7 per cent in 1966, to 25.5 per cent in 1971 (Wade, 1990).

A supremely important conclusion emerges at this point. Both South Korea and Taiwan were protectionist (as discussed in the introduction to section 3.2.3) *and* liberal with their imports at the same time. This is no oxymoron—both countries realised that importing intermediate goods was necessary to ‘feed’ the export strategy (and in South Korea’s case, some were important for the acquisition of foreign technology through reverse engineering), but a full liberalisation of imports would create severe balance of payments problems and, in the case of intermediates in particular, constrain the growth of a domestic supplier industry. In other words, while ISI was a tricky business, EOI had an ‘unequivocal’ green light. The export strategy relieved foreign exchange constraints, thereby enabling these countries to import necessary goods. It also encouraged investments, as it provided a more stable macroeconomic environment.

Another important aspect of the export strategy for South Korea and Taiwan, more explicitly related to GVC participation, was learning about technologies and marketing by lead firms in GVCs. For example, as Taiwanese supplier firms inserted themselves in GVCs led by large US retailers, such as J.C. Penney and Walmart, many of these retailers set up offices in Taiwan to deal directly with small manufacturers. Close links to these buyers were important sources of technology. Levy (1994) argues that foreign buyers and traders were among the most important sources of technological information and support for SMEs in Taiwan. According to Aw (2003), foreign buyers, eager to purchase from cheaper sources, provided Taiwanese firms with technical assistance so that they could meet the foreign markets’ quality standards and specifications. These GVC-related productivity gains for Taiwanese SMEs were initially important in the textile industry, but later became supremely important in the electronics industry as well (see Gee and Kuo, 1998). In South Korea’s case, several studies with domestic firms have also pointed to the importance of GVC-participation whereby foreign buyers of locally produced goods under OEM arrangements provide technological knowhow to ensure that locally manufactured products meet buyers’ stringent specifications (e.g. Kim, 1987; Kim, 1980).

### **3.3 How do GVCs manifest themselves in developing countries, particularly Africa?**

Having discussed the definition of GVCs from a critical perspective and having examined the history of GVC-oriented industrial policies in two of the most successful growth experiences throughout the history of capitalism, we can now examine how the productive structures of

developing countries (in particular African countries) are affected by the expansion of GVCs (and how they could be affected in the future), before turning to how those countries can cope with these changes in section 3.4 .

In doing so, this section will look at both the opportunities and the challenges posed by the expansion of GVCs. Among the opportunities are the possibilities to capitalise on the increasing inflows of FDI and the chance to specialise in ‘niches’ of a GVC, which, for a single country, is arguably easier than trying to do all the things in a vertically integrated value chain. Both FDI attraction and niche specialisation are increasingly happening in physical spaces known as special economic zones (SPZs) and export processing zones (EPZs). Attention will therefore also be devoted to the importance of these zones.

The challenges are less well known. First, while niche specialisation can be beneficial, firms (and countries) can get ‘stuck’ in low value added activities in GVCs. Second, when developing countries specialise in low value added activities that have low entry barriers, TNCs further up in the chain often end up relocating the activities they initially outsourced to supplier firms in one country, to another country that offers cheaper labour, thereby ‘tossing’ firms out of the chain. Third, and most importantly, the expansion of GVCs has been accompanied with a massive expansion and consolidation of powerful TNCs, as briefly outlined in the previous section. This has resulted in a distribution of profits in GVCs in favour of TNCs from predominantly the West, which has, together with intensified global competition between developing countries, made it more difficult for developing countries to appropriate their ‘fair’ shares of value in the value chain.

### **3.3.1 Opportunities with the expansion of GVCs<sup>45</sup>**

#### *3.3.1.1 FDI*

As mentioned, the expansion of GVCs especially since the 1990s has entailed a massive increase in FDI into developing countries. From a developing country perspective, FDI inflows from richer countries can yield a number of benefits. In the short term, it can boost employment; it can increase foreign exchange and tax revenues; it can assist the integration of host countries in the world economy; and it can have a positive impact on infrastructure

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<sup>45</sup> The general gains from trade openness is one of the opportunities with GVCs that is often referred to in the literature (e.g. OECD, 2013b; UNCTAD, 2013) but will not feature in this section, the reason being that it is arguably not directly linked with participation in GVCs per se, but rather participation in international trade.

development and the business environment (Farole and Winkler, 2014; Gallagher and Zarsky, 2007).

There are also benefits to be derived from FDI that are more long term in nature. Below, explanations for these long term benefits will be discussed, focusing mainly on three effects: technological transfers/ spillovers, competitive pressures and human capital development. Additionally, this section will look at the world's most famous example of successful FDI attraction, namely Singapore.

Technological transfer, or spillovers, is the principal channel that the economic literature has identified as a mechanism through which FDI inflows benefit the host economy. Especially during the last 50 years, it has become clear that the development of productive capabilities in developing countries has not happened through innovation but through imitation—a process of acquiring technologies that more developed countries already have, often embedded in the practices of TNCs (frequently generated through their corporate R&D). A common channel through which spillovers happen are backward linkages with local suppliers in the host country, when TNCs provide technical assistance, training and other information to raise the quality of suppliers' products and help them meet on-time delivery (OECD, 2002; Paus and Gallagher, 2008). TNCs also are known to assist local suppliers with purchasing raw materials and intermediate products (especially from abroad) that help modernise and upgrade their production process (OECD, 2002). Spillovers can also happen through simple demonstration, as domestic firms are exposed to TNCs' products, production processes and marketing strategies.

A second channel through which FDI is often argued to be beneficial for the host economy is competition. The logic is that the presence of foreign firms will exert greater pressure on competing domestic firms to be more productive. As a result, domestic producers are thought to reduce inefficiencies and make a greater effort to incorporate new technologies in the production process, thus raising their productivity and consequently the average productivity of the industry (Paus and Gallagher, 2008).

Third is the possibility of enhancing skills of the local workforce through attracting foreign companies (this is largely related to the first point, as skills development can in some ways be seen as a type of technology transfer). Although tertiary education and training programmes by the host country government is important, it is also recognised that skills development often happens through training programmes implemented by foreign companies—sometimes even outside the host country, by sending workers to intensive training programmes to model factories based in TNCs' home countries—or on-the-job learning.

Labour mobility between firms in the host country (both foreign and domestic firms) eventually ensures that knowledge is transferred between firms. The demand for certain types of skills by TNCs can also provide host-country governments an indication of the type of skills that are useful for international competitiveness, and thus encourage them to adjust and construct education and TVET programmes accordingly (OECD, 2002).

#### 3.3.1.1.1 The world's most successful in FDI attraction? A brief overview of Singapore's experience

We have already seen how South Korea and Taiwan utilised FDI in their industrialisation strategies. But, of the Asian tigers, the most popular example of strategic use of FDI for economic development is Singapore (and probably among the most popular examples in the world). Between 1971 and 1995, net FDI inflows as a share of gross fixed capital formation in Singapore was 22.9 per cent, the highest in the world in this period (Chang, 2006). Between 1980 and 1990, Singapore received more FDI in absolute terms than any other developing country (Huff, 1995). This is astonishing considering that it had a population of less than 3 million people in 1990. On a per capita basis, using 1990 population, the figures for FDI inflows were \$767 for Singapore compared to \$1.50 for China, the latter of which was the fourth largest least developed country (LDC) recipient of FDI at the time (Huff, 1995).

Given the lack of entrepreneurial talent and technological knowhow in Singapore in its early phase of industrialisation, attracting TNCs from abroad provided a perfect strategy to acquire state of the art technology and access to global production networks. The Economic Development Board (EDB) has played the central role in promoting Singapore to foreign firms and ascertaining the capabilities that foreign firms need in order to be in Singapore. Policies for attracting FDI included liberal entry and ownership conditions, a range of custom-designed financial incentives (perhaps most importantly tax breaks) and efficient and transparent administration (Lall, 2000).

Policies have also focused on raising the knowledge content of TNC subsidiaries in Singapore. The principal device was investment incentives tied to the introduction of higher value added operations, training of local staff and the dispatching of Singaporean engineers to TNC headquarters to acquire new technical skills (Wong, 2003). Policies have also encouraged joint ventures and technology alliances, usually facilitated by the EDB, particularly in high-tech industries, such as semiconductor wafer fabrication and chemicals (Wong, 2003).

In parallel with these policies, the Singaporean government made heavy investments in

infrastructure and education oriented towards the TNCs that they were attracting. For example, the government purposefully planned modern living environments with good housing, R&D facilities and efficient transport infrastructure to help attract foreign companies (Prime, 2012). In parallel, the government made sure to build basic infrastructure, such as roads, ports, airports and telephone lines. With respect to education, the country's renowned TVET programmes have been critical. A distinguishing feature of the many TVET institutions in Singapore is that they were established and run as collaborative ventures between the EDB and overseas partners. Some partners were well known TNCs, like Philips, ABB and Seiki, while others were highly regarded industrial training institutes in Europe, like the French Electrical/Electronic Industry Federation and the German Agency for Technical Cooperation (Wong, 2003).

Singapore remains of the most internationally integrated economies—after Luxembourg, it has the highest GVC participation in the world (OECD, 2013b).

### *3.3.1.2 Niche specialisation: joining the chain rather than building it*

The expansion of GVCs entails that production has become increasingly fragmented. Until the 1990s, the argument goes, industrialisation in developing countries focused on building vertically integrated industries, i.e., building the entire supply chain (Baldwin, 2011; OECD, 2013b). With reference to the industrialisation era before the 1990s, Baldwin (2011, p.4) states, “The touchstone fact was that no nation could become globally competitive without a broad and deep industrial base. Building such a supply chain took decades, so considerations of scale, coordination, and commitment posed massive development challenges.”

Today, a popular view is that nations can industrialise by joining some value chains rather than building them, and that they don't necessarily need to develop vertically integrated industries (Baldwin, 2011; Bigsten and Söderbom, 2009; Cattaneo et al., 2013). In other words, GVCs are making it relatively easier for developing countries to industrialise by allowing them to specialise in particular segments of an industry (stages of production, tasks or business functions)—niche specialisation so to speak—without having all the ‘upstream’ capabilities in place, and thus start to export more quickly at a lower cost. AfDB-OECD-UNDP (2014, p.129) even claims that developing countries can break into high tech sectors this way: “The presence of high tech goods in a country's export basket no longer implies the presence of a wide set of industrial capabilities, but merely the presence of the respective assembly operation.”

China is an often-cited example to prove the benefits of niche specialisation that has been enabled by GVC expansion. The country's export success in manufacturing products<sup>46</sup> largely reflects its assembly activities: the share of processing trade (exports that use duty-free imported inputs) in China's total trade has increased rapidly since the 1990s, almost reaching 50 per cent in 2011 (OECD, 2013b). Between 2000 and 2008, China accounted for 67 per cent of the world's processing exports (Gereffi and Lee, 2012). In large part, China's processing activities reflect a triangular trade pattern. Advanced parts and components are produced by more developed countries (typically Asian countries, like South Korea, Taiwan and Japan, but sometimes the US), then exported to China, where different intermediates are assembled into finished products, and finally the assembled products are often exported to the US or developed countries in Europe, where they may undergo additional processing (like packaging and marketing) before being sold on the market. The making of an Apple iPod is a perfect example. The hard drive and display module is made in Japan, the multimedia processor chip is made in Taiwan, assembly and testing is done in China, and distribution and retail is done by Apple (whose headquarters are in the US).

Some Latin American countries have also been benefitting from industrialisation drives based on niche specialisation in GVCs. Costa Rica is a good example. From the 1980s onwards, the country has implemented several reforms aiming for more integration in international trade, including the establishment of a dedicated investment agency (CINDE), a free trade zone, and preferential trade agreements with dozens of countries. These reforms have provided a tremendous boost to Costa Rica's FDI stock, which in 2011 stood at 37 per cent of GDP, second only to Chile in Latin America (OECD, 2013b). The country has attracted in particular large IT companies interested in setting up assembly plants for microprocessors. Foreign investment in the industry started in the 1990s with Intel, and gradually, other companies such as HP and IBM have set up production facilities (COMEX, 2011). Most inputs are imported for simple assembly, before being exported for more processing in the US. The niche of this industry that Costa Rica has specialised in has allowed the country to diversify from its traditional exports, banana and coffee, towards manufacturing.

We already know that Africa's integration into global production networks and FDI inflows are relatively low, so it is unsurprising that there are not many successful examples of industrialisation through niche specialisation on the continent. There are, however, a few exceptions. The most notable ones are Egypt (electronics industry—video displays), Mauritius

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<sup>46</sup> By 2000, China's manufactured exports had expanded 26 times the value recorded in 1981 (Memedovic, 2004).

(apparel industry) Morocco (apparel industry and automotive industry) and Tunisia (apparel industry) (OEC, 2016). Most of these countries that export apparel products generally perform CMT functions on imported fabric, before exporting them to brand names or retailers based in the West (more on the global apparel and textile industry in chapter 4). The automotive sector in Morocco stands as the largest export-oriented manufacturing industry in any one African country, with estimated export earnings of \$5.43b in 2015, employing over 100,000 people (Saleh, 2016). The growth of the sector has benefitted from attracting foreign automotive companies to SPZs, most notably French ones, such as Renault (the largest) and Citroën. The cars are assembled in Morocco, using mostly imported inputs, before they are exported to Europe for sale.

### *3.3.1.3 EPZs*

The physical spaces most commonly known as EPZs have become an integral part of FDI attraction and GVC participation (and often based on niche specialisation) for developing countries. An EPZ is a geographically delimited zone (usually physically secured, for example by a fence) that provides special financial incentives for foreign companies (although sometimes to domestic companies) for them to relocate production to host countries, most often manufacturing activities. These zones go under a variety of different names—apart from EPZ, SPZ and free trade zone (FTZ) are frequently used terms. World Bank (2008b) uses the SPZ terminology, and within that category, distinguishes between FTZ, Traditional EPZ, Hybrid EPZ, Freeport, Enterprise Zone, and Single Factory EPZ. Many more terms are known to be used. In fact, Boyenge (2007) lists thirty-two different titles for such zones, indicating slight differences in terms of concessions, regulations and subsidies. In this chapter, the EPZ terminology will be used, as almost all of these zones involve a high degree of export processing, referring broadly to the zones that have a wide variety of regulatory frameworks that most importantly contain special financial incentives for primarily foreign companies. Milberg and Winkler (2013, p.242) provides a concise, yet comprehensive list of such incentives:

Some of the typical incentives offered under EPZs include exemption from some or all export taxes, exemption from some or all duties on imports of raw materials or intermediate goods, exemption from direct taxes such as profit taxes, municipal and property taxes, exemption from indirect taxes on domestic purchases, exemption from national foreign exchange controls, free profit repatriation for foreign companies,

provision of streamlined administrative services especially to facilitate imports and exports, and free provision of enhanced physical infrastructure for production, transport, and logistics.

Madani (1999) lists additional features, such as more flexibility with labour laws for firms in the zone than in the domestic market, generous income tax holidays, and subsidised utilities and rental rates.

Alongside the expansion of GVCs, the number of EPZs in the world has exploded. As seen from Table 3.2, the number of countries with one or more EPZ in 2006 was 130, up from 93 in 1997, and 29 in 1975. From a world total of 3,500 zones in 2006, developing countries tallied 3,126 of these (Stein, 2012). Employment by EPZs reached 66m in 2006, up from 22.5m in 1997. China’s export processing activity has been a huge driver—the country’s EPZs account for over 60 per cent of total EPZ employment in the world.

<b>Table 3.2: EPZs in the world, 1975-2006</b>					
	<b>1975</b>	<b>1986</b>	<b>1987</b>	<b>2002</b>	<b>2006</b>
<b><i>Number of countries with EPZs</i></b>	25	47	93	116	130
<b><i>Number of EPZs</i></b>	79	176	845	3000	3500
<b><i>Employment (millions)</i></b>	N/A	N/A	22.5	43	66
<b><i>Employment China (millions)</i></b>	N/A	N/A	18	30	40

Source: Boyenge (2007)

<b>Table 3.3: Countries ranked by highest employment in EPZs, 2006</b>			
<i>Rank</i>	<i>Country</i>	<i>Employment</i>	<i>Number of EPZs</i>
1	China	40,000,000	164
2	Indonesia	6,000,000	N/A
3	Mexico	4,312,000	N/A
4	Philippines	1,128,000	78
5	Vietnam	950,000	191
6	Pakistan	888,000	26
7	UAE	552,000	16
8	South Africa	535,000	6
9	Malaysia	492,000	213
10	Czech Rep.	487,000	13

Source: Boyenge (2007)

<b>Table 3.4: EPZs in Africa, 1971-2006</b>			
	<i>1971</i>	<i>1997</i>	<i>2006</i>
<i>Number of EPZs</i>	1	40+	155+
<i>Top countries with most EPZs (employees number / of zones)</i>	Mauritius (N/A / 1)	Kenya (N/A / 14), Egypt (N/A / 6)	South Africa (535,000 / 6), Tunisia (259,000 / 6), Egypt (209,000 / 57), Morocco (145,000 / 2), Nigeria (111,000, 6), Mauritius (65,000, 1)

Source: Author's calculations based on Boyenge (2007), Stein (2012) and World Bank (2008b)

In 1990, only three African countries, Egypt, Tunisia and Mauritius, had EPZs with any significant employment or exports (Stein, 2012). Africa is still relatively small on the world EPZ map, but definitely not absent. As seen from Table 3.4, the continent was estimated to have over 155 EPZs in 2006. Of these, Stein (2012) estimates that there are 91 in SSA spread

over 20 countries, with employment of roughly 1,05m. South Africa has by far the most employees, with an estimated 535,000 (Table 3.3).

Why do developing countries go to such great lengths to set up EPZs? It's obviously closely linked to FDI attraction, so the general motivations for attracting FDI also apply to motivations for setting up EPZs. Mallani (1999) lists 3 primary goals of an EPZ: 1) to promote foreign exchange earnings by promoting non-traditional exports; 2) to provide jobs to alleviate underemployment in the host country; and 3) to attract foreign investment and engender technological transfer. Milberg and Winkler (2013) point out another important reason (closely related to point 3 by Mallani), which is the importance of collaborating with lead firms, not only in order to reach their markets, but also for the potential of industrialisation of the host economy.

The export gains from EPZs are especially important. In Costa Rica, EPZ's share in manufacturing exports increased from 10 per cent in 1990 to 53 per cent in 2005, while during the period 2001-2005, total exports in the country grew by 55 per cent (Engman et. al., 2007). In Bangladesh, EPZs' share of the growth in total foreign exchange earnings increased from 0.02 per cent in 1983 to 18 per cent 2004 (Hossain, 2005). In Africa, Mauritius is the most prominent example of reaping export dividends thanks to EPZs. The country saw its share of exports produced by EPZs jump from 3 per cent to 53 per cent of total exports between 1971 and 1986, while in the same time period, total exports skyrocketed from Rs3.9m to Rs4.96b (Engman et. al., 2007). The investments came mostly from Hong Kong, and were targeted at the apparel industry. Mauritius has also been successful in securing increasing local content in its apparel EPZs. By 1982, domestic producers were supplying 41 per cent of all the intermediate inputs going into the EPZs, including nearly all the cardboard boxes, and a large proportion of the cloth, thread, buttons and trimmings (Willmore, 1995).

### **3.3.2 Downsides with the expansion of GVCs**

#### *3.3.2.1 Getting stuck in low-value added activities*

All the opportunities with GVC expansion for developing countries that were discussed in the previous section are closely linked—the production activities that happen through FDI attraction are usually within a segment of a value chain, quite often in an EPZ context. Several examples of countries that have been successful to various degrees with GVC participation were presented. But in fact, there are equally many, if not more, examples of countries that

have participated in GVCs without much success. The main issue in the failed cases is the lack of technological spillovers and/or linkages to the domestic economy. These countries typically start with and end up doing a simple task for one or several foreign firms that requires little skill. A typical result is that the FDI ends up creating some jobs only within the confines of the EPZ, becoming a ‘cathedral in the desert’, or an ‘enclave economy’, in the words of Gallagher and Zarsky (2007).

In fact, econometric studies trying to find a link between FDI attraction and productivity growth in the host economy are ambiguous at best. Cross-sectional studies tend to find statistically significant evidence of positive spillovers, while those based on panel data are more likely to find negative spillovers (Farole and Winkler, 2014; Görg and Greenway, 2004; Paus and Gallagher, 2008).

While EPZs tend to increase exports, the high share of local content that, for example, the Mauritian case achieved, is an exception rather than a rule. According to Milberg and Winkler (2013), the range of 3 to 9 per cent of inputs purchased domestically is more common, which has been the case for El Salvador, Guatemala, the Philippines and Sri Lanka in the mid to late 1990s. For an extreme example, take the Dominican Republic. 30 years after the creation of the first EPZ in the country, the average purchase of domestic inputs in all EPZs was no more than 0.0001 per cent of the value of all inputs used.

On average, it might seem that East Asian countries have performed better than the rest of the developing world in terms of GVC participation (thus far, this chapter has discussed to varying degrees of detail the successes of China, Singapore, South Korea and Taiwan). Below, we move to another region of the world, Latin America, which on average has been far less successful than East Asia in relation to GVC participation.

Case studies from three countries will be presented: Mexico, Dominican Republic and Brazil. Mexico is a prime example of FDI attraction in high-tech sectors but with few linkages to the domestic economy. The case of the Dominican Republic tells a similar story, but in low-tech sectors. The Brazilian case does not illustrate a lack of backward linkages, like the other two, but rather how GVC power structures and well-protected rents by TNCs hinder developing countries from reaping the profits from producer services.

### 3.3.2.1.1 Mexico: the ultimate example of massive, but mostly failed, FDI attraction in the IT industry

In the early 2000s, more than 90 per cent of FDI inflows to developing countries were dispersed between only 10 countries, and Mexico was one of the top three (Gallagher and Zarsky, 2007). In addition to being a prime case of massive FDI attraction, it illustrates a stark change from a relatively strict stance against foreign investors, which was partly successful, to a highly liberalised regime for FDI.

In the IT sector, a sector that has become hugely important for Mexico, TNCs were limited to 49 per cent of ownership of domestic firms between 1950 and 1980; they had to invest between 3 and 6 per cent of gross sales into R&D; and domestic parts and components had to account for at least 45 per cent of value added for personal computers and 35 per cent for minicomputers (Paus and Gallagher, 2008). This relatively interventionist strategy was successful in generating growth and diversification of the domestic IT sector.

But it was not successful in achieving international competitiveness, and by the mid-1980s, continuing balance of payments problems and a debt crisis (the plunge in the oil price in 1982 being a contributing factor) swung the pendulum towards neoliberalism. After signing the North American Free Trade Agreement (NAFTA) in the early 1990s, the shift towards free trade was more or less complete. President Carlos Salinas' (1988-1994) plan was to create jobs and modernize the economy through large increases in FDI. Global flagships of the IT industry, like Hewlett Packard (HP) and International Business Machines (IBM), moved massive manufacturing assembly operations to Guadalajara, Mexico, as wages were low and labour unions weak, there was proximity to the US market and tariffs on high tech exports was eventually lowered to zero under NAFTA (Paus and Gallagher, 2008).

There were initial hopes that local firms would evolve into contract manufacturers and suppliers to the US-based TNCs, but these hopes were short-lived. Companies like HP and IBM invited contract-manufacturing firms based in the US instead, such as Flextronics and Solectron, to co-locate in Guadalajara. In turn, these contract manufacturing firms built their competitive advantage by managing a third tier of local suppliers mostly in East Asia. Less than 5 per cent of inputs were sourced from Mexico (Gallagher and Zarsky, 2007). While the attraction of lead firms from the US was initially a source of employment and income, this changed in the early 2000s. The high-tech stock bubble burst, making US lead firms search for cheaper production sites, so China's WTO membership in 2001 could not come at a better time.

China became the lead production platform for these firms, and manufacturing operations in Guadalajara were severely cut back or relocated.

In the early 1980s, Mexico actually had some indigenous firms who manufactured their own computers, like Scale and Electron Computers, and joint venture assembly manufacturers, such as Electronica Panter and Microtron, that worked alongside TNCs and in some instances supplied global firms like IBM, Motorola, HP and Kodak (Palacios, 2001; Wilson, 1992). By 1987, an impressive 56 per cent of domestic demand in Mexico's IT industry was met by domestic supply (Paus and Gallagher, 2008). 20 years later, the entire domestic computer industry was nearly extinct. A large reason for this was not only that TNCs were free to import all of their inputs, but the skill content of jobs given to Mexican workers was extremely low, thus generating very few knowledge spillovers. Among the employees of foreign firms in Guadalajara, only 6.9 per cent had graduated from high school (Paus and Gallagher, 2008). Furthermore, the TNCs conducted almost no R&D operations in Mexico—they saw the country primarily as a place for assembly manufacturing operations.

So who is to blame for this lack of technological spillovers? Gallagher and Zarsky (2007) argue that the promise of Mexico's "Silicon Valley" went unfulfilled for two reasons. One is the global restructuring and increased competition of the IT industry. The emergence of China as a key player in the global production system, with a rare combination of low wages, a huge domestic market, and impressive productive capabilities, made it more difficult for Mexico to compete internationally. The second is the lack of government policies aimed at building the capacities of local firms. From the mid-1980s onwards, Mexico's government failed to put in place incentives for foreign firms to use domestic inputs; there was no government-provided development financing for domestic firms; and high interest rates choked domestic investments and put upward pressure on the peso, which further biased TNC procurement away from domestic suppliers. As Gallagher and Zarsky (2007, p.9) writes:

The experience of other late-industrialising countries, especially in East Asia, is that the state must proactively promote local learning, knowledge, and innovation. With such policies in place, FDI spillovers can be garnered. Without them and the growth of local knowledge assets they engender, MNCs will transfer only low-skilled, low-wage and ultimately footloose operations. Rather than a proactive industry policy to develop domestic firms and markets, Mexico adopted a "maquila mindset" that oriented industrial development solely around attracting MNCs to produce for export.

### 3.3.2.1.2 Dominican Republic: apparel EPZs with no linkages

From the mid-1980s, the participation in GVCs through EPZs in the Dominican Republic expanded rapidly. From 1985 to 1994, the number of EPZ increased from 4 to 32, exports by EPZs increased from \$0.2b to \$2.8b (\$1.6b of which was apparel and textile exports), and EPZ employment rose from 35,720 to 176,311 (Engman et.al, 2007). So from an employment and export point of view, GVC participation has had a positive impact on the domestic economy.

However, as already mentioned, the problem of linkage creation has been pertinent, with less than 0.0001 per cent of the value of inputs used in production in the EPZs purchased domestically. Shrank (2001) cites three reasons for the low degree of linkage creation. First, a domestic capital and intermediate goods industry did not exist, and there has been little attempt to develop one, through, for example, ISI policies. Second, for those local suppliers that did exist (and initially survived the entry of EPZs), few were able to meet world market standards (i.e. EPZ standards) for price, quality, delivery terms and level of output. Third, many local suppliers simply did not see it profitable to serve the EPZs—they were comfortable with the profit margins in the domestic market.

Apart from the obvious problem that the attraction of foreign firms through setting up an EPZ did not create any linkages to the Dominican economy, there was an additional problem. The types of activities that were carried out in EPZs in the Dominican Republic were simple, labour-intensive activities that required very little skill, relying on the country's relative labour cost advantage over other countries. When relative labour costs increase, a firm (or even an entire country) risks losing the production activities to other countries with cheaper labour, just like what happened in the Mexican case. Kaplinsky and Morris (2001) provide the case of a firm making denim jeans in an EPZ in the Dominican Republic during the early 1990s. It specialised in sewing denim jeans, using materials imported from the US, designed in the US and cut in the US, selling them to a major international brand-name company. The local firm began by getting \$2.18 per pair of jeans. But as neighbouring countries devalued their currencies, thereby reducing their labour costs in terms of US dollars, the firm in the Dominican Republic was forced to reduce its charge-rate. However, even this was not enough and the work was eventually sourced elsewhere.

The vulnerability of this firm (and most firms in the EPZ) in the Dominican Republic was that it specialised in a niche task (sewing) in the GVC, a low-value added activity subject to fierce international competition that could easily be sourced elsewhere. The actual activity did not even allow for enhanced value-addition. Most of the value was appropriated at the

design and branding stages of the GVC anyway.

### 3.3.2.1.3 Brazil: GVC power structures hindered functional upgrading in the shoe industry

For those familiar with the expansion of the shoe cluster in Sinos Valley, Brazil, it might seem confounding to provide it as a case study of how GVC participation can go wrong. From the 1960s to the 1990s, the cluster grew rapidly to become recognised as one of the largest players in the global footwear industry, reaching close to \$1b in export earnings in 1995 (Nadvi, 1995), accounting for almost all of Brazil's shoe exports. Its employment creation has been impressive, not only in shoe manufacturing but also in its supplier industry. Analysing the cluster's performance in the 1990s, Schmitz (1995, p.11) writes, "Roughly speaking, for every job in shoe manufacturing, there is a job in the local supplier industry," the latter consisting of jobs in the local cattle ranching sector and in firms producing uppers, soles, heels, insoles, insoles, shanks, glues, nails, eyelets and dyes.

So the lack of backward linkages is not what has been the problem with the Sinos Valley shoe cluster. Rather, it has been an issue of power structures in the GVC that shoe producers in the cluster participated in. The Sinos Valley cluster mostly sold its shoes to buyers based in the US, who supplied large US chain stores. This started as early as the 1960s, when these buyers started targeting suppliers in the cluster that could deliver larger volumes of standardised products. The larger firms were able to meet the new requirements, experiencing increases in product quality in the process.

The early 1990s saw the rise of rival Chinese producers and downward pressure on prices (Kaplinsky and Morris, 2001). By that time, shoe manufacturers in the Sinos Valley cluster had built up 3 decades of experience in the global footwear industry, and one would expect that some of the manufacturers in the cluster would move further up the value chain to marketing and design, where rents were better protected. This did not happen however, as 1) large producers in the cluster were reluctant to move to areas of design and marketing for fear of retaliation from the cluster's main buyers, which represented nearly 40 per cent of the total cluster exports and 2) US buyers did not diffuse their capabilities in design and marketing. The cluster simply got stuck selling shoes to the Americans at declining prices.

So this example shows that it is perfectly possible for firms (or even entire industries) to become locked into a low-value added activity as a result of power structures within the chain.

### 3.3.2.2 *GVC expansion and the profit squeeze for developing countries*

As seen thus far, the expansion of GVCs brings with it plenty of opportunities but has produced different outcomes largely because of different policy interventions. On average, East Asia has been more successful than other regions of developing countries. However, regardless of policy interventions, the expansion of GVCs brings with it inherent challenges for developing countries. This section will discuss two important challenges in this respect, both of which are contributing to a profit squeeze for developing countries. One is the expansion and consolidation of power by TNCs, especially by those based in the West (as already mentioned in section 3.2.1), which allows these TNCs to appropriate increasing shares of profits. Another is the ‘race to the bottom’ by developing countries—the expansion of GVCs has (partly) resulted in a massive increase in the global supply of unskilled labour over the last decade, causing increased competition in especially light manufacturing industries. Together, these two developments are causing downward pressure on profits and prices in the products/parts of GVCs that developing countries are specialising in.

#### 3.3.2.2.1 ‘Cannibalised’ by TNCs

Section 3.2.1 showed that there has been a steady global expansion and consolidation of TNCs since the 1990s. These TNCs are predominantly based in the West. Of the top 100 companies in the world, as ranked by market value by the Financial Times in 2014, only eight are from developing countries—six from China, one from Brazil and one from Russia (FT, 2014). Of these eight, only one is outside the oil or banking sectors, the Brazilian beverage company Ambev.

Not a single African firm makes the list of the top 100 companies in the world. While it comes as no surprise that African firms are not big players on the global stage, more unexpectedly, they play a marginal role on their own continent as well, largely because of the increasing market shares that TNCs from predominantly the West are gaining in Africa. While detailed aggregate data on the role of TNCs versus the role of domestic firms in Africa is hard to come by, a recent ranking of the largest domestic firms in Africa (see Table 3.5) can help us draw some conclusions. In the SSA region excluding South Africa (SSAXSA countries)—made up of 47 countries and often considered to most accurately represent Africa in an aggregate manner, at least when talking about the continent from an economic point of view—Flour Mills of Nigeria, an agribusiness company, is the largest outside the extractive industries.

The fact that it ranks as low as 95 illustrates the marginalised role that domestic firms in SSAXSA countries play outside the extractive industries. By contrast, the largest agribusiness company in Europe, Nestle, ranked 9 of all companies in the world in the same year, with an estimated turnover of \$100.6 billion, 63 times larger than Flour Mills of Nigeria.

<i>Rank</i>	<i>Company</i>	<i>Country</i>	<i>Sector</i>	<i>Turnover</i>	<i>Net profits</i>
1	Sonatrach	Algeria	Petroleum	\$72bn	\$9bn
2	Sonangol	Angola	Petroleum	\$33.3bn	\$3.1bn
3	Sasol	S. Africa	Chemicals	\$17.5bn	\$2.4bn
4	MTN Group	S. Africa	Telecoms	\$15bn	\$2.5bn
5	The Bidvest Group	S. Africa	Diversified	\$14.6bn	\$0.4bn
6	Eskom	S. Africa	Electricity	\$14.1bn	\$1.6bn
7	Shoprite Holdings	S. Africa	Retail	\$8.9bn	\$0.3bn
8	Vodacom Group	S. Africa	Telecoms	\$8.2bn	\$1.2bn
9	Imperial Holdings	S. Africa	Diversified	\$7.9bn	\$0.3bn
10	De Beers Consolidated Mines	S. Africa	Mining	\$7.4bn	\$1bn
.....	.....	.....	.....	.....	.....
95	Flour Mills of Nigeria	Nigeria	Agribusiness	\$1.6bn	\$0.05bn

Source: Africa Report (2013)

Outside the extractive industries, foreign companies account for practically all investments of any significant size in Africa, which explains why African firms themselves are more or less invisible. A most recent case in point is the stakes bought by Danone (the world's biggest yogurt company, based in France) in Africa's major dairy companies. In 2014, it bought a 40 per cent stake of Brookside Dairy Limited, East Africa's largest milk company, giving Danone access to over 140,000 milk farms across the East African region. Beyond this acquisition, the company has also set plans to raise its stake in the Moroccan dairy company Centrale Laitiere to more than 90 per cent. Centrale Laitiere holds a 60 per cent share of the Moroccan dairy market (UNECA, 2015). With respect to the African food and retail industry,

UNECA (2015) writes:

Transnational foreign-owned firms in the longer run are not far from taking full control of almost all profit-making opportunities at the expense of the (...) weak African smallholder agriculture, totally crowding out along the way the emergence of indigenous-owned food giants or branded agribusiness (...) there is urgent need to see African governments intervene to prevent emerging success stories of the indigenous food sector be financially cannibalised and owned across Africa by the most financially endowed firms in the food and retail industry (UNECA, 2015, pp.108-109).

How, precisely, is this a problem for developing countries? The consolidation and global expansion of TNCs that has been evidenced in this section and in section 3.2.1 means that a tremendous amount of power lies in the hands of very few companies based in the West. In essence, the type of globalisation we have witnessed in the last three decades has resulted in a small number of actors appropriating increasing shares of profits—accruing from technological dominance (fortified by strong protection of intellectual property rights), brand name recognition, and privileged access to low-cost capital—over a larger market.

The technological dominance of these companies is tacit in nature, and act as natural barriers to entry. They offshore parts of the results of their innovations (that is, use them to produce things abroad) but not the innovative capabilities themselves, locating almost all their technology-creating activities in their home countries. Relatively little R&D, other than lower-level support laboratories, tend to be relocated to developing countries (Dicken, 2011). This trend was actually observed as early as the 1960s by Raymond Vernon. In his product life-cycle theory, he argued that products have a cycle of globalisation, with (mass) production eventually being offshored to poorer countries, with the richer countries retaining much of the profits (Vernon, 1966).

Unsurprisingly, the last few decades of increased offshoring have coincided with increased corporate profits as share of national income in almost all major industrialised countries. Milberg and Winkler (2013) find that US corporate profits as a percentage of corporate gross value added increased from 23 per cent to 32 per cent from 1970 to 2010, while at the same time, US goods imports from low - and middle-income countries as a percentage of total goods imports increased from 10 per cent to over 50 per cent. TNCs based in the West are basically growing their profit shares from intangible activities that are increasingly knowledge - and skill-based.

Especially branding is becoming a key strategy through which these TNCs make profits. We are seeing this most importantly in industries in which production technology is

now standardized, like apparel, footwear, consumer electronics and to some extent automobiles. For example, in the car industry, production technologies are now widely shared. In the words of Ford Chairman William Clay Ford Jr., “It’s easy to build a car. It’s harder to build a brand” (Davis, 2009, p.200). Some brand power is associated with considerable technological design content (such as Apple), but the maintenance of brand loyalty is usually the main source of rent generation (think about the marketing and advertising efforts by Nike).

Moving on to the ‘tangible realm’ (as opposed to the ‘intangible realm’; e.g. branding, design and retail) we see that those companies possessing capabilities only in parts of the value chains with low entry barriers are losing out. For example, in the coffee industry, producing countries (growers and exporters) appropriated half of the total income of the final retail price of processed coffee (roasted and ground) until the mid-1980s. When the farm-gate prices of coffee crashed in the early 1990s, retail prices of processed coffee stayed the same, shrinking the income share of producing countries. This change was driven by increased market power of the largest coffee TNCs, who controlled marketing and distribution links. Today, 90 per cent of the total income from coffee, calculated as the average retail price of a pound of processed coffee, goes to the countries where the TNCs have their home base (UNECA, 2013).

We are seeing a similar trend in low-technology labour-intensive manufacturing industries. According to Kaplinsky (2005), after sustained growth in the prices of globally traded manufactures until the early 1980s, we have witnessed an aggregate relative decline in these prices, most significantly for those exported by developing countries. On a more detailed level, using trade data between 1988 and 2001, he finds that: 1) the percentage of manufactures exported to the EU with negative price trends are significantly higher among those manufactured goods that come from low-income and lower-middle-income countries than those that come from upper-middle-income and high-income countries; and 2) a higher share of resource-based and low-technology manufacturing sectors have experienced negative global price trends compared to medium-technology and high-technology manufacturing sectors. Using more recent data, Milberg and Winkler (2013) find a similar trend by looking at the price of US manufactured imports that predominantly come from developing countries. They find that clothing, footwear, textiles, furniture and toys have all experienced import price declines in the US (relative to US consumer prices) over two decades of more than 1 per cent per year on average, or 40 per cent in the period from 1986 to 2006.

### 3.3.2.2.2 A race to the bottom and a fallacy of composition

Part of the reason for the relative price decline in goods that developing countries are exporting can be explained by the asymmetric power relationship within GVCs: TNCs/lead firms based predominantly in the West are retaining the most profitable segments of value chains over a larger market, thus making it more difficult for firms based in developing countries to do anything different than that which is based on cheap labour.

Another factor contributing to this relative price decline is the increased competition among these countries. With greater participation of China and other Southeast Asian countries in the global economy, the developing country share of low-tech manufacturing exports has almost tripled since 1980 and the global pool of unskilled labour has doubled since 1990 (Kaplinksy and Morris, 2001; Kaplinsky 2005, 2013).

Lin (2013) argues that China's wages will eventually rise, giving a window of opportunity for lower-income countries, especially in Africa, to enter low-technology manufacturing industries. However, the low-wage labour capacity in the Asian production system is far from exhausted. Countries like Bangladesh, India and Vietnam have developed better capabilities to take over after China than what most African countries currently have.

Alongside untapped capacity in the Asian production system, the number of people looking for unskilled work in Africa is also rapidly increasing. Africa's population is growing at an alarming rate—by 2030, the continent is expected to have 1.6 billion people. With the current youth bulge in Africa, an estimated 800 million of these are expected to be eligible for work in 2030, compared to 460m in 2010 (Fengler and Rowden, 2013). As mentioned in chapter 2, the majority of the current working population in Africa end up in vulnerable jobs, which means that a colossal number of jobs would have to relocate from Asia to Africa to absorb this surplus. So the global competition in low-technology manufacturing looks only likely to solidify, with what seems like an endless supply of cheap labour in Asia and especially Africa in the years to come.

Therefore, TNCs from high-income countries are likely to continue to enjoy a 'race to the bottom' among developing countries—declining global wages as a consequence of an abundant supply of unskilled labour in those countries. At the same time, developing countries are likely to suffer from a 'fallacy of composition'—many of them entering the production of low-technology manufacturing goods in the belief that it will significantly boost their export earnings, only to find out that the earnings are nowhere as high as expected, as the prices of those goods have fallen exactly because so many countries have started producing them.

## **3.4 Implications for industrial policy**

### **3.4.1 General applicability of industrial policy and the importance of learning from history**

Industrial policy is ultimately formulated at the national level. As such, it would and should look different from country to country, based on social, political and economic circumstances. But this does not mean that useful generalisations cannot be made—this thesis is certainly attempting to make some. And by doing so, it is clear that the proposed tools in this section should not serve as a blueprint for all 54 countries in Africa. As mentioned in the introduction, the focus on Africa is not motivated by the fact that all countries are part of the same continent. Rather, it is an observation that most African countries share the same economic structural characteristics—they are low-income, they are largely dependent on exports of unprocessed agricultural goods and natural resources and they reveal an acute lack of manufacturing and other production activities that embed higher levels of technology. Certainly, the industrial policies proposed in this section are equally applicable to low-income countries outside of the African continent that share similar production characteristics. Many would actually be applicable more generally to middle income countries too, as all developing countries share the challenge of catching up with the global technological frontier and are engaged in investment and trading relationships with richer countries (and companies from those countries) that have far more bargaining power than them.

Additionally, the importance of the industrial policy tools mentioned in the previous chapter cannot be understated. The chapter analysed a range of such tools, focusing on tariffs and subsidies (direct and indirect); strategic credit allocation through state-funded lending; the establishment of SOEs to enter risky industries that require large capital outlays; and policies to maximise domestic linkages and coordinate investments between interdependent industries.

This general taxonomy of industrial policies is a result of studying the historical contexts of their successful implementations. Today's industrial policy plans are rarely formulated out of thin air but usually have elements of inspiration from previously successful (or failed) industrial policy experiences. For example, in the late 1980s, many of the leaders of today's ruling coalition in Ethiopia, the EPRDF, read books on South Korean industrial policy while fighting a guerrilla war against the ruling communist regime (Weis, 2016b). According to the late Prime Minister Meles Zenawi, who ruled Ethiopia from 1995 to 2012, taking

inspiration from the East Asian experience has been crucial for Ethiopia's industrial policy formulation since the early 2000s (the next chapter will discuss Ethiopia's industrial policy regime in greater detail).

However, with the expansion of GVCs since the 1990s, certain tools have arguably become more critical than they were before, especially those that relate to international trade and investment—those that have been referred to as GVC-oriented industrial policies in this chapter. We now turn our attention to them.

### **3.4.2 GVC-oriented industrial policies**

In the African context, AfDB-OECD-UNDP (2014) emphasises five key considerations that must guide policy measures in the era of GVCs: 1) Policies must be value-chain-specific and provide the best environment for developing/integrating into the identified value chain with the most potential. 2) Making the most of value chains implies trade-offs, as prioritising one sector over another creates winners and losers. 3) Entrepreneurship and collaboration between the public and private sector is crucial, and requires strong business associations. 4) The power and ownership of a GVC can determine which pathways to productivity growth are open and which are not. For example, upgrading to higher-value processing activities may not be feasible in certain GVCs due to the tight control of processing activities that is retained by large manufacturers, such as in the global coffee or cocoa industry. 5) Low-road strategies in GVCs risk a 'race to the bottom'. Therefore, when African countries attract foreign firms in order to integrate themselves into GVCs, they must also focus on creating skills and domestic productive capabilities for upgrading within GVCs.

These five considerations are supremely important, but most of them were arguably equally relevant 50 years ago, and thereby do not point out if or how industrial policy needs to adjust to the new era of globalisation. Point 4 is an exception. As we have seen, the proliferation of GVCs has entailed a rise in global power of the largest TNCs, which has restricted options open to developing countries in terms of creating their own GVCs—for example, the creation of its own automobile or electronics GVCs by South Korea (more on this later).

Milberg et al. (2014) more instructively discuss how industrial policy must be *changed* in an era of GVC expansion. I mentioned their three points in the introduction, which serve as a useful basis for a general discussion of GVC-oriented industrial policies.

### *3.4.2.1 Vertically specialised industrialisation or developing fully integrated production structures?*

To recap, the first two points of Milberg et. al. (2014) were: 1) industrial policy must shift from the traditional stance aimed at developing fully integrated production structures (i.e. the entire industry domestically), to a stance focusing on moving into higher-valued tasks associated with a certain industry; and 2) while traditional industrial policy may have included protection of domestic industry, success in the era of GVC expansion requires easy and cheap access to imports, in particular for necessary intermediates.

These two points are interrelated—specialising in a segment of an industry rather than developing fully integrated production structures largely means being more liberal with imported inputs. Engaging in this type of vertical specialisation, rather than hosting a fully integrated chain, can indeed bring about economic benefits. Many East Asian countries, as we have seen previously in this chapter from the examples of South Korea, Taiwan and in particular China, have achieved some success from principally manufacturing assembly activities. Taking advantage of its large pool of low-wage English-speaking workforce, India has also reaped benefits from specialising in particular segments of global service industries (e.g., call centres for IT companies or banks and back offices of airlines).

Particularly in the GVC era, FDI attraction for developing countries has almost become synonymous with niche specialisation (mainly in manufacturing industries). When doing so, if a liberal stance towards importing intermediate inputs is not already a requirement by foreign companies, failing to have it makes it almost impossible to attract FDI, as foreign buyers can largely ‘pick and choose’ which country to outsource to in a world where cheap labour is more easily accessible and plentiful than before. Even 60 years ago, when this was not the case, we saw how Taiwan made a strenuous effort to woo foreign investors by offering 100 per cent foreign ownership, guarantees against expropriation and five-year tax holidays.

Staritz et. al. (2016) provide the example of the apparel industry and shows that, first of all, it is difficult for one country to produce all the types of fabric and yarn that that country needs in its apparel production, especially if there is a contract with a huge Western buyer that demands a large variety of clothes. Second, lead firms in the industry tend to have a range of suppliers that do different things, and often prefer to have a range of designated textile suppliers that export their products to apparel suppliers in other countries.

Furthermore, a strategy focusing on niche specialisation is far easier for countries with lower levels of technology and skills and provides a quick route to creating jobs and earning

foreign exchange. As we have seen through various examples in this chapter, almost all the cases of niche-specialisation, regardless of the long-term result on the development of domestic productive capabilities, have been successful in generating export earnings and local employment, especially those doing so through the set-up of EPZs.

However, the benefits of specialising in segments of GVCs are limited, especially those which use cheap labour and low levels of technology. As Milberg et. al. (2014) actually emphasise, call-centres and other service activities that India has come to specialise in are low-skill-based and have not brought about much technological upgrading. In countries like South Korea, Taiwan, and Singapore, vertical specialisation only brought about benefits because they used it as a basis for building higher-level productive capabilities, including especially nationally-controlled GVCs (e.g., electronics in South Korea or Taiwan) and at that as a part of ambitious industrial policy strategies. Malaysia is said to be in a ‘middle-income trap’ because it has not been able to use its GVC participation for productive-capability upgrading as much as South Korea, Taiwan or Singapore have done (Cherif and Hasanov, 2015). China is still struggling to achieve high domestic content in high-technology manufacturing, even though it is close to acquiring control over full-fledged GVCs in textiles, apparel, and consumer electronics. We also saw the examples of many Latin American countries that became stuck in low value added activities because of GVC participation.

The key point here is that a careful balance needs to be struck between the benefits that vertical specialisation and a liberal trading regime can bring about, and the need to develop domestic productive capabilities. We saw how in the case of South Korea and Taiwan, they carefully balanced the need to import intermediate inputs and capital goods with the strategy of developing a domestic supplier industry. But too many of today’s low income countries are failing to strike this balance, particularly neglecting the need to create backward linkages to the domestic production of inputs needed for manufacturing activities. Unconditional FDI attraction policies may lead to employment creation and export earnings, but are not sufficient to ensure a domestic supplier industry. Kaplinsky and Morris (2016) distinguish between the two different strategies as ‘thinning’ (vertical specialisation) and ‘thickening’ (creating domestic linkages). They argue that for low and middle-income countries, the thickening strategy is relatively more important.

Coming back to the example of the apparel industry, Staritz et. al. (2016) argue that for a host country to transform its domestic industry through FDI attraction, it is crucial to build linkages to input industries. While it is difficult, and not necessary, to produce all inputs domestically, there are possibilities to produce at least some, such as cotton. This is important

not only for the linkage perspective, but it also benefits the foreign company in that it reduces lead times when certain inputs can be sourced domestically.

From this point of view, Ethiopia—arguably the most successful African country in nascent stages of industrial transformation—is going in the right direction when it declares that a central goal of its industrial policy is to reduce its dependence on imported inputs in the highly prioritised manufacturing industries, textiles and leather products. Such a policy stance is taken, among other things, in order to create better linkages to the supplier industries (Ethiopia has Africa’s largest livestock population and good opportunities for cotton cultivation), to avoid using scarce foreign exchange reserves on importing inputs, and to reduce the risk of foreign firms relocating their production activities to other countries, as frequently happens in these type of labour intensive manufacturing-industries.

Clearly, for this to happen, industrial policy must play a role, examples being tariffs on imported inputs and local content requirements. The latter is now prohibited by the WTO,<sup>47</sup> but to some degree remains a policy option for LDCs. And not all African countries are members of the WTO (such as Ethiopia), and can therefore legally use them. However, as mentioned, putting requirements on foreign investors to use local inputs is not easy in a global context where possible sourcing locations are abundant, and would be less contested if introduced more informally through negotiations with foreign investors. UNECA (2013) suggests that the host country puts requirements on the foreign firm to report regularly on local sourcing and the degree of local value added, including a clear ‘roll-out’ plan for future local sourcing. “Such a mechanism is likely to focus the minds of their chief executives, engender a climate of moral enforceability and help to encourage local linkages” (UNECA, 2013, p.244).

But it is not as if the wheel has to be reinvented. A current example to draw inspiration from could be Brazil’s ‘Inovar Auto’ program, which aims to develop a domestic automotive industrial base by incentivising foreign automotive firms to use inputs from local suppliers by granting tax exemptions depending on the degree of local sourcing (Pascoal et al. 2014). Another example would be Bangladesh, which has achieved considerable success in creating backward linkages in the manufacturing of knit apparel by granting firms cash subsidies for exports made from locally produced yarn and fabrics (Staritz and Frederick, 2012).

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<sup>47</sup> The regulations on tariffs for WTO members are somewhat more complicated than that of local content requirements. The WTO works towards lowering tariffs worldwide, and all WTO members are required to bind (that is, set the upper limit on) at least some of their tariffs. But some countries (many of them in Africa) have yet to bind their tariffs. This means that there is some ‘water’ in the tariff profiles of African countries - the difference between bound and applied tariffs. Additionally, many of the countries that have bound their tariffs have done so at quite high levels.

Furthermore, the cases of both South Korea and Taiwan that I provided earlier in this chapter serve as useful examples for how to bargain with foreign investors by striking a balance with handing out financial incentives to attract them, but at the same time inducing them to source inputs locally.

### *3.4.2.2 Linking up to TNCs or challenging them?*

#### *3.4.2.2.1 How far up the value chain and how ambitious?*

The third point of Milberg et. al. (2014) was that whereas traditional industrial policy sought to build domestic capacity in order to eventually compete with leading TNCs, industrial policy nowadays should focus more on negotiating and linking up to TNCs, as the issues facing firms and governments these days requires moving up through the chain of production of a particular commodity or set of commodities.

This is perhaps the most valid one, and is similar to point 4 made by AfDB-OECD-UNDP (2014). Some of these benefits have already been mentioned in the previous section—linking up to TNCs can provide quick stimulus to export earnings, it can create jobs and stimulate a local supplier industry.

An issue so far not explicitly discussed in this section though is that of technology transfer from foreign companies,<sup>48</sup> more specifically the extent to which low-income countries are able to develop locally owned capabilities in the manufacturing activity at hand (not only the inputs, which were discussed above, but all the way to the finalised product) through linking up to TNCs. An increasingly common model in many low-income countries, especially in BDVCs, is that a Western brand name or retailer (a lead firm) identifies an outsourcing location, and does not subcontract directly to national producers in that country but facilitates the entry of suppliers from a slightly higher income country, for example China, to carry out production. A critical question is whether the low-income countries are able to induce technological spillovers and eventually build up nationally owned manufacturing firms. In other words, should domestic firms move up the GVC only insofar the TNCs would allow them to or should they eventually aim to challenge the production activity initially carried out by TNCs in the host country?

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<sup>48</sup> Only implicitly discussed because it was not mentioned that local content requirements can be a way of transferring technology from foreign firms to local suppliers. For example, in Taiwan, the local content requirements on Singer Sewing Company encouraged the company to assist local suppliers in raising the quality of their products.

This is where GVC-oriented industrial policies come into the picture. One way of inducing technological spillovers can be through joint ventures between domestic and foreign owned partners. The idea is that this will give domestic partners easier access to higher-level technologies. We saw how this was the case in the South Korean joint ventures with the Japanese in the textile industry, not only for learning production techniques but also for acquiring managerial and international marketing skills. Another way could be to encourage the conduct of R&D in the host country. In the 1970s, Taiwan, for example, did this by offering foreign companies tax write-offs on R&D activities. A third way can be through human capital requirements, say to reach an agreement with a foreign company on an increasing share of local employees in technical and managerial positions after a certain number of years. Training programmes should also be initiated, one way being to send local employees to model factories of TNCs' home countries. But it is also important to construct TVET programmes in the host country that match the skills demands of foreign companies, either through industry-specific training institutes or in higher education institutions. In Singapore, TVET programmes were run and established as collaborative ventures between the government and overseas partners. Additionally, clustering foreign and domestic firms together increases the chance of labour mobility between the foreign and domestic workforce.

But even if a host country manages to develop nationally owned capabilities in all of its manufacturing activities, from the inputs needed in production to the finalised end product, will that be enough for sustained economic development? It definitely goes a long way, yes, but as I have shown, especially in the GVC era, profits in the manufacturing segment of GVCs are becoming increasingly squeezed, especially in the low-tech segment.

This is why industrial policy-makers should pay attention to the possibility of upgrading not just through the development of capabilities to physically produce goods but also through the development of producer services, such as design, marketing, and branding. Government support for capability developments in these producer services, especially for small and medium-sized enterprises (SMEs), should most importantly include subsidies and public service provision for export marketing and design. And in this sense, it is not as much as linking up to TNCs as it is about challenging them. For low-income countries this might seem like a thankless task given the global foothold that Western TNCs have established in the area of producer services, spending billions on R&D to maintain brand loyalty, and on design and marketing (just think about Apple and Nike). However, it is not impossible. Sammy Ethiopia, an Ethiopia-based company specialising in hand-woven textiles and garments, is doing just that. Their products are spun, woven, dyed and embroidered using techniques stemming from

old Ethiopian traditions, but also designed and branded by the company. They export their products to high-end retailers in Australia, France, Germany, Italy and Japan. Although it is questionable whether an operation like this can be duplicated with more modern techniques (Sammy Ethiopia's products are largely marketed based on the fact that they are hand-made), it is a good example of something African that sells in Western markets, completely 'made in Africa', and is a testament for the potential of African brands in the West.

Another prominent example from Ethiopia would be Solerebels, an Ethiopian footwear brand that sells shoes and sandals made from Ethiopian leather and recycled car tyres. Just like Sammy Ethiopia, their products are handcrafted and incorporate Ethiopian artisan traditions and designs, but with twists that bear more resemblance to Western products. Unlike Sammy Ethiopia, Solerebels actually have their own retail stores abroad, in Spain, the US, Switzerland, Singapore and Taiwan. In addition to branding their products as something uniquely Ethiopian, Solerebels is also trying to appeal to a growing fair-trade and eco-friendly consumerism in Western markets. The company claims zero carbon footprints and is fair trade certified.

Industrialisation strategies in African countries aiming to immediately compete in producer services, where large TNCs have an immense competitive advantage, might seem overly ambitious, but being ambitious and doing things that are not aligned with one's 'comparative advantage' is exactly what has characterised the really successful catch-up economies. In the early 1960s, there was little to indicate that Japan would be one of the world's largest automobile manufacturers, yet the country protected its automobile industry for nearly four decades. For another example, could anyone have predicted that Nokia would be famous for cell-phones, when it had to cross-subsidise its electronics division for nearly 17 years before making a profit (Lin and Chang, 2009)? Similarly, in the mid-1960s, the World Bank strongly advised the South Korean government against starting a steel industry, as it was not aligned with the country's current comparative advantage. The government did not heed that advice, took on the risk by setting up a steel SOE (POSCO), and as a result, South Korea has become one of the world's largest steel producers (Wade, 2012). African countries and other low-income countries should not completely deviate from current comparative advantage, but these examples show that risk-taking and going for activities and industries that seem far out of reach can yield significant benefits in the long run.

#### 3.4.2.2.2 Learning about end markets and varieties of value chains

While challenging TNCs is ultimately necessary to capture profitable segments of value chains,

including in the area of producer services, connecting to TNCs in the meantime can be valuable in terms of learning about standards and preferences that are required by consumers and firms in end markets, and not just in terms of learning about technologies and management practices.

Lead firms in GVCs often have home bases to which firms in low-income countries are trying export their products, and so, when lead firms specify the exact characteristics of what their suppliers should produce and how they should produce it, this can allow the low-income country firm to learn about the nature of markets in those countries. With growing product differentiation and increased consumer awareness of social and environmental concerns, quality standards set by lead firms for their suppliers are a key mechanism through which suppliers learn about producing things for consumers in higher-income countries (Gereffi et al., 2011; Gereffi and Lee, 2012). These standards can induce firms to improve the quality of their products and upgrade production management—we saw earlier in this chapter how this type of technology acquisition was very important for many SME's in Taiwan.

However, it should be born in mind that the specifications from lead firms' do not always lead to more technology-intensive activities. TNCs normally make sure that the activities that are outsourced do not encroach on the high-earning core competences of lead firms. The case of the Sinos Valley shoe cluster in Brazil discussed earlier is a perfect example.

Another interesting observation is that connecting to lead firms with home bases in different markets often leads to different outcomes in terms of the type of capabilities that are developed, which goes to show that knowing the end market matters. For instance, in the apparel industry, US buyers tend to demand high volumes of very basic products from their suppliers, with relatively low 'design intensity'. Asian suppliers from Lesotho, Swaziland and Kenya follow these requirements. On the other hand, EU buyers tend to require smaller orders, higher fashion content, and prefer more design intensive products. Supplier firms in Mauritius and Madagascar follow this model, and hence adopt a different production style (Morris et. al., 2011).

However, linking up to TNCs is not the only way to improve knowledge of foreign markets. Establishing (or linking up to) trading companies that connect buyers and sellers but do not produce any goods, can also be a way. For example, the relationship with Japanese trading companies, and later the establishment of national trading companies, was crucial for the South Korean export strategy in the US. Especially in the light-manufacturing sector, where a lot of initiative lies with the importer of a product, and not the exporter, links to importers, their trust, and their satisfaction reigns supreme.

### 3.5 Summary and conclusion

Since the 1990s, falling transport costs, advances in communication and information technology and lowered trade and investment barriers have led to the globalisation and fragmentation of production networks. These complex, borderless business networks are popularly referred to as GVCs.

The GVC era has created a buzz in the development community, leading some to claim that, “The country-centric view of trade no longer reflects reality...Global value chains offer new opportunities for structural transformation in Africa” (AfDB-OECD-UNDP, 2014, p.124). There seems to be an established belief among scholars who have long studied development and industrialisation issues from the perspective of GVCs (the GVC lens) that industrial policy for developing countries in the GVC era has to take a different form compared to the ‘old’ style policies that characterised the development path of the Asian tigers. Most importantly, the GVC lens calls for an approach to industrial policy that 1) shifts its ‘traditional’ stance from aiming to develop fully integrated production structures, to one focusing on specialised tasks associated with a certain industry, and 2) focuses more on linking up to TNCs, in contrast to traditional industrial policy, which emphasised building up domestic capacity in order to eventually compete with TNCs.

In line with the GVC lens, I have recognised that the aspect of industrial policy focusing on attracting FDI and linking up to TNCs is more important now than before the 1990s. Also in line with the GVC lens, I have acknowledged the increased importance that niche specialisation (such as assembly manufacturing) is acquiring, especially through activities in EPZs (China being the prime example), and that looking at lead firm (TNC) strategies has to become of greater importance for industrial policy.

But at the same time, I have argued that the buzz around GVCs is something of a hype and that the GVC era has not brought about significant qualitative changes for African countries (and other developing countries for that matter). The changes are, I argue, rather quantitative: a) more offshoring and FDI inflows to developing countries, and b) increasing power of TNCs.

Building on these observations, I claim that the GVC lens fails to acknowledge the important role of policies for GVC participation in the case of the Asian tigers. By adopting a Statist lens, I have presented case studies of GVC-oriented industrial policies from roughly 1960 to 1990 in South Korea and Taiwan (and shorter case studies of other countries), going through the literature on industrial policy that looks at policies related to trade and foreign

investment; a literature that seems to have been overlooked by the GVC lens in the discussion on how industrial policy has to adapt to the GVC era. From this, I conclude that, while production networks have indeed become more fragmented since the 1990s, ‘old style’ industrial policy still holds relevance.

First of all, I show that GVC participation has been a part of these countries’ industrialisation strategy. Both South Korea and Taiwan participated in global production networks, especially in light manufacturing industries, controlled by Japanese and US firms. A telling example is that Nike outsourced almost all its shoe production to Taiwan and South Korea in the early 1980s.

Second, using especially these two countries as models to study for today’s African countries (and other developing countries), I looked at the GVC-oriented industrial policies implemented, and concluded that, while niche specialisation and linking up to TNCs rather than challenging them has played a vital part of successful industrialisation strategies, policies to build domestically owned GVCs (vertically integrated industries) are ultimately what separates the really successful late-industrialisers from many of today’s countries stuck in ‘middle-income traps’. Therefore, the discussion on industrial policy in the GVC era should in greater detail include policies for increasing local content and technology transfer. In particular, the encouragement of technology transfer would involve requirements on foreign firms to set up R&D facilities and education/skills programs; and joint venture requirements, preferably with the host economy having a majority stake. As the cases of Taiwan and South Korea show, financial incentives were often handed out in return for fulfilling these requirements.

Three cases in Latin America—Mexico, Dominican Republic and Brazil—were shown to support these conclusions. Using different industries in each case, they showed how FDI attraction without requirements for building domestic productive capabilities has caused low-value added ‘traps’ in their respective GVCs.

I also showed how the expansion of GVCs has resulted in a relative price decline of low-tech manufactured goods, especially those exported by developing countries. Two developments have produced this result: 1) TNCs in the West are consolidating and expanding, appropriating profits in the producer services segment over a larger market, and 2) The competition between developing countries in especially low-tech manufacturing has become incredibly fierce, with the global pool of unskilled labour more than doubling since 1990.

Therefore, I also suggested that African countries have to become more serious about formulating industrial policy that aims to build capabilities in producer services. This may sound overly ambitious for African countries, but I have provided the examples of two

Ethiopian firms that have managed to do so. On a related note to ambitiousness, I also emphasised the point that those countries who were really successful with industrial policy were mostly deemed overambitious in early phases of development, like for example South Korea (steel), Japan (automobiles) and Finland (cell phones).

Lastly, I looked at the importance of learning about end markets for export-oriented strategies. In this sense, linking up to TNCs can be useful. In the apparel industry, we saw that US and EU buyers tend to demand different specifications from their suppliers, shaping the type of capabilities developed among supplier firms (and countries). However, there are alternative ways of going about this. For example, in the case of South Korea, linking up to Japanese trading companies that connected US buyers with Korean companies were a way of learning about consumer preferences in the US market.



## Chapter 4

# Ethiopia's industrialisation trajectory and GVC-oriented industrial policies: the case of the textile and leather industries

### 4.1 Introduction

In the mid-1980s, Ethiopia pierced the conscience of the world with a devastating famine that took the lives of hundreds of thousands of people. The image of Ethiopia as Africa's drought and famine-stricken country in need of salvation, portrayed in a 1984 BBC television report, still sticks for many people. But in recent years the narrative has started to change. It seems like the vision of Meles Zenawi, Ethiopia's strongman from 1991 until his death in 2012, of an Ethiopia following the fast-paced growth of East Asian countries like South Korea and China, is slowly starting to manifest itself. Since 2004—when results from policies of Ethiopia's first national development plan, the Sustainable Development and Poverty Reduction Programme (SDPRP), started to materialise—Ethiopia's economy has been booming. GDP per capita skyrocketed from \$136 in 2004 to \$619 in 2015 (WDI, 2017). While acknowledging that this growth has started from a low base, a more than four-fold increase in GDP over a 12-year time span is impressive. It translates into an annual GDP per capita growth rate of 7.96 per cent, one of the highest in the world in this period.

Since coming to power in 1991, Ethiopia's ruling party, the Ethiopian People's Revolutionary Democratic Front (EPRDF) has been scrutinised and criticised by the international community for its authoritarian style. At the same time, its capable, committed and relatively egalitarian state-led development model has been praised. Some now hail Ethiopia as Africa's 'lion' (Smith, 2013), a stand-alone success story in a continent where most countries' economic growth rates rise and fall with primary commodity prices (Pilling, 2016). They are not wrong in doing so, given that the Ethiopia hype definitely has more to show for itself than 'just' economic growth. In the past decade, impressive results have been achieved in the areas of infrastructure development, education and health. The road network is estimated to have quadrupled since 1997; net enrolment in primary schools reached 79 per cent in 2014, up from only 19 per cent in 1994; and the average life expectancy has hit 64 years, an impressive increase of 12 years since 2000 (Oqubay, 2015).

The infrastructure projects in particular stand out. With help from the Chinese, the government has recently completed the construction of a light rail in Addis Ababa (the first ever metro in a capital city in Sub-Saharan Africa) and a 756 km railway connecting Addis Ababa and several industrial parks in the country to the port in Djibouti. Ethiopia's Grand Renaissance Dam, which is expected to be completed by December 2017, will stand finished as the largest hydroelectric power plant in Africa.

For many, though, it is the anticipation of rapid industrialisation that creates the Ethiopia buzz. While MVA as a share of the economy in Ethiopia remains a modest 4.8 per cent (MoI, 2016b), manufactured goods exports have grown from \$21m to \$436m between 2004 and 2015 (WTO, 2017). A self-proclaimed developmental state inspired by the Asian tigers (Clapham, 2015; Oqubay, 2015; Weis, 2016a), Ethiopia has formulated a slew of industrial policies, most notably since the Growth and Transformation Plan (GTP) in 2010 was launched.

Unsurprisingly, scholars have started devoting attention to the industrialisation push, some focusing generally on industrial policy and economic performance, (e.g Altenburg 2010; Cramer and Chang, 2014; Gebreeyesus, 2013; Oqubay, 2015), some on the politics of industrialisation and the 'developmental state' (e.g. Clapham, 2015; Weis, 2016a), and others on partly successful sector case studies in the Ethiopian context, like the floriculture industry (Abebe and Schafer, 2015; Oqubay, 2015), the leather industry (Abebe and Schaefer, 2015; 2013; Brautigam et. al., 2017; Oqubay, 2015) and the textile industry (Staritz et. al., 2016; Staritz and Whitfield, 2017).

The aim of this chapter is to contribute to the scholarly literature on Ethiopia's industrialisation trajectory and industrial policies, but focusing particularly on the rising prominence of FDI and GVC participation in Ethiopia's industrialisation push. FDI inflows have surged in Ethiopia in recent years, from \$288m in 2010 to \$2,168m in 2015 (UNCTAD STAT, 2017). It is particularly two highly prioritised labour-intensive manufacturing industries, the textile and leather industries,<sup>49</sup> that foreign investors are flocking to Ethiopia for. According to McKinsey (2015), Ethiopia is now Africa's most attractive location for apparel sourcing, outcompeting African counterparts with low wages and cheap electricity.

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<sup>49</sup> Throughout this chapter, the textile industry refers to both the process of transforming cotton and synthetic fibres into fabric and the process of transforming fabric into most importantly clothes/apparel, but also some other textile based products, like towels and bed sheets. The process of transforming fabric into clothes is often known as the apparel or garment industry. Similarly, the leather industry refers to both the leather products industry (most importantly footwear production, but also the production of other leather products, like belts, bags and wallets) and the leather tanning industry (i.e. the process of transforming raw hides and skins to finished leather). When necessary, distinctions between the stages of production will be made.

And with rising wages in countries like Bangladesh, Cambodia and Vietnam, it is not a long shot to predict that Ethiopia will become one of the world's, if not *the* world's, most attractive outsourcing destination for these industries.

Brautigam et. al. (2017) and Staritz et. al. (2016) have paved the way with excellent analyses of Ethiopia's industrialisation push through attracting FDI and inserting itself in the GVCs of these two global industries. Building on the previous chapter, this chapter aims to go deeper than the two aforementioned papers on if and how the Ethiopian government is using industrial policy to build domestic productive capabilities in these two industries through participating in GVCs, the results achieved so far, and the prospects for the future. Similar to many countries in Latin American that were reviewed in the previous chapter, is Ethiopia likely to simply become stuck in low value added activities in the value chains? Or is it doing the right things in terms of creating linkages and inducing technology transfer, more in line with how the East Asian countries did it?

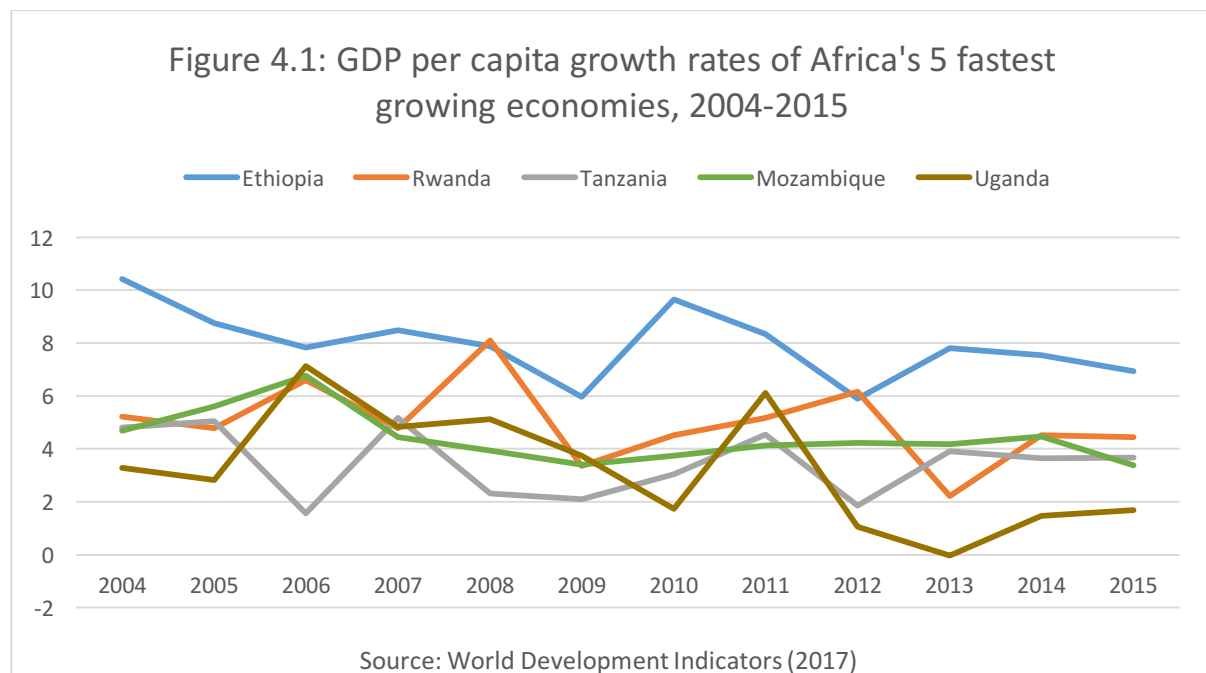
This chapter is separated into two parts (each with several subsections). The first one, 4.2, discusses economic growth, industrialisation and industrial policy in Ethiopia. While the manufacturing sector is starting to flourish in Ethiopia, it has not been the main driver of economic growth. This section looks at the factors underpinning that growth. But what, then, explains the buzz around industrialisation? The explicit commitment by the EPRDF to an industrialisation path, in the image of the East Asian industrialisation experience, is part of the reason. Another part of the reason are all the policies that the government has been putting in place to create a conducive environment for the manufacturing sector to grow. This section will also discuss these policies.

Building on the previous chapter, the second part of this chapter, 4.3, moves on to the relevance of GVCs to Ethiopia's industrialisation. As mentioned, GVC participation and FDI attraction has become the crux of policies to develop Ethiopia's two most highly prioritised manufacturing industries—the textile industry and the leather industry. This section examines Ethiopia's motivation behind developing these industries; the structure of the value chains in today's global context and the GVC-oriented firms in Ethiopia; Ethiopia's export performance in these industries; the GVC-oriented policies that the Ethiopian government has formulated to develop these industries; the results that the GVC participation strategy has produced in terms of the development of domestic productive capabilities; and key challenges for further growth of the industries through the GVC participation strategy.

## 4.2 Economic growth, industrialisation and industrial policy in Ethiopia

### 4.2.1 What are the drivers of Ethiopia's economic boom?

In the African context, Ethiopia's economic growth clearly stands out. Figure 1 compares the GDP per capita growth rates of Africa's five fastest growing economies in the period 2004-2015, excluding countries whose growth has been highly volatile, such as Angola, Cote D'Ivoire and Nigeria. As mentioned, the average of Ethiopia's GDP per capita growth rate was 7.96 per cent in this period. As seen from the figure, there is a significant gap between Ethiopia and the second fastest growing economy, Rwanda, whose average GDP per capita growth in this period was 4.98 per cent. The growth performance comes across as even more impressive when considering that, except for Rwanda, Ethiopia is the only country in Africa whose GDP growth has been consistently high for over a decade without relying on a natural resource boom (Chang et. al., 2016). The following sub-sections will analyse the drivers of this growth.



#### 4.2.1.1 Manufacturing

Part of the growth can be attributed to growth of the manufacturing sector. MVA has grown at an annual rate of 11.5 per cent from 2004 to 2015, far outperforming Rwanda (WDI, 2017). Manufactured goods exports have grown 21-fold in the same time period, from \$21m to \$436m, largely thanks to the increasing earnings of the textile and leather industries. This represents more than a doubling of manufactured goods exports' share of total merchandise exports, which itself has grown from \$503m to \$3,819m in this time period (WTO, 2017).

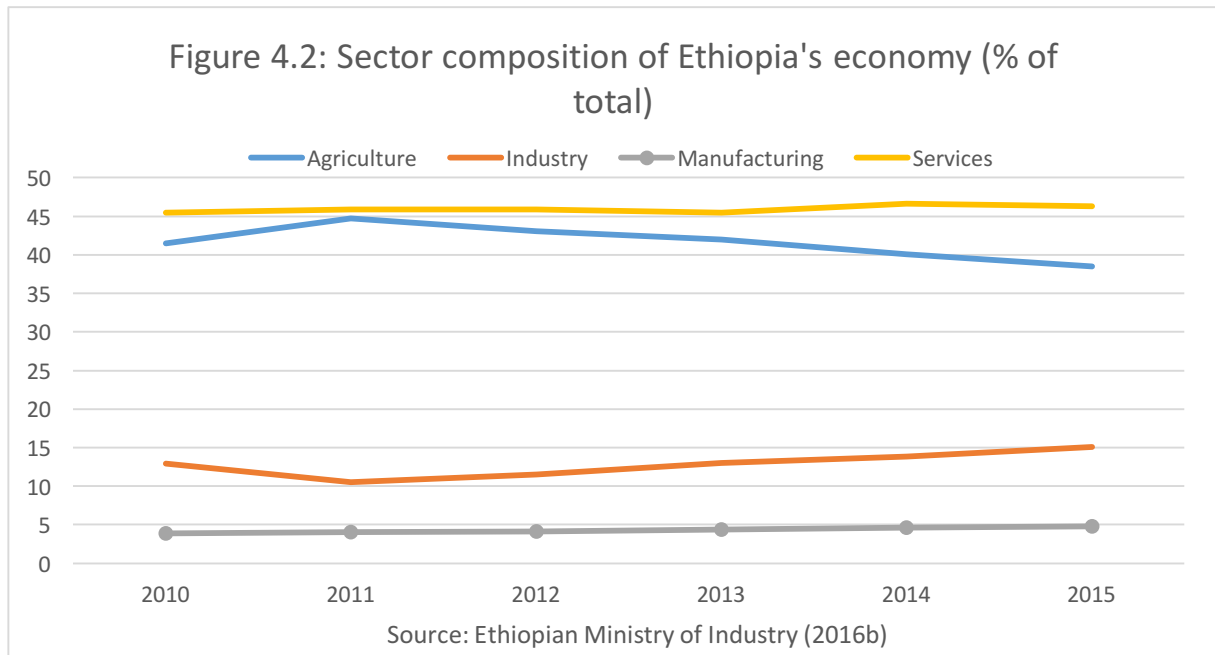
However, MVA as a share of GDP in Ethiopia remains 4.8 per cent (MoI, 2016b), well below the African average of 10 per cent (Chang et. al., 2016). The country scores below the ACET 15<sup>50</sup> average on most structural transformation indicators, including diversification, export competitiveness, productivity, and technological upgrading (ACET, 2014). Chandra (2013) benchmarks Ethiopia's economic performance over the past 30 years against six countries that were at similar income levels and shared fundamental economic characteristics in the base year<sup>51</sup>—Bangladesh, China, India, Vietnam, Cambodia and Lao PDR (the most similar country being Vietnam, according to Chandra). Of these countries, Ethiopia is the only one that has yet to go through a major shift of the economic structure from agriculture to manufacturing, as measured by each sector's share of GDP. Agriculture and services still dominate the Ethiopian economy, as seen from Figure 5.2.<sup>52</sup> We can also see that, although the manufacturing sector has grown in absolute terms, its contribution to GDP has been relatively constant over the last 5 years.

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<sup>50</sup> A group of 15 countries in SSA that make up a majority of the region's GDP, manufacturing and agricultural production. They are: Burkina Faso, Ghana, Nigeria and Senegal in West Africa; Ethiopia, Kenya, Rwanda, Tanzania and Uganda in East Africa; and Botswana, Mauritius, Mozambique, South Africa and Zambia in Southern Africa.

<sup>51</sup> All were poor, predominantly agricultural economies that exported mostly agricultural commodities and minerals, and imported nearly all manufactured goods they consumed.

<sup>52</sup> In the figure, manufacturing is a sub-category of industry. This means that the three categories, agriculture, industry and services, together sum up to 100 per cent of the economy.



#### 4.2.1.2 Infrastructure investments

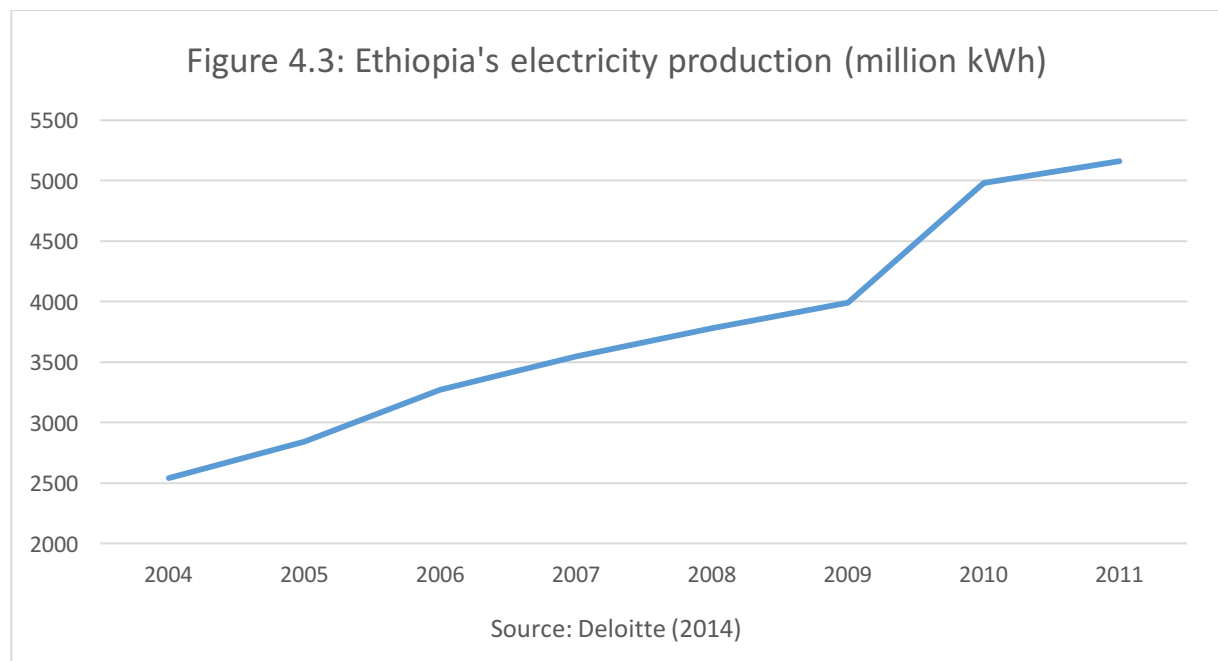
Seeing that the manufacturing sector is growing but still not at a point where it is contributing significantly to the economy, what factors then underpin this impressive economic boom?

Massive federal spending on infrastructure and construction, which has in some part boosted growth of especially the agriculture and services sectors, were cited as the most important factor in my interviews. More than 40 per cent of the federal budget is spent on infrastructure projects, primarily transport and power generation (Oqubay, 2015). The hallmark project is the Grand Renaissance Dam (GRD)—a hydroelectric whose construction was started in 2011 and is expected to open by the end of 2017. Upon completion, the dam will have a yearly production capacity of 6,000 MW, making it the largest hydroelectric plant on the African continent and the fifth largest in the world. With a budget of close to \$6bn, it is also the single largest infrastructure project ever to have been undertaken by an Ethiopian government.

The Dam is financed almost purely domestically, as the World Bank and even the Chinese government have been hesitant to fund the project because of ‘hydro-political’ sensitivities with Egypt. Seeing the unwillingness of international creditors to become involved in the project, the government has encouraged public sector workers and other salaried employees to pledge a month’s salary to the project. This has been done by issuing a special Renaissance Dam bond that are within the means of domestic savers. The government has also

enabled the diaspora community to invest in the project by issuing a version of the bond denominated in foreign currencies (Berhane, 2013). This domestic financing scheme has largely worked, as purchasing the bond is seen as a civic duty (Weis, 2016a).

The GRD is not the only hydroelectric project in Ethiopia. In fact, the country has the second largest hydropower potential in Africa, after the Democratic Republic of Congo (Deloitte, 2014), and is steadily increasing its electricity production, 86 per cent of which is currently hydroelectric. As seen from Figure 4.3, total electricity production more than doubled from 2004 to 2011. New hydroplants that are contributing to this increase in output include Tekeze (300MW), Gilgel Gibe 2 (420MW) and Tana Belese (460MW) (Deloitte, 2014). With the completion of the GRD, electricity production is set to increase even more steeply.



Transport systems are also highly prioritised. The flagship project in this area is the recently inaugurated 756 km railway that connects Addis Ababa and other industrial areas (recently built industrial parks, or parks in construction) of Ethiopia to the port in Djibouti. It is one of many construction projects in the country built and financed by the Chinese—built by the China Railway Group and China Civil Engineering Construction Corporation, and financed through concessional loan arrangements by the Exim Bank of China, the China Development Bank, and the Industrial and Commercial Bank of China.

The road network in Ethiopia has also grown at a rapid pace. According to the Ethiopian Roads Authority, the road network expanded from 26,550 km to 53,997 km between 1997 and 2011 (Cramer and Chang, 2014). Current projections put the road network at over 90,000 km (Oqubay, 2015).

These types of infrastructure investments are incredibly important for manufacturing development in Ethiopia. Over 90 per cent of firms in the export-oriented manufacturing industry that I surveyed cited high logistics costs (specifically referring to the high cost of transport of goods to the port in Djibouti and the cost of clearing a container there) as one of the key issues they would like the government to address. The recently completed railway that connects industrial zones in Ethiopia to the port in Djibouti is built mainly for the purpose of easing these logistics costs.

The boom in construction driven by the federally funded infrastructure investments is giving a boost to related economic activities as well. Cement production in Ethiopia has soared, growing from 800,000 tons in 1999 to 10m tons in 2012, making Ethiopia the third largest cement producer in Africa. The average annual growth of cement was more than twice that of the world in this period. Given its capital-intensive nature, the cement industry's direct contribution to employment has been limited; employment in cement factories increased from only 1,648 in 1992 to 7,233 in 2012 (Oqubay, 2015). But it has created significant downstream employment through forward linkages to downstream cement product manufacturers (concrete products and ready mix cement). It has also brought about employment opportunities in construction services. This increase in labour demand by the construction industry is ironically causing somewhat of a nuisance for other industries that rely on cheap labour: shoe and apparel factories around Addis Ababa are reporting problems of high labour-turnover because of the slightly higher wages offered by the construction industry (the problem of labour turnover will be addressed in section 4.3.7)

#### *4.2.1.3 Services and agriculture*

In addition to construction services, many other services are booming as well. These include commercial services (wholesale and retail trade); hotels and restaurants; transport; financial intermediation; and public services (public administration, social services and health services) (World Bank, 2016). Some of the growth of these services can be attributed to high levels of state spending on infrastructure, whilst others are related to increased tourism and foreign

investment (more on foreign investments later in this chapter).

Ethiopian Airlines is a remarkable example of services growth in the transport segment. The state-owned airline was established decades ago, but started growing rapidly in the late 2000s, alongside many other state-prioritised development projects (this was the time when most industries started experiencing growth, as a result of targeted government action articulated in 5-year development plans). From 2013 onwards, no firm in Ethiopia, either public or private, has brought in as much foreign exchange as Ethiopian Airlines. In 2015, it became Africa's most profitable airline, serving more than 80 international destinations. From 2011 to 2016, the number of annual passenger increased from 3.7m to 8.8m and annual net profits increased from \$100 to \$280m (The Economist, 2016). It was recently rated the 6<sup>th</sup> most dependable airline in the world by CBS News (CBS, 2015).

Growth of the agricultural sector has also been a key driver of growth. The total area of cultivated land increased by 2.7 per cent between 2004 and 2014, and annual yields have grown at about 7 per cent per annum (World Bank, 2016). Growth in both land use and yield have centred around the major cereals (teff, barley, wheat, maize, and sorghum). The reason is that since the 1990s, Ethiopia's agricultural development programs have focused on cereal intensification, particularly through the promotion of modern agricultural technologies, most importantly the use of chemical fertilizer (Spielman et al., 2010). Fertilizer use has focused on cereals because food security is a high priority in Ethiopia. Fertilizer use by smallholder farmers increased by 144 per cent between 2004 and 2014 (World Bank, 2016). The Ethiopian government has also invested heavily in the provision of rural public services since 2000, including rural education and health, rural infrastructure, extension services, and strengthening of public agricultural research.

While much of the productivity increases in agriculture and efforts to strengthen food security are related to cereals, a different type of land cultivation practice has been driving export growth of the agricultural sector, namely floriculture. Cut flower exports increased from three tons in 2003/04 to more than 50,000 tons in 2011/12, with export earnings rising from \$0.32m to about \$200m. From 2007 to 2012, the sector's employment grew from 25,000 to 50,484 (Oqubay, 2015). The industry grew from a single firm in 2000 to about 100 firms in 2014 (World Bank, 2014). The industry has also created indirect jobs through the associated expansion of horticulture. Linkage effects have included backward linkages to packaging products and forward linkages to cold chain logistics and air transport (Ethiopian Airlines).

Seeing that between 70 per cent and 80 per cent of Ethiopia's population obtain their livelihoods directly or indirectly through subsistence farming, it is not surprising that the

agricultural sector has featured as a top development policy priority in Ethiopia. Since the first 5-year development plan in 2005—the Plan for Accelerated and Sustained Development to End Poverty (PASDEP)—even industrial policies have paid attention to raising livelihoods in agriculture, mainly through linkages to the agricultural sector by for example promoting manufacturing industries that use agricultural inputs that are or can easily be provided by the domestic agricultural sector (i.e. cotton for the textile industry and hides and skins for the leather industry, more on which will be addressed later in the chapter). The success Ethiopia can boast in reducing extreme poverty is largely due to the targeted policies aimed at developing the agricultural sector. From 1995 to 2011, the number of people living in extreme poverty in the country was reduced from 60.5 per cent to 30.7 per cent (WDI, 2017).

In conclusion, the manufacturing sector in Ethiopia is still in nascent stages of development, and the high economic growth rates over the past decade are more a result of infrastructure investments and growth in services and agriculture (in some part related to those infrastructure investments). So why then is Ethiopia is predicted by many to soon become Africa’s industrial powerhouse? Much of it has to do with the government’s clear vision and idea of industrialisation.

## **4.2.2 A state committed to industrialisation**

### *4.2.2.1 The emergence of a developmental state?*

Particularly in Ethiopia, the ideological origins of party officials have been influential in shaping development policy. According to Arkebe Oqubay, long-time member of the ruling party and the current head of Economic Planning and Supervision at the Prime Minister’s Office, “the historical roots and political ideas of the ruling party (in Ethiopia), in power for two decades under a dominant-party multiparty system, have shaped the policies behind the new economic dynamism” (Oqubay, 2015, p.72).

The ruling party—the EPRDF—is often described, for better or worse, as an authoritarian regime with control of almost every aspect of the economy (Clapham, 2015; Weis 2016a). Before it became the government in 1991, the EPRDF was a rebel group fighting against the Derg (a socialist military junta) which had, in turn, deposed of Emperor Haile Selassie in 1974. The EPRDF is an alliance of four parties, each with roots in certain regions and ethnic groups of Ethiopia. The party with roots in the Tigray region of the north, the Tigray People’s Liberation Front (TPLF), has held a majority of influential cabinet positions since

1995, and is undoubtedly the most powerful faction of the EPRDF.

Whereas the EPRDF was formed in 1988, the TPLF was formed in 1975, immediately after the Derg takeover. Its organisation has been shaped by the military discipline and hierarchical chain of command required over a 16 year-long armed guerrilla struggle. Like the Derg, the TPLF was also inspired by socialist thinking (although TPLF ideology would change to a more market-oriented approach), so in some ways, then, it is possible to draw parallels between the Derg regime and the TPLF: military-like organisational structures drawing from the same student Marxism of the early 1970s. But the TPLF is known to have had a stronger intellectual bend. A fascinating aspect of the party's intellectual drive was the establishment of a Business College in Hageresalam towards the end of the insurgency in the late 1980s. The College's initial faculty consisted of six foreign-trained cadres with graduate degrees in economics, accounting, management and statistics (Weis, 2016a). Although many of the economics textbooks were written by US economists influenced by the Reagan-era, the idea was simply to learn the techniques from those textbooks, while keeping firmly with the Marxist-Leninist orientation of the party and a vision of state-led industrial development. Considerable resources were put into translating the works of Lenin and writing studies on Albania's socialist revolution and South Korean industrial policy (Weis, 2016b).

The influence of the state-led industrialisation experiences of South Korea and other countries in East Asia, such as Japan, Taiwan and, later, China, cannot be understated. In an interview with the *New African* in 2011, Meles Zenawi summarised Ethiopia's development model in the following way:

Essentially, the concept hangs on the prudent combination of market forces and state intervention, where the state plays a leading role not only in providing infrastructure and basic services, but also in providing the right conducive environment for the development of productive and manufacturing capacities. For sure, the experience of a number of East Asian countries supports the validity of our approach (*New African*, 2011, p.2).

In a recent interview conducted by myself, a long time TPLF member and Special Adviser to the current Prime Minister, Hailemariam Desalegn, recounted his experience of studying for a distance-taught MBA programme in 1991 at Open University in the UK, together with Meles Zenawi and several other high-ranking TPLF officials, "Where we studied in particular the East Asian experience" (Special Advisor to the Prime Minister, interviewed by the author in Addis Ababa, May 13, 2015). Similarly, a researcher at the renowned Ethiopian Development Research Institute (EDRI) stated in an interview, "I would say that the current

development strategy of Ethiopia is inspired by a mix of South Korea and China” (EDRI researcher, interviewed by the author in Addis Ababa, April 15, 2015).

The East Asian influence has not happened purely through ‘intellectual’ channels, but also more directly through development assistance. Around the time when the Ethiopian government was formulating a development strategy for 2010-2015, they began regular, high level consultations on industrial policy with a delegation of Japanese experts from the Tokyo-based National Graduate Institute for Policy Studies (GRIPS). Prime Minister Zenawi had approached GRIPS at a workshop hosted by the economist Joseph Stiglitz, and between 2009 and 2011, a delegation from GRIPS conducted quarterly seminars for the Prime Minister and his economic advisers (Weis, 2016a). The dialogue focused largely on drafting an economic master plan and turned out to be integral in the formulation of the five-year national development plan for the period 2010-2015, the Growth and Transformation Plan. The plan, published by the Ethiopian Ministry of Finance and Economic Development, put a growth target for the industrial sector at 21.4 per cent per year in the five-year period, significantly higher than that of both the agricultural sector (14.9 per cent) and the services sector (12.8 per cent). It also emphasised how efforts to develop skills and infrastructure should be focused to meet the demands of the growing manufacturing industry (MoFED, 2010).

Another feature of the Ethiopian regime that is important for understanding its approach to industrial policy is its insistence on being autonomous from the ideological demands of Western donors. It would not be an exaggeration to call the EPRDF, and in particular the TPLF branch of the EPRDF, anti-neoliberal. This makes Ethiopia highly unique in the African context—a continent where the World Bank and the IMF had immense influence in the 1980s and 1990s through the SAPs and the PRSPs (see chapter 2 for more details). In his book, *Globalization and Its Discontents*, Joseph Stiglitz recounts details of his conversations with Meles Zenawi in 1997, Stiglitz’ first year as chief economist of the World Bank. At the time, the IMF had suspended its lending programme to Ethiopia due to the country’s ‘unstable’ fiscal revenue generation. The IMF demanded structural reforms, most importantly liberalisation of the financial sector, but Zenawi staunchly refused. Stiglitz, according to his own accounts, managed to lobby the World Bank and, eventually, the IMF to restore development assistance to the country (Stiglitz, 2002).

Prime Minister Zenawi later wrote a book chapter for an academic book edited by, among others, Stiglitz. In the chapter, entitled ‘States and Markets: Neoliberal Limitations and the Case for a Developmental State’, he discusses at length what he sees as shortcomings of

neoliberal and neoclassical economic theory in explaining how activist states are successful in achieving sustained economic development (Zenawi, 2012).

Given the strong influence of the East Asian industrialisation experiences on Ethiopian development policy, it comes as no surprise, then, that there are several aspects of the developmental state literature that resonate with the Ethiopian model: The centrality of industrialisation to the government's political agenda, the preference for economic planning, a state that 'governs' the market, and the existence of large SOEs in a number of strategic industries—for example the Metals and Engineering Corporation (METEC) and the state-owned enterprises in the textile industry, like Kombolcha Textiles and Bahir Dar Textiles.

Oqubay (2015) describes the Ethiopian state as one aspiring to become developmental. Drawing on the works of Amsden (1989), Chang (1994), Evans (1995), Mkandawire (2001) and Wade (1990), he defines the developmental state as one characterised by the “Exclusive pursuit of development; public mobilization around a grand vision; and state capability, embeddedness, and autonomy” (Oqubay, 2015, p.74). He points to Ethiopia's national development plans and income targets, as well as the consistently high levels of federal spending on infrastructure and human development, as evidence for the exclusive pursuit of development and public mobilisation around a grand vision. For state capability, he uses the example of the ruling party's strong organisational capabilities, while admitting that the state bureaucracy inherited from the Derg regime has been more difficult to transform. He also points out the difficulties the state has faced in maintaining autonomy while at the same time developing trust with private actors, especially as the social actors with economic power changes alongside economic diversification.

In a similar vein, Clapham (2015) writes that Ethiopia is, “One of the clearest examples in Africa of the application beyond East Asia of the idea of the developmental state” (Clapham, 2015, p.10). He is, however, critical of the Ethiopian state's insistence of controlling all aspects of the private sector, and calls for higher freedom of action to the private sector in order to generate higher levels of production.

Weis (2016a), on the other hand, contends that the term 'vanguard capitalism' better describes Ethiopia's contemporary political economy—combining the “Centralising political logic of a Leninist movement party with the expansive logic of capitalist markets. At its base lies the monopolisation of state-society relations by the EPRDF which, in turn, allows for the creation, centralisation and strategic use of economic rents by its administration” (Weis, 2016a, p.i). But he does not attribute the term vanguard capitalism to the entire period of EPRDF rule.

He traces changing stages of the Ethiopian political economy, as seen from Table 4.1, clearly acknowledging a ‘developmental’ discourse.

<b>Table 4.1: Evolution of Ethiopia’s political economy since 1991</b>	
<i>1991-2000: Liberal reforms</i>	Constitutional reform and introduction of a multiparty system. Dismantling of the socialist command economy and (partial) market liberalisation.
<i>2000-2005: Origins of the ‘developmental state’</i>	Reform of administration and civil service, and the formulation of a national industrial policy. Closer integration of state and market.
<i>2005-2012: Towards transformation</i>	The idea of a developmental coalition between party, state and people becomes a hegemonic discourse. New fusion of political, administrative and economic structures under the direction of the party: ‘vanguard capitalism’

Source: Based on Table 1 in Weis (2016a), p.24.

According to Weis, the EPRDF centralised economic rents in the early 2000s without a corresponding degree of control over society, hence leaving the party vulnerable. The EPRDF suffered a near-defeat in the general elections in 2005, and consequently claimed a hegemonic vanguard role, increasing the party’s power over both state and market. This vanguard direction does not fully fit into the ideas of a developmental state, according to Weis. However, he sees the term vanguard capitalism as complementary to the developmental state characterisation:

The framework of vanguard capitalism also diverges from—or, rather, complements—the literature on African ‘developmental states.’ Seen from the perspective of this literature, the highly managed nature of markets in Ethiopia is the most rational response to the pervasive market failures that characterise emerging economies. This is the point of view taken by the EPRDF government, which cites the example of East

Asia's state-led industrialisers as a key influence for its policies. However, merely branding the EPRDF state as 'developmental' offers little insight into the nature of Ethiopia's economic transition. It assumes the neutrality of economic institutions – seen as technical solutions to technical problems – which in reality are highly political and the outcome of long struggles over the nature and direction of the state. By putting the party at the centre of the relationship between state and market, the framework of vanguard capitalism adds substance to the debate around a specifically Ethiopian developmental state. In so doing, it ties in with the EPRDF's own writings on the subject, which emphasise the need for the mobilisation of society by a revolutionary movement party as the basis of state-led industrial transformation (Weis, 2016a, p.21).

Weis' claim that a developmental state assumes neutrality of economic institutions is not entirely correct—the developmental state literature does not develop a notion of the state as purely technocratic. However, in Ethiopia's case, Weis adds substance to the developmental state characterisation by identifying a shift in the EPRDF's discourse, towards more hegemonic rule since 2005. Therefore, while Ethiopia is unarguably Africa's clearest example of a developmental state, the vanguard capitalism description is also fitting.

#### *4.2.2.2 Industrial policy in practice*

The previous section showed how, although the manufacturing sector is in nascent stages of development, the Ethiopian government has a strong vision of state-led industrialisation, very much in the image of the East Asian industrialisation experiences. This reinforces the belief that what we are seeing in Ethiopia right now is the beginnings of rapid industrialisation. It also largely explains why people, in particularly those interested in African industrial policy, associate Ethiopia with industrial development. The Ethiopian government's commitment to industrial development can also be shown through the various industrial policy instruments that have become particularly noticeable since 2005.

Table 4.2 provides a taxonomy of industrial policy instruments currently in place in Ethiopia. The table is based on various first and second hand data that I obtained during fieldwork—including readings of government documents and newspaper archives, and interviews with government officials and firm managers. Some categories certainly overlap, but the division into these eight categories reflect my personal judgements.

**Table 4.2: Taxonomy of Ethiopia’s industrial policy instruments**

<p><b><i>Sectoral targeting</i></b></p>	<p>Prioritised industries are clearly articulated in national development plans, based on productive potential, labour intensity, linkages to the agricultural sector, technological entry barriers, and export potential. These include: leather, textiles, metals, agro-processing, chemicals and construction inputs, and pharmaceuticals.</p>
<p><b><i>Expansion of ‘industrial bureaucracy’</i></b></p>	<p>Several new government agencies have been set up to more effectively provide state support to prioritised industries. Examples of such institutes would be the sectoral development institutes, the Industrial Parks Development Corporation and the Ethiopian Industrial Inputs Supply Enterprise.</p>
<p><b><i>Credit allocation: Development Bank of Ethiopia (DBE) and Commercial Bank of Ethiopia (CBE)</i></b></p>	<p>These are state owned banks that provide subsidised credit to prioritised industries. The DBE provides investment capital, whereas the CBE provides working capital.</p>
<p><b><i>Export promotion</i></b></p>	<p>Several incentives are put in place to encourage exports in prioritised industries. These incentives are targeted at export-oriented firms, and include: reduced interest rate on loans from DBE and CBE, subsidised leasing of land, subsidised salaries for foreign ‘experts’, and tax exemptions. Currency depreciation can also be seen as an export promotion instrument.</p>
<p><b><i>Import substitution</i></b></p>	<p>High tariffs are applied for industries in which the Ethiopian government wants to ‘nurture’ and protect domestic producers, but these tariffs are also in place to limit growth of the current account deficit and to raise tax revenues. High tariffs are common in the heavy manufacturing industries, but also for finished products in the light manufacturing industries, such as apparel.</p>

<b><i>FDI attraction</i></b>	Several measures have been put in place to attract FDI in prioritised industries, in order to create employment, generate export earnings, and transfer technology. Such measures include favourable access to infrastructure (e.g. industrial parks and rail transport), tax exemptions and subsidised land leases (in some cases, free land).
<b><i>Infrastructure investments</i></b>	Infrastructure investments in especially power generation and transport are geared towards industrial development.
<b><i>Industrial park development</i></b>	The Ethiopian government has undertaken a massive commitment to build several industrial parks, in large part to cater to foreign investments, but also more generally to ease the logistics constraints of exporting.

The table is self-explanatory, but it can be useful to briefly look at some sector-specific experiences as well.

One sector that has been booming in Ethiopia in recent years is the floriculture industry, and industrial policy has been deemed important for its growth (Abebe and Schaefer, 2015; Gebreeyesus and Iizuka, 2010; Oquay, 2015). While it could be debated if floriculture should be considered a manufacturing activity, it definitely involves stages of value addition before reaching the consumer, and cutting and packaging activities are organised in a similar fashion to traditional industrial activities.

Government support for the floriculture industry in Ethiopia was ramped up in 2002, when the Prime Minister's Office required the Ministry of Industry to prepare a five-year action plan for the industry (Gebreeyesus and Iizuka, 2010). First, attraction of FDI came to be seen as crucial in contributing to technological development and market access for the industry. While Ethiopian firms initially kicked off the industry, foreign firms have increased their investment in the sector, accounting for 63 per cent of all firms operating in the sector in 2012 (Oqubay, 2015). The attraction of foreign investors was enabled through offering investment incentives, like generous tax exemption schemes. Second, air cargo logistics was facilitated. Suitable land at favourable lease rates were made available to investors at a reasonable distance from the airport, and the government subsidised air freight rates and gave exporters the

privilege to ship through Ethiopian Airlines on a credit basis (Abebe and Schaefer, 2015). Third, subsidised loans by the DBE became the prime source of long-term investment financing for firms in the floriculture industry—almost two-thirds of firms in the industry have relied on loans from the DBE. After seeing the success of DBE loans to the floriculture industry, private banks have now also started lending to the industry (Oqubay, 2015).

Cement, as already seen, is another industry that has boomed since the early 2000s. The state has provided support to the cement industry through both direct and indirect measures. Direct measures most importantly include entry incentives for domestic firms, such as long-term loans made available for capital investments; easy access to mining resources for firms; and the allocation of foreign currency on preferential basis. Additionally, government provision of transport and energy has been crucial, including import of over 1,000 trucks and supplies of heavy-oil fuel, coal, pet coke and electricity (Oqubay, 2015). More indirectly, the government's large-scale housing and infrastructure programmes, when combined with the expansion of private sector construction, have provided an important demand stimulus for cement.

Highly prioritised export-oriented manufacturing industries, such as the textile and leather industries, have also enjoyed various instruments of government support. Similar to the floriculture sector, the government has put in place a range of export incentives for both foreign and domestic firms. These include duty free access to imported inputs and capital goods, exemption of income tax for up to ten years, subsidised loans from DBE, subsidised land leases, and payment of salaries for foreign 'experts'. The payment of salaries for foreign experts is significantly more important for domestic firms, as they are more constrained, both in terms of knowledge and financing, than foreign firms.

Particularly for the apparel industry (part of the textile industry), the construction of industrial parks<sup>53</sup> is becoming an essential part of the industrialisation strategy. A majority of the largest foreign-owned firms that have made commitments to invest in the country in the last two years are locating in industrial parks.

The textile and leather industries have now become Ethiopia's two largest manufacturing industries, as measured by export earnings, and the attraction of foreign investments are starting to play a massive role in the expansion of these industries. The rest of this chapter will analyse these two industries in greater detail, mapping out the growth of the industries, and also discussing the extent to which foreign investments in the industries are

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<sup>53</sup> These parks are similar to what would be known in many other countries as industrial zones, EPZs or SEZs.

benefitting the Ethiopian economy, especially in terms of the development of domestic productive capabilities. Particularly in the context of industrial policy for African countries in an era of GVC expansion, these two industries in the Ethiopian case serve as excellent case studies to build further conclusions on from the previous chapter.

### **4.3 Ethiopia's GVC participation and industrial policies in the textile and leather industries**

Seeing that this section is extensive, a brief overview of its structure is useful:

Section 4.3.1 examines the Ethiopian government's motivation behind developing the textile and leather industries.

Section 4.3.2 turns specifically to the GVC aspect of these two industries. Why is a GVC participation strategy useful for Ethiopia, what do the industry value chains look like in today's global context, and who are the GVC-oriented firms in these two industries in Ethiopia?

Section 4.3.3 breaks down the export performance of the industries, both in terms of product variations and export performance at the firm level (i.e. what firms account for the largest share of exports?). Because a GVC participation / FDI attraction strategy for developing countries is largely about boosting exports—which is also a key aim of industrialisation strategies for developing countries—this section is generally about evaluating the performance of the industries.

Section 4.3.4 looks at the factors that are motivating foreign firms to outsource production to Ethiopia. Some of these are related to simple cost savings by outsourcing production to a lower income country, while other factors are more specific to the Ethiopian context.

Section 4.3.5 analyses Ethiopia's GVC-oriented industrial policies that are being used to develop the two industries. As the policy apparatus in Ethiopia does not often use the word 'GVC oriented' for its industrial policies, it is not always useful (or even possible) to make a distinction between the 'general' industrial policies, and the 'GVC-oriented' industrial policies. They certainly overlap, so this section cannot avoid looking at general industrial policies as well. However, an effort has been made during fieldwork to investigate especially those policies that aim to take a GVC path for both industries (e.g. what export incentives have been put in place?) and to make the attraction of foreign firms benefit the domestic economy (i.e. what policies, if any, have been put in place to transfer technology from foreign firms to

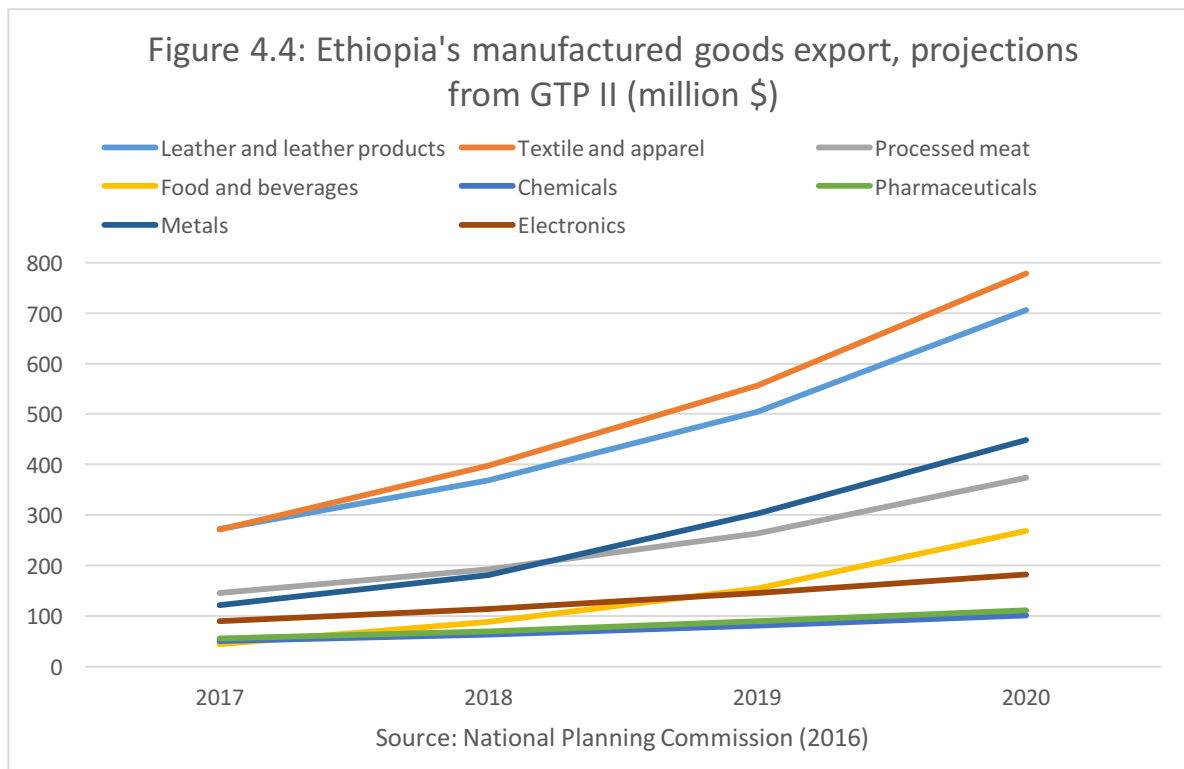
the domestic economy, and to create linkages between foreign firms and the domestic economy?).

Section 4.3.6 investigates the impact that the GVC participation / FDI attraction has had on the development of domestic productive capabilities. The breakdown of export performance in section 4.3.3 will already have revealed some results. But this section will also look at aspects that were theorised in the last chapter, like the demonstration and competition effects of FDI, if and how FDI has contributed to meaningful skills development, and if any backward linkages to the local economy have been created (or if such prospects look bright). Because Ethiopia is in very early stages of a GVC participation strategy in the two industries, the section will also talk about the future prospects of developing domestic productive capabilities.

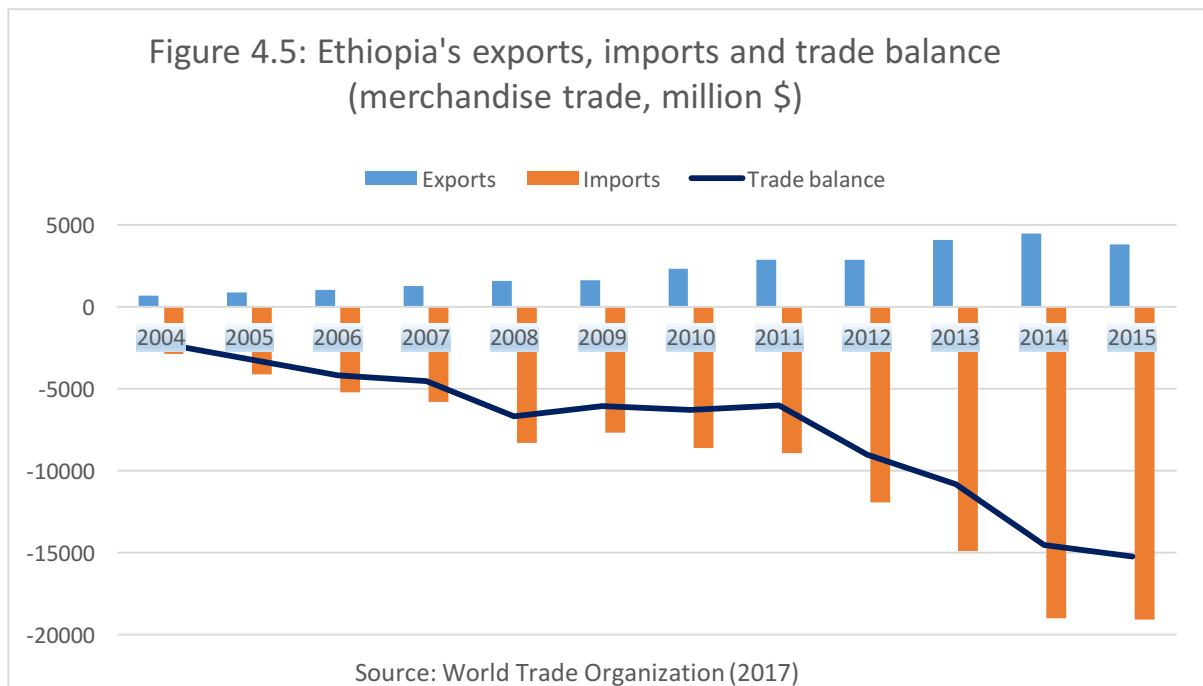
Section 4.3.7 looks at two key challenges for the growth of these industries through the GVC participation strategy—bottlenecks on the input side and high labour turnover. These are problems that have been discussed and analysed in the literature in the context of Ethiopia outside a GVC lens, but must be addressed if the GVC participation strategy is going to be successful.

#### **4.3.1 Why does the Ethiopian government want to develop the textile and leather industries?**

The Growth and Transformation Plan II, Ethiopia's national development plan published in 2015, identifies six manufacturing industries to be prioritised in the period 2015-2020 (Table 4.2 in the previous section lists these sectors), including the textile and leather industries. As mentioned, the textile and leather industries currently bring in more export earnings than any of the other manufacturing industries, and the Ethiopian government predicts this trend to continue, as seen in Figure 4.4. In this sense, they will be the most important manufacturing industries for Ethiopia in the near future.



Promoting economic activities that generate foreign currency (in theory, all manufacturing products can be traded) is critical for Ethiopia. Figure 4.5 shows that the trade deficit has been growing as the import bill has mushroomed in the last decade. Because of the scarcity of foreign currency, foreign exchange controls are in place. It is now close to impossible to buy foreign currency in Ethiopia by paying with Ethiopian Birr, unless you have government approval to do so, by, for example, holding a diplomatic visa/passport as a foreigner.



The commitment to develop the textile and leather industries is seen as a means to ease this foreign exchange scarcity. In fact, interviews with industry experts in the country conducted during fieldwork indicate that the generation of foreign currency is one of two primary reasons for promoting the industries.

The other primary reason cited is high labour-intensity and thus the industries' employment generating capabilities. Both industries absorb a lot of labour, and the hope is that, eventually, these two industries will grow to a point where they contribute to alleviate the dire job situation in Ethiopia. According to the most recent Ethiopian Labour Survey, the unemployment rate in the country is only 4.5 per cent, but as mentioned in chapter 2, looking at conventional unemployment numbers is not very revealing in the African context, as most people who are counted as 'employed' are usually stuck in vulnerable jobs—working for their families or on non-contractual arrangements. UNDP (2015) reveals that over 70 per cent of young people (aged 15-29) in Ethiopia are stuck in such vulnerable jobs, requiring practically no formal education. Most of these young people are desperate to find consistent, remunerated employment as a means of living. This massive surplus of young, unskilled labour, explains in large part why Ethiopia can currently offer the world's lowest 'factory wage' and why foreign companies in labour-intensive industries are setting up or relocating their factories to Ethiopia (more on this later).

Another important reason for promoting these industries is the possible economic links that they can provide to the agricultural sector. Because such a large share of Ethiopia's population depends on agriculture for their livelihoods, industrial policy in Ethiopia has since the 1990s emphasised the need for developing manufacturing industries that provide linkages to the agricultural sector (inspired especially by the notion of backward linkages from Hirschman (1958)). The links to leather is the livestock, an industry which is by no measure a small one in Ethiopia: the country has Africa's largest livestock population, with a cattle population of more than 53m, along with sheep and goat populations of 25.5m and 24.1m, respectively (Abebe and Schaefer, 2015). For the textile industry, the linkage is to the cotton industry. The linkages here are somewhat more of a challenge to develop than in the leather industry, as the domestic cotton sector in Ethiopia is already struggling to keep up with the requirements for the quality and the quantity of cotton demanded by the textile producers. Section 4.3.7 will discuss in greater detail the challenges on the input side of both these industries.

Furthermore, the Ethiopian government's insistence on developing these industries obviously relates to the party's view of the manufacturing sector as being integral to economic and technological development. The choice of these manufacturing industries in particular has to do with the above factors already mentioned, but also an historical observation of the process of industrial development by frontrunners—starting out with labour-intensive industries with relatively low entry barriers, before moving on to more sophisticated industrial activities. According to Staritz and Whitfield (2017), Prime Minister Zenawi particularly stressed the need to develop a textile industry, as he had observed how this sector had historically been the first step of industrialisation in almost every country that went on to successfully industrialise.

But even with the relatively low technological barriers, there is a recognition by the Ethiopian government that the entry of foreign investments is crucial to developing these industries, as Ethiopian companies lack the technology, capital and knowhow to be internationally competitive.

#### **4.3.2 The industry value chains and Ethiopia's GVC oriented firms in these value chains**

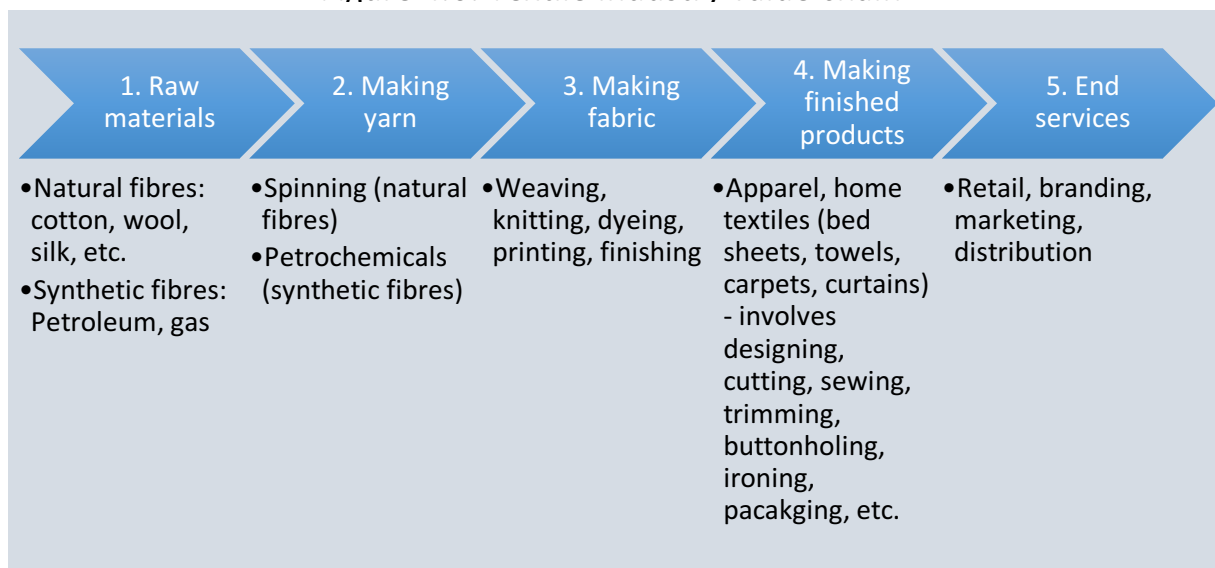
In theory, Ethiopia's participation in the GVCs of both the textile and leather industries could be in the form of Ethiopian manufacturers selling their products to lead firms (retailers and brand names) based in the targeted consumer markets, or even selling their products under their

own brands. However, very few Ethiopian companies have the necessary know-how to produce for markets in Europe and the US (meeting quality standards, being able to adjust to change in orders of both quantity and design specifications, on-time-delivery, etc.) or have the necessary capital for running big operations. Therefore, in line with how the global industry has come to work in both these sectors for a ‘typical’ least developed country, Ethiopia is inviting foreign manufacturers to produce for the export market. But there are some differences in Ethiopia’s GVC participation in the two industries that ought to be explained.

#### 4.3.2.1 The textile industry

While I’m referring to the industry as the ‘textile industry’ in this chapter, some would quite probably call it the ‘textile *AND* apparel industry’. This comes from the observation that there are production processes in the value chain that are somewhat different from each other. Stage 1 (in Figure 4.6) in a least developed country like Ethiopia, typically involves cotton cultivation, and is therefore associated with the agricultural sector. The manufacturing / ‘factory’ stages of the value chain are associated with stages 2 to 4. In these stages, the global industry has gradually become separated into textile manufacturers (stages 2 to 3) and apparel manufacturers (stage 4).

Figure 4.6: Textile industry value chain



Stages 2 and 3 (the ‘textiles’ part) are typically more capital intensive than the other stages of production. Firms that engage in stages 2 to 3, also sometimes engage in stage 4. There are also instances whereby firms that engage in stages 2 and 3 also engage in raw material production, but this is more of a rarity. Firms that have capacity to do everything from stages 2 to 4 are commonly known as *vertically integrated textile firms*.

Because the global market for apparel is so much larger than any other finished product based on textiles, the growth of firms who only engage in apparel production has been immense with the expansion of GVCs. These firms carry out labour-intensive assembly activities on finished fabric, commonly known as *CMT functions* (CMT stands for cut-make-and-trim). The skill level of workers is lower than of those in textile firms and investment capital requirements are smaller. Global firms in this segment of the value chain are generally able to move operations easily, and a large chunk of FDI in the textile industry to least developed countries tend to concentrate on CMT functions in the apparel segment of the industry. Since the early 2000s, CMT production has been booming in countries like Bangladesh, Cambodia and Vietnam, and are now starting to surge in Ethiopia. CMT firms who operate in least developed countries will often import fabric from slightly higher-income countries.

Firms that engage in stage 5 activities generally do not engage in the manufacturing stage of the value chains. In that sense, the textile value chain fits neatly into Gereffi’s characterisation of a BDVC (a term that was introduced in the last chapter), whereby those firms that are involved in retail typically outsource apparel production to a string of global manufacturers. We will see, however, that in Ethiopia’s case, some firms in the industry defy the typical value chain characteristics.

#### 4.3.2.1.1 Ethiopia’s GVC-oriented firms in the textile industry

Ayka Addis Integrated Textile, a Turkish firm, is by many considered the ‘pioneer’ for FDI in the textile industry in Ethiopia. It has been producing yarn and fabric in Ethiopia since November 2008 in a plant located 20 km outside of Addis Ababa (Reporter, 2010), but expanded to include apparel in 2010 with a \$100m investment (Capital, 2010). Since then, many other Turkish investors have followed suit, but to date, Ayka Addis is the largest exporter in the industry, making up between 40 per cent and 50 per cent of Ethiopia’s total exports in the textile industry (MoI, 2016e). Its exports are mainly headed to one buyer in Germany, which Ayka established a relationship with before coming to Ethiopia.

Gradually, apparel manufacturers from South and East Asia have become interested in Ethiopia as a possible outsourcing destination, especially when the Ethiopian government announced that export-oriented apparel production would be a priority in the national development agenda and that they would build industrial parks to ease logistics constraints for export-oriented apparel producers. Bole Lemi 1 became the first government-owned industrial park to host foreign-owned firms from different countries, in both apparel and footwear manufacturing. Operations for most firms started in 2014. Notable apparel firms operating in the park include Arvind (India), JayJay Textiles (India) and Shin (South Korea) (MoI, 2016e).

The flagship project for export-oriented apparel production, however, is Hawassa Industrial Park (HIP), located approximately 250 km south of Addis Ababa. Firms in the park are expected to start production in mid-2017 (the park was inaugurated on June 20, 2017), and the park is estimated to bring in \$1bn in export earnings—roughly 10 times the current figure for the entire textile industry—and employ over 60,000 people when operating at full capacity (notes from presentations at the Agro-Industry Investment Forum in Addis Ababa, October 5-7, 2016). The park has attracted the first wave of world-leading apparel producers to Ethiopia.<sup>54</sup> According to several stakeholders involved in HIP, the impressive scale of the HIP project was enabled by the anchor investor in the park, Philip Van-Heusen (PVH), one of the world's largest apparel companies. PVH owns several global apparel brands, including Calvin Klein and Tommy Hilfiger, and does not normally engage in manufacturing operations. In that sense, it is a typical example of a 'lead firm' in the BDVC classification: many of the apparel manufactures in HIP are part of PVH's global supply chain and are there at the invitation from PVH.

While foreign-owned firms are dominating the export-oriented segment of the textile industry, some domestic firms that have traditionally focused on the domestic market are increasingly orienting themselves towards the export market. These are most notably vertically integrated textile firms that, in the words of one industry expert, "Come from big money" (Ethiopian trading company manager, interviewed by the author in Addis Ababa, November 09, 2016). Because of the large capital requirements associated with textiles, the four largest vertically integrated domestic textile firms are either state owned (Bahir Dar Textile and Kombolcha Textile), affiliated with the TPLF's endowment fund, EFFORT<sup>55</sup> (Almeda

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<sup>54</sup> One could argue that Bole Lemi 1 also hosts some large international apparel producers, but those in HIP operate, on average, on a larger scale.

<sup>55</sup> EFFORT is the acronym for the Endowment Fund for the Rehabilitation of Tigray. It was established and is still controlled (though no longer formally owned) by the TPLF. Its current CEO is Azeb Mesfin, the widow of former Prime Minister Meles Zenawi. Its total assets exceed half a billion dollars (Weis, 2016a).

Textile), or owned by Ethiopia's richest person, the Saudi-Ethiopian businessman Sheikh Mohammed Al Amoudi (MAA Garments).

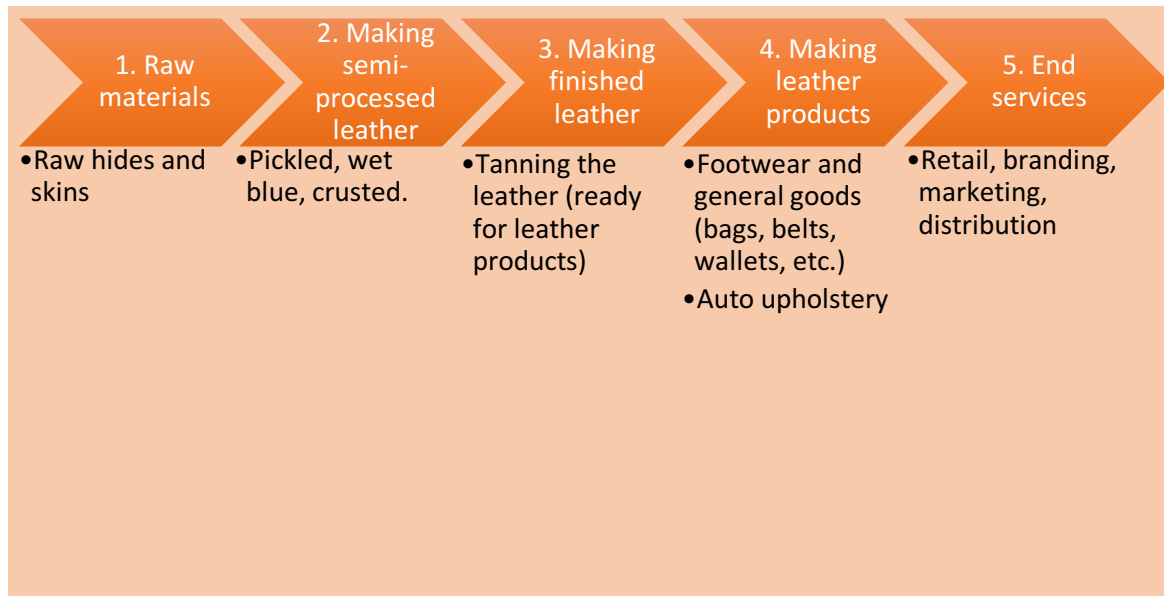
#### *4.3.2.2 The leather industry*

The name of this industry, similar to the textile industry, could arguably be called the leather and leather products industry. This comes from the observation that some firms specialise in transforming raw hides and skins into finished leather (tanneries), while others specialise in transforming finished leather into leather products—predominantly shoes, but also bags, belts, and other leather-based accessories. Similar to the textile industry, stage 1 (Figure 4.7) is associated with the agricultural sector. Tanneries buy raw hides and skins from farmers, herders and traders. Apart from the traders, many of the stage 1 actors do not consider themselves as part of the leather industry, but raise and graze cattle and sheep as part of their subsistence (e.g. for milk and meat). The hide or skin is simply a by-product when the animal is slaughtered.

Tanneries are those that engage in stages 2 and 3. Like the textile industry, these are more capital intensive stages than stage 4. Factories that operate in stage 4 manufacture predominantly footwear. In some trade statistics industry classifications, like that of the WTO, footwear manufacturing is actually classified under the textile/apparel category—shoes made of both leather and of synthetic fibres (the latter of which should obviously be classified in the textile and the apparel category rather than the leather products category).

The leather industry value chain also fits into the BDVC classification as stage 5 firms normally do not manufacture the products themselves, but subcontract to a network of global suppliers.

Figure 4.7: Leather industry value chain



#### 4.3.2.2.1 Ethiopia's GVC-oriented firms in the leather industry

Whereas the textile industry saw a pioneer wave of FDI coming from Turkey, FDI in the leather industry initially originated from China. On advice from then-World Bank chief economist, Justin Lin, Ethiopia's Prime Minister, Meles Zenawi, sent a trade mission to China in 2011 to invite potential footwear manufactures to invest in Ethiopia (Lin and Wang, 2014). One firm, Huajian, visited Ethiopia later that year and decided to set up a factory in a Chinese industrial zone (mainly for textile and footwear manufacturers), producing women's shoes for buyers and retailers in the US and Europe, similar to the firm's operations in China. The firm started production in 2012, and has subsequently expanded rapidly. The number of employees increased from 550 in January 2012 (Lin and Wang, 2014) to 5,200 in November 2016 (Huajian deputy manager, interviewed by the author in Addis Ababa, November 25, 2016). The firm's exports reached \$16m in 2015 (MoI, 2016f), making up 46 per cent of Ethiopia's total footwear exports in that year (MoI, 2016c). The firm is still growing, aiming to reach \$35m in export revenues in 2017 (Huajian deputy manager, interviewed by the author in Addis Ababa, November 25, 2016).

Huajian's footwear exports are expected to reach much higher levels than that though. The firm has committed a \$1bn investment to build 'Ethiopia Huajian Light Industry Park' (a park that has already commenced footwear production, with 700 workers at the time of writing)

to be completed by the end of 2020. Operating at full capacity, the park is estimated to employ 30,000-50,000 people and generate \$2bn in export revenues (Huajian, 2016).

Other big footwear manufacturers in Ethiopia also originate from East Asia, like George Shoe (Taiwan) and New Wing Shoes (Hong Kong), which are the second and third largest footwear exporters in Ethiopia, respectively (MoI, 2016f). Both firms focus on end markets in the US and Europe, but George Shoe also caters to a brand that has stores in China and Japan. Like Huajian, George Shoe also has grand expansion plans. The company is building an industrial park in Mojo, the tannery hub of Ethiopia, where they plan to employ 20,000 people and generate \$250m in yearly export revenues (general manager of George Shoe, interviewed by the author in Addis Ababa, November 19, 2016).

While the footwear industry is booming in Ethiopia, the inputs industry (finished leather) is actually larger as measured by export revenues. This, in part, comes from the long tradition of tanning leather in Ethiopia. Currently, 5 of the 10 largest exporters in the tanning industry are Ethiopian—Kolba, Dire, Mojo, Sheba and Batu (MoI, 2016f). The two largest, however, are foreign owned—Ethiopia Tannery, a formerly Ethiopian state-owned tannery that was sold to the UK leather products company, Pittards, in 2009 (Capital, 2009), and Friendship Tannery, a Chinese-owned tannery. An analysis of interviews conducted with tanneries during fieldwork shows that the tanneries in Ethiopia, both foreign-owned and local, produce for both foreign - and local-owned leather products manufacturers, with China being the main destination for exported leather. Huajian and George Shoe are among the largest domestic customers for finished leather. Some leather products manufacturers have their own tanneries (e.g. Pittards and New Wing Shoes), while others have plans of building in-house tanning capabilities (e.g. George Shoe).

In contrast to the export-oriented Ethiopian tanneries, the export-oriented Ethiopian leather products manufacturers are at this point very small compared to the foreign ones. A telling example is that one of the largest local exporters is Anbessa Shoes, which exported shoes at a value of less than \$1m in 2014 (MoI, 2016f). Consequently, foreign firms account for over 90 per cent of Ethiopia's leather products exports (MoI, 2016f).

### 4.3.3 Export performance

#### 4.3.3.1 *The textile industry*

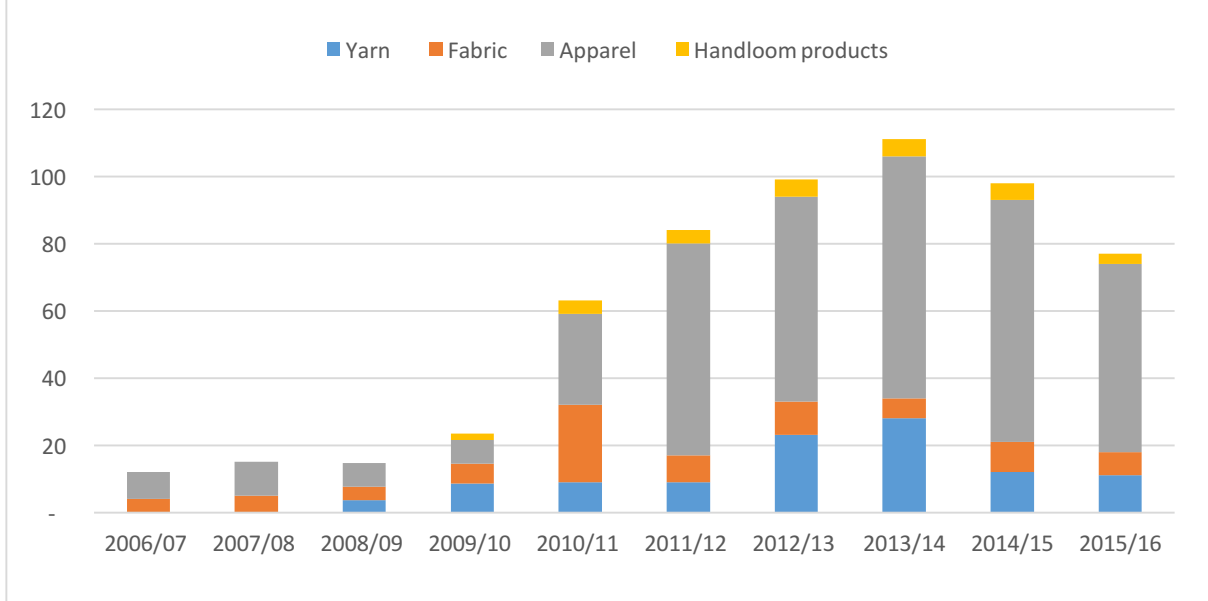
As can be seen from Figure 4.8, textile exports in Ethiopia have been booming since around 2010, totalling \$78m in 2015/16. This can chiefly be attributed to the onset of apparel production by the Turkish firm Ayka Addis, which, as seen in Figure 4.9, accounts for a massive share of Ethiopia's apparel exports. By comparator country standards, however, \$78m is a miniscule number. For example, in Bangladesh, textile exports totalled \$30.1bn in 2014, and in Vietnam, the figure was 26.9bn (OEC, 2017). This is 386 and 345 times the exports of the industry in Ethiopia, respectively.

The export figures for these countries almost completely reflect CMT apparel production, so in this sense, dubbing the industry 'textile' is slightly misleading. In Ethiopia's case, we also see that apparel accounts for the main source of export growth (Figure 4.9). Still, this does not mean that pure textile production (fabric) is unimportant. For some of the vertically integrated firms that exclusively export apparel, like MAA Garments and Ayka Addis, pure textile production is very much part of the production process, but it does not show up in the export data, as it is not sold as a finished product.

Some possible measurement errors with the Ethiopia data should be noted. OEC (2017) reports that textile exports from Ethiopia totalled \$168m in 2014, whereas Figure 4.8 (data from the Ethiopian Ministry of Industry) shows \$110m for that year. Data from Ethiopia's National Planning Commission provides yet another number, \$98m, for this year (NPC, 2016). A plausible explanation for this is that the absolute figure for Ethiopia is so small, resulting in a small number of firms accounting for a large share of exports, making the error/difference in reporting from any one firm larger in aggregate terms.

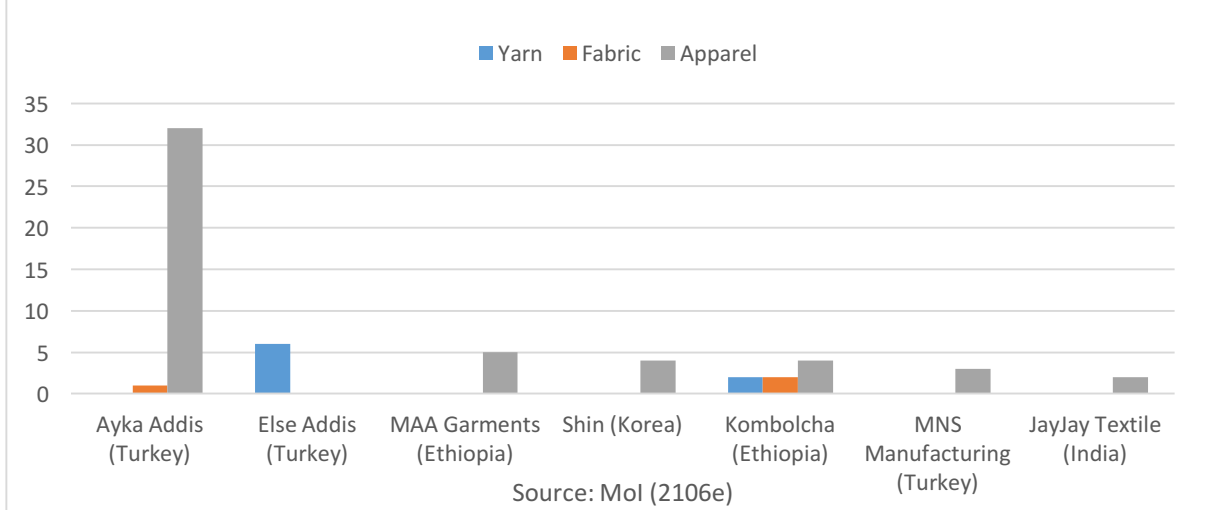
The significance of just a few firms in determining aggregate numbers also serves as an explanation as to why total exports in Ethiopia have decreased since 2013. From 2013/14 to 2014/15, the decrease in total exports was largely due to a decrease in yarn exports by two firms—Selendewa Textile and Else Addis. From 2014/15 to 2015/16, Ayka Addis' exports dropped dramatically, reportedly because its sole customer required fewer orders that year (senior official at the Ethiopian Textile Industry Development Institute, interviewed by the author in Addis Ababa, November 11, 2016).

Figure 4.8: Ethiopia's textile exports (million \$)



Source: Mol (2016d)

Figure 4.9: Ethiopia's top exporting firms in the textile industry (million \$, 2015/16)



Source: Mol (2106e)

#### 4.3.3.2 The leather industry

Like the textile industry, leather exports in Ethiopia have been growing in recent years (see Figure 4.10) but, seen from a global perspective, it is still at a low level. For example, in 2011— a year from which the value of Ethiopia’s leather products exports has not changed

significantly—Africa’s leather and leather products export earnings accounted for 1 per cent of global exports in the industry, and Ethiopia’s share of Africa’s export earnings was less than 1 per cent (Oqubay, 2015).

We can see that the composition of Ethiopia’s exports has changed though. In 2008, the government levied a 150 per cent export tax on raw and some semi-processed hides and skins<sup>56</sup> (pickled and wet blue<sup>57</sup>) to encourage more value added in the stages processing (Capital, 2008). In effect, the high tax worked as a ban, and while exports took a hit in 2009/2010, it seems to have had a positive effect on value added in later years, as the share of higher value added leather in exports started to increase in 2010/11, as seen in Figure 4.10. In 2011, a similar tax was levied on the last stage of semi-processed leather (crust) for the same reason, which again had a positive effect on the degree of value added in exports.

There has been a small dip in exports since 2014/2015, mainly in finished leather. Numerous explanations have been offered by tanneries in personal interviews. The main one is that demand for leather and leather products has slowed down in Russia (one of the world’s largest markets for the industry) as a result of the economic sanctions imposed by the EU on the country in 2014, in view of Russia’s perceived role in destabilising Eastern Ukraine. Another explanation is that synthetic materials are increasingly substituting leather in traditionally leather-based products.

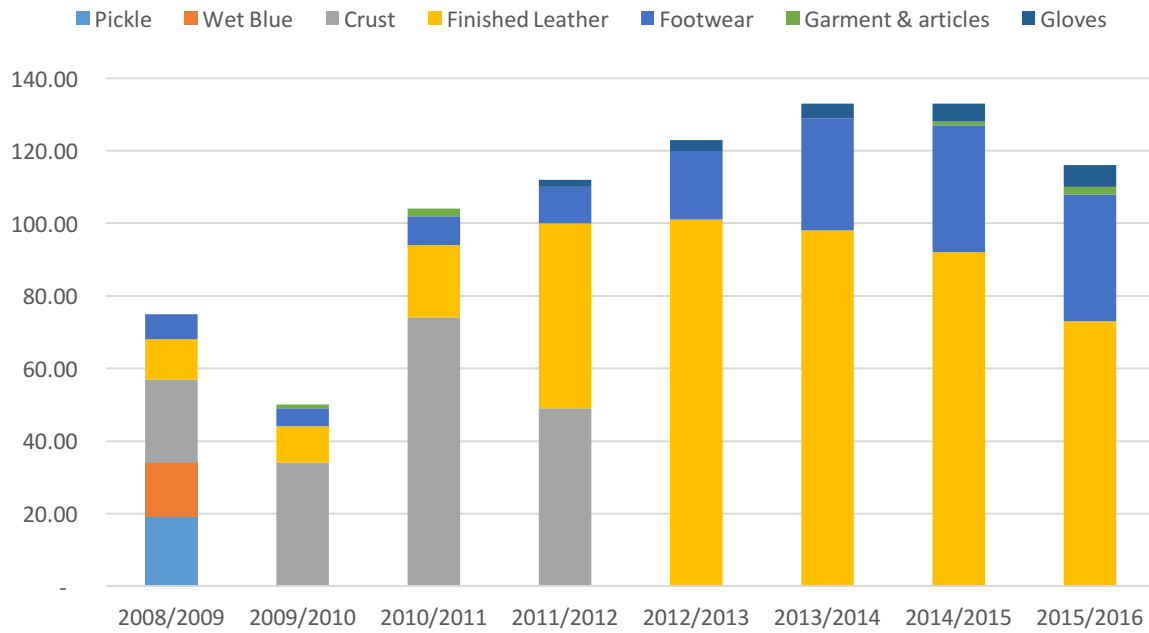
Like in the case of the textile industry, the reliability of some of the data presented in the below figures should be addressed. While no individual firm in the industry accounts for as large a share of exports as Ayka Addis does in the textile industry, the weight of few firms in determining export performance, in particular in the footwear industry, is heavy. For example, the MoI (2016e) data below estimates Huajian’s earnings at \$16m in 2015/16. However, the company itself claims that they made \$25m in that year (Huajian deputy general manager, interviewed by the author in Addis Ababa, November 25, 2016).

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<sup>56</sup> The term ‘hide’ is normally used for larger animals with thicker skin (e.g. cowhide), while the term ‘skin’ is normally used for smaller animals with thinner skin (e.g. sheepskin).

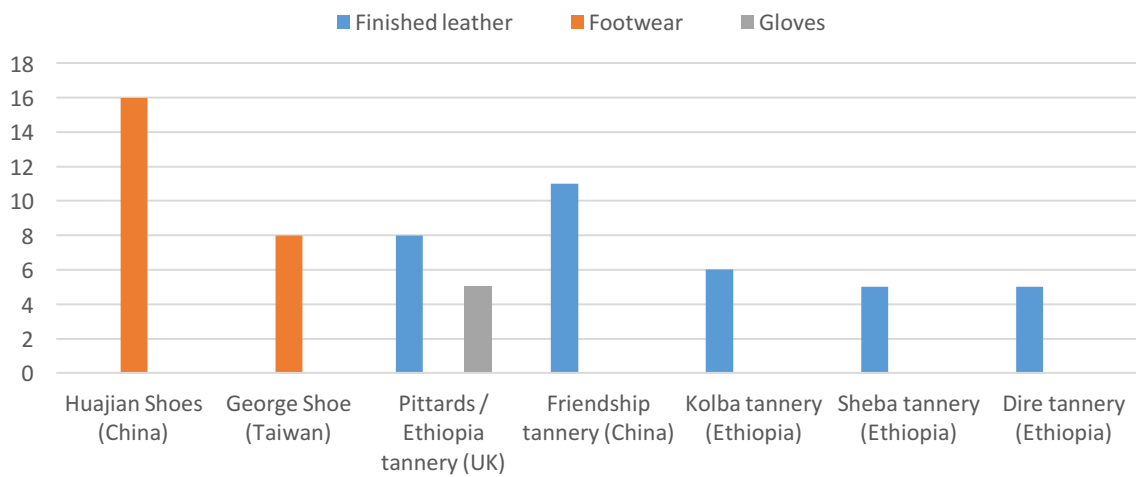
<sup>57</sup> These are the first stages of the processing. Pickling is the process of lowering the pH value of the hide/skin to help with the penetration of certain tanning agents, like chromium. Wet blue skin is when the leather has been tanned for the first time, leaving a pale blue colour.

Figure 4.10: Ethiopia's leather industry exports (million \$)



Source: Mol (2016c)

Figure 4.11: Ethiopia's top exporting firms in the leather industry (million \$, 2015/16)



Source: Mol (2016e)

#### 4.3.4 Foreign firms' motivation for investing in Ethiopia

Earlier in this chapter, the Ethiopian government's motivations for attracting FDI were discussed. But the chapter has yet to address (in detail) the reasons as to why foreign firms in the textile and leather industries are flocking to Ethiopia.

The previous chapter has given some pointers; particularly in BDVCs, foreign buyers or manufacturers are increasingly relocating manufacturing operations to low income countries in order to save production costs. In the Ethiopian context, this is also a big part of the story. An analysis of interviews during fieldwork with managers and representatives of foreign firms made clear which cost savings held a higher priority, and also pointed out some particularities in the Ethiopian context. Below follows a synthesis of these interviews.<sup>58</sup>

Cheap labour is the most important explanation for FDI inflows in both industries. According to foreign investors, no other prospective investment destination in the world could offer lower wages. In Ethiopia, wages at the operator level in assembly operations (the lowest skill segment, in which most local employees are hired) normally range between \$30 and \$45 per month (not adjusted for purchasing power). According to ILO (2014b), Bangladesh, Myanmar and Sri Lanka are the countries that offer wages closest to this level, but none of them offer wages below \$55. Whereas most investors were honest in the interviews about the cheap labour incentive, not all would be explicit—some would say that Ethiopia has 'great demographic potential' while others would say that 'there is plenty of labour and most working people are young.' This is not to say that a statement like the latter one is dishonest. If Ethiopia had cheap labour, but a demographic composition such that most working people are, say, over 35, it would not be as attractive to invest there. In fact, most companies reported that they prefer to hire people who are younger than 30, in part because of health, but also because they want people with limited working experience. The general manager of one of the largest foreign footwear companies actually stated that his company prefers to hire people with no previous working experience. From a human capital perspective, this does not make much sense. A possible explanation could be that managers think that workers will be less demanding in terms of wages and working conditions if they have no basis for comparing the nature of their work to similar types of formal work.

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<sup>58</sup> The motivations for investing in Ethiopia are discussed in order of importance. These reflect my personal judgements, so it is entirely possible that a foreign investor or Ethiopian government official would rank them in a different order.

Second, preferential access to end markets plays an important role. While Ethiopia is not part of the WTO, it has negotiated duty-free access to the US market through the African Growth and Opportunity Act (AGOA) and to the European market through the Everything But Arms (EBA) agreement. Both agreements include not only apparel but also a range of goods that African countries traditionally export, like primary commodities. The EBA agreement includes all least developed countries and encompasses all goods apart from arms. It is conceived as an initiative to help economic development in least developed countries. AGOA is specific to SSA and eligibility is determined every year by the US president, based on initiatives taken towards becoming a market-oriented economy. Additionally, AGOA places caps on using yarns and fabric from outside the US, both locally sourced and from ‘third party lesser developed countries’. However, these caps do not apply to least developed countries, like Ethiopia. From a US standpoint, the aim of AGOA is to strengthen commercial ties between countries in SSA and US companies, and eventually establish SSA as a market for American cotton.

AGOA has recently been extended until 2025 and seems to be more important for apparel companies in Africa than EBA is, as it gives a competitive edge to companies that produce in Africa compared to those in Asia (Staritz et. al., 2016). In Ethiopia, companies in both industries underscore the importance of both trade agreements, but especially in the apparel industry TNCs have reported that there would be no prospect for developing the industry in Ethiopia without AGOA. For these companies, Bangladesh seems to be the benchmark comparator country in terms of cost savings, and AGOA turns the lever in favour of Ethiopia. A representative for one of the largest foreign apparel investors in Ethiopia said the following:

Without AGOA, the international apparel industry wouldn't be here (in Ethiopia). With AGOA, you outcompete Asian competitors in the American market. You take away Bangladesh, in effect. For every t-shirt I produce here, I pay 35 cents in logistics costs. In Bangladesh, I would pay 10 cents. But AGOA enables \$1.15 per t-shirt in duty savings compared to Bangladesh (representative of foreign apparel company, interviewed by the author in Addis Ababa, November 15, 2016).

Third, the price of electricity in Ethiopia is relatively low. The firms surveyed say that they pay the equivalent of roughly 5 US cents per kWh. By comparison, the price of electricity in Turkey (which, naturally, a Turkish investor compared it to) is about 20 US cents per kWh.

Fourth, the Ethiopian government has put in place a range of investment incentives for foreign investors that produce for the export market (the full details of which will be discussed

in section 4.3.5). These include a range of tax exemptions, subsidised loans from the DBE and subsidised land leases. As the Ethiopian government owns all land, they have a lot of freedom to allocate land on a preferential basis. Some of the larger foreign firms even reported that they lease land for free.

Finally, foreign investors also said that the risk of investing in Ethiopia was fairly low compared to many other countries with cheap labour costs—the political situation is stable, and the government is responsive. Even those investors who were interviewed after the ‘state of emergency’<sup>59</sup> was declared seemed relatively undeterred, especially those from South and East Asia. The general manager of a foreign footwear company likened the protests to those of Tiananmen Square in 1989, saying that “you can’t have smooth sailing when you’re investing in emerging markets.”

### **4.3.5 Industrial policies (GVC oriented) to develop the textile and leather industries**

#### *4.3.5.1 Establishment and revitalisation of government support agencies*

Since roughly 2010, when an industrial development strategy was launched (ETIDI, 2015) alongside the GTP, the Ethiopian government has revitalised its efforts to improve the institutional apparatus for industrial development, especially in the form of new government support agencies under oversight by the Ministry of Industry. Table 4.3 below provides a brief description of these agencies.

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<sup>59</sup> On 8 October 2016, Ethiopia’s prime minister, Hailemariam Desalegn, declared a six-month state of emergency following nearly a year of anti-government demonstrations.

<b>Table 4.3: New or revitalised government support agencies to assist growth of the textile and leather industries</b>	
<b><i>Ethiopian Textile Industry Development Institute (ETIDI)—under the Ministry of Industry</i></b>	Established in 2010. Mission: To assist the development of the textile industry through investment promotion, consultancy services, training, research, and marketing and laboratory/technology support services (ETIDI, 2015).
<b><i>Ethiopian Leather Industry Development Institute (LIDI)—under the Ministry of Industry</i></b>	Established as the Leather and Leather Products Technology Institute (LLPTI) in 1998, renamed LIDI in 2010. Mission: To assist the development of the leather industry through investment promotion, consultancy services, training, research, and marketing and laboratory/technology support services (LIDI, 2015).
<b><i>Ethiopian Investment Commission (EIC)—independent, reports directly to the Prime Minister</i></b>	Established in 1992, revitalised in 2014. Mission: To promote Ethiopia as an investment location for both foreign and domestic investors, and attract FDI into strategic industries and segments of value chains; to formulate incentives for investment attraction, and create a conducive investment climate (deputy CEOs of EIC, interviewed by the author in Addis Ababa, October 22, 2016).
<b><i>Industrial Parks Development Corporation (IPDC)—under the Ministry of Industry</i></b>	Established in 2014. Mission: To assist Ethiopia’s industrialisation process, promote exports and create employment opportunities by building dedicated industrial parks with one-stop-shop services for domestic and foreign investors (IPDC, 2015).
<b><i>Ethiopian Industrial Inputs Development Institute (EIIDE)—under the Ministry of Industry</i></b>	Established in 2015. Mission: To assist the process of input provision to the domestic manufacturing sector of high quality and quantity, and at a stable price (CEO of EIIDE, interviewed by the author in Addis Ababa, November 03, 2016).

The ETIDI and the LIDI (both under the Ministry of Industry) are arguably the agencies that work most closely with the two industries, as their mandate is broadly to support development and growth of the industries through an array of interventions. As foreign firms generally have more know-how and capital, both the ETIDI and the LIDI are more important for domestic firms (though some foreign firms report that their investment support services are valuable). As seen in Table 4.3, their services are wide-ranging, but interviews have indicated that their skills-development services—either through giving training directly to firm employees or embarking on collaboration programmes with universities, the private sector and the international donor community—are among the most important ones.

Because the development institutes themselves suffer from lack of skills, they have embarked on ‘twinning’ partnerships with similar institutes abroad. The LIDI has established partnerships with the Central Leather Research Institute of India (CLRI) and the Footwear Design Development Institute of India (FDDI). At any time, the LIDI hosts 10-40 employees from these institutes, who assist with preparing curriculums for university students, and give technical and marketing advice to the LIDI staff and to leather and leather products firms (senior official at the LIDI, interviewed by the author in Addis Ababa, October 20, 2016). The ETIDI has also established a similar partnership the National Institute for Fashion Technology (NIFT) in India. The ETIDI regularly sends Ethiopian staff to India for training, either through short term training programmes, or to embark on masters and PhD programmes. The ETIDI also hosts some experts from the NIFT (rotations for up to 4 years) who help prepare training manuals and give on-the-ground technical support to firms (senior official at the ETIDI, interviewed by the author in Addis Ababa, November 11, 2016).

Over the course of fieldwork, interviews with firms in both industries clearly indicated that the LIDI provides better support than the ETIDI. As the LIDI was established 12 years before the ETIDI, this is not surprising.<sup>60</sup> This difference in support capabilities became especially clear from the perspective of foreign firms. One representative of a foreign apparel company stated: “ETIDI probably has machinery worth \$5m, but lots of it has never been used. I have a good relationship with ETIDI, and some of the young guys there are starting to learn things, but currently, they just don’t know much” (representative of foreign apparel company,

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<sup>60</sup> The LIDI was effectively established in 1998 under the name ‘Leather and Leather Products Technology Institute,’ but was renamed the LIDI in 2010 when the institute’s responsibility and mandate was significantly expanded (Abebe and Schaefer, 2013).

interviewed by the author in Addis Ababa, November 15, 2016). The LIDI, on the other hand, is generally praised by foreign firms. The general manager of one of the largest foreign tanneries even called the institute an extension of their company:

LIDI has always been supporting. For example, we place requests for leather technologists from them, they also send people here to do internships that often end up working for us. They also help with machinery breakdown – we recently used their machines for tannery when our own broke down. When we recently had a fire, they helped us with machinery. LIDI feels like an extension of our company (general manager of foreign tannery, interviewed by the author in Addis Ababa, November 24, 2016).

The Ethiopian Investment Commission and the Industrial Parks Development Corporation are two additional government agencies that are vital for the development of the textile and leather industries. Both of them work closely together in the area of industrial parks. The IDPC is mostly responsible for the construction of parks—their design, size and location within the country.

The EIC evaluates all investment proposals in the country, and because such a large share of investment proposals in the two industries are targeted at the parks, especially those from foreign firms, the EIC has become integral to the success of industrial parks. The EIC was established in 1992, but in 2014, the agency was restructured and ordered to report directly to the Prime Minister’s Office rather than the Ministry of Industry, which, in effect, meant more power. The idea of the restructuring was to transform the EIC “from a mere permit and licensing entity to a nucleus where foreign direct investment is directed” (Fortune, 2014, p.1). The EIC does not merely evaluate proposals, but also sends delegations abroad to promote Ethiopia as an investment location. Moreover, the EIC is responsible for formulating investment incentives and coordinating possible co-location between foreign and domestic investors in industrial parks. As such, the EIC is also integral to policies for technology and skill transfer from foreign to domestic firms (more on which will be discussed later in this section).

The youngest of these new or revitalised government support agencies is the Ethiopian Industrial Inputs Supply Enterprise. The EIIDE was established to respond to bottlenecks in the domestic supply chain for both apparel and leather products—export-oriented firms consistently reported that raw material provision (cotton, hides and skins) was not meeting the standards for quantity, quality and price. In some respects, the EIIDE works as a trading company, buying raw material from farmers and traders, and selling it on to the manufacturers.

Particularly domestic textile producers use the EIIDE for buying cotton (leather producers do not seem to be using the EIIDE that much, which might simply be because the institute has not been in existence long enough to establish rapport with all actors in the private sector). The EIIDE purchases raw material from both domestic and foreign producers. For example, when a textile company requires organic cotton, which is not grown in Ethiopia, the EIIDE will typically import organic cotton from the US or China (CEO of the EIIDE, interviewed by the author in Addis Ababa, November 3, 2016).

#### *4.3.5.2 Export (and investment) incentives*

As mentioned, the Ethiopian government sees the development of the textile and leather industries not only as a first step on the way to industrialisation and economic prosperity but also as crucial for providing export revenues. Pushing for exports does not only mean easing the balance of payments constraint but it also means learning about international markets, striving for higher productivity, and creating more jobs than would be possible if only serving the domestic market. Therefore, almost all incentives that the government provides to firms (both domestic and foreign) in these industries are linked to export performance.

For foreign firms, these incentives might simply be interpreted as incentives to invest in Ethiopia, as practically no foreign firms have any intention of selling their products on the domestic market anyway. For attracting foreign firms, the construction of industrial parks is a very important incentive. By doing so, Ethiopia is following an industrialisation model that has become increasingly common in developing countries since the 1990s, revolving around building these parks (which also go by the names SEZs, EPZs and FTZs, as explained in the previous chapter) primarily for foreign firms, which make it easier to concentrate dedicated infrastructure in a delimited area.<sup>61</sup> Such parks also normally provide one-stop-shop services to firms—a multitude of logistics services efficiently and easily streamlined because of the co-location of many firms.

In Ethiopia, resources are put into providing dedicated infrastructure not only in and around the parks, but also in other areas of the country to make transport to and from the parks easier. The prime example is the railroad connecting Addis Ababa and various industrial parks in the country to Djibouti. Because Ethiopia is landlocked, foreign firms face higher transport and logistics costs than they normally would elsewhere. In fact, an analysis of interviews

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<sup>61</sup> Ranked by order of employment, most such parks/zones are in China, Mexico, Phillipines, Vietnam and Malaysia (Boyenge, 2007).

conducted with foreign firms during fieldwork revealed that this is the most common complaint among foreign firms. Moreover, Djibouti recognises its importance for Ethiopian exports<sup>62</sup> and charges a steep price for international trade clearing. The representative of a foreign apparel company in Ethiopia claimed that he pays \$1,100 for clearing a container in Djibouti, whereas in Mombasa, Kenya, the cost is only \$250 (representative of a foreign apparel company, interviewed by the author in Addis Ababa, November 15, 2016).

It is hard to understate the importance of industrial parks for industrialisation and the attraction of FDI in Ethiopia. As already mentioned, the flagship park in the textile industry, HIP, is estimated to bring in 10 times the current export revenues of the entire industry. But several other such massive parks are under construction (see table 4.4), all planned to be completed by the end of 2018.

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<sup>62</sup> Ethiopia cannot go through Eritrea—there has been no cross border exchange between the two countries since the border war broke out in 1998.

<i>Name of park</i>	<i>Location</i>	<i>Km from Addis Ababa</i>	<i>Proximity to Djibouti</i>	<i>Delimited land (hectares)</i>	<i>Phase 1 (hectares)</i>	<i>Eligible industries</i>	<i>Completion stage</i>
Bole Lemi I	Addis Ababa	Addis Ababa	863	156	156	Apparel	Operational
Bole Lemi II	Addis Ababa	Addis Ababa	863	186	186	Apparel	Not completed
Kilinto	Addis Ababa	Addis Ababa	863	337	337	Food processing, pharmaceuticals, furniture, house appliances, electronics	Not completed
Hawassa	South	275	998	300	100	Textile and apparel	Under testing
Dire Dawa	East	473	380	1500	150	Textile and apparel, auto assembly, food processing	Not completed
Kombolcha	North-East	380	480	700	50	Textile and apparel, food processing	Not completed
Mekelle	North	760	750	1000	50	Textile and apparel, food processing	Not completed
Adama	South-East	74	678	2000	100	Textile and apparel, auto assembly, food processing	Not completed
Bahir Dar	North-West	578	985	1000	50	Textile and apparel, food processing	Not completed
Jimma	South-West	346	1098	500	50	Textile and apparel, food processing	Not completed

Source: IPDC (2015)

As seen from the Table, textile (fabric) and apparel production will be the main focus of most parks, but probably more so apparel, given the way the global industry is organised today. This is not to say that leather and leather products are unimportant. Leather footwear

production is sometimes categorised under apparel (which is clearly the case for Bole Lemi industrial park). Moreover, the main park project for the leather industry is Modjo Industrial Park, which is not owned by the government and operates separately from other industries. Many of the state-owned parks will carry an ecological label, and because tanneries are very difficult to operate in an ecological manner, it is hard to co-locate them with other industries.

A range of financial incentives have been put in place for export-oriented firms in the state-owned parks (practically all firms in the parks are export-oriented). As mentioned, these should not simply be seen as export incentives, but also as a way of attracting foreign investors. Table 4.5 present a full overview of these incentives.

**Table 4.5: Financial incentives for manufacturing firms in state-owned industrial parks**

- Income tax exemption for up to 10 years
- Exemption from duties and other taxes on imports of capital equipment (machinery, construction materials, spare parts, vehicles, etc.) and raw materials (inputs needed in production, like cotton, yarn and/or fabric).
- No taxes on exports
- One-stop-shop for government services
- Subsidised land lease: 60-80 years free of charge for factories and residential quarters.
- Guaranteed remittance of capital for foreign investors

Source: EIC (2016)

It is not completely clear what one-stop-shop for government services entails, but according to the general manager of a domestic firm that is set to locate in HIP, it most importantly includes visa and immigration services (general manager of domestic trading company, interviewed by the author in Addis Ababa, November 9, 2016).

The list of incentives in Table 4.5 are not restricted to firms in the state-owned industrial parks. In fact, all export-oriented firms in Ethiopia are handed such incentives (and in some instances, non-export firms). However, some incentives are offered on a case-by-case basis,

while others are offered across the board to all export-oriented firms. For example, exemption of duties and taxes on imports are offered to all firms in Ethiopia if used for the purpose of export. Firms who sell products on the domestic market are also offered duty free access to imports, but only capital equipment, not raw materials, and only for a maximum of five years if the investment is not in manufacturing or agriculture (UNIDO, 2016b). Additionally, the exemption of export tax is applicable to all exporters, inside and outside of parks, with the exception of a few products (like semi-processed hides and skins, as discussed earlier in this chapter). The remittance of capital also applies to all foreign investors, regardless of being inside or outside an industrial park.

Other incentives are also determined on a case-by-case basis. Subsidised land lease is one of them. While there are some guidelines for land lease (see for example UNIDO, 2016b), interviews with foreign investors outside industrial parks indicated that the guidelines are not strict. Some investors pay for leasing land, while others said that they have been offered to lease large tracts of land for free. From the government's perspective, lease rates seem to be determined based on the desirability of the investment. Investors that indicate grand investment and/or expansion plans with the possibility of creating a lot of jobs seem to be offered more favourable lease rates.

One can observe a similar practice with respect to income tax. While there are guidelines in this area as well based on the share of exports in total production, production activity and location (higher share of exports, and locating to an area where job absorption is needed, generally means more years of income tax exemption), the 'big fish' investors seem to be offered more years of income tax exemption. The general manager of one of the largest footwear companies claimed that income tax exemptions are offered for up to 15 years (general manager of foreign leather products company, interviewed by author in Addis Ababa, October 8, 2016), whereas no official government document sets the bar at over 10 years.

While these financial incentives are important, Ethiopia is not doing something supremely novel by offering them. Many of them, such as income tax exemption (also known as 'tax holidays') and tax exemption on imports, are offered in industrial parks in many of the aforementioned countries (see footnote 61) that also have or are still attracting FDI into manufacturing industries. The owner of a foreign apparel company in Ethiopia remarked that in Egypt, where his company had chiefly operated in before setting up in Ethiopia, the government had offered him a lifelong tax holiday (owner of foreign apparel company, interviewed by the author in Addis Ababa, October 21, 2016).

Another important incentive is credit allocation. The state plays an important role in capital markets in Ethiopia, as foreign banks are not allowed to operate there. The understanding is that they will be allowed to operate in the country only when domestic banks have developed the financial, managerial and technological capacities to compete against international banks.<sup>63</sup> Consequently, two state-owned banks, the DBE and the CBE, dominate the banking sector in Ethiopia. DBE is important for long-term loans (investment capital), particularly for the manufacturing sector, while CBE is responsible for providing working capital and international banking services. Their banking services are especially important for domestic firms in both the textile and leather industries, as these firms are normally shorter on capital than foreign firms. From DBE, domestic firms can get up to 75 per cent of required investment capital, whereas foreign firms can get up to 50 per cent (official at the Ethiopian Ministry of Industry, interviewed by the author in Addis Ababa, November 23, 2016). According to sources in the two industries, the interest rates on loans from both banks range between 9 and 12 per cent, depending on the firm's export share. The CEO of a large domestic textile company reported that the interest rate is set at 12 per cent for any export share below 60 per cent, 9.5 per cent for an export share in the range of 60 to 80 per cent, and 9 per cent for an export share over 80 per cent (CEO of domestic textile company, interviewed by the author in Addis Ababa, November 7, 2016).

Finally, domestic export-oriented firms enjoy subsidies for hiring expatriate experts. While all domestic firms and government officials have confirmed the existence of such a scheme, the particularities are slightly unclear. Some firms have reported that the number of expatriate experts vary between 3 and 6 per firm, and that the subsidy covers 75 per cent of their total salaries during the first year of employment, 50 per cent the second year, and so on. The president of the Ethiopian Textile, Garment and Manufacturers Association (ETGAMA), however, reported that each firm is given fixed amount: \$75,000 the first year of employment for payment of the expatriate experts, \$50,000 the second year of employment, and so on. He also claimed that the scheme favoured in particular firms in the textile and leather industries (ETGAMA president, interviewed by the author in Addis Ababa, November 7, 2016).

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<sup>63</sup> Another reason for not liberalising its capital markets to foreign banks is to avoid intrinsic financial instability, vulnerability, and shocks that have in many instances plagued LDCs with high dependence on foreign capital (Chang, et. al., 2016).

#### *4.3.5.3 Policies for technology transfer and linkages*

The previous two sub-sections elaborated on the Ethiopian government's renewed commitment to develop the textile and leather industries, in particular the export and investment incentives that have been put in place to do so. These focus largely on attracting foreign investors, to create jobs and generate export revenues. However, as seen from the previous chapter, many developing countries who have embarked on FDI-led industrialisation strategies have become stuck in low-skilled assembly tasks, failing to transfer technology from foreign companies to the domestic economy, and/or creating few to no linkages to the domestic economy, particularly backward linkages to domestic supplier industries. Is there a danger that Ethiopia becomes another such case? Will Ethiopia's industrial parks be yet another example of 'cathedrals in the desert'?

In the leather industry, it has been easier to promote backward linkages than in the textile industry. This is partly because the raw material is more readily available. Ethiopia has Africa's largest livestock population, but the country is far from meeting the same quantity and quality standards in cotton cultivation compared to its African counterparts. In fact, several tanneries and footwear producers say that the availability of raw hides and skins is part of why they are attracted to Ethiopia, whereas very few foreign textile or apparel manufacturers come to Ethiopia with the intention of using Ethiopian cotton, or other raw materials that go into textile production. Ethiopia has also put in place local content requirements in the leather industry: because of its abundance of sheepskin, the government has had in place a policy since 2011 that bans the import of sheepskin, unless there is a shortage of sheepskin in the country. If a policy like this were put in place for cotton, it would most likely spark an outrage among export-oriented textile producers, as Ethiopian cotton does not meet international quality standards for fabrics finer than that of home textiles, like bed sheets and towels, for which one would need a longer cotton staple length than what is being grown in Ethiopia right now.<sup>64</sup>

Apart from the ban on importation of sheepskin, the Ethiopian government puts no explicit requirements on foreign investors, such as the joint venture requirements that were discussed in the case of both South Korea and Taiwan in the last chapter. However, as we saw in Taiwan's case, its FDI strategy was relatively liberal in earlier stages of industrialisation, and one could arguably make the case that in Ethiopia, the gap in technological capabilities between domestic and foreign firms at this stage are so large that few foreign investors would

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<sup>64</sup> More details on the challenges facing the inputs sectors will be addressed in section 4.3.7.

be willing to engage in joint ventures, which, in fact, many of them have reported would be out of the question. Furthermore, the degree of competition among developing countries in labour-intensive manufacturing today gives less bargaining power to the developing countries when making deals with foreign investors. Countries in a stage of development like Ethiopia could rightfully argue that any ‘requirement’ policy would simply make prospective investors source production from elsewhere.

It is clear that, like Taiwan did in earlier phases of industrialisation, Ethiopia is putting in place a range of incentives simply to *attract* FDI. But is the country strategic in terms of which type of FDI it is attracting? As we saw from the Singapore example in the previous chapter, part of its success with FDI owed to the fact that it attracted exactly the type of FDI it wanted. The Ethiopian government claims that it is doing this—emphasising that it is attracting investors in all different segments of the value chain, so that it increases the probability of learning about production activities in more than just the low-value assembly like segments of the value chains (notes from presentation by the CEO of EIC at the Agro-Industry Investment Forum in Addis Ababa, 5-7 October, 2016). To some extent, this is true. In the leather industry, FDI has successfully been attracted to both the tanning industry and the leather products industry. In the textile industry, FDI from particularly Turkey has focused on a range of activities in the value chain. Ethiopia has also managed to secure a whopping \$350m investment from a Chinese wool textile company (Reuters, 2016). However, the general trend in the textile industry is that a growing share of companies focus exclusively on CMT functions in the apparel segment, which is contributing to a worrying trend of increasing dependence on fabric imports (more on this in section 4.3.6 and section 4.3.7).

Even if foreign companies are attracted in a range of activities in the value chains though, the challenge of transferring technology and skills from these companies to the domestic economy remains. A special adviser to the prime minister expressed belief that this would partly happen through demonstration effects—domestic firms being exposed to foreign firms’ products, production processes and marketing strategies—and competition effects—the simple presence of foreign firms will expose greater pressure on competing domestic firms to be more productive (special adviser to the prime minister, interviewed by the author in Addis Ababa, May 13, 2015). Moreover, there is some evidence of skills development at higher levels than simple operator training, without the Ethiopian government explicitly calling for it—many foreign firms actually send Ethiopian workers in technical or managerial positions to their home countries for training or train such workers through elaborate training programmes at their own facilities in Ethiopia (details of which will be discussed in the following section).

This is not an act of ‘benevolence’, as firms simply save money by having a lower dependence on expatriate workers.

But the degree of perceived benevolence of foreign firms is also an issue that the Ethiopian government does indeed consider when going abroad to court investors, as strange as this might sound. The CEO and owner of one of the few exported-oriented domestic apparel firms in Ethiopia stated that he trusts the government’s ability to attract the right type of apparel investors to the country, recognising that the global industry is full of ‘bad’ investors with pure profit motives who move to whichever country has the cheapest labour, investors he referred to as ‘hunter-buyers’: “The textile sector is a bird. There are always hunter-buyers. We see which they are by inviting them and testing them” (CEO of domestic apparel company, interviewed by the author in Addis Ababa, 3 November 2016).

While these strategies for transferring technology do not come across as very interventionist, there is however one explicit technology transfer policy, very recently put in place, that is worth noting: In all the government owned industrial parks under construction, the government plans to allocate at least 20 per cent of sheds to domestic firms. HIP is piloting this scheme, and at the time of writing it is not completely clear what the role of domestic firms will be in relation to foreign firms, but the EIC reports that they intend for the foreign firms to act as ‘midwives’ for the domestic firms, explicitly stating that the scheme is put in place with the intention of transferring technology. (Deputy CEOs of EIC, interviewed by the author in Addis Ababa on October 22, 2016). When asked about the scheme, the representative of a foreign apparel company set to locate in HIP confirmed that the role of domestic investors was unclear, and that the EIC, the foreign investors and the domestic investors are in the process of meeting each other and figuring this out. To him, the most feasible solution seemed to be using the domestic firms as subcontractors or as suppliers of certain inputs (representative of foreign apparel company, interviewed by the author in Addis Ababa, November 15, 2016).

An interesting feature of the scheme is the subsidies that the Ethiopian government is putting in place for the domestic investors. Once all domestic investors have been selected (through a competitive tender process), they are offered the following, in addition to the industrial park incentives given to all investors (see Table 4.5): 1) The opportunity to borrow up to 85 per cent of needed investment capital from DBE, at an interest rate of 9 per cent; 2) 85 per cent coverage of employee training programmes, including those that involve sending employees abroad for training. This subsidy will decrease by 10 percentage points each year; 3) 85 per cent coverage of the salaries of expatriate ‘experts’. This subsidy will also decrease by 10 percentage points each year. An agreement has not yet been reached on the number of

expatriate experts each firm is allowed to hire, but according to different sources, it will be in the range of 5-10 (deputy CEO of EIC, interviewed by the author in Addis Ababa, November 01, 2016; and general manager of domestic apparel company set to locate in HIP, interviewed by the author in Addis Ababa, November 09, 2016).

#### **4.3.6 Results achieved and future potential of technology transfer through attracting FDI**

The influx of FDI has contributed to an increase in export earnings in the respective industries, as already seen. It is also absorbing labour, steadily providing jobs for people in the areas where the firms establish factories and industrial zones. The previous section went beyond this, looking at policies to transfer technology to domestic firms and create linkages to the domestic economy. What results have been achieved so far, and what do prospects for the future look like?

##### *4.3.6.1 Technology transfer through demonstration effect, competition effect, spillovers and backward linkages*

When asked in interviews how they saw the entry of foreign firms, most domestic firms in the textile and leather industries responded positively, while some took a neutral position. It was a rarity to find domestic firms that saw entry of foreign firms as something ‘bad.’ One reason for the optimism was the chance to learn about technologies, management practices and business practices of foreign firms. The CEO of one the largest domestic vertically integrated textile firms, whose main buyer is H&M, elaborated on this point:

One of the main factors for our success is that buyers are coming to Ethiopia. The foreign investments are helping to put Ethiopia on the map. We need foreign companies, as they are coming with full technology. Technology transfer will happen through teaching the Ethiopian people. They will demonstrate for us, but their competition is also good for us. Leaders, like myself, will be pressured by FDI...My company has the best linen in the country because we saw how foreign firms are doing it (CEO of domestic textile firm, interviewed by the author in Addis Ababa, November 07, 2016).

His statement builds on one of the theories outlined in the previous chapter: technology transfer happening through simple demonstration, as domestic firms are exposed to TNCs’ products, production processes and marketing strategies. Furthermore, this particular CEO

looked at competition as something beneficial, the logic being that the presence of foreign firms will exert greater pressure on competing domestic firms to be more productive.

In a similar vein, the general manager of a domestic apparel company set to locate in HIP stated that, “Operating in the export market will be the main facilitator of technological transfer” (general manager of domestic apparel company, interviewed by the author in Addis Ababa, 09 November, 2016). He also noted that technological spillovers would happen through direct backward linkages to domestic suppliers:

Foreign buyers will help domestic suppliers with the process...There will also be collaboration with machinery and technology providers. They are coming to help us in Hawassa Industrial Park. JUKI, the famous sewing company, has even set up an office here.

His account also relates to a theory outlined in the previous chapter: technological spillovers happening through backward linkages with local suppliers in the host country, when TNCs provide technical assistance, training and other information to raise the quality of suppliers’ products and help them meet on-time delivery.

This type of channel for technology transfer was more commonly referred to in interviews. For example, one of the largest foreign footwear companies that exclusively sources leather locally assist the domestic tanneries with ensuring high quality leather: “We help the local tanneries understand how to improve their leather. For example, we send them technicians to help solve the problem if they have problem with making quality leather” (deputy general manager of foreign footwear company, interviewed by the author in Addis Ababa, November 25, 2016).

While backward linkages in the textile industry are rarer than in the leather industry, one foreign textile company reported how they have one stable domestic supplier of yarn, and how they collaborate:

We use yarn from a local spinning factory. 100 per cent of our yarn in the last year came from them. Before that, we imported yarn from Turkey, India and Pakistan. It’s a bit more expensive from the local spinning factory, but geographical proximity and reliability is a plus. For our production type, we are happy with yarn from them...We describe to them how they should produce our yarn. We share some recipes (exports and sales manager of foreign textile company, interviewed by the author in Addis Ababa, 07 December, 2016).

There are also such positive accounts from the perspective of domestic firms. The deputy manager of a domestic textile firm described what he foresees as a future beneficial supplier relationship with a foreign apparel firm, i.e. the prospect of supplying fabric to the foreign apparel firm:

We may get something in the future from foreign firms, and we believe we will. We may be able to supply them with inputs. Still, nothing, but they are on the way. We have talked to one foreign apparel firm in particular. We have good communication with them. In fact, they had experts from their home country that came here and gave us knowledge sharing, and recommended and consulted on our machinery and technology. They did this for free, as they see us as a potential supplier someday (deputy manager of domestic state-owned textile company, interviewed by the author in Kombolcha, November 22, 2016).

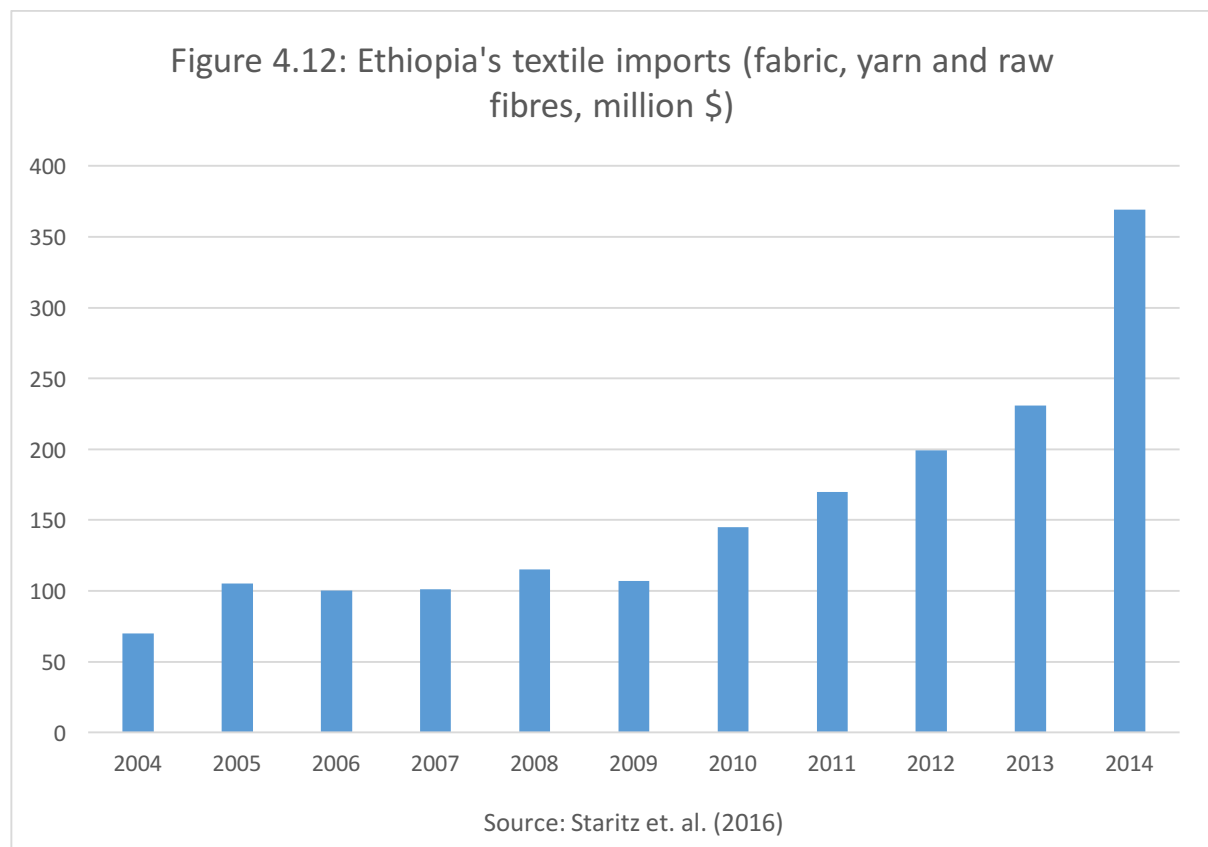
However, while there are optimistic accounts of technology transfer, there are also those who worry that the lack of clear technology transfer policies is leaving the degree of technology transfer to the ‘whims’ of foreign firms. An official at the ETIDI reported how he heard that some of the expatriate workers from the home country of one of the largest vertically integrated textile firms would send Ethiopian workers in semi-skilled positions to run errands whenever there was a machinery defect—the expatriate workers were worried that Ethiopian workers would learn skills that would take their jobs, so they sent the Ethiopian workers away because they did not want them to see how the machine is fixed (official at ETIDI, interviewed by the author in Addis Ababa, November 11, 2016). Similarly, the Ethiopian general manager of a foreign-owned tannery said how she had received clear instructions from the headquarters in the home country *not* to transfer technology to local workers – she had to keep in line with the practice of encrypting tanning recipes (general manager of foreign tannery, interviewed by the author in Addis Ababa, November 23, 2016).

Other than the planned technology transfer scheme in HIP, there are in fact no clear policies for technology transfer from foreign to domestic firms. One of the larger domestic footwear companies was actually calling for joint ventures, arguing that clearer government policies are needed to ensure that domestic firms are learning more and exporting more (general manager of domestic footwear company, interviewed by the author in Addis Ababa, 13 October, 2015).

While these interview accounts are interesting and help shed light on the big picture, by no means can a sound, aggregate conclusion be drawn. They give us some indication for future potential of productivity growth, but, as seen in the section on export performance,

which is the only sound indicator of aggregate performance achieved thus far, the current situation is that foreign firms account for the largest share of export growth in both the industries, clearly indicating that there is a significant gap in productive capabilities between foreign and domestic firms.

In terms of backward linkages, while there seems to be strongly established ties between foreign footwear producers and local tanneries, the trend is more worrying in the textile industry, even if there are some positive accounts, as indicated above. Figure 4.12 shows that Ethiopia's import dependency on textile-based products has increased considerably with the growth of the apparel segment of the textile industry. Linkages between foreign apparel producers and domestic textile firms are more the exception rather than the rule. In fact, very few of the apparel investors coming from abroad say that they intend to source local fabric for at least the next five years.



#### *4.3.6.2 Technology transfer through skills development*

The effect that FDI has on skills (human capital) development is an additional facet of technology transfer that warrants a discussion. In the context of labour-intensive manufacturing in Ethiopia, there are two lenses one can study this through. One is the skills development that happens at the operator level: to what extent will training of people in assembly-like tasks result in building capabilities that can further industrialisation, both for firms in the prioritised industries (domestic and foreign) and for other industries? The other is higher-level skills development: is there any indication that Ethiopians are being employed or trained for technical, managerial and administrative positions that typically require vocational or university-level education?

##### *4.3.6.2.1 ‘Simple’ skills—the creation of a modern industrial workforce?*

The case studies in the previous chapter made it clear that the second type of skills development is more desirable for sustained industrialisation. For example, in the case of Mexico, the computer industry in Guadalajara only attracted footloose operations from US companies that could easily be sourced elsewhere if a cost advantage should arise. A big problem was that domestic employees were engaged in little more than assembly tasks. Among employees of foreign firms in Guadalajara, only 6.9 per cent had graduated from high school.

However, the Ethiopian context is a unique one, as the majority of people currently entering the industrial workforce have little or no previous formal employment experience. Without being asked, many representatives of foreign firms urged me to look at ‘work culture’ and the lack of time management as an issue underpinning lack of productivity. The general manager of one of the largest foreign footwear companies, which also has operations in China, naturally compared Ethiopian and Chinese workers. “In China, work, work, work. Here, it is different. In China, they will do exactly what they tell you to do. The Ethiopian workers are willing to learn though, that is important” (general manager of foreign footwear company, interviewed by the author in Addis Ababa, October 08, 2016). In a similar vein, the general manager of a foreign tannery that has been in the country for over a decade commented, “Ethiopian tanneries are not as productive as foreign tanneries because of the culture of the workforce. The concept of time has a different meaning here in Ethiopia” (general manager of foreign tannery, interviewed by the author in Addis Ababa, November 24, 2016). Interestingly, the general manager of a foreign apparel company stated that that although the work culture

was an issue in the country, this was simply because it had not industrialised yet, and with industrialisation, this would change (general manager of foreign apparel company, interviewed by the author in Addis Ababa, October 24, 2016). Chang (2007) provides rich historical evidence that supports this idea, and concludes, “Culture is the *result*, as well as the cause, of economic development. It would be far more accurate to say that countries become ‘hardworking’ and ‘disciplined’ (and acquire other good cultural traits) because of economic development, rather than the other way around” (Chang, 2007, p.197).

A question, then, naturally arises: is it possible that the simple absorption of labour by foreign manufacturing firms will assist in producing a modern industrial workforce with factory-like work discipline and the habit of keeping time? A classic article that theorises this is E.P. Thompson’s (1967) “Time, Work-Discipline and Industrial Capitalism”, in which he talks at length about the importance of disciplining English workers for the success of the industrial revolution. “Mature industrial societies of all varieties are marked by time-thrift and by a clear demarcation between ‘work’ and ‘life’ ... Without time-discipline we could not have the insistent energies of industrial man” (Thompson, 1967, p.93). The development economist Arthur Lewis also underscored the importance of ‘factory routines’ for productivity growth, “The opportunities for greater productivity exist whatever level of work people may fix upon...some of these opportunities depend on willingness to make regular effort; factory routines, for example, require regular attendance and regular hours” (Lewis, 1955, pp.39-40). According to Sugihara (2013), productivity growth in the textile industry in Japan during the Meiji period required women who were disciplined, punctual, and willing to respond to various incentive schemes instituted by firm managers, although skill levels required to carry out their tasks remained simple.

As Ethiopia is in a nascent stage of industrialisation, there is no evidence that this large-scale creation of a modern industrial workforce has yet happened. In fact, many foreign firms report problems of high labour turnover because Ethiopian workers cannot cope with the demands and stress during work hours, as they are not used to the clear division between work and leisure (more on the issues of labour turnover in section 4.3.7). But given that employment looks to increase massively in the next few years in these labour-intensive industries and that this will involve employing a substantial number of people that have little or no previous experience with industrial style work, it is not unlikely that the attraction of foreign investments in the textile and leather industries will assist in producing a ‘modern’ industrial workforce.

#### 4.3.6.2.2 Higher level skills training

The type of skills training whereby domestic workers develop abilities to do more than simple assembly-type work are ultimately more important. In this regard, industry-specific training institutes, like the LIDI and the ETIDI, as well as universities and vocational schools are important. Foreign firms can play an important role as well. While it is a common belief that host governments have to incentivise or push foreign firms to engage in this type of training, it is not unusual for foreign firms do this on their own initiative—many of them actually save costs by reducing the number of expatriate workers needed for operations abroad.

In Ethiopia, it seems that Chinese companies are particularly engaged in the practice of sending their Ethiopian employees back to China for training. This might be related to language—Chinese companies in Ethiopia generally have a strong desire for Ethiopian workers to learn Chinese. One Chinese textile company that has not commenced production yet but has made the initial investment, reported the following:

Technicians are very important for the industry. We hired 30 Ethiopian candidates who specialise in IT and textile technology. First, we train them in Chinese for 7 months here in Ethiopia. Then, we bring them to China for technical training for 6 months. These are graduates from Bahir Dar, Wollo and Hawassa University. These people will train at our factory in China (general manager of Chinese textile company, interviewed by the author in Addis Ababa, November 7, 2016).

A Chinese footwear company has had a similar practice of sending Ethiopian workers to China for training:

Right now, we mostly have Chinese people in skilled positions, but we are training Ethiopians in skilled positions. The company pays for training them in HQ in China. This training is in management, technical and production operation. Each year, we send about 100 Ethiopians to China for a period of 6-12 months. We're basically training future supervisors. And it saves us money. We are also building supervisor training here (general manager of Chinese footwear company, interviewed by the author in Addis Ababa, October 08, 2016).

The general manager of a non-Chinese foreign leather products company also emphasised the point of costs-savings by reducing the number of foreign workers (mostly Chinese) needed. She said that the company had successfully reduced the number of foreign workers in mechanics and design from 15 to 5, in part because they send 5 Ethiopians abroad

every year to train in their headquarters (general manager of Chinese leather products company, interviewed by the author in Addis Ababa, November 24, 2016).

Some foreign companies engage in higher-level skills training in collaboration with the government and the international development community. For example, one of the anchor investors in Hawassa Industrial Park, PVH, has recruited 140 textile graduates from Bahir Dar University and has managed to get the German Development Agency (GIZ) to hire vocational teachers from Germany to train them intensively for 5 weeks in technical and managerial skills, in collaboration with the ETIDI (representative of foreign apparel company, interviewed by the author in Addis Ababa, November 15, 2016).

Thus seen, there is some evidence that foreign investors are training their Ethiopian employees in more than simple assembly work, without the Ethiopian government demanding it. However, there is no evidence of any R&D activities being relocated to Ethiopia, and unless the Ethiopian government explicitly calls for it, or formulates policies to attract it (by for example handing out financial incentives for relocating R&D activities—as seen from last chapter, Taiwan enabled tax-write offs for R&D activities for foreign companies), there is no clear indication that these foreign companies will start investing in R&D in Ethiopia. The observations in Ethiopia resonate with those of Dicken (2011), in that TNCs tend to offshore parts of the results of their innovations but not the innovative capabilities themselves, and that relatively few R&D activities tend to be relocated to developing countries in the process of offshoring.

#### **4.3.7 Key challenges for growth of the industries through the GVC participation strategy**

The slew of incentives and policies that the Ethiopian government is designing to support growth of the textile and leather industries gives reason for optimism, but as seen, the performance of the industries as measured by export value is not that impressive at this point. Interviews in Ethiopia pointed out two key challenges that, if addressed, would provide further optimism for growth of the industries: 1) The lack of domestically available inputs—the quantity and quality of hides, skins, and cotton does not meet international requirements; 2) High labour turnover in footwear and apparel factories.

#### *4.3.7.1 The input problem*

As highlighted numerous times in this and the previous chapter, successful FDI attraction strategies in developing countries have stressed the creation of backward linkages to domestic supplier industries. This could be done better in Ethiopia, and the challenge is not simply about inducing foreign investors to do so.

##### *4.3.7.1.1 The leather industry*

Recent research has highlighted the lack of marketisation of hides and skins and the prevalence of traditional animal husbandry practices as a problem that has led to poor quality of hides and skins (Abebe and Schafer, 2013; Oqubay, 2015). As for the lack of marketisation, which results in insufficient supply of skins to tanneries, Oqubay (2015) presents some worrying figures. In 2012, 61 per cent of skins and 48 per cent of hides in Ethiopia were not marketed, but used within producer households. Moreover, due to traditional animal husbandry practices, the estimated reproductive rate of Ethiopian livestock is 37 per cent, one of the lowest in the world. Besides, as a result of predominantly traditional slaughtering methods and poor handling of raw hides and skins during collection, the quality of hides and skins have deteriorated. In 1980, 50 per cent of tanneries received top quality ratings, compared to only 20 per cent in 2012 (Oqubay, 2015). According to Oquaby, the major reason for this is ectoparasites, which agricultural extension services and veterinary services in Ethiopia have failed to address thus far.

Abebe and Schefer (2013) point out how market imperfections (or, rather, the informality of the market) has created problems on the input side. For example, no formal system of quality assessment or objective grading rules for hides and skins exist. Quality and prices are negotiated on eyeball to eyeball basis, which has sometimes led to bitter disagreements between tanneries and traders on the quality of hides and skins. This has created mistrust between sellers and buyers, which, in turn, reduces the number of transactions in the market.

Interviews during fieldwork confirm these problems. In particular, the quality and poor preservation of hides and skins were brought up numerous times. The general manager of one of the largest foreign tanneries said the following:

Unfortunately, the quality of skins in Ethiopia has been deteriorating. Parasites, knife cuts, preservation. Don't understand why the government fails to improve in this areas.

Animals have to be treated not only for the meat, but also by-product. We also need a proper way of trading. Today, skin traders go around, and do not properly preserve. They don't handle, salt is also an issue. We don't think EIIDE will solve things, we deliberately did not sign up for their services (general manager of foreign tannery, interviewed by the author in Addis Ababa, 24 November, 2016).

The EIIDE was created to respond to the aforementioned problems, but as the reflection of the general manager shows, the EIIDE has yet to gain the confidence of the tanneries—it was hardly mentioned in interviews with other tanneries.

Oqubay (2015) suggests that the prolonged difficulties on the input side of the sector is a result of path dependency; the system of smallholder livestock management, whereby slaughtering is part of subsistence rather than ultimately making leather products, has been in place for such a long time, making it difficult to effectively change practices through policy. He suggests exploring the experiences of countries that have gone through similar problems in the livestock sector, such as Brazil, Botswana and South Africa. Abebe and Schafer (2013) propose that existing extension and veterinary services must be improved, especially to address the quality issue. There is some hope that this will be more effectively addressed in the future, not only because of the establishment of the EIIDE but also seeing that a new Ministry of Livestock (and Fisheries) was established in 2016 to engage more in depth with slaughtering and preservation practices (senior official at the Ministry of Industry, interviewed by the author in Addis Ababa, 26 October, 2016).

#### 4.3.7.1.2 The textile industry

The challenges on the input side in the textile industry are not too different from those of the leather industry, but the bottlenecks are more severe. Whereas export-oriented leather products manufacturers use local hides and skins, hardly any export-oriented apparel manufacturers use locally made fabric, yarn or cotton, as mentioned in the previous section. The declining prices that international apparel manufacturers are offered from retailers and buyers in end markets (as detailed in last chapter), combined with an almost complete dependence on inputs of raw materials, leaves a very small segment of the value chain in Ethiopia, and at that, one that does not add a lot of value.

The operations manager of a foreign apparel company pointed out that if Ethiopia wants to generate export revenues, they need to get serious about the raw materials segment of the value chain: “The government needs to focus on the raw materials, like cotton and fabric. This is 70 per cent of the value of the finished product!” (operations manager of foreign apparel

company, interviewed by the author in Addis Ababa, November 16, 2016). Thus seen, Ethiopia has an input problem that needs to be addressed, even if they simply want the textile industry to be a cash cow for foreign currency.

A key issue in terms of upgrading the inputs industry is the quality of cotton. According to MoI-ITC (2016), the crucial factors affecting quality are outdated production, post-harvesting and ginning techniques and technology; inadequate extension services; and the lack of finance for farmers. Furthermore, the amount of land being cultivated for cotton in Ethiopia is far below the potential. According to ITC (2015), Ethiopia has 3m hectares of land suitable for cotton cultivation. This is almost equal to the land under cotton cultivation in Pakistan, the 4<sup>th</sup> largest cotton producer in the world. Only 4 per cent of this land is currently being used for cotton cultivation in Ethiopia.

The government has taken some actions to address the inputs problem. The EIIDE was established in 2015 and in 2016, the Ministry of Industry launched a detailed cotton and textile roadmap (MoI-ITC, 2016). Some domestic textile producers have confirmed that they find the EIIDE's services useful. Especially as the EIIDE has put in place an internationally benchmarked grading and price system for all cotton producers, the producers report that they don't have to deal with the volatility of cotton prices that they had problems with in the past.

However, in a personal interview on 26 November, 2016, the head of an association of cotton producers and ginnerers expressed scepticism about the government's proposed solutions. He had 4 main objections:

1) There is an illogical fragmentation of responsibilities within the government. On the one hand, the ETIDI is formulating policy for the cotton sector. On the other hand, the Ministry of Agriculture leases the land, conducts research and carries out extension services. A cotton development agency that incorporates all these responsibilities would come closer to solving the organisational mess.

2) The EIIDEs grading system is punitive and inconsistent. It has only established three grading centres in Ethiopia, making for an unnecessary long journey for many cotton producers. It could potentially waste cotton producers' time and raise their costs, should they refuse to take the EIIDEs price—they may simply end up transporting the cotton to the grading centre and back, without having sold any. The EIIDEs inconsistency is reflected in its price setting. It claims to set prices based on the international spot price, but this price fluctuates every day, whereas the EIIDE updates prices only every few months.

3) Cotton producers have insufficient access to finance. The DBE requires collateral in the form of property in Addis Ababa. Very few cotton producers in Southern Afar, where

Ethiopia has traditionally produced 50 per cent of its cotton, can offer that type of collateral and consequently they are not granted loans for capital investments.

4) There is a widening geographical asymmetry between cotton producers and ginneries, which increases logistics costs. The government has started leasing out land in the Western belt of Ethiopia to large scale cotton producers, but the ginneries (that are mostly located in the East (Southern Afar)) have not followed.

There are additional problems to be addressed in the domestic textile production segment. Ethiopia has applied high tariffs on imported textiles and apparel sold in the domestic market, in order to protect domestic producers. According to some, this has created disincentives for domestic fabric producing firms to supply the export-oriented apparel producers. They can be comfortable in the domestic market, where the price of fabric is reportedly higher than on the international market. The general manager of a trading company in the industry said that he pays less for knitted fabric from Pakistan, including the transport costs, than for any of the domestically knitted fabric (general manager of domestic apparel company, interviewed by the author in Addis Ababa, 09 November, 2016). Not only is the price higher, but the quality (which relates to the cotton quality, as discussed) and the diversity of fabric types do not meet international market standards. Linking up to export-oriented apparel producers is key in order to upgrade the production process (MoI-ITC, 2016). This could change with the numerous financial incentives recently put in place to encourage exports, but so far it does not seem to have had any effect, with the exception of the few links mentioned in the previous section.

#### *4.3.7.2. Labour turnover*

High labour turnover is one of the most problematic issues reported by investors and managers in the textile and leather industries in Ethiopia. This makes Ethiopia little different from other catch-up economies: In Japan, Saxonhouse (1978) reports that due to great similarity in wages and equipment across firms, a high degree of turnover was present in the Japanese textile sector during the Meiji era. The poor quality of jobs as well as the short-term orientation of workers towards their work has also been discussed by Deyo (1989) as reasons for high turnover in the export-oriented industries of the East Asian developmental states in the 1960s and 1970s. Koo (2001) suggests that at an early stage in the process of proletarianisation, 'exit' tends to be a predominant strategy amongst workers, due to a lack of occupational identity and the low status associated with industrial work.

While high turnover rates are to be expected in these labour-intensive industries, the problem should be taken seriously, as it is reported as one of the main bottlenecks for output growth in these industries in Ethiopia. In Bole Lemi industrial park, output has fallen short of expectations, according to government officials and firm managers. Interviews with firm managers in the park pointed to high labour turnover as the main cause, and various explanations for this were offered:

- 1) Low wages. It is almost impossible to cover the relatively high cost of living in Ethiopia, especially in Addis Ababa (where Bole Lemi is located), with a monthly wage ranging between \$40 and \$55 per month, which is the reported wage range of workers at the operator level in Bole Lemi. The general manager of a foreign apparel company remarked that it is difficult for firms to offer higher wages than they already do, as food and transport subsidies on top of the monthly wage make the total cost per worker come out to roughly \$90 per month (general manager of foreign apparel company, interviewed by the author in Addis Ababa, November 08, 2016).
- 2) The Ethiopian workforce is not accustomed to industrial work, time-management and expectations of efficiency at the workplace. Most of those who enter the industrial workforce in Ethiopia today are young people who have never been in any employment capacity before, raised in a family living off subsistence farming.
- 3) Competition from other industries. The construction and services industries are booming in Addis Ababa, and many factory workers who live in the vicinity of the city often leave factory work for slightly higher paid work in the construction and services sectors.
- 4) Many people see work in an apparel or footwear factory as something temporary. Over 80 per cent of workers in apparel factories in Bole Lemi are women between the ages of 18 and 25. Eventually, these women want to get married or they meet expectations of marriage from their families. Firm managers have also reported maternity leave as an issue.

In addition to lay interpretations of the turnover problem, one academic explanation has been proposed. Blattman and Dercon (2016) argue from an economic perspective that the high turnover found in Ethiopia's manufacturing sector is the result of a combination of 'learning and matching' and workers' responses to shocks. The first explanation suggests that workers take up industrial jobs without a clear understanding of the effort levels and non-wage characteristics, and quit after finding out that these do not match their expectations (related to

point 2 above). The ‘shocks’ explanation on the other hand proposes that industrial work is known to be unpleasant, but serves as a stop-gap solution while workers await better alternatives (related to point 4 above). While these are indeed plausible suggestions, the underlying structural features of Ethiopia’s low-skilled labour market and a consistent treatment of the ‘micro-agency’ of labour are not integrated by the authors into their analysis. Hardy and Hauge (2017) suggest that industrial workers quit at high rates because organizational exit is perceived to be the *only* recourse to change, similar alternatives are readily available, and there is no system in place to penalize workers for leaving an employer.

For firms to reduce turnover, keep labour costs down and develop a capacity to produce to the standards of the international market, Hardy and Hauge suggest two solutions.

First, a key strategy would be for firms to rationalise their internal labour markets. In segments of the labour market where firms offer few or poor promotion prospects, high quit rates can be interpreted as a rational strategy as workers seek to obtain the maximum economic and psychological rewards. Given preoccupations with status and ‘hierarchical’ power relations in Ethiopia (Vaughn and Tronvoll, 2003), a clear structure for salaries and promotion ladders is likely to be especially important in order to retain workers in the manufacturing sector.

Hardy and Hauge’s second recommendation is to provide greater support and room for the Confederation of Ethiopia’s Trade Unions’ (CETU) legitimacy to grow amongst workers at the level of the shop-floor. If indeed, a developmental state is to emerge without following the ‘low road’ of authoritarianism, trade unions must acquire some level of collective legitimacy. The model of Singapore’s National Trade Union Congress (NTUC) could represent a useful blueprint. The state-supported NTUC emerged as a formal partner to the ruling People’s Action Party, yet managed to gain legitimacy amongst workers through the provision of benefits and services as well as its effective position within the governance structure (Deyo, 1989; Wong, 2000).

#### **4.4 Summary and conclusion**

For those interested in industrial policy and industrialisation in the African context, Ethiopia is a fascinating case. Since 2004, the manufacturing sector in Ethiopia has been growing fast in absolute terms, and has doubled its share of merchandise exports. But yet, MVA a share of GDP remains a lowly 4.8 per cent, and manufacturing exports in prioritised industries are far from reaching the levels of countries one step ahead, like Bangladesh, Cambodia and Vietnam.

Despite this, there is an industrialisation ‘buzz’ in Ethiopia. Part of this buzz can be attributed to the massive public investments in infrastructure that aims to create a conducive environment for manufacturing production, like investments in road networks, rail systems, power generation and industrial parks. Another part comes from the observation that the ruling party is putting industrialisation at the forefront of its development agenda, as evidenced not only by the infrastructure investments but also by national development plans and a slew of industrial policies. There has been a clear expansion of the ‘industrial bureaucracy’, the state has ramped up support for investment and working capital to the manufacturing sector through its state-owned banks, several incentives to attract manufacturing FDI and promote manufacturing exports have been put in place, and an import-substitution strategy has been implemented for industries that the government wants to protect and nourish. The Ethiopian government’s commitment to industrialisation has also become clear from the explicit inspiration that the EPRDF draws from the East Asian industrialisation experience. Given this, some are labelling Ethiopia as Africa’s ‘developmental state.’

Ethiopia also serves as an excellent case study of a country with a GVC-oriented industrialisation trajectory, so our story in this chapter builds well on the previous chapter. In its two most highly prioritised manufacturing industries, the textile and leather industries, the crux of industrial policy for Ethiopia has been about attracting foreign investors and inserting itself into GVCs, primarily to boost export earnings and to create jobs. Incentives for export-oriented investors (both domestic and foreign) include subsidised land lease rates, access to favourable infrastructure (industrial parks, road networks and rail networks), income tax exemption for up to 10 years, duty free access to imported capital equipment and raw materials, guaranteed remittance of capital for foreign investors, and below-market interest rates on loans from the state-owned banks.

Results so far show that the industries are on a good track for achieving what the government is setting out for: export earnings in the two industries are growing fast (although from a low base) and big commitments by export-oriented foreign investors have been made, meaning that exports are likely to keep growing. And because of the labour-intensive nature of these two industries, the growth in exports is resulting in job growth as well. Lucrative trade agreements with Europe and especially the US, the world’s cheapest labour, and cheap electricity, have now made Ethiopia one of the world’s most attractive outsourcing locations for global apparel and footwear producers. It is not a long shot to predict that Ethiopia will become Africa’s export powerhouse in these two manufacturing industries in the near future.

The Ethiopian government has also indicated that they are attracting foreign investors in these industries to transfer technology—raising the level of productivity for domestic firms by learning about new production techniques and practices, management practices, and acquiring knowledge of international markets and trade—and to create linkages, especially backward linkages, to the domestic economy. Some policies have been formulated to achieve this. For example, to ensure linkages between footwear producers and tanneries, the government has had a policy in place since 2011 that bans the importation of sheepskins unless there is a shortage of sheepskin in the country. Furthermore, the government is planning to co-locate domestic and foreign firms in the state-owned industrial parks (HIP being the pilot project) to ensure technology transfer, although how this will happen has yet be detailed.

But for the most part, the Ethiopian government is not putting requirements on foreign firms in the form of joint venture requirements, local content requirements (apart from the sheepskin) and R&D requirements, like we saw in the previous chapter that Taiwan and South Korea did during their years of rapid industrialisation. Ethiopian government officials seem to believe that a large part of the technology transfer will happen through demonstration and competition effects prompted by foreign firms, and by attracting ‘the right type’ of FDI. Also, by attracting firms in many segments of the value chain, the Ethiopian government’s strategy is to learn about more than just the low-skill assembly tasks. They ultimately hope that foreign manufacturers will choose to source inputs domestically based on cost considerations, when the domestic firms are producing inputs to a satisfactory level of quality.

There is some evidence that this is working. Most domestic firms are positive about the entry of foreign firms and some say that it has helped put Ethiopia on the global map in the respective industries, drawing global buyers not only to the foreign manufacturers in the country but also the domestic ones. With respect to linkages, many foreign footwear producers in the leather products industry are using leather from domestic tanneries, and sometimes even helping them improve production techniques. There is also some evidence that Ethiopian employees in foreign firms are being trained in technical, managerial and administrative positions. Moreover, the massive absorption of unskilled labour that the influx of foreign firms is accounting for can very well assist in creating an ‘industrial workforce’—one that has the habit of time-management and factory routines.

Nevertheless, aggregate data gives some cause for worry. No domestic firm is close to reaching the levels of export volumes and productivity that foreign firms have reached and are predicted to reach in the near future. Moreover, while many of the foreign leather producers in Ethiopia are sourcing local inputs, the trend looks bleaker for the apparel industry. The

importation of textiles (fabric) has been growing rapidly with the growth of the apparel industry, an industry which is growing faster in Ethiopia and has higher global demand than the leather products industry. Most foreign apparel manufacturers have said that they do not foresee any local fabric/cotton sourcing for at least the next five years, indicating that Ethiopia will largely be carrying out CMT functions on imported fabric. Given the low value that this activity accounts for, the industry might not even serve as the export cash cow that the government primarily wants it to.

This underscores a very important conclusion drawn in the previous chapter: vertically specialised industrialisation (i.e. inserting oneself in a value chain rather than building fully integrated production structures) is not enough for a sustained industrialisation path for developing countries. We saw how in some countries in Latin America, particularly Mexico, TNC's ultimately transferred only low-skilled, low-wage and footloose operations (Gallagher and Zarsky, 2007). China, which is trying to avoid this by gradually increasing its domestic content in low-tech industries, like the textile industry, has now surpassed Mexico in terms of manufacturing sector wages (Johnson, 2017). A balance needs to be struck between the benefits that vertical specialisation can bring about, and the need to develop domestic productive capabilities. But as Ethiopian government officials have pointed out, it is difficult to put requirements on foreign firms to source locally, especially when the quality of inputs does not meet international standards. Therefore, while technology transfer policies are important, policies that address bottlenecks on the inputs side that go beyond simply GVC-oriented industrial policies, must be formulated in parallel (as discussed in section 4.3.7).

In addition to the industrial policies already in place, a recommendation for the Ethiopian government would be to formulate incentives that make foreign companies source locally. One example would be to grant tax exemptions depending on the degree of local sourcing (e.g. Brazil's automotive industry), or granting firms cash subsidies for exports made of locally produced inputs (e.g. Bangladesh's apparel industry). Ethiopian government officials do recognise this problem. An official at the Ministry of Industry said that in the future, they would like to organise clusters of domestic firms around industrial parks, like what has been done in Bangladesh (special advisor the Minister of Industry, interviewed by the author in Addis Ababa on November 23, 2016). And given the affinity and knowledge Ethiopian government officials have of industrial policy and other countries' experiences with it, it might well be that many more such policies are brewing and will soon be put in place.



## Chapter 5

### Conclusion

#### 5.1 Summary of the main chapters

If one person can be said to embody Ethiopia's vision of development, it is Meles Zenawi, the country's strongman from 1991 to 2012. In chapter 4, I highlighted an interview he gave with an African news magazine in 2011, in which he said that a number of industrialisation experiences in East Asia support the validity of Ethiopia's approach to economic development. Fast forward 6 years and the vision of Ethiopia following in the footsteps of the Asian tigers still stands strong: in July 2017, the *Financial Times* published a 'Big Read' on Ethiopia's development model, focusing on Ethiopia's low-tech manufacturing boom and how the country is, "Trying to ape the centrepiece of Asia-style industrialisation" (Aglionby, 2017, p.3). Zemedeneh Negatu, a prominent Ethiopian business leader, is quoted in the article, saying that the Ethiopian government is, "Piggybacking on the best elements of China and South Korea, and perhaps, some aspects of Singapore, with an Ethiopian flavour. And if they get it right, they have a high probability of creating an Asian Tiger-like economy in Africa" (Aglionby, 2017, p.9).

Negatu's quote, and generally Ethiopia's approach to development, epitomises the methodological staple of this dissertation and its most important policy implication: when formulating industrial policy, learning from past and current experiences of industrial policy is invaluable. As made clear in the introductory chapter, the historical-comparative method has been central to my research approach, looking 'backwards' and 'sideways' to establish best practices. There is no reason why today's developing countries can only learn from other developing countries that have developed in the same global economic era, as some scholars would undoubtedly suggest. This is why I have placed such heavy emphasis on industrial policies in countries like South Korea and Taiwan, whose industrialisation experiences 30-60 years ago still hold valuable policy lessons for today's African countries, as Ethiopia's approach to industrialisation clearly proves.

In chapter 2, I focused on four justifications for industrial policy, anchoring these particularly in the Asian tigers' industrialisation experiences: industries in developing countries need government support in their infancies (infant industry argument); the market

can fail to allocate resources efficiently (market failures); in many instances, the government has the best ability to take on the risk of venturing into possibly long-term profitable activities (the ‘deepest pocket’ argument); and the need to coordinate and take advantage of the interdependence between industries calls for government action (interdependence between industries). The reason for discussing and analysing both the theoretical and empirical justifications for industrial policy for economic development at length is because in Africa—which has been the starting point as a unit of analysis for this dissertation—there is practically no industry. I carried out a thorough investigation of the manufacturing capabilities of all 54 countries in Africa and found that the lack of manufacturing is so severe, you will have a hard time naming any internationally competitive manufacturing firm with a home base in an African country. This, I argued, in large part explains why GDP per capita growth rates in Africa have been low and why the continent struggles with alarmingly high rates of extreme poverty and vulnerable employment.

This depiction of Africa, as a continent lagging behind other regions of developing countries in terms of economic development, stands in stark contrast to the ‘Africa rising’ narrative that the business media, amongst others, has been promoting in recent years. Given the following that this narrative has gained, I devoted a part of chapter 2 to investigate whether this narrative is ‘fact’ or ‘myth’. I found that Africa indeed has positive developments to show for itself since the year 2000 (the approximate starting point of Africa’s supposed ‘rise’), like significant improvements in health indicators and a clear reduction in violent conflicts. But in terms of the development of productive capabilities, the essence of economic development, Africa does not look very different from what it looked like in the 1960s. I therefore concluded that industrial policy must be reintroduced on the development agenda in Africa.

However, we have witnessed a globalisation of production since the 1990s, which might call for new approaches to industrial policy in developing countries. Reduction in transport costs, advances in information and communication technology and lowered trade and investment barriers have led to the geographical dispersion and fragmentation of production systems, popularly referred to as the expansion of global value chains.

Chapter 3 turned to this issue, asking if and how the expansion of global value chains affects the productive structures of developing countries, particularly those in Africa, and what the implications are for industrial policy. Some scholars have already approached this topic, most notably those who study industrialisation and development issues from a GVC perspective, a perspective I have been referring to as the ‘GVC lens’. The GVC lens suggests that the industrial policies implemented by the Asian tigers pre-1990s are largely outdated, and

that we have now entered an era where joining a global value chain—also known as ‘niche specialisation’ or ‘vertically specialised industrialisation’ (VSI)—rather than building a domestic value chain, has become more important. For example, Milberg et. al. (2014, p. 170) writes that:

The first challenges under VSI is to shift from the traditional industrial policy stance aimed at developing ‘industry’, where ‘industry’ was conceived as a fully integrated production structure. With GVCs, competitive improvements come not with the development of the fully integrated scope of activities in an industry but by moving into higher-valued tasks associated with the industry.

Similarly, Baldwin (2011, p.3) states that, “Before 1985, successful industrialisation meant building a domestic supply chain. Today, industrialisers join supply chains and grow rapidly because offshored production brings elements that took Korea and Taiwan decades to develop domestically.”

The GVC lens has taken the discussion on industrial policy in some useful directions. The expansion of GVCs since the 1990s is definitely real—we have seen a massive increase in inflows of FDI from predominately industrialised to developing countries, which is part of this globalisation of production. This has increased the opportunities for developing countries to capitalise on FDI and link up to TNCs, for example through niche specialisation, such as assembly activities in EPZs.

However, I argued that the GVC lens is missing out on some important aspects of history and, consequently, pointed out some flaws in its new industrial policy framework. First of all, I pointed out that, although the scale of GVCs has increased, GVCs are not something supremely new that have only existed since the 1990s. Countries like South Korea and Taiwan actually inserted themselves in GVCs as part of their industrialisation strategies. Building on this observation, I claimed that the GVC lens fails to acknowledge and study the important role of policies for GVC participation in the most notable industrialisation experiences before 1990. Through adopting a Statist lens—the lens through which industrial policy is most thoroughly studied—I presented case studies of GVC-oriented industrial policies from roughly 1960 to 1990 in South Korea and Taiwan (and shorter case studies of other countries), focusing particularly on industrial policy and how it was used to develop domestic productive capabilities by participating in international trade and attracting FDI. From this, I concluded that, while production networks have indeed become more fragmented since the 1990s, ‘old style’ industrial policy still holds relevance.

Towards the end of chapter 3, I introduced a new framework for GVC-oriented industrial policies aimed to serve today's African countries. This framework largely builds on the GVC-oriented industrial policies that the successful catch-up industrialisers adopted before the 1990s. These were about inducing foreign firms to transfer technology (through mechanisms such as joint venture requirements with domestic firms, employment of domestic workers in managerial positions, or requirements on conducting R&D activities in the host country, all of which were often offered with financial incentives in return), local content requirements and carefully balancing and combining 'EOI and ISI' strategies for the purpose of industrialisation.

I also pointed out how today's developing countries specialising in low-tech manufacturing have ended up with lower profit margins in their value chains, and consequently suggested that African countries should not shy away from incorporating elements of ambitiousness and risk-taking in their industrial policies—which is what has characterised the really successful catch-up industrialisers—especially in the area of producer services.

Chapter 4 contextualised issues raised in the previous chapters by analysing the industrialisation trajectory and the GVC-oriented industrial policies of Ethiopia. While the manufacturing sector in Ethiopia constitutes a small share of GDP, it is arguably Africa's clearest example of a country that puts industrialisation at the forefront of its development agenda. The Ethiopian government makes the goal of industrialisation—particularly in the image of the Asian tigers—highly explicit: the state has invested massively in infrastructure that aims to create a conducive environment for manufacturing production (like investments in road networks, rail systems, power generation and industrial parks), and a range of industrial policies have been formulated to support the growth of the manufacturing sector.

Ethiopia is also an interesting case to study from the perspective of GVC participation. In its two most highly prioritised manufacturing industries, the textile and leather industries, the Ethiopian government is attracting massive amounts of FDI and inserting itself into GVCs. The model is based on attracting foreign manufacturers (OEMs from slightly higher income countries, like China, India and Turkey), whose products are predominantly sold in the West under European or American brand names. The OEMs willingly relocate their operations to Ethiopia because production costs are lower. The OEMs either come on their own initiative or on the initiative of the lead firm in the value chain (like in the case of HIP). Results thus far show that the industries are on track for achieving what the government initially set out for:

export earnings in the two industries are growing fast and big commitments by export-oriented foreign investors are increasing, meaning that exports are likely to keep growing.

However, in terms of the development of domestic productive capabilities, the results are more ambiguous.

On the upside, domestic firms are positive towards the entry of foreign firms and some say that it has helped put Ethiopia on the global map in the respective industries, drawing global buyers to both foreign and domestic manufacturers in the country. With respect to linkages, many foreign footwear producers in the leather products industry are using leather from domestic tanneries, and sometimes even helping them improve production techniques. There is also some evidence that Ethiopian employees in foreign firms are being trained in technical, managerial and administrative positions.

On the downside, Ethiopian firms constitute a very small share of the export earnings in the textile and leather industries. Moreover, the government is not putting requirements on foreign firms in the form of joint venture requirements, local content requirements (apart from the sheepskin) and R&D requirements, like Taiwan and South Korea did during their years of rapid industrialisation. Ethiopian government officials seem to believe that a large part of the technology transfer will happen through demonstration and competition effects prompted by foreign firms, and by attracting ‘the right type’ of FDI.

Furthermore, while many of the foreign leather products manufacturers in Ethiopia are sourcing local inputs, the trend looks bleaker for the apparel industry. Most foreign apparel producers say that they do not foresee using domestically produced fabric for at least another five years. Given that CMT operations make up a small share of the value in the textile value chain, the apparel industry (which looks to grow more rapidly in Ethiopia than the footwear industry) might end up being completely dependent in imported fabric, and consequently not serve as the export cash-cow that the Ethiopian government wants it to. This underscores a very important point that was highlighted in chapter 3: while inserting oneself in a GVC can bring about short-term benefits, niche specialisation is not enough for a sustained industrialisation path.

So, while the Ethiopian industrial policy model is impressive in many ways, it has yet to figure out how to make the GVC-participation strategy work for the development of domestic productive capabilities. But Ethiopia is in very early stages of development, and it might just be that policies for technology transfer and local content are brewing (like seen in the case of HIP), and that we will soon see GVC-oriented industrial policies that are, in the

words of Zemedeneh Negatu, inspired by China, South Korea and Singapore, with an Ethiopian flavour.

## **5.2 Related directions of research**

This dissertation analysed how one aspect of change in the global economy affects industrialisation prospects and industrial policy in African countries and, more generally, developing countries. However, there are several other global economic changes, some more related to the expansion of GVCs than others, that has had an impact on industrial policy in developing countries and that warrants more analysis and debate in future years than what this dissertation has scope for.

One is the increased difficulty of industrialisation for today's developing countries, particularly those in Africa. Rodrik (2014, p.11) writes that, "I have the suspicion that the obstacles facing industrialisation in Africa are more deep-seated, and go beyond specific African circumstances. For various reasons that we do not quite understand, industrialisation has become really hard for all countries of the world." While Rodrik rightly points out that the industrialisation obstacles go beyond specific African circumstances, he is wrong to argue that the developments leading to this are beyond our understanding. In chapter 3, I discussed some of these. One is that the competition between developing countries, particularly in low-tech manufacturing, has become incredibly fierce, leading to a price-decline of these goods. The other is that TNCs in the West are consolidating and expanding, appropriating profits in the producer services segment over a larger market. Nolan (2007) analyses this second point in greater detail and suggests that this 'global business revolution', whereby TNCs based in the West are consolidating their global power, largely explains why we have not seen a single country in the world make the transition from poor to rich, after the Asian tigers did so between roughly 1960 and 1990.

Another factor that makes industrialisation prospects for today's developing countries more worrisome is increased automation of labour-intensive industries. While the concern that machines are taking over our jobs is far from new—it started over 200 years ago with the Luddites' protests in England in the early 19<sup>th</sup> century—we have to take this argument seriously. For example, Adidas, the famous German footwear and sports accessories company, has already started 'reshoring' shoe production from China to a highly-automated factory near Ansbach, Germany. For companies like Adidas, reshoring is not only about simplifying the

production process through automation, but also about simplifying what is currently an immensely complex supply chain. The former chief executive of Adidas, Herbert Hainer, says that reshoring will reduce logistics and storage costs, shorten lead times and make the company more flexible in terms of how it makes its shoes. (Shotter and Whipp, 2016).

In Ethiopia, when asked about the likelihood of automation, many foreign investors in the apparel and footwear industry predicted that in 10-15 years, automation would radically change the nature of the industry and that it is crucial that Ethiopia takes advantage of the current ‘window of opportunity’ for labour-intensive industrialisation. Ethiopia and other African countries are probably the ones that will suffer most severely should full automation of current labour-intensive production processes become reality. As this dissertation has already highlighted, thus far, Africa has been unable to create formal employment opportunities for most of its workforce consisting of approximately 500m people, a number which is expected to rise to 800m by 2030.

International policy developments are also making it more difficult for developing countries to industrialise. With the proliferation of international trade agreements, particularly the establishment of the WTO, the developing countries of today do not have the same industrial policy space that the Asian tigers had during their industrialisation push. The WTO is pushing all its member states to lower their tariffs, and they strictly prohibit member states to use export subsidies and local content requirements. In chapter 3, we saw how important these instruments have been for the industrialisation process of South Korea and Taiwan. Chang et. al. (2016, chapter 5.1) points out that although there are some loopholes for African countries to take advantage of even if they are members of the WTO and have signed the European Partnership Agreements (EPAs),<sup>65</sup> these trade agreements are definitely limiting the policy autonomy African countries have for nurturing their infant industries.

With respect to international trade agreements, it is not only about pushing the research agenda to figure out how industrial policy can respond to these complex sets of trade rules, but also about advocating for more global justice and democracy. Although the WTO in principle reflects a one-country-one-vote system, rich countries have far more resources to spend on negotiating international trade agreements and lobbying at WTO meetings. It would be naive to think that current international trade agreements are not tilted in favour of the West. Hickel

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<sup>65</sup> The EPAs are reciprocal trade agreements between the EU and 79 African, Caribbean and Pacific (ACP) countries.

(2017) suggests setting up a common fund for poorer countries that cannot afford a permanent contingent at the WTO headquarters in Geneva or that cannot pay for the staff they need to attend negotiating meetings.



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*This reference list is divided into four categories. The first category (which has no headline) is the 'main' reference list, and includes almost all the references. Subsequent categories are entitled 'Ethiopian government policy documents', 'Newspapers and online media' and 'Datasets and databases'.*

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