

Wolf, Christina (2018) Industrialisation in times of China: a demand-side perspective on China's influence on industrialisation processes in sub-Saharan African countries at the example of Angola between 2000 and 2014. PhD thesis. SOAS University of London. <http://eprints.soas.ac.uk/26484>

Copyright © and Moral Rights for this thesis are retained by the author and/or other copyright owners.

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge.

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder/s.

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

When referring to this thesis, full bibliographic details including the author, title, awarding institution and date of the thesis must be given e.g. AUTHOR (year of submission) "Full thesis title", name of the School or Department, PhD Thesis, pagination.

Industrialisation in times of China: A demand-side perspective on China's influence on industrialisation processes in sub-Saharan African countries at the example of Angola between 2000 and 2014

Christina Wolf

Thesis submitted for the degree of PhD

2018

Department of Economics
SOAS, University of London

Declaration for SOAS PhD thesis

I have read and understood Regulation 21 of the General and Admissions Regulations for students of the SOAS, University of London concerning plagiarism. I undertake that all the material presented for examination is my own work and has not been written for me, in whole or in part, by any other person. I also undertake that any quotation or paraphrase from the published or unpublished work of another person has been duly acknowledged in the work which I present for examination.

Signed: _____ Date: _____

Acknowledgements

I would like to express my sincere gratitude to my advisory committee: Dr. Dic Lo, Dr. Elisa van Waeyenberge and Prof. Ben Fine for their continuous support of my Ph.D study and related research, motivation, and immense knowledge. Their insightful comments and hard questions encouraged me to widen my research from various perspectives.

My sincere thanks also go to Dr. Carlos Oya, who provided me an opportunity to join their research project on labour conditions in Chinese firms in Africa, a collaboration which provided important insights and inspiration for this research.

I thank my fellow research students Dr. Bruno Bonizzi, Matteo Pinna-Pintor, Dr. Gabriel Pollen and Dr. Richard Itaman for the stimulating discussions and for all the fun we have had in the last four years.

I am further extending my heartfelt gratitude to my proof-readers Judith Nübold, Kourosh Amini, Andrew Harrison and Rafael Goriwoda, whose painstaking attention to detail have greatly contributed to the final version and to keeping me sane in the final stages of writing up.

I am by far most indebted to my partner Rafael Goriwoda who has made countless and invaluable contributions to this project, supporting me in virtually every aspect from writing the initial proposal over discussing ideas and problems I have encountered to proof-reading. This work would not have been possible without him. We made it!

Last but not the least I would like to thank my family: my parents and Ewa Goriwoda for supporting me throughout writing this thesis especially by helping with child care duties.

Abstract

Using a case study of Angola between 2000 and 2014 this thesis investigates how economic ties with China have affected patterns of manufacturing sector development in sub-Saharan Africa. Research on industrial development largely side-lines the conditions under which demand for commodity production remains or becomes expansionary – a question of particular relevance for SSA economies at the time of writing given recent reconfigurations of global export markets. While aggregate export earnings of many SSA economies increased as a result of the commodity price boom between 2000 and 2015, export markets served less and less as outlets for manufacturing products. Financialisation in developed economies crowds out long-term productive investment and tends to worsen the distribution of income and wealth thereby depressing consumer demand. What is more, intense competition from China displaced some African manufacturing exports. Against this global economic context tending towards systemically deficient demand, the mobilisation of domestic sources of demand for manufacturing outlets becomes a key challenge of late-industrialisation in SSA.

China's specific mode of engagement with SSA economies has the potential to support domestic market formation because of its focus on construction activities which are labour absorbing and carry the potential for chains of induced investment demand in the real economy. In Angola, the export demand stimulus resulting from Chinese demand for raw materials has favoured the formation of domestic markets in two distinct ways. Export demand fuelled entrepreneurial expectations about rising levels of consumer demand which led to investments in the beverages sector. In the building materials sector, export earnings facilitated government spending on infrastructure and housing which induced investment demand for construction materials like cement.

Domestic policy has facilitated the emergence of manufacturing industries and macroeconomic policy has acted in support of the building materials sector but less so in support of the beverages sector. Overall, government support for demand growth is in no way self-evident or uniform across sectors. Patterns of fiscal spending, labour market and redistributive policies are all tightly linked to the distribution of income and, by extension, distributional conflicts. Demand was an important driver of investment decisions in beverage production, yet the growth of demand for these products was not supported by coherent redistributive policies. In the absence of such support, the demand base remained vulnerable to external shocks such as the 2015 collapse in oil prices and resulting increases in domestic inflation. Taken together, this suggests that the extent to which and the reasons why demand growth is supported by domestic policy are important explanatory elements for understanding patterns of expansion and stagnation of manufacturing production in developing economies.

TABLE OF CONTENTS

Chapter 0. Introduction	14
Contextualisation and aims of this study: Industrial development in times of China	14
Theoretical conceptualisation of industrial development	17
What do we know?	22
Empirical research design and methodology	23
Tracing the relationship between China-related demand-side effects and manufacturing output growth in Angola.....	27
Chapter 1. Scholarly Debates Around Industrial Policy – A Fairground Mirror Of Industrial Development?	30
Introduction.....	30
1. The industrial policy literature evolves from 'why do we need it'... ..	33
1.1. Neoliberalism: Questioning the ‘why’ of industrial policy.....	34
1.1.1. The World Bank’s explanations for the difficulties of African manufacturing industries.....	34
1.1.2. Theoretical inconsistencies and contradictions of the Washington Consensus policy advice and their implications for further research on industrial development	38
1.2. The East Asian “Miracle” and the failure of the Washington Consensus prescription: the game changers?	48
1.2.1. Post-Washington consensus and evolutionary justifications for industrial policy	49
1.2.2. Policy options for the promotion of industrial development	52
2. ... To a narrow notion of industrial policy and ‘how to make it work’? ..	56
2.1. Export-centrism and its implications for the conceptualisation of macro-economic policy in support of industrial development.....	57
2.1.1. From export-led growth to the new export-centrism in developmental states	57
2.1.2. Industrial development and the lack of endogenous theories of demand growth.	59
2.2. The new orthodoxy and its major divide: how extensive should industrial policy be?	63
2.2.1. From the invisible to the transparent hand	63
2.2.2. Towards processes of accumulation: what is the state?.....	66
3. New industrial policy paradigms: From ‘how to make it work’ to ‘which industries should be targets of industrial policy’	71

3.1. New Structural Economics (NSE) - An abstract debate about comparative advantage determining the “strategy”.....	71
3.1.1. Comparative advantage – comparative schmadvantage: a theory in need for theory	71
3.1.2. GIFF: a theory that needs to explain domestic and global demand growth	75
3.2. Integrating commodity value chains: Resource Based Diversification (RBD).....	77
4. Financialisation and the systemic tendency towards deficient demand in contemporary capitalism.....	81
4.1. Explaining the rise of finance.....	81
4.2. And its consequences	84
4.2.1. Depressed productive sector investment demand.....	84
4.2.2. Coupled with an eroding consumer demand base in high income countries.....	86
5. Bringing demand back in	90
5.1. Linking structure, scale and demand.....	91
5.2. Exploring the endogeneity of demand and the nature of different demand problems	94
5.2.1. The formation of markets in transformational growth theory	94
5.2.2. The Keynesian-type demand constraint.....	96
5.2.3. The Kaldorian-type demand constraint.....	99
5.2.4. The specificity of export demand	101
5.3. Some Policy Dimensions of demand constrained capital accumulation.....	102
5.3.1. Macroeconomic policy in support of autonomous investment demand	103
5.3.2. Macroeconomic policy in support of induced investment demand	105
Conclusions	106

Chapter 2. Situating China-Related Effects On the Prospects for Industrialisation in SSA and the Role of Policy..... 110

Introduction.....	110
1. Supply-side channels: Potentially productivity-enhancing effects of Chinese investment, construction activities and trade	112
1.1. Technology transfer through Chinese investments	112
1.1.1. Chinese FDI in SSA – a quantitative perspective.....	113
1.1.2. Chinese FDI in SSA a qualitative perspective: between flying geese and resource colonialism?.....	119

1.2. Trade-related supply-side effects: Technology transfer through Chinese capital goods imports.....	128
1.2.1. Sino-African import structures: An overview	128
1.2.2. Unfavourable trade structures?.....	132
1.2.3. Evidence for the productivity-enhancing properties of Chinese capital goods imports	136
1.3. Trade-related supply-side effects: Chinese construction services and Chinese infrastructure development in SSA	138
2. Demand-side channels: Between reduced scope for export-led industrialisation and increased potential for domestic market formation...	147
2.1. African exports in times of China: Evolutions in volumes and composition of African exports	147
2.1.1. Some evidence for export-displacement.....	150
2.1.2. Labour intensive export-oriented manufacturing remains feasible but faces simultaneity problems.....	152
2.1.3. Displacement of manufacturing exports only affects some groups of products.	155
2.1.4. Increased balance of payments constrained growth rates and increasing terms of trade	156
2.2. Increased opportunities for domestic market formation.....	160
2.2.1. Employment and income effects broadening the domestic demand base	161
2.2.2. Demand chain formation through construction projects: market for building materials.....	169
2.2.3. Problems in terms of linkage formation	171
Conclusions	173
Chapter 3. Empirical Research Design and Methodology	175
Introduction.....	175
1. Changes in manufacturing value added in sub-Saharan African countries: 1990-2013	176
1.1. Stylized patterns of economic growth in SSA relative to other developing regions: 1990-2013.....	176
1.2 The diversity of manufacturing sector growth performances across SSA	178
2. Methodological approaches in finding causal relationships between China-related effects and manufacturing sector development	187
2.1. Methodological approaches.....	187

2.2. Cluster Analysis	189
2.2.1. Cluster analysis as a tool to inform the choice of case studies	189
2.2.2. The choice of cluster variables	193
2.2.3. Selecting the number of cluster groups	197
2.2.4. The typical patterns of economic ties with China across the six clusters.....	199
2.3. The choice of case study	206
Conclusions	209

Chapter 4. Industrialisation in Times of China: Domestic Market Formation in Angola Between Global Economic Cycles and Changing Elite Interests..... 211

Introduction.....	211
1. Stylised patterns of manufacturing output growth and government efforts to support the manufacturing sector.....	213
1.1. Emerging manufacturing sector activities after the end of the civil war.....	213
1.1.1 Patterns of manufacturing output growth	213
1.1.2. Patterns of domestic and foreign investment.....	217
1.2. Industrial policy in Angola.....	224
2. Reconfigurations of Angola’s system of accumulation – Manufacturing consent?.....	231
2.1. A brief overview of Angolan post-independence economic history.....	233
2.1.1. 1961-1975: The late-colonial Angolan economy a flourishing manufacturing sector?.....	233
2.1.2. The Angolan civil war: the shaping of material and non-material conflicts in post-independence Angola.....	237
2.1.3. The post-colonial economy: The collapse of the non-oil economy and the scramble for the remainder	239
2.2. Reconfigurations of the Angolan political settlement after the civil war in 2002: Manufacturing consent?.....	247
3. Domestic market formation in times of China: From export earnings to domestic investment.....	251
3.1. Changing global demand and price structures and their impact on Angola’s balance of payments consistent growth rate	253
3.1.1. Relaxation of the balance of payments consistent growth rate.....	253
3.1.2. ...Increasing the capacity for ‘productive’ imports.....	259

3.2. From export earnings to domestic investment: Domestic market formation in Angola	269
3.2.1. The formation of a market for building materials on the back of Chinese construction projects	269
3.2.2. The beverages sector: Investments triggered by expectations about rising consumer demand	278
3.2.3. The political economy of income distribution and wage growth	280
3.2.4. Agricultural purchasing power and investment	286
3.2.5. End of the commodity price boom and its implications for manufacturing in Angola.....	288
Conclusions	290
General Conclusions	292
Findings from the Angolan case	295
Main contributions.....	299
Main limitations and future research needs	301
Bibliography.....	303
Annex 1. Product group classification for trade data analysis.....	328
Annex 2. Ethiopia investment breakdown.....	332
Annex 3. Angola trade details	335
Annex 4. Angola Chinese construction projects details	344

List of Graphs

Graph 1. US Productivity, GDP, Employment and Income: 1953-2011.....	88
Graph 2. Global Growth Incidence Curve, 1988-2008.....	89
Graph 3. Chinese OFDI stocks by region 2004-2013 (current USD, millions)	116
Graph 4. Chinese OFDI flows as % of Gross Fixed Capital Formation (2013).....	119
Graph 5. Proportion of State-owned enterprises and Non-state enterprises in China's Outward FDI Stock 2006-2014.....	122
Graph 6. Sectoral distribution of Chinese FDI to Africa by selected years (% of total stocks)	123
Graph 7. SSA imports by partner 2002-2014 cons. 2005 USD (excluding South Africa). 130	
Graph 8. SSA imports by trade partner as % of total imports, 2002-2014 (excluding S. Africa)	130
Graph 9. Imports from China as % of total imports, 2014	131
Graph 10. Imports from China as % of GDP, average 2011-2013.....	132
Graph 11. Consumer goods and food and beverage imports from China as share of GDP, 3 year average 2011-13.....	134
Graph 12. Average annual growth rates of consumer goods imports from China out of total imports from China, 2000-2013.....	135
Graph 13. Capital goods imports from China as share of total capital goods imports, 3 year average 2011-2013.....	138
Graph 14. Chinese FDI (stocks and flows) compared to Chinese Overseas Contracted Projects SSA aggregate (2000-2013, current USD).....	139
Graph 15. Chinese Overseas Contracted Projects by region (current USD)	141
Graph 16. Chinese Overseas Contracted Projects by region (% of total).....	142
Graph 17. Chinese Overseas Contracted Projects relative to GDP (average 2011-2013)..	145
Graph 18. SSA Real exports and imports (2005 constant USD).....	157
Graph 19. SSA export index by partner (2002=100, based on real export earnings)	157
Graph 20. Terms of Trade Index Sub-Saharan Africa and China 1990-2013 (2000=100)	158
Graph 21. Terms of trade index in 2013 (2000=100).....	159
Graph 22. Exports to China as share of GDP, average 2011-2013	159
Graph 23. Manufacturing Value Added per capita, % increase 2013 relative to 1996-2000 average	180

Graph 24. Real Manufacturing Output per capita 1 st quintile SSA countries (decreasing) – 1990-2013 (2005 USD).....	182
Graph 25. Real Manufacturing Output per capita 1st quintile SSA countries (stagnating) 1990-2013 (USD 2005).....	183
Graph 26. Real Manufacturing Output per capita 1st quintile SSA countries (increasing) 1990-2013 (USD 2005).....	184
Graph 27. Real Manufacturing output per capita in 2nd quintile SSA countries 1990-2013 (2005 USD)	185
Graph 28. Real Manufacturing Output per capita in 3rd quintile SSA countries 1990-2013 (2005 USD)	186
Graph 29. Real Manufacturing Output per capita in 4th quintile SSA countries 1990-2013 (2005 USD)	186
Graph 30. Cluster criteria by number of groups	198
Graph 31. Manufacturing Value Added per Capita 1996-2013 (constant 2005 USD)	208
Graph 32. Manufacturing Value Added per capita in 2013 (constant 2005 USD).....	209
Graph 33. Manufacturing Value Added Per Capita (2005 constant USD).....	214
Graph 34: Manufacturing Production Index Quarter 4 2013 by Sub-Sector (2002=100)..	215
Graph 35. Angola – FDI by country and Domestic Investment 2003 – 2013 (constant 2005 USD)	221
Graph 36. Angola – Investment by Sector and Country (2003-2013, constant 2005 USD)	222
Graph 37. Angolan merchandise exports and imports 1975-2015 (2005 constant USD) ..	242
Graph 38. Angolan exports (value and volume increases) 2000-2012.....	253
Graph 39. Angola evolution of merchandise and service imports 2000-2015 (2005 constant USD)	261
Graph 40. COPs in Angola (current USD and % of GDP, 2000-2013)	270
Graph 41. Electricity (production of kwh) - % increase period 2000-04 to 2007-2010.....	274
Graph 42. Cement consumption and production (Mt) Angola 2000-2014.....	276
Graph 43. Prevalence and depth of poverty in Angola 2000 vs. 2009	281
Graph 44. Evolution of wage and profit shares in Angola, 2002-2010	285

List of Tables

Table 1. Chinese FDI stocks by region and tax region in 2013 (\$ million)	117
Table 2. Top destinations of Chinese OFDI stocks in SSA in 2013, current USD million	118
Table 3. FDI stocks in SSA (excl. South Africa) by investor (current USD million).....	119
Table 4. Imports by type and region (as % of total imports from that partner)	133
Table 5. Top 10 countries for Chinese construction projects, current USD	142
Table 6. Market shares of top 250 international contractors in Africa (selected years).....	144
Table 7. Top 10 international contractors in Africa	144
Table 8. Exports by type and region/ partner (% of total exports to that partner)	149
Table 9. Domestic labour content in Chinese firms by activity indicated in various reports	163
Table 10. Cement Production in SSA (selected years) excl. S. Africa	170
Table 11. FDI flows as share of GFCF	171
Table 12. Evolution of the Manufacturing Sector in the Developing World	178
Table 13. Summary Statistics of Cluster Variables and Key Country Characteristics	197
Table 14. Cluster criteria by number of groups.....	198
Table 15. Summary Statistics: Δ Manufacturing VA per capita by Group	206
Table 16. Angola – Average real GDP Growth Rates by Sector (2005 constant USD)	215
Table 17. Labour productivity (\$/ worker).....	216
Table 18. Angola, Employment by Sector of Activity 2002-2015	217
Table 19. Angola FDI stocks by data source and partner (USD million)	219
Table 20. Chinese investments in Angola by sector and year (constant 2005 USD, million)	223
Table 21. Manufacturing Sector Investments 2011 and 2012 by Broad Category (constant 2005 USD, thousands)	224
Table 22. Medium Term Manufacturing Sector Development Plan – Sources of Finance	230
Table 23. Unit Root test Results.....	256
Table 24. Estimation results import/ export demand functions and co-integration test.....	256
Table 25. Overview market shares, growth rates, income and price elasticities.....	257
Table 26. Decomposition of Angola’s generalised balance of payments consistent growth increase between 1990-00 and 2000-2012.....	259
Table 27. Angola – Balance of Payments Consistent Growth rates by sub-period.....	259

Table 28. Angolan Merchandise Imports by Broad Category 2002 vs. 2014 (2005 constant USD)	263
Table 29. Angola: Imports by broad category and partner/ region as % of total imports from that partner/ region.....	266
Table 30. Machinery imports by economic use and major trading partner (sum 2002-2014), constant 2005 USD million.....	268
Table 31. Composition of Machinery Imports by Major Partner (Σ 2000-12), % of total subgroup, ISIC rev 3.....	268
Table 32. Main International Contractors operating in Angola in 2014	271
Table 33. Angola: Chinese contracted projects by sector 2004-2015	273
Table 34. Manufacturing Sector Investments – Intermediate Goods, 2011 and 2012 (constant 2005 USD, thousands)	275
Table 35. Angolan Cement production base in 2014	276
Table 36. Manufacturing Sector Investments - Food and Beverages, 2011 and 2012 (constant 2005 USD, thousands).....	279
Table 37. Average Monthly Salaries by Sector (in Kwanza).....	284
Table 38 Ethiopia: Chinese manufacturing sector investments 2000-2015 by ISIC 4 digit	332
Table 39. Angola: Imports by Partner as % of Total Imports in that Product Group, 2014	335
Table 40. Angola: Composition of Chinese imports by broad category, % of total imports from China	336
Table 41. Angola: Composition of Chinese imports by broad category, USD constant 2005 millions.....	336
Table 42. Angola: Total Imports by Major trading partner, constant 2005 USD millions .	337
Table 43. Angola: Imports by major trading partner as % of total imports	337
Table 44. Composition of Machinery imports by major trading partner (sum 2002-2014), constant 2005 USD millions	338
Table 45. Composition of Intermediate inputs imports by major trading partner (sum 2002-2014), constant 2005 USD million	339
Table 46. Composition of Final Consumer goods imports by major trading partner (sum 2002-2014), million 2005 USD	341
Table 47. Composition of food and beverages imports by major trading partner (sum 2002-2014), constant 2005 USD million	343

CHAPTER 0. INTRODUCTION

"China takes from us primary goods and sells us manufactured ones. This was also the essence of colonialism. China is (...) an economic giant capable of the same forms of exploitation as the West. China is a major contributor to the de-industrialisation of Africa and thus African underdevelopment." *Lamido Sanusi, Central Bank Governor Nigeria* , quoted in Chima (2013)

"This contract is the foundation on which the growth of our economy is going to be built. (...) It will give a firm boost to the rise of agricultural, mining, and industrial production of our country. (...) This contract is undoubtedly the best which the country has ever signed with foreign investors." *Pierre Lumbi, Former Infrastructure Minister Democratic Republic of the Congo* , quoted in InfoMine (2008)

Contextualisation and aims of this study: Industrial development in times of China

There is perhaps no more important and no more complex question in social sciences than what are the causes of economic growth. This question was central in classical political economy from Adam Smith to David Ricardo and its critique by Karl Marx but has been side-lined in the mainstream of the economic discipline following the marginalist revolution with neoclassical economics being mainly concerned with welfare maximisation through allocative efficiency.

In development economics, which emerged as a field outside of mainstream neoclassical economics in the post-World War II period, economic growth continued to be a prime if not the sole concern of study. Early development economics located the causes of rapid economic growth in the transition from traditional to modern sector production. This 'structural change' comes with changes in the composition of output, changes in the distribution of income and related changes in the composition of demand, changes in the location of economic activity (urbanisation) and demographic changes (H. Chenery, Robinson, and Syrquin 1986: 11). At the most fundamental level, it involves changes in the social organisation of production towards capitalist relations of production, which impose a systemic need to develop the productive forces, search out new markets and improve labour productivity. Capitalist relations of production are special because labour is separated from the means of production and has no possibility other than selling its labour power in order to survive while capitalists cannot rely on a wide-spread system of extra-economic coercion and are thus dependent on the purchase of labour as well as improvements to labour productivity in order to survive against the competition of other capitalists (Wood 2002).

From the 1970s onwards, neoclassical economics encroached on the discipline of development economics and, in its wake, the study of the multi-faceted process of structural transformation faced a similar fate to that of growth in economics more widely. Only later did heterodox accounts of the East Asian growth experiences challenge neoclassical development theory. These accounts revived one aspect in the study of structural transformation, that of industrialisation. What is emblematic of this revival is the increasing number of policy reports devoted to the constraints to industrialisation in the world's poorest economies, especially in sub-Saharan Africa (SSA) (UNECA 2015; UNECA 2013; UNCTAD and UNIDO 2011; UNIDO 2012).

This focus on industrialisation reflects the unique growth dynamics thought to be inherent to the manufacturing sector (in terms of output, productivity and employment growth). For instance, Kaldor's first growth law maintains that it is manufacturing sector growth which drives GDP growth, a relationship which finds ample empirical support in cross-country studies (Szirmai 2012; Timmer and Szirmai 2000; Thirlwall 1983; Wells and Thirlwall 2003) and in the growth experiences of the East Asian developmental states (Amsden 1989; Wade 1990).

To uncover the causes of industrial development and underdevelopment, it is important to critically examine the causal relationships between systemic factors, acting on a global scale, and factors specific to individual economies and societies. Extrapolation should be consistent both ways, i.e. research should be able to explain how country-specific dynamics are influenced by systemic factors while leaving room to explain why and how systemic pressures are shaped by domestic dynamics. For sub-Saharan African countries, their growing economic ties with China are among the most significant global economic reconfigurations over the past decade. This interaction has been controversially discussed, both among academics and lay audiences with China being seen as both a rogue donor or a benevolent dragon, a bully who is blocking everyone else's development path or a goose that leads the way for the rest of the under-developed flock.

By all accounts, China's presence in Africa has grown substantially: Economic flows between China and sub-Saharan Africa have increased dramatically from the early 2000s onwards. China emerges as SSA's most important individual trading partner, procuring 23% of SSA imports and demanding 22% of SSA exports in 2014. Between 2004 and 2013, Chinese foreign direct investment (FDI) stocks in SSA (excluding South Africa) increased

by a factor of 29 and Chinese contracted overseas projects (COPs) by a factor of 34, the latter increasing from \$1.2 billion in 2000 to \$40.6 billion in 2013. The intensification of Sino-African economic flows has coincided with accelerations in real GDP per capita growth after two decades of lost development in SSA. Clearly, though, it is not sufficient to observe such a correlation or even a causal link. What is more relevant is what type of growth is occurring and whether it has the potential to lead to sustainable economic development in the region. For now, at least at the aggregate level, we observe little structural change in SSA (as measured in the re-composition of output towards the manufacturing sector). There is thus a risk that any improvement in economic performance will be short-lived and entirely dependent on Chinese demand for African raw materials.

This study will contribute to the academic discussion on the implications of economic ties with China for structural change in SSA economies by putting it in a wider framework of structural change and industrial development. In the main, existing assessments of China's impact on processes of industrial development in SSA are ambiguous and two opposing aspects are highlighted. On the one hand, China is said to 'block the stepladder' to industrial development by out-competing African light manufactures on world and domestic markets. This argument, brought forward by Kaplinsky (2008), suggests a story of unequal exchange, in which African countries are locked in a position as raw-material providers. They may benefit, as raw material exporters, from the boom in commodity prices, but cannot diversify their economies and, therefore, do not move into higher value-added production. On the other hand, China is said to present a 'golden opportunity' for industrialisation in SSA. Rising labour costs and industrial upgrading in China can free up jobs in labour-intensive manufacturing which, combined with the increasing number of Chinese investments and Chinese financed infrastructure projects, could ignite industrialisation in SSA (Lin 2012a). Signs of such a 'flying geese' process led by 'dragons'- to take up Lin's metaphor - can already be observed in some East African countries such as Ethiopia and Tanzania (X. Tang 2014).

What stands out empirically is that manufacturing sector growth has been highly unequal across different SSA countries over the past decade. Over the past decade (somewhat broadly defined as comparing 2013 to the 1996-2000 average), 15 SSA economies experienced a decrease in their manufacturing output per capita, 19 countries recorded increases of less than 70% and 11 countries observed an increase of more than 70%, of

which six experienced increases of more than 120% (calculations based on UN National Accounts).

Faced with such heterogeneity, the question, of course, is not merely whether China is helping African countries to get their feet on the ladder or blocking the way further up. Instead, the study of late industrialisation should ask which government policies mediate the constraints and opportunities given by global trends in a way that is conducive to structural change.

“It is indeed, the unravelling of the *interaction between the global trends*, as constraints, and the *mediation of national institutions* that provide the key to understanding technological development and late industrialisation in general.” (Lo 2011: 13, emphasis added)

Overall then, the question whether or not any of the differences in manufacturing output growth can be linked to China is not straightforward. There are three analytical challenges here (reflected in Figure 1). *Firstly*, we need to assess what can be explained by the diverse nature of Chinese engagement? The discussion on China’s potential impact on manufacturing output refers to diverse and even contradictory effects, which differ in size and distribution across SSA countries. *Secondly*, we need to ask what can be explained by differences in policy mediation across SSA countries. While global trends such as China’s rise in the world economy may act as constraints or accelerators to industrial development, domestic policy plays an important role in shaping or counteracting these effects. *Thirdly*, we need to consider what can be explained by factors completely independent of China, the latter being only one condition in a multi-faceted broader global economic context that affects SSA’s potential for structural change.

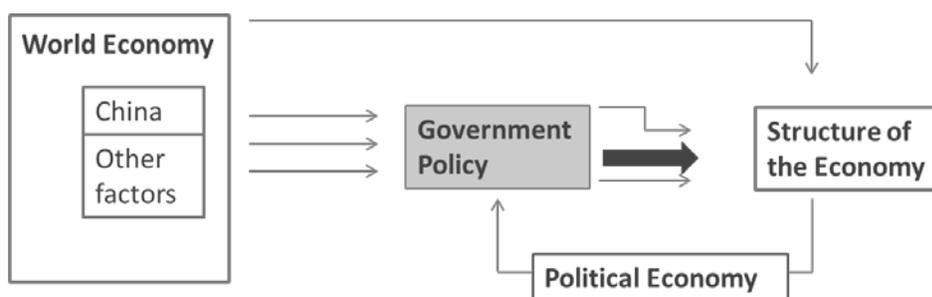


Figure 1. China and structural change in sub-Saharan Africa

Theoretical conceptualisation of industrial development

The recognition that domestic policy responses will be a crucial determinant of whether and how the Chinese presence on the continent and in the world economy will affect structural

change in Africa has also spurred and revived discussions about what are appropriate policy responses for African countries within this new global economic setting. In fact, two new industrial policy paradigms for African economies have emerged corresponding closely to the different accounts of what China's rise in the world economy and in Africa might mean for structural change in SSA economies. On the one hand, the "flying-geese" paradigm (FG) predicts the relocation of labour-intensive industries from China and stipulates wage moderation and labour market deregulation (Ceglowski, Golub, and Mbaye 2015; Monga 2013) to attract this "flock of geese" to Africa. On the other hand, the resource-based diversification paradigm (RBD) maintains that, in the face of saturated global demand for various consumer goods, late-industrialisers need to focus on adding value in rapidly expanding export markets such as processed mineral and energy commodities (UNECA 2013) while supporting the production of domestically consumed 'bottom-of-the billion products' (Kaplinsky 2013).

These antipodal stories about the implications of China for structural change in SSA are ultimately underpinned by a debate over what drives and sustains (inclusive) manufacturing sector growth. Indeed, what constitutes an 'appropriate' policy response is dependent on one's understanding of the workings of the economy and society. Against the free-market orthodoxy pushed by the Washington institutions stand the policy lessons derived from the East Asian developmental states. Each of them is coherent within their theoretical framework yet subject to fierce debate. For the purposes of this study, the first task at hand is therefore to critically investigate the theoretical foundations and boundaries (i.e. what is not theorised) of different paradigms on the role of and priorities for industrial policy. Through the analysis of major policy documents and the key theoretical contributions to which these refer, **chapter 1** demonstrates that the industrial policy paradigms emerging after the Washington Consensus (WC) focus primarily on the conditions under which capital accumulation and technology acquisition can be facilitated by government policy. However, little work has been done linking evolutionary supply-side dynamics to the demand-side conditions necessary to sustain profitable commodity production, with the noticeable exception of export-demand.

By and large, in other words, the contemporary debate does not explore the drivers of investment, nor the phenomenon of "frustrated savings" (Hirschman 1958: 35), i.e. money not invested in modern sector activities but instead channelled off-shore or spent on luxury

products. Yet, any theory of industrialisation, must, as Hirschman (1958: 35) puts it, start with “a consideration of the forces that determine investment in underdeveloped countries”. Building on China’s own economic transformation, Lo (2011) concludes that

“(…) market formation stands at both the beginning and ending points. It is the existence (and growth) of the domestic market which attracts technology transfer. It is also the domestic market which sustains indigenous industrial expansion.” (Lo 2011: 20)

The question how domestic markets form and under which conditions demand for commodity production remains or becomes expansionary is of particular relevance for SSA economies given reconfigurations of global export markets. While aggregate export earnings of many SSA economies increased as a result of the commodity price boom between 2000 and 2015, export markets served less and less as outlets for manufacturing products. Asset-driven wealth accumulation (financialisation) in developed economies crowds out long-term productive investment and tends to worsen the distribution of income and wealth thereby depressing consumer demand. What is more, intense competition from China displaced some African manufacturing exports. Against this global economic context tending towards systemically deficient demand, the mobilisation of domestic sources of demand for manufacturing outlets becomes a key challenge of late-industrialisation in SSA.

The importance of theorising the demand side of the economy in relation to manufacturing sector development is equally apparent when considering the two aforementioned China-related industrialisation paradigms. On the RBD side, Kaplinsky’s ‘walking (stumbling?) on two legs’ strategy starts from the observation that demand in certain export markets is saturated while expanding in others. But the question remains whether policy makers can merely react to tides of global demand or actually influence, at least, the domestic demand regime? On the other hand, the flying-geese paradigm relies on competitive cost advantages but, as pointed out by its critics, can easily result in a competitive downward spiral (‘fallacy of composition’), unless there is an expansionary global and domestic demand regime. This raises the question how such an expansion (be it export or domestic) comes about in the first place. Nothing is solved by introducing foreign trade to the model if we look at the question from the point of view of the *world* market. While the simultaneous growth of exports is feasible in theory, the world economy as a whole cannot be *export-led*. Instead, what requires explanation is the two-way causal relationship between growth of world export demand and domestic market formation, i.e. how the growth of world export demand can be endogenously explained by domestic market formation and through which channels

(exogenous) increases in world export demand generate demand multiplier effects domestically.

And yet, demand has not been the explicit focus of research on industrial development and policy – especially when compared to the body of work focussing on supply side capacity. Therefore, to fill that gap, this thesis will explore, in particular, those channels of influence, as outlined in figure 1, which relate to demand. Chapter 1 therefore proposes a synthesis of demand-side dynamics relevant for industrial development drawing on industrial policy paradigms preceding the WC (in particular Rosenstein-Rodan, Hirschman and Kaldor) and post-Keynesian scholarship (in particular theories of wage-led growth). It distinguishes between Keynesian-type demand dynamics (linked to autonomous demand and entrepreneurial expectations – and departing from Say’s Law) and Kaldorian-type demand dynamics (linked to induced demand and differential growth in value and productivity across forwardly and backwardly linked production chains).

It also argues that explaining de- or inflationary demand regimes requires an analysis of the spending behaviour of social classes and the state, which typically elude the conceptualisations of the state on which many developmental state theories are built. These two main theoretical premises (i.e. the departure from Say’s law and the departure from the ideal-type state framework) are neither meant to invalidate nor to diminish the theoretical relevance of various advances in research relating to industrial policy since the WC, in particular those relating to the nature of technology or power-relations in global value chains. Instead they are proposed as necessary critical extension to further our understanding of industrial development in general and the China-Africa nexus in particular.

For the purpose of this introduction, it is important to note that while the academic debate on industrial policy has evolved substantially over time with shifting theoretical bases and boundaries, the critical juncture has been the WC policy reversal. After the abandonment of industrial policy in exchange for market-liberalism under the WC, much of the revival of the question of industrial policy is inspired by the dissident writings of a number of scholars studying East-Asian industrialisation (for instance Amsden 1989; H.-J. Chang 2002; Wade 1990). Crucially, this empirical and theoretical revival of industrial policy formed in relation to and hence on the terms set by the free-market and free-trade policy doctrine embodied in the WC. This limits its scope in a number of ways.

Firstly, the WC ties the problems of African manufacturing activities in the mid- to late 1970s to supply-side distortions and a lack of trade openness. The critical scholarship on the East Asian developmental states (DS) challenges the *type* of supply-side policies necessary to achieve (industrial) output growth but not the proposition that the problems of African manufacturing activities can be addressed exclusively through supply-side policies. Relatedly, the critical scholarship on the DS challenges the type of policies necessary to achieve export growth but retains the export-centrism of the WC. Where the neoliberal policy paradigm purported that trade liberalisation would result in export-led growth thereby solving the debt crisis in sub-Saharan Africa (World Bank 1981a), the critical accounts of the East Asian DS showed that ‘Import Substituting Industrialisation’ and ‘Export Oriented Industrialisation’ both rely on state-intervention and market distortions. State-intervention had to prepare the ground for a successful integration into the world economy, and it was quintessential for the success of industrial policy “how vigorously and rapidly exportables were extracted from a sequentially rising number of import substitution sectors” (Amsden 2001: 161). In short, “the *new* mode of industrialization” was conceptualised as a “process of *learning* how to *compete*” (Amsden 1989: 3, emphasis added) and strongly related to the question how to achieve export growth. One of the consequences from this is that, where it is recognised as a relevant topic in the scholarship on industrial development, demand is generally limited to export-demand.

Secondly, to fully understand demand requires an understanding of the spending behaviour of different social classes and the state as well as the extent to which these are shaped by distributional conflicts. The developmental state literature is, fundamentally, set up in a way that makes it difficult to reach such an understanding, because it is primarily concerned with the question under which conditions market-distorting government intervention can be successful in correcting market-failures. As with export-centrism, this comes out of the terms set by the neoliberal policy break and emergence of the WC. State and market might be increasingly seen as potential complements, but the state-market dualism remains the starting point for discussion: the legitimacy of state-intervention is seen as dependent upon the state’s capacity to improve on market outcomes. The major analytical concern of the critical scholarship on DS is under which conditions the state can discipline big businesses so as to avoid subversions of the state-subsidies necessary to kick-off production. Different schools of political science contributions have identified the characteristics of states, in

which interventionist policies were successful and emphasise different characteristics within the bureaucracy: either impersonal, bureaucratic rule based on meritocracy and in pursuit of the common interest (neo-Weberian) or “embedded autonomy”, i.e. a bureaucracy aloof from vested interests but still constrained by the society it represents (neo-Marxian).

These analyses are too narrow in scope because they effectively if involuntarily limit the agency-relationships studied to state-business relations turning a blind eye to others, such as capital-labour and industry-finance relations. The latter two are particularly relevant for patterns of consumer and investment demand, which need to uncover how distributional conflicts form in the process of structural transformation and how these are mediated or resolved through the state and through the market (capital-labour relations) as well as under which conditions the financial sector intermediates savings into productive sector investments. At the same time, the ideal-type state framework is too abstract because, from an analytical point of view, what is of interest is not the extent to which any bureaucratic setting diverges from the ideal but how specific vested economic, political and ideological interests come about, what sustains them and how they change over time. “These matters cannot be analysed in the abstract but must be related to the specific circumstances in which economic and political interests are pursued” (Fine and Rustomjee 1996: 57).

Based on these theoretical considerations, the **research questions** of this thesis are refined as follows:

- 1) Through which channels do Sino-African economic ties affect the demand-side dynamics of industrial development in SSA?
- 2) How and why did domestic policy mediate China-related demand-side stimuli in a way that facilitated domestic market formation?

What do we know?

Chapter 2 sets out to investigate the main characteristics of economic ties between China and SSA economies. Direct and indirect economic ties with China are linked to SSA’s prospects of industrial development through a multitude of channels. On the supply-side, Chinese firms (operating both through Chinese contracted projects and FDI) have been shown to promote knowledge and skill transfer (X. Tang 2014; Seyoum, Wu, and Yang 2015; UNDP, SASAC, and MOFCOM 2015; Gu and Carty 2014; Amighini and Sanfilippo 2014). Existing research also suggests that Chinese FDI in manufacturing is more frequently

attracted by African consumer markets than seeking labour cost advantages (Shen 2015; Seyoum, Wu, and Yang 2015; Huang and Ren 2013; Warmerdam and van Dijk 2013; Gu 2011; Geiger and Goh 2012). Furthermore Chinese construction activities address critical gaps in infrastructure relevant for production such as electricity and road networks (Schiere 2010; Foster et al. 2009). Finally, Chinese capital goods have been shown to be both cheaper and more appropriate for operation in SSA economies than those of high income countries (Hanlin and Kaplinsky 2016; Atta-Ankomah 2016; Agyei-Holmes 2016).

If supply-side channels are comparatively well-established and often shown to be positively related to productivity and skill development in country- and cross-country studies, across a range of sectors, research gaps exist when it comes to demand-side channels and the link between demand- and supply-side channels. Existing research findings are almost exclusively limited to export-demand and point to contradictory effects. African manufacturing exports have been displaced on world markets (Geda and Meskel 2010; Villoria 2009a; Giovannetti and Sanfilippo 2009; Kamau, McCormick, and Pinaud 2009). By contrast, on aggregate, increases in export demand from China for raw materials and the improvement of terms of trade have been shown to have a positive impact on the balance of payments position of SSA countries (Bagnai, Rieber, and Tran 2012 and 2016). Yet, so far, no work has examined whether and how increased aggregate export demand translates into domestic investment demand in manufacturing activities and the extent to which this is mediated by domestic policy or constrained by supply-capacity.

Chapter 2 advances a number of hypotheses in this respect, namely that the activities of Chinese firms, in particular Chinese construction activities, contribute to domestic market formation by inducing demand for the production of building materials and by contributing to employment and income generation which broadens the demand base for consumer goods.

Empirical research design and methodology

The remainder of the thesis explores how, if at all, demand-side dynamics in SSA economies are influenced by economic ties with China and how, if at all, this influence has been mediated by government policy within a specific domestic political economy setting.

Chapter 3 discusses how to approach these questions empirically and proposes a mix of case study and cluster analysis. This choice of methods is informed by the nature of subject matter and stands largely in opposition to the core methods used in mainstream applied

growth theory, namely cross-section or panel regressions. In principle, it is possible to estimate correlations between macro-level China-related effects and variables capturing structural change in SSA economies. These correlations could, in theory, be a useful starting point to get a sense of the magnitude of different effects. However, in practical terms, not everything can be parametrised appropriately, especially given concerns about data quality and availability in the SSA context. What is more, merely establishing correlations and the average size of effect makes it impossible to trace the relevant transmission mechanisms on any given variable. This is particularly relevant when, as set out above, many of the China-related effects will work out differently depending on each country's particular political economy, sets of policies as well as historical contingencies. Late-industrialisation in SSA countries and China's impact thereon need to be understood as multi-dimensional, path-dependent and path-shaping processes. For the subject matter, context-specific and time-specific knowledge is required to trace the evolution, formation and effects of domestic policies as well as to understand the spending behaviour of different social strata and the state or even historically formed ownership structures within the industrial sector which create path dependencies.

Detailed country-level case studies can produce this type of context-specific knowledge which is needed to trace the complexity of social systems. Yet, case studies have been criticised on account of their inability to produce generalizable conclusions. Some case-study researchers maintain that this should not be the aim of scholarship in social sciences in the first place (Lincoln and Guba 2000), arguing that the value of case studies lies in building 'naturalistic generalisations', i.e. a wealth of detail derived from a multitude of concrete cases which helps the researcher to build a tacit understanding of the causal processes which can be subjectively and intuitively applied to other problem sets (Stake 2000). Alternatively, case studies can help formulating working hypotheses depending on their 'transferability', i.e. the fit in terms of similarities between source and target cases (Lincoln and Guba 2000).

However, even the concepts of 'transferability' and 'naturalistic generalisation' imply that the findings of one case can be extrapolated to a wider, however defined, set of cases. Gomm, Hammersley, and Foster (2000b) point out that sound induction needs to be both theoretically informed and systematically tested across and within groups of cases. That is, theoretical induction *firstly* relies on a process of conceptual thinking in formulating what is

to be explained and the factors explaining it. As argued at greater length above, for the study of structural change in SSA, this needs to include the conditions under which demand for manufacturing goods remains or becomes expansionary. *Secondly*, researchers have to seek a large number of cases where the explanatory factor is present so as to check whether and under which conditions it has the effect predicted. This, in turn, requires a relatively large number of cases and case study researchers building on one another's work (Gomm, Hammersley, and Foster 2000b: 249).

Repetition through a large number of case studies clearly exceeds the scope of this thesis. However, there are a number of methodological considerations to address, in order to facilitate empirical generalisation. *Firstly*, the studied case has to be situated relative to other cases or groups thereof. Gomm, Hammersley, and Foster (2000a) maintain that the extent to which the specific case is symptomatic or significant for a wider phenomenon needs to be itself established empirically. At the most general level, this involves reaching conclusions about the distribution and co-occurrence of particular features within a population of cases. In analogy to survey research, case studies should be situated with respect to the wider population of cases (Gomm, Hammersley, and Foster 2000a: 105). Gomm, Hammersley, and Foster (2000a) advocate collecting and presenting information about the case and the population by way of extensive analysis of secondary data to the extent that these are available. For instance, to situate the findings of a case study of differential treatment by teachers of different racial groups in a specific school, would require to compare some relevant dimensions like social class representation, ability profiles etc. of the specific school to the nationwide average. If there are no secondary data to draw on, then the potential risks involved in generalisation should still be noted, preferably via specification of likely types of heterogeneity that could render the findings unrepresentative.

Applied to the present research questions, there might be case(s) in which in China-related demand-side dynamics are more likely to occur or case(s) in which demand-side effects occur in tandem with a distinct set of supply-side effects and so on. Going back to figure 1, this is dependent on though not reducible to the size and composition of economic ties with China (arrows on the left hand side), which as documented in chapter 2 varies substantially across the sample of SSA countries. These sources of heterogeneity need to be documented using available secondary data. To inform both the choice of the case study and its

representativeness in relation to other cases, chapter 3 uses cluster analysis techniques to stratify SSA countries according to their economic ties with China.

Cluster analysis is an exploratory data analysis technique used to find groups in data with a maximum similarity within groups and a maximum dissimilarity across groups. Going back to figure 1, heterogeneity in the sample stems from differences in the size and composition of economic ties with China (left hand side arrows), global economic factors independent of China and the domestic policy itself a function of the structure of production (right hand side arrows). Using the k-means partition algorithm, SSA economies are clustered into six groups on the following set of indicators of economic ties with China likely to alter the demand-side dynamics of SSA economies: exports to China as share of GDP, Chinese contracted projects relative to GDP and consumer goods imports from China relative to GDP. China-related demand-side effects would be most likely to occur in countries experiencing a strong increase in export demand from China and in which both construction and investment activities of Chinese firms are substantial.

Secondly, which case is chosen has itself a bearing on the kind of generalisations that can be drawn from it. Chapter 3 discusses a number of criteria for the selection case studies proposed by case study researchers. Eckstein (2000) and Flyvbjerg (2006) maintain that, if chosen appropriately, case studies can be useful to test theoretical propositions in social sciences. For example, cases of the ‘least likely type’ and the ‘most likely type’ can serve to respectively verify and falsify theories by way of demonstrating causal chains exist even where they are least likely to occur or by disproving their existence if they cannot be observed where they are most likely to occur. Alternatively, choosing a ‘critical case’ can advance theory building by means of revealing different sets of causal relations at play. In other words, the theoretical relevance of a case study is not limited to their ability to (dis)prove theoretical propositions but can also lie in its ability to reveal wider causal relationships (Flyvbjerg 2006). For this thesis, the choice of case study is informed by the latter rationale, i.e. investigating the constraints to, the conditions under which and the factors despite which external demand stimuli, whether transmitted through Chinese export demand or construction/ investment activities, can translate into domestic consumer and investment demand in manufacturing activities.

Based on the cluster analysis Angola was identified as a critical case. It falls into the group of cases in which China-related demand-side effects on structural change are most likely to

occur. Within that group of cases, it has realized the highest rate of manufacturing output growth since the turn of the century. Independent of its relations with China, the Angolan economy also exhibits a number of other structural features relevant for a larger set of SSA countries, namely it has a comparatively large domestic market and is a resource-rich country, whose ability to undertake successful industrial policy has been questioned based on resource curse arguments. The Angolan case might therefore reveal something about the *combination* of causal relations at play.

Tracing the relationship between China-related demand-side effects and manufacturing output growth in Angola

Chapter 4 then uses the Angolan case to trace the relationship between increases in export demand from China as well as demand induced by Chinese firms, on the one hand, and domestic investment in manufacturing activities, on the other hand. The starting point is a parametric estimation of Angola's balance of payments consistent growth rate, which provides a useful empirical tool to estimate the *potential* growth rate consistent with a given level of exports and imports and to trace changes to this rate in response to external factors, such as growth in demand from trade partners. Using a multi-country specification, this is done primarily to quantify the extent to which increases in the levels of demand from China have relaxed Angola's balance of payments constraint. The relationship between increased export demand and domestic manufacturing production is then explored through qualitative analysis informed by government policy plans, sub-sectoral output data and an account of post-independence socio-economic history.

China contributed to the formation of a domestic market for manufacturing goods in two significant ways. *Firstly*, up until the drop in oil prices in 2015, growing Chinese demand for Angolan oil increased per capita income, which, in turn, spurred expectations about rising levels of consumer demand. This can, for instance, be observed in the Angola's beverage industry where multinational companies expanded capacity as a result of the economic boom triggered by rising oil prices. Backwardly linked industries like can and glass bottle making even started to export to other SSA countries. *Secondly*, rising export earnings sustained high levels in government spending on infrastructure. Mainly carried out by Chinese contractors, infrastructure development, in turn, created a profitable market for building materials. The case of cement illustrates this pattern of linkage formation between the construction and the

manufacturing sector Angola emerging as SSA's third largest cement producer after Nigeria, and Ethiopia.

Domestic policy has facilitated the emergence of Angola's manufacturing industries. Economic diversification became the focus of Angolan policy in the mid-2000s, and manufacturing sector investment has been supported by various policy measures. Other than investment incentives for strategic key sectors, direct subsidies for manufacturing firms and support for skills development through technical and vocational training centres, demand-side policies have been critical for the emergence of the cement industry. By contrast, against the context of structurally engrained inequality, the demand base for consumer goods like beverages has not been supported by coherent redistributive policies, partially explaining the sector's vulnerability to external shocks such as the 2015 collapse in oil prices and resulting increases in domestic inflation.

Government expenditure on housing and infrastructure development was, in particular, critical for the emergence of building materials manufacturing. These patterns of government spending need to be seen against the end of the 27 year long Angolan civil war, which marks a critical juncture in Angolan politico-economic dynamics. With the elimination of UNITA (*União Nacional para a Independência Total de Angola*) military resistance to the hegemony of the ruling party MPLA (*Movimento Popular de Libertação de Angola*), the ruling elites around president dos Santos did look for new ways to consolidate their political and economic domination. In this respect, large-scale infrastructure reconstruction served to demonstrate the government's ability to deliver basic services. While this created a profitable market for building materials, investments in the cement sector are controlled by circles close to the president's family and political allies. Linkage formation between the construction and the manufacturing sector remained, to a large extent, limited to the capital-intensive cement sector.

More generally, within the Angolan post-Civil war political economy setting, all new business opportunities are tightly controlled by concentric circles around the presidency. This even applies to sectors dominated by foreign multinationals like the beverage industries, where political elites maintain minority shares and foreign multinationals maintain close ties with the political elites through the MPLA's financial investment company GEFI. This makes material success entirely dependent on support for the ruling party but also serves to increase the wealth and power of the ruling elites. Within this post-Civil war political

economy setting we can also explain the relative absence of demand-side support relevant in particular for the emerging consumer goods sectors. With the increase in profitable markets for foods and beverages and building materials, Angolan elite interests transitioned from pure rentierism towards capitalist modes of accumulation. However, the sustainability of this accumulation process depends itself on there being a broad demand base for consumer goods and, by extension, a more equal income distribution in Angola. Yet, redistributive policies, despite figuring nominally in the government's diversification programme, are not the prime concern of those who benefit from the diversification process in the first instance.

Chapter 5 summarises the main findings and contributions of this thesis.

CHAPTER 1. SCHOLARLY DEBATES AROUND INDUSTRIAL POLICY – A FAIRGROUND MIRROR OF INDUSTRIAL DEVELOPMENT?

INTRODUCTION

Industrialisation in developing countries has followed patterns of sudden spurts and unexpected relapses into stagnation. The ambitious import-substituting industrialisation (ISI) programmes, on which the majority of African countries had embarked post-independence had achieved some noticeable success in terms of output growth (Mkandawire 2001) before running into financing problems cumulating in the 1980s debt crisis and the structural adjustment policy reversal.

This chapter reviews shifting industrial development and industrial policy paradigms and argues that the research on industrial development which emerged from the ashes of neoliberalism reduces the factors impeding investment in manufacturing activities in developing countries to supply-side issues relating to cost-competitiveness, while neglecting the demand-side conditions necessary to sustain profitable commodity production under the assumption of a potentially unlimited export market. In the main, this is surprising because the sources of investment demand figured prominently in early development theory. Hirschman (1958), for instance, maintains that, given the phenomenon of “*frustrated savings*” in developing countries, i.e. mobilisable savings not offset by decisions to invest in productive activities but, instead, showing up in hoarded gold, foreign exchange, luxury consumption or indeed capital flight, the starting point for understanding modern sector development must be “a consideration of the forces that determine investment in underdeveloped countries” (p. 35). What is more, even the Washington institutions, after the Washington Consensus (WC) policy reversal, explain the difficulties of African manufacturing industries in the post-independence period by deficient demand on world and domestic markets (Meier and Steel 1989; Steel and Evans 1984).

The disregard for demand, in more recent literature, is explained, in part, by the fact that, both in mainstream (neoclassical) and in the majority of heterodox growth theory, supply determines demand. Demand is therefore not recognised as a phenomenon that needs explanation let alone something that can be influenced by policy beyond the short-run. At the theoretical level though, the relevance of demand for long-run growth patterns is readily

illustrated when giving up on the assumption of decreasing returns to scale (Lavoie and Stockhammer 2012) and the artificial separation between the short-run and the long-run (Sawyer 2011).

In part, it is also explained by the fact that the revival of industrial policy forms in relation to and hence on the terms set by the free-market and free-trade policy paradigm embodied in the WC. To reassert the legitimacy of state-intervention against the free-market paradigm, the heterodox accounts of the East Asian miracles emphasise supply-side constraints, arguing that, costs of production in developing economies exceed world market prices. Because productivity increases rely on tacit knowledge about how to operate machines and organise production, which can only be acquired through the production process itself, various forms of support from the state are needed to ensure production can take place *before* competitiveness is reached (Khan 2013b). Relatedly, to debunk the free-trade paradigm, the heterodox accounts of the East Asian miracles stress that export-led industrialisation is not the result of “neutral trade regimes” – as stipulated by the WC – but can only be achieved through an initial phase of infant industry protection, though the success of protection hinges on the degree to and speed at which infants can be pushed into export markets. This challenges the *type* of supply-side policies necessary to achieve industrialisation and reasserts the necessity and feasibility of active state support for selected high growth sectors of the economy. However, by building on to the export-centrism of the WC, demand-side dimensions are ultimately reduced to export demand. Macroeconomic interventions in support of industrialisation, where acknowledged at all, are therefore limited to exchange rate management, while analysis turns a blind eye to fiscal, redistributive or labour market policies. The wider social dynamics of the transformation process, namely the determinants of the spending behaviour of the state and social classes as well as the distributional conflicts these reflect also elude the analysis.

With the emergence of China in the world economy and China’s intensifying links to other developing economies, we witness the emergence of two China-related industrialisation paradigms. While the flying-geese paradigm (FG) predicts the relocation of labour-intensive industries from China and stipulates wage moderation and labour market deregulation, the resource-based diversification paradigm (RBD) maintains that in the face of saturated global demand for various consumer goods, late-industrialisers need to focus on adding value in rapidly expanding export markets such as processed mineral and energy commodities while

supporting the production of domestically consumed bottom-of-the billion products. High competitive pressures in increasingly saturated export markets for manufactured goods are not just the result of an increasing number of developing countries successfully building manufacturing supply capacity but also of sluggish growth of global demand, which, in turn, is both a driver and consequence of financialisation. This restructuring of capitalist accumulation dynamics towards finance-led, asset driven wealth accumulation comes at the expense of investment in the productive sectors of the economy, a trend, which extends to (foreign) investment in developing countries. What is more, the asset-driven wealth accumulation regime tends to worsen the distribution of income and wealth and therefore tends to erode the consumer demand base in high income countries. Sluggish growth of consumer demand in OECD economies, in turn, intensifies competitive pressures between developing countries over outlets for manufacturing products on world markets.

This chapter argues that against this global economic context tending towards deficient demand, both China-related industrialisation paradigms need to be complemented by a holistic theorisation of demand-side constraints to investment in manufacturing sectors and a conceptual extension of macroeconomic demand-side policies in support of industrial development. The FG paradigm faces the challenge of explaining under which conditions the global and the domestic demand-regime can remain expansionary, especially when investments follow labour-cost advantages, an accumulation logic that is at odds with continuous rises in purchasing power. The RBD, in turn, emphasises limits to export-demand in certain sectors but, in the absence of a holistic understanding of demand omits a range of potential policies that could act in support of domestic demand growth. It is further argued that, when trying to understand the extent to which and the reasons why the growth of demand is supported or not by domestic policy, greater weight must be given to the study of agency relations beyond state-business relations.

Building on to the RBD, the ambition of this chapter is therefore to build a theoretical frame that includes demand as one determinant of investment and (long-run) manufacturing output growth. By doing so, it proposes a synthesis of demand-side dynamics relevant for industrial development drawing on development theory preceding the WC (in particular Rosenstein-Rodan, Hirschman and Kaldor) and post-Keynesian scholarship (in particular theories of wage-led growth). It distinguishes between a Keynesian-type demand constraint linked to autonomous investment demand and entrepreneurial expectations and a Kaldorian-type

demand constraint linked to induced investment demand and the differential growth of prices across forwardly and backwardly linked production chains.

1. THE INDUSTRIAL POLICY LITERATURE EVOLVES FROM 'WHY DO WE NEED IT' ...

This section traces the evolution of the industrial policy literature, in a chronological manner from the classical development theory to the reassessment of the later WC in response to the experience of Asian industrialisation. Tracing the scholarly debate on industrial development in this manner, we find, at its origin, classical development theory, which established an extensive role for government intervention to foster modern sector (understood as industrial sector) development, which was thought of as a process of ‘cumulative causation’, based on the exploitation of increasing returns to scale and scope. This being taken as a given, the question was very much, “how” can the state solve coordination failures and engineer positive externalities to foster cumulative causation, e.g. by focussing on consumer goods industries or rather by focussing on producer goods industries; by focussing on export markets or rather focussing on domestic markets. However, with the advent of neoliberalism, the whole notion of industrial policy was put to the trial and, the rationale for “why” industrial policy was necessary was questioned altogether. This first section traces the debate demonstrating the extent to which the neoliberal position becomes agenda-setting for subsequent research on industrial development. Interestingly, after the WC policy reversal, the Washington institutions themselves still attributed the demise of African manufacturing industries to stagnating domestic and global demand over the course of the 1970s, but these problems were re-interpreted as problems of overproduction caused by distorted market signals that need to be corrected through free-market supply-side reforms and trade liberalisation. Ultimately, this links the question of growth to supply-side and trade policies. Critical scholarship challenging the WC questions the type of supply-side policies necessary to achieve industrial output growth reasserting the necessity for government guidance but does not resolve the tension between (presumed) short-run demand fluctuations and long-run supply growth embodied in the WC and neoclassical growth theory more widely.

1.1.1. The World Bank's explanations for the difficulties of African manufacturing industries

Early development economics was centred around the notion of state-led structural transformation through modernisation, where modernisation is seen to be equivalent to industrialisation. Based on theories like Rostow's stages of development or Rosenstein-Rodan's big push and inspired by successful industrialisation in the Soviet Union, many developing economies including those in SSA, embarked on big push-type industrial strategies including large scale infrastructure development, import of capital goods and extensive import-substitution strategies during the 1950s, '60s and '70s (Toye 2006: 30ff). Post-independence efforts to build manufacturing capacity in SSA initially achieved high rates of output growth with industrial output growing at an average annual rate of 14.6% over the period 1965 to 1973, which was twice as fast as average annual growth rates of total GDP in that period. Yet, following the first oil price shock in 1973, SSA industrial activities entered a state of crisis growing at a mere 1.4% annual average in the period 1973 to 1983 compared to 2.1% of GDP overall (Meier and Steel 1989: 8). Subsequently, modernisation efforts and import substitution programmes were blamed for African countries' economic stagnation and the soaring balance of payments crisis of the early 1980s. A widespread questioning of the performance of the state, not least in developing countries, inspired a counter-revolution which proposed to minimise the role of the state and focus on letting markets work: active industrial policy was replaced by 'neutral' trade regimes, in which markets were supposed to deliver technology transfer and economic development through efficient trade and production patterns (Toye 2006: 30ff).

Given that the critique of early development theory is driven by the rise of neoliberalism, it is essential to disentangle the conceptual bases of this position to understand what shaped the industrial policy debate since the 1980s, as the critical contributions challenging the WC, quite naturally, had to address the agenda set by the WC. Going back to World Bank reports published in the heyday of neoliberalism, we are confronted with a fundamental oddity: while performance issues of African manufacturing activities starting in the mid-1970s are attributed to factors like deficient domestic consumer demand and high leakages into import demand, the policy solutions proposed to address these issues are limited by the free-market supply-side economics of the neoliberal era. Meier and Steel (1989), for instance, attribute

the crisis of African manufacturing industries first and foremost to deficiencies of domestic demand and the high import intensity of African manufacturing industries:

“The persistence of capacity underutilization suggests that a temporary shortage of foreign exchange is not the fundamental problem. The fundamental problems are *dependence on imported* rather than domestically produced *inputs* and *excessive growth of production capacity relative to the growth of import capacity* – and in many cases relative to the size of the market. In other words, industrial expansion has tended to outstrip both the supply of inputs and the demand for industrial output.” (Meier and Steel 1989: 87, emphasis added; see also Steel and Evans 1984: 55)

In this respect, a critical issue identified in the reports is the slow growth of the domestic consumer demand base due to highly unequal patterns of income distribution and the type of production which did not target the broad mass of the population:

“Without substantial substitution for intermediate and capital goods, the growth of Import-substitution *production depended on the growth of domestic demand*, once the initial stage of replacing most consumer imports was essentially completed. Aside from the limitation of small market size in most African countries, the growth of domestic demand was limited both by the *lack of growth in income per capita* during the 1970s and by *patterns of income distribution* with relatively few people able to purchase the goods produced by the modern industrial sector. This problem is associated with the lack of emphasis on production of simple manufactures for the broad mass of population and with biases against small-scale production.” (Steel and Evans 1984: 50)

The reports point out that sluggish growth of domestic demand was compounded by policy mismatches, most important among which figures the neglect of agricultural production, which has further ramifications for the growth of domestic consumer demand:

“Contrary to the intention of the import-substitution strategy, dependence on imports increased rather than decreased (...) for two main reasons: the import-substitution industries tended to be highly dependent on imported capital and inputs, and food imports became increasingly necessary because of the inability of agriculture to keep pace with population growth. The bias of policies toward industrialization discouraged agricultural investment and production (...) These policies shifted the structure of production away from dependence on agriculture and exports, but *stagnation in these sectors ultimately constrained* industrial expansion by slowing the *growth of demand and input supply*.” (Meier and Steel 1989: 9f, emphasis added)

In addition, the report points out that trade policies did not address the import dependence of the manufacturing sector:

“The policies of high protection to consumer goods (but not to inputs) and of overvalued currencies, however, created a bias against domestic production both of inputs for domestic industries and of exports for increased foreign exchange earnings.” (Steel and Evans 1984: 56)

Importantly, the slow growth of productivity of African manufacturing industries is seen in relation to the slow growth of demand and correspondingly low rates of capacity utilisation. “Although the pace of industrial growth in Africa before 1975 was impressive” (Meier and Steel 1989: 48), Africa’s share of world manufacturing exports fell from 1.1% in 1971 to 0.6% in 1976, whereas the share of world exports supplied by other developing regions (especially South Asia) grew (Meier and Steel 1989: 48). This suggests that African manufactures did not reach international competitiveness or at least did so at a slower speed than Asian

manufactures. Yet, the evidence presented in the World Bank reports of the 1980s suggests that labour productivity in African manufacturing industries was initially increasing in line with output growth and only started declining from the mid-1970s onwards and in relation to the low rates of capacity utilisation and the narrow domestic demand base:

“Capacity underutilization, combined with pressures to maintain employment growth even when output is falling, have made it difficult for countries to sustain rising industrial productivity.” (Steel and Evans 1984: 58)

“Although helping infant industries offset high startup costs may be justified, protection tends to insulate them from the competitive forces needed to prod them to maturity (...). This argues for encouraging domestic competition (...), but most African countries (except Nigeria) have markets so small that competition is limited, especially in industries characterized by economies of scale.” (Meier and Steel 1989: 16)

Taken together, the problems of African manufacturing production identified by the Washington Institutions in the neoliberal era revolve around deficient domestic demand for industrial output produced by infant (i.e. not yet internationally competitive) industries coupled with a balance of payments crisis, which made it increasingly difficult to pay for productive inputs. The balance of payments crisis, in turn, needs to be seen in relation to a number of external shocks following the oil price hikes of 1973 and 1979/80. While the first oil price shock of 1973 led to a deterioration of African oil-importing countries’ terms of trade, the pressure on foreign exchange reserves intensified with the slow-down of global demand following the second oil price shock and the rising debt service ratios for the dollar denominated debt of African countries following the rise in US interest rates under Volcker (Arrighi 2002).¹ This combination of under-consumption and balance of payments problems

¹ The global economic context of the African debt crisis: The seeds of the 1980s debt crisis of SSA economies are sown in the period 1974-1979 and unfold against a combination of structural and concurrent developments of the world economy, including the decline in non-oil commodity prices, the recycling of petro-dollars in the developing world and the sharp rise in US and UK interest rates between 1979 and 1981. SSA countries’ terms of trade decline due to a combination of slow growth in demand for industrial raw materials due to the first oil price shock in 1973 as well as technological changes in industrial production and excess supply due to EC’s agricultural policies and increased supply by developing countries themselves (Maizels 1992). The decline in export earnings and increase in import prices was compensated by external borrowing from commercial banks in the US and the UK swamped by deposits from oil-producing countries (Arrighi 2002). This helped to sustain growth rates but caused debt to spiral out of control after the US and UK governments resorted to sharp rises in interest rates in an attempt to control inflation following the second oil price shock in 1979. US interest rates rising to nearly 20% by 1981, the dollar denominated debt held by African governments against US commercial banks increased from \$2 billion in 1975 to \$8 billion in 1982 (Moyo 2009). Arrighi (2002) argues that the US’ response to the economic stagnation in the 1970s explains the accelerated divergence between developing regions. By the 1980s, the US became the world’s main creditor and largest recipient of foreign capital, which reflat effective demand in the US while deflating it in the rest of the world. SSA and Latin America for a number of historical and geographical reasons (e.g. colonial legacies affecting state-formation and national economic integration or the relative dearth of financial support and privileged access to US markets in the cold war context) were disadvantaged against East and South Asian countries in competing for the share of North American demand. To this adds the much higher dependence on foreign capital of SSA and

is evoked in a similar way in later policy reports as explanations for the post-independence failure to build manufacturing activities in SSA (e.g. UNECA 2000: 37; UNECA 2004: pg. 63)

Yet, the policy recommendations derived to redress these issues stand in the shadow of neoliberal ideology dominating the early 1980s, which interpreted deficient domestic demand and the high import dependence of manufacturing industries as a problem of overproduction caused by distorted market signals, leading to a misallocation of capital, labour and administrative resources.

“Among subsectors, *distortions* in the pattern of protection have encouraged *overinvestment* in some *activities that use resources inefficiently* or even lose foreign exchange, and they have discouraged activities based on local resources or export.” (Meier and Steel 1989: 14, emphasis added)

Therefore, rather than proposing policies that would strengthen the domestic demand base or reduce the import dependence of manufacturing industries by encouraging production of inputs, the WC policy ‘adjustment’ rests on correcting distorted price signals and comprises a ‘short-run’ stabilisation pillar and a ‘long-run’ adjustment pillar. The (supposedly) ‘short-run’ stabilisation policies aim at a reduction of government deficits by way of austerity and at controlling inflation by way of curtailing domestic credit creation and currency devaluation. The second pillar aims at ‘adjusting’ the structure of production by removing distortions to optimising properties of markets, i.e. privatisation and liberalisation of trade policy and the agricultural sector (World Bank 1981b: 3). In this reasoning, the market mechanism (price) balances demand and supply across all markets (general equilibrium) thereby reconciling conflicting desires of producers and consumers and thus maximising aggregate welfare (i.e. the sum of consumer and producer surpluses). However, price signals have to correctly reflect relative scarcities, consumer preferences and producer technology and, thus, any intervention that distorts these price signals will be associated with (static) welfare losses. Both pillars are well reflected in the reports cited above:

“Policies that determine profit and investment incentives need to be changed so that entry and exit decisions reflect comparative advantage and *efficiency of resource use*. The most critical broad policy objectives are a *realistic exchange rate*, *control over fiscal deficits*, and *monetary stability*. *Regulatory and administrative obstacles* that inhibit responsiveness to change incentives *should be removed*, and the infrastructure and services needed to support increased production should be strengthened.” (Meier and Steel 1989: 13, emphasis added)

Latin American economies, making them much more vulnerable to the Volcker shock and subjecting them to the consequences of structural adjustment.

To restore the “incentive structures” (pg. 52) of (smallholder) agricultural producers, the Berg report recommends the removal of subsidies and price controls, reducing what was deemed “too large a set of responsibilities [of] public institutions” (pg. 58) and the privatisation of crop marketing and input supplies (World Bank 1981b). Policy adjustments to “improve industrial performance” (World Bank 1981b: 96), centre around trade liberalisation through reduction of tariffs and exchange rate liberalisation, the removal of price controls and the reduction of public ownership. Similarly, Meier and Steel (1989) maintain:

“Trade policies (for example, exchange rates, tariffs, quantitative restrictions, export subsidies) in particular affect the incentives to invest in industry relative to other sectors, to seek foreign or domestic markets, and to be internationally competitive (...). Price controls prevent firms from perceiving the correct production incentives (...), while direct allocation of imports and other inputs lock in the existing pattern of production. Liberalization of such policies is an essential precondition for sectoral and subsectoral shifts in structure (...).” (Meier and Steel 1989: 14)

Exposing domestic firms to international competition would then also be conducive to productivity growth:

“Evidence from a wide range of countries suggests that growth is better sustained under policies that minimize price distortions and are "outward oriented" in the sense of exposing producers to international prices and competition. (...) Competition from imports is therefore especially critical as an incentive for firms to lower costs and raise productivity and argues for generally low levels of protection.” (Meier and Steel 1989: 15f)

Together, liberalisation and privatisation would result in “agriculture based and export-oriented development” (World Bank 1981b: 6) while also reducing costs associated to rent-seeking:

“Greater reliance on market forces to determine the exchange rate and domestic prices has several advantages (...): reduced incentives for black markets, smuggling, corruption, and rent-seeking behavior; shift of high-level government personnel from detailed administrative decisions to policymaking; increased incentives for production of exports and other tradable goods and services; and profit signals that reflect shifts in demand and supply.” (Meier and Steel 1989: 17)

1.1.2. Theoretical inconsistencies and contradictions of the Washington Consensus policy advice and their implications for further research on industrial development

The anti-statist and supply-side oriented neoliberal policy advice outlined above draws on different strands of neoclassical theory, combining the proposition made by New Classical Economics that policy intervention into the macroeconomy are generally ineffective with old neoclassical growth and trade theory. The resulting policy advice has a number of theoretical inconsistencies which merit exploration. The following sections will elaborate on a number

of theoretical inconsistencies, not with the ambition of completeness but with the aim to investigate the extent to which these have been influential for subsequent debate.

The tension between the short-run and the long-run

Firstly, there is an inconsistency in the WC policy advice regarding the relationship between the short-run and the long-run embodied in the ‘stabilisation’ and ‘adjustment’ pillars respectively. Even though the Berg report advocates government spending on social and economic infrastructure, this becomes effectively impossible within the stabilisation framework that is both revenue reducing through loss of tariff revenues and expenditure reducing through fiscal and monetary austerity (Stein 1992; Stein and Nissanke 1999). More fundamentally, while liberalisation and privatisation are meant to achieve a “faster rate of production increase” (World Bank 1981b): 5), the austerity component of the package aimed at a reduction of various components of aggregate demand, including domestic credit creation and hence investment, which, in turn, cannot be presumed to be independent of the long-run supply potential.

The stabilisation pillar of the WC aimed at resolving the balance of payments crisis through devaluation of overvalued currencies, or, even better, allowing the currency to float freely, which, in the presence of a current account deficit would also imply a depreciation of the currency. This would make exports cheaper and imports more expensive thus supposedly incentivising production for export markets and of import competing goods. To reduce the import bill further the stabilisation programme advocated measures reducing domestic demand through a rise in the interest rate, which would have the added benefit of counteracting the tendency towards capital flight as a result of devaluation. The reduction in domestic demand through the reduction in domestic credit would have to be coupled with a cut in government expenditure so as to reduce fiscal deficits and counteract the adverse effects of a rise in interest rates on the debt service obligations of debt denominated in domestic currency (Mussa and Savastano 2000; Krueger 2003). In short, the stabilisation pillar of the WC proposed a restoration of net exports by reducing imports and other components of domestic aggregate demand, namely investment and government expenditure. This relies on the assumption that the capacity to export is unaffected by changes in other components of aggregate demand. In practice, policies depressing aggregate demand by way

of reducing domestic credit creation and government spending, reduced investment and output and, by extension, reduced the capacity to export and restore the Balance of Payments (BoP) even in the short run. More fundamentally, a depression of investment and output in the short-run cannot be presumed to be neutral with respect to the course of the long-run – assuming, for instance, a positive relationship between investment and technological progress or between employment and labour productivity – and is therefore most likely to permanently alter deficit economies’ ability to export and import compete. Put differently, from a purely logical point of view, supply cannot evolve independent of demand because investment is, undeniably, a determinant of technological progress and therefore long-run output growth as well as a component of aggregate demand (Sawyer 2011).

This reflects a fundamental problem of macroeconomic theorising starting with the Neoclassical Synthesis and spanning over all subsequent mainstream macroeconomic schools whether Monetarist, New Classical or New Keynesian in orientation. The Neoclassical Synthesis by Patinkin, and more prominently, Samuelson aims at making Keynes’ rejection of Say’s law and proposition that money affects agents’ decisions to consume and produce consistent with Walrasian general equilibrium. This is achieved by introducing real balance effects,² yet, the only way to make equilibrium in goods and money markets consistent with the idea that money matters is by sticking to the idea of a unique long-run equilibrium, which is determined independently of the short-run by aggregate preferences, endowments and technology. This separates the short-run from the long-run and does not allow the long-run to be permanently influenced by the short-run (Dimakou and Fine 2016).

Within this framework that separates the short-run from the long-run, different macroeconomic schools of thought take different positions on the desirability and feasibility of short-run demand-side management. The theoretical content of IMF financial

² **Patinkin’s real balance effects:** Patinkin shows that if there is an excess demand for money, there must be a corresponding excess supply of goods and vice versa. If all prices are doubled (from an original position of equilibrium), real balances will be halved and agents will feel they are worse off and presumably spend less resulting in a decrease in consumption. Hence, there is an excess supply of goods. Eventually prices will fall up until agents’ real balances are restored. Alternatively, if the money supply is increased beyond the level of money demand (price level does not change), in the short run agents will think that they are better-off and spend more. The corresponding excess demand in the real economy will bring about an increase in the general level of prices that will reduce real balances. Therefore Patinkin concluded that money must appear inside the real economy, excess demand being both a function of prices and real balances. Money appearing in the real economy, it has an impact on aggregate activity but only in the short-run, while remaining neutral in the long-run (Mehrling 2002).

programming models does not evolve substantially since the Polak model developed in 1957 and is in principle compatible with short-run demand-side management of neoclassical synthesis Keynesianism (Fine 2006). What does evolve and what subjects the stabilisation programmes to neoliberalism are the lending practices of the IMF. While early IMF lending practices involved visiting teams assessing the productive capacity and whether it was advisable to restrict sources of demand or alternatively to face the risk of inflation, lending practices became more rules-based over the course of the 1970s (Clift and Tomlinson 2012). Lending became subject to a stricter and expanding set of rules, shaped and influenced by evolutions in macroeconomic theorising, in particular the advent of New Classical Economics, which becomes influential in the Fund in the early 1980s (Chwiero 2007; Chwiero 2010; Boughton 2004).

New Classical Economics emerging in the mid-1970s as a critique of both Keynesianism and Monetarism takes neoclassical (i.e. micro-founded, general equilibrium) macroeconomics to an extreme with the proposition of ‘policy ineffectiveness’: in the presence of rational expectations and continuously and instantaneously clearing markets, any government intervention into the macroeconomy will be ineffective for it is immediately offset by private agents’ equal and opposite anticipation of evolutions in the price level and taxation. Under rational expectations, the output and prices always immediately collapse into their long-run equilibrium levels because all agents make best use of all available information to form expectations³ and adjust their behaviour in relation to what they believe is the ‘correct’ model of the macroeconomy (Snowdon and Vane 2005). To arrive at the conclusion of policy ineffectiveness, of course, not only requires all agents to act according to the same model of the economy but also to act according to the new classical model of the economy specifically. Suppose rational agents were acting according to a different model, for instance one in which supply adjusts to demand and in which the short-run has a permanent impact on the course of the long-run, then any government demand stimulus whether fiscal, monetary or otherwise would be instantaneously effective increasing output and prices immediately to the new rationally predicted long-run equilibrium. This makes the new classical economics model recursive and dependent on itself because the model is part of the model (Dimakou and Fine 2016). In turn, for markets to clear perfectly and instantaneously requires perfect competition and the absence of any externalities or increasing return to scale.

³ This allows forecast errors but these are random and serially uncorrelated meaning that agents do not form expectations which are systematically biased.

To summarise, the WC policy advice is built on a macroeconomic theory in which short-run investment decisions or the absence thereof have no bearing on the unique though otherwise poorly specified long-run, which is determined by exogenously given ‘fundamentals’ based on fixed (!) preferences, endowments and technologies. Not allowing for money to have an independent or rather permanent effect, Say’s law that every supply creates its own demand is assumed to hold in the long run. This excludes the possibility that money not being reinvested back into the economy – as a result of expectations about investment decisions of other capitalists or about deficient levels of consumer or government demand – would entail a permanent impact on the evolution of technology, skills or preferences. Hence, demand-side management cannot have any impact on the long-run. While this critique applies to neoclassical macroeconomic theory in general, it is compounded in the WC policy advice by the policy ineffectiveness proposition of the New Classical School. In this framework, the only appropriate set of policies to increase output and reduce unemployment is to increase the micro-level incentives of firms to supply more output and labour.

In mainstream macroeconomic theorising, following the New Classical school, acceptable macroeconomic policy is reduced to monetary policy at the expense of fiscal policy. Demand-side policies are confined to controlling inflation through countercyclical monetary policy operated by independent central banks. Government consumption (fiscal policy), which used to be an essential tool of output stabilisation in post-War neoclassical synthesis Keynesianism, is considered either unnecessary (since monetary policy can do the job) or even harmful for potentially crowding out private investment (Ricardian equivalence) or falling prey to political interests. Fiscal policy is ascribed the limited role of an automatic stabiliser (e.g. unemployment benefits) or that of a stabilisation tool in extreme circumstances such as financial crisis (like in Japan) (Blanchard, Dell’Ariccia, and Mauro 2010). Any other policy dimensions that could address systemic causes of demand to be deficient, such as redistributive policies, or those regulating labour markets, wage bargaining or the market power of firms, are absent altogether within the micro-founded macro models in which aggregate economic outcomes are derived from the sum of individual maximisation behaviour (Dimakou and Fine 2016) and which assume a single representative agent. In short, mainstream macroeconomic theory is particularly ill-suited to address any systemic demand-side problems such as those faced by African manufacturing industries in the mid-1970s.

The shaky foundations of neoclassical welfare economics

Secondly, independent of the *de facto* exclusion of deficient demand as a determinant of long-run economic activity, the welfare maximising propositions of neoliberal supply-side policies rely on highly restrictive assumptions. Exchange (trade) allegedly maximises welfare on the individual, national and global level, hence deregulation and liberalisation are by definition welfare maximising. Some of the tensions in this proposition are perhaps best illustrated in confronting the policies recommended in the Berg report with its own empirical evidence base. Markets, it is argued, would correctly signal relative scarcities of factors of production and therefore “spur agriculture based export oriented development” (World Bank 1981b: 6). *What* is exported is secondary (Microchips vs. potato chips argument) to this argument. Yet even the Berg report predicts that world trade of primary commodities, will grow at slower rates than overall world trade (World Bank 1981b: 23). This at least seems to imply the possibility that the gains from trade could be unevenly distributed depending on structure of production. So, surprisingly, in response to the foreign exchange crisis of early 1980s, the Berg report recommends letting the market shift resources to sectors in which the Berg report itself projects the value of exports to grow slower than the global average.

On a theoretical level, the welfare maximising effects of free trade are usually derived with reference to neoclassical trade theory (Heckscher-Ohlin-Samuelson, HOS), which advances the proposition that international trade through specialisation in production corresponding to comparative advantages in factor endowments will equalise real wages and profit rates across countries (factor price equalisation theorem). Capital abundant countries specialise in the production of capital-intensive goods which increases demand for and the price of capital (the interest rate) while demand for labour and correspondingly wages decrease. In labour abundant countries, the opposite happens – specialisation in labour intensive production increases demand for and the price of labour (i.e. wages) while the price of capital decreases. The model relies on very strong assumptions, including perfect competition, constant returns to scale and diminishing returns to labour and capital individually, perfect factor mobility within countries and the absence of flows of labour between countries and the same aggregate production function (see Metcalfe and Steedman 1979).

Metcalf and Steedman (1979) show that all welfare maximising predictions of HOS trade theory break down once giving up on aggregate production functions even when sticking to all of the other more restrictive conditions. Assuming countries to operate with the same aggregate production function implies that countries have given factor endowments, identical with respect to quality but different with respect to quantity, production techniques are the same and consumers have identical homothetic preference maps. Further, every form of capital can be used everywhere and smooth substitution between capital and labour is possible. All predictions of HOS break down once allowing for the possibility of more than one capital good. This results from the circularity problems of neoclassical theory of value and distribution. In neoclassical value theory, prices reflect scarcity and utility and all factors in the production function are being paid at their marginal productivity (wage and interest rate). The real return to capital is determined by technical properties (diminishing marginal product of capital), yielding an inverse relationship between factor quantities and factor prices (e.g. the greater quantity of capital, the lower the marginal productivity of capital, the lower the interest rate). Because it is impossible to aggregate, for instance, output per hammer and output per nail, any attempt to aggregate heterogeneous capital goods into a homogenous function requires a unique unit of measurement, which is the price of capital (i.e. the interest rate). Yet, as revealed in the Cambridge Capital Controversies, determining the value of capital faces a circularity problem. The price of capital is determined by the net present value of its future profits. Yet, the rate of profit is determined by future income streams divided by current cost/value. In other words, to calculate the current value of capital requires knowledge about the rate of profit. To calculate the rate of profit requires knowledge about the current value.

An additional point concerns the nature of capital. Neoclassical aggregate production functions assume a smooth substitution between capital and labour. While the two can be substituted, in practice, this can only happen in fixed proportions. Hence there are different production functions using different fixed ratios of capital and labour making switching and re-switching possible. With these different production functions, there will be different patterns of demand and prices for capital, which do not reflect relative scarcities (Cohen and Harcourt 2003). The Cambridge capital controversies have implications for the use of aggregate production function, for instance in growth accounting and the measurement of total factor productivity (Fine 2003), but more fundamentally, they invalidate any

conclusions relating distributional outcomes between capital and labour to their respective marginal product whether within or between economies. Hence, they ultimately jeopardise any welfare maximising propositions of allocative efficiency embodied in HOS (Metcalf and Steedman 1979).

The tension between welfare maximisation and growth

Thirdly and equally related to the supply-side policies advanced under the WC, there is the question whether the allegedly welfare maximising policies advanced are also growth enhancing, that is under which conditions can static allocative efficiency of resources translate into growth, meaning the dynamic growth of the ‘fundamentals’. Beyond static (i.e. allocative) efficiency, neoclassical theory cannot explain why, given diminishing marginal returns to investment, a once and for all liberalisation would be associated with continuous productivity increases (Deraniyagala 2001: 82). Consequently, other sources of ‘dynamic’ gains from trade are included into the models, such as technology transfer and the process of creative destruction triggered by import competition (and in new growth theory even increasing returns to scale). This relies on highly arbitrary assumptions that link the existence of these factors to free trade, for instance that trade liberalisation will expand activities subject to increasing returns to scale (Deraniyagala 2005).

Krueger (1998), for instance, provides a general equilibrium model with constant returns to scale in which distortions to free trade result in both static and dynamic efficiency losses. The latter arise from the potentially wrong choice of activities under protection. Over time, activities under protection will lie further and further away from the original comparative advantage, which leads to higher capital per labour costs, which for a given savings and investment rate implies a declining rate of economic growth (Krueger 1998: 1518).

Further, dynamic costs of trade distortions arise from lost opportunities for growth through the use of ideas, knowledge and capital. Import restrictions lead to a lack of foreign exchange necessary for the purchase of raw material and capital imports. Also, imported capital goods are significantly cheaper than those manufactured at home. Thus policies reducing imports will reduce real investments thereby hindering economic growth. Due to the lack of exchange with other producers, developing countries that are insulated from international trade might fall behind in production techniques and quality. Feedback

mechanisms to policy makers are potentially weaker under a regime of trade distortions, especially an import substitution regime, since diminishing rates of export growth provide a clearer signal of how well domestic industries are doing and policy makers are more sensitive to the degree of overvaluation of the currency (Krueger 1998: 1519).

Governments, therefore, should, according to Krueger, not bias incentives towards import-competing industries but provide equal incentives to exporting activities and the production for domestic markets, i.e. assure neutral trade regimes (Krueger 1998: 1514). In this scenario, it is argued, industrialisation will be supported by rapid export growth caused by trade liberalisation: the initial increase in imports causes a current account imbalance, which in turn, under flexible exchange rates, leads to a depreciation of the exchange rate. This depreciation will stimulate the production of exportables and import substitutes with resources transferred from the non-traded sector (Ocampo and Taylor 1998). Other than on the assumptions already outlined above, this depends on the assumption that import competition will lead to a redeployment of domestic resources and that Say's law holds at the global level: as long as there is no intervention or distortion in the price mechanisms, all that is produced by export producers will find an external market.

Box 1. Core theoretical inconsistencies in the WC and their implications for research on industrial development and policy	
<i>Core inconsistency</i>	<i>Implications for research on IDP</i>
Relationship between the short-run stabilisation pillar and the long-run adjustment pillar	<ul style="list-style-type: none"> • Orthodox macroeconomics after the neoclassical synthesis separates long-run supply capacity from short-run fluctuations in AD, the effects of which are assumed to be limited to the short-run. Long-run output growth is tied to <i>supply-side policies</i>. • Critical IDP scholarship focusses on challenging the type of supply-side policies proposed by the WC. The forces that determine investment decisions and their relationship to other components of AD are not investigated by scholarship on IDP.
Welfare maximising properties of markets	<ul style="list-style-type: none"> • WC ties industrialisation to <i>trade deregulation</i> and sets up a dichotomy between inward-looking and outward-oriented development strategies thereby giving a prominent role to the question of how to achieve <i>export-oriented industrialisation</i>. • The welfare maximising properties of neoclassical trade theory are built on the shaky foundations of neoclassical value theory. Critical IDP scholarship opposes allocative efficiency to arguments of dynamic efficiency (dynamic vs. static comparative advantage).
Relationship between welfare maximisation and growth	<ul style="list-style-type: none"> • Old neoclassical leaves the determinants of technological progress unexplained. WC rests on highly arbitrary attempts to make free-market welfare maximisation consistent with the question of what drives growth. • Process of <i>technology acquisition</i> challenged by evolutionary growth theory and critical scholarship on IDP.

Box 1 summarises the core inconsistencies embodied in the WC and the way these shaped subsequent scholarship on industrial development and policy (IDP). The WC has set the agenda for research on industrial development in at least two ways. *Firstly*, the WC turns the difficulties of African manufacturing activities into problems that can be addressed by supply-side reforms, irrespective of the fact that the causes of the demise are located on the demand-side by the Washington institutions themselves. Mainstream neoclassical macroeconomics is and has been ill-suited to formulate policy advice to address problems of deficient demand whether systemic or transitory because of its reliance on micro-foundations and separation of the short-run from the long-run. While this is true for mainstream macroeconomic theory in general, the WC takes this to an extreme under the ideological influence of the New Classical School, in which the short run disappears altogether, macroeconomic policy is reduced to stabilising inflation and fiscal policy permanently discredited while the appropriate set of policies to increase output and reduce unemployment

is reduced to increasing the micro-level incentives of firms to supply more output and workers more labour. Industrial policy, then, should be limited to “functional interventions” and refrain from “selective interventions”. The former (including infrastructure and education provision) could be justified while the latter are always deemed undesirable as they are directed at specific industries and presumably governments cannot improve on information processing by markets and are in addition to that inherently corruptible (Pack and Westphal 1986). *Secondly*, the supply-side policy reforms proposed under the WC link the questions of both welfare maximisation and growth to trade-openness, which couples industrial development to trade policy. From this follows the amalgam made by neoliberalism between trade-regime neutrality and export-led growth setting up a dichotomy between inward-looking and outward-oriented development strategies.

1.2. THE EAST ASIAN “MIRACLE” AND THE FAILURE OF THE WASHINGTON CONSENSUS PRESCRIPTION: THE GAME CHANGERS?

The outlined consensus has been gradually challenged both on empirical and theoretical grounds. However, as this section will show, by setting the analytical framework back to zero the WC leaves its mark for decades to come. In particular, subsequent scholarship on industrial development challenges the *type* of supply-side policies suggested by the WC but does not resolve the tension around the interdependencies between supply and demand, the short-run and the long-run.

Empirically, the WC policy prescription has been challenged along two lines. *Firstly*, a body of critical literature provides evidence of the poor record of the Washington Consensus prescription (marketisation *cum* liberalisation, privatisation and stabilisation reflected in the SAPs) documenting the limited gains and devastating effects resulting from trade liberalisation (Ocampo and Taylor 1998; Akyüz 2009; Lall 2000; Lall 1999; Dasgupta and Singh 2006; UNCTAD 2008; Stein and Nissanke 1999; Stein 1992). *Secondly*, a body of critical literature explaining the East Asian 'miracles' provides comprehensive historical evidence (on South-Korea: Amsden 1989, Taiwan: Wade 1990; and the OECD-countries: H.-J. Chang 2002) against the idea that 'getting prices right' and 'letting markets work' is all it takes to catch-up with advanced economies.

Analytically, the free-trade paradigm has been challenged along two lines. *Firstly*, the post-Washington consensus schools challenge the assumptions of perfectly working markets

stressing the prevalence of market-imperfections (market-failures and externalities) as well as increasing returns to scale. *Secondly*, evolutionary schools, which also provide the theoretical foundations of the East Asian developmental state literature, challenge the welfare and growth maximising propositions of the free-market/ free-trade orthodoxy by uncovering the nature of technology, the process of technology acquisition and locating the role of the state within that. Evolutionary growth theory rejects the use of aggregate production functions and the idea of a unique long-run equilibrium hence allowing the short-run to have a permanent impact on the course of the long-run. However, it maintains Say's law.

1.2.1. Post-Washington consensus and evolutionary justifications for industrial policy

One set of justifications for industrial policy measures is derived from within the framework of neoclassical theory by reference to market failures. Greenwald and Stiglitz (2013), for instance, maintain that “there is a broad consensus on why countries should have such policies: to correct market failures” (pg. 27; see also Noman and Stiglitz 2015: 11). Market failures, in turn, impede technological progress.

“The Washington Consensus policies referred to earlier in this chapter focused on static efficiency. They didn't even consider the consequences for innovation and learning” (Greenwald and Stiglitz 2013: 29)

The nature of the market failures detected varies. Greenwald and Stiglitz (2013) highlight, on the one hand, capital market imperfections: due to information asymmetries between creditors and borrowers, access to capital for productive activities is limited. On the other hand, the public goods (non-rivalrous) nature of knowledge leads to an ‘underproduction’ of learning and therefore persisting gaps in technological progress between developing and developed countries. Investments in learning undertaken by one firm have positive externalities for other firms, which cannot be appropriated by the firm investing in learning even with effectively enforced patents and therefore result in under-investment in learning. This is similar to what is proposed by Hausmann and Rodrik (2003), who argue that the diversification of productive activities requires entrepreneurs to “discover” new products that can be produced at low enough cost to be profitable. First-mover entrepreneurs then face the disadvantage of having to internalise the costs associated to the discovery while second-movers just benefit from the information externality. To correct the resulting market failure in the self-discovery, requires rents to be provided to the first-mover entrepreneurs (Hausmann and Rodrik 2003). In addition, there might be *coordination failures* as

simultaneous investments in large scale non-tradable inputs (electricity network, transportation network etc.) are pre-conditions for scale industries to become profitable (Rodrik 1996: 2)

A second line of justifications for industrial policy emerges by reference to evolutionary growth theory (e.g. Nelson and Winter 1982) and thus stands outside the neoclassical framework. Evolutionary growth models usually provide the starting point for the critical accounts of the East Asian developmental states (see Amsden 1989; Amsden 2001; Lall 2004; Castaldi et al. 2009). The key assumption challenged by evolutionary growth models is that knowledge and technology are perfectly tradable and costlessly applied and transferred if and where appropriate, provided prices signal scarcities and there are no barriers to the movement of capital. Firm-level productivity is not simply a function of physically installed capacity. Instead, successful assimilation of (foreign) technology relies on tacit knowledge about how to operate machines and organise production, which can only be acquired through the production process itself (learning by doing). Therefore, various forms of support, such as subsidies on inputs, credit direction, or tariff protection are needed to ensure production can take place before competitiveness is reached (Lall 1992; Khan 2013b). In this framework, any targeted state support for technological learning can be conceptualised as 'learning rents' in analogy to 'innovation rents' whose necessity is widely acknowledged (Khan and Jomo 2000; H.-J. Chang and Cheema 2002). In Alice Amsden's terms, "learning how to compete" is the "new mode of industrialisation" (Amsden 1989: 3).

While the reference to the tacit component of knowledge can also be conceptualised with reference to market failures (Lall 1992; Greenwald and Stiglitz 2013; Khan 2013b), some differences between the Post-Washington Consensus (PWC) and the evolutionary approaches should be highlighted. *Firstly*, evolutionary growth models challenge the assumption of an aggregate production function. Firms not operating on a common production function, means that knowledge is not acquired equally among firms but depends on external inputs and supporting government institutions as well as idiosyncratic firm level technological capabilities. Evolutionary growth theory does not make any reference to the representative agent. Indeed it maintains, on the one hand, that what is 'representative' cannot be defined through a priori axiomatic reasoning but instead evolves out of and is confined to a specific economic system. On the other hand and influenced by Schumpeter's work on innovation and entrepreneurship, what drives growth is precisely non-representative

behaviour. By the same token, there cannot be any meaningful aggregate of capital, technology or knowledge and any attempt to construct one, disguises the causes of differential growth of productivity and output (Metcalfe and Foster 2010). *Secondly*, evolutionary growth theory challenges equilibrium economics, seeing the economy instead as an organically growing, path-dependent and path-shaping system (Lall 1992; Nelson and Winter 2002). In evolutionary growth theory there cannot be a single equilibrium since the range of possibilities for economic action is always changing, generally growing but in a way that cannot be predicted let alone deduced from behavioural axioms (Nelson 2008).

These differences have implications for the type of government interventions judged necessary and appropriate to achieve learning. While the PWC tradition challenges the assumption of perfectly working markets thereby strengthening and widening the scope of state intervention beyond a minimal set of functional interventions, it lends itself to off-the-shelf, non-context-specific solutions to market failures. To create an increasing number of well-functioning markets after the neoclassical ideal would require, for instance, institutions that provide agents with relevant information such as the comparative advantage of the economy or the quality of lenders (Deraniyagala 2001). By contrast, by departing from the assumptions of rational representative individuals, evolutionary theorising is more context- and time-specific linking some common problems found in the abstract to the idiosyncratic specificities of firms in specific sectors and in specific countries. Furthermore, evolutionary theorising opens itself to a wider range of interventionist policies because their normative justification is compatible with but not contingent on market failures. In evolutionary growth theory, market relationships are always embedded in social and institutional structures. Hence, there is a need to “get prices wrong”, a term coined by Amsden (1989: 141). There is also a need to provide public funding for research and to create market structures, such as monopolies or barriers to entry, which might appear to reduce social welfare in simple, static models of the economy, and whose justification is explicitly not that they correct market failures, but rather that, in actual fact, they generate high social returns over time (Nelson 2008).

What evolutionary and PWC approaches share is, of course, their emphasis on factors impeding technology acquisition. Indeed, there is overlap between the two traditions. In 2009, for instance, Stiglitz, who had coined the term Post-Washington Consensus, co-edited

a seminal work on industrial policy together with Cimoli and Dosi, who come from the evolutionary traditions (Cimoli, Dosi, and Stiglitz 2009).

1.2.2. Policy options for the promotion of industrial development

The evolutionary schools provide an in-depth analysis of the determinants of technology acquisition and, in doing so, open up one of the black-boxes of neoclassical economics. Following the renewed interest in industrial policy from 2010 onwards, there is an increasingly comprehensive body of research applied to the SSA context, which not only sheds light on how policy can address impediments to the development of technological capabilities but also on which problems and predicaments policy-makers face in the design of industrial policy. The following gives a brief if incomplete overview of emerging research findings on industrial policy practices in SSA.

The key lesson derived from the developmental states in East Asia and that can be applied to sub-Saharan Africa is that technological learning and innovation occurs within the '*National Innovation System*', i.e. the interplay between different institutional actors, which have to ensure holistic support for skills formation targeted to the needs of the industrial sector, on the one hand, and support for the adoption, adaption and further development of technologies, on the other hand (Nelson and Winter 2002). This involves the close interaction between coordination of the formal education and vocational training system, public research institutions and is applied in research in view of developing supply capacity in target sectors (Lall 2004).

Firstly, in terms of workforce development, human capital formation has to be aligned to industrial upgrading priorities. Attracting foreign investment and technology to priority sectors needs to be coupled with targeted, industry-responsive skills development in these sectors. This requires both investments in formal education and subsidies for on the job training. These training institutions are usually situated outside the traditional educational system and operate in close contact with newly established foreign and domestic investors to define training curricula, provide equipment to trainers, facilitate and subsidise on the job training or sponsor work placements abroad. Examples of such policies and institutions abound in East Asia and are increasingly found in the sub-Saharan African context as well, for instance the Ghana Industrial Skills Development Center (GIDSC) or the Nigerian

Vocational and Innovation Enterprise Institutions (VEIs and IEIs, respectively) (Ansu and Tan 2012).

In this context, it is increasingly recognised that workforce development also extends to managerial capabilities, in particular regarding labour management, computerisation, inventory control and business skills. Ethiopia's Leather Industry Development Institute, for instance, provides both technological training as well as managerial and marketing consultancy services such as market research feasibility studies, investors profiles, assisting firms in meeting their contractual obligations, design consultancy etc. (Abebe and Schaefer 2015). A Japanese donor-funded project also introduced the *kaizen* method of improving strategic business management and manufacturing floor management to a pilot group of 28 Ethiopian firms operating in various sectors achieving large monetary efficiencies within these firms (Shimada 2015).

Secondly, skills and capabilities diffusion at the technical and managerial levels, occurs through the interplay between different institutional actors. In Ethiopia, for instance, capacity building in the cut flowers industry is operated through the Development Bank of Ethiopia (DBE) and the Ethiopian Horticulture Development Agency (EHDA). The former had developed sector-specific expertise following a series of over-invoicing of loan demands. Given this expertise of industry characteristics and project costs, the DBE started providing assistance, especially to domestically owned smaller farms by assigning a contact officer who lends assistance for technical, financial and export and marketing matters (Abebe and Schaefer 2015).

Thirdly, stimulating technological activity also requires incentives and support for technological investment for instance through government-financed R&D or tax exemptions (Lall 2004; Lall and Wangwe 1998). The Korean Institute for Science and Technology (KIST), for instance, initially focussed on technology transfer and absorption and later promoted independent technological innovation through the set-up of specialised research institutes for machinery, electronics etc. as well as the provision of lump sum finance for research projects in sectors of strategic interests (Lall 2004). Rudimentary support for indigenous innovation can also be observed in the SSA context. The EHDA, for instance, is involved in supporting academic research on flower breeding to avoid expensive royalty payments to advanced flower producing countries (Abebe and Schaefer 2015).

Fourthly, knowledge necessary for industrial development involves learning on the policy making level as well. Ohno and Ohno (2012) maintain that what distinguished policy-making in successful cases of structural transformation is foremost the method of policy-making. Policy makers have to develop an in-depth understanding of each sector in terms of ownership structures, technology, demand trends, marketing and logistics. Furthermore, policy makers have to work backwards from broad development targets to phased strategies and concrete action plans at the ministerial level. In Ethiopia for instance, capacity development in the civil service is supported by a Japanese donor-funded project in which a policy dialogue programme assisted the civil service in translating objectives set in the Growth and Transformation Plan into concrete sector specific programmes of support (Shimada 2015).

In this respect, the supply-side constraints to be addressed go much beyond technology and skills development. Measures incentivising and protecting domestic production, for instance, through the tariff schedule or corporate tax system can entail short-term losses for other firms along the value chain and call for a careful assessment of trade policy measures possibly for complementary support measures along the supply chain as a whole. The Ethiopian tariff scheme, for instance, bans the export of raw skins and hides and levies a 150% tax on the export of semi-finished (wet blue and crust) leather. While these measures have contributed to increased domestic value addition in the leather industry thus serving long-term developmental goals, it has also led to initial supply shortages further up the value chain. The ban on exports of raw hides left Ethiopian producers no alternative but to sell to domestic tanneries, who offer lower prices than the export market. This spurred the rise in illegal exports and ultimately led to supply shortages in the tanneries. To support output growth and quality of raw skins and hides, the Ethiopian government has engaged in setting up public slaughtering houses and collective skin gathering. The export tax on semi-finished leather, in turn, invites foreign companies to use transfer pricing schemes, i.e. selling semi-finished leather goods to their parent companies broad much below the domestic selling price (Abebe and Schaefer 2015). Similar issues arise in the apparel and textile sector. To encourage the formation of a domestic value chain, the Ethiopian government imposed 10 to 35% tariffs on textile inputs for apparel production. Yet, in the absence of large-scale and quality domestic textile production, this tax penalised export-oriented apparel producers by increasing their production costs and thereby reducing their international competitiveness. In

addition, apparel exporters are prohibited to sell waste products to smaller firms producing for the domestic market, which negatively impacts on this kind of production as well (Chandra 2013).

Other supply-side hindrances to be addressed through policy concern the support for trade logistics and access to industrial land. To facilitate the timely export of perishable goods like cut flowers, the Ethiopian government has, for instance, facilitated the cooperation between flower farmers and Ethiopian Airlines and subsidised freight rates. To facilitate land acquisition close to airports, the government has set up 'land banks' and cross-subsidised less profitable locations outside the capital (Abebe and Schaefer 2015).

Furthermore, the domestic banking system is likely to be characterised by inadequate liquidity and over-cautious lending favouring investments into immediately lucrative commercial activities, especially in early phases of industrialisation. Griffith-Jones and Karwowski (2015) maintain that the financial sector must meet a number of functions, namely help to mobilise sufficient savings, intermediate savings at low costs and through a range of maturity periods to investors and consumers, ensure savings are channelled into the most efficient investment opportunities and help companies manage risk. Overall, SSA countries should aim at a diversified banking system with large and small banks as well as public development banks because a diversified banking structure allows mitigating systemic risk, generating complementarities in serving different sectors and functions and inducing competition. Development banks can be a useful tool to cover for weak or inexistent capital markets and direct capital into specific industries (Deraniyagala 2001). The Development Bank of Ethiopia was essential in the provision of credit for various Ethiopian industries including cement (Oqubay 2015) and cut flower industries. In the latter case, private banks were unwilling to shoulder the risks associated with investments in this industry, which requires high initial capital outlets for greenhouses and cold storages and has a comparatively long period of breaking even (Abebe and Schaefer 2015). This raises the question of how to finance institutions like state-sponsored development banks. South Korea, for instance, relied on foreign borrowing while Taiwan relied on taxes from the agricultural sector to solve this problem (Lall 2004). **Box 2** summarises the main factors constraining industrial development identified by scholarship on IDP and research findings on how these were successfully addressed in SSA and East Asian context.

Box 2. Measures in support of technology acquisition and industrial development		
Support for 'learning' at various levels	Skills development and human capital formation	<ul style="list-style-type: none"> • Formal education • Industry-responsive vocational training • Building managerial capabilities
	Technological development	<ul style="list-style-type: none"> • Support technology transfer and absorption at the firm-level in key sectors • Incentives for technological innovation
	Learning at the policy level	<ul style="list-style-type: none"> • translation of broader development targets into phased strategies and detailed action plans at the ministerial level
	<ul style="list-style-type: none"> • Coordination of different institutional actors with specialist knowledge of industry-dynamics and -bottlenecks 	
Incentivising domestic production	Incentivising investment	<ul style="list-style-type: none"> • Tariff protection and corporate tax system • Manage bottlenecks along the supply-chain
	Trade logistics and access to land	<ul style="list-style-type: none"> • Facilitate transport infrastructure and trade logistics • Ensure access to industrial land
	Finance for investment	<ul style="list-style-type: none"> • Credit creation and direction within the banking sector

2. ... TO A NARROW NOTION OF INDUSTRIAL POLICY AND 'HOW TO MAKE IT WORK'?

Following on from the previous section, which has traced how the research on industrial policy evolved up to the WC and its subsequent challenges, this section will assess the current state of the debate. After a period during which industrial policy has been completely banned from the research agenda, the failure of the WC policy prescription and the critical reappraisal of the East Asian development experiences makes the debate evolve from 'why' to 'how' (Rodrik 2009). In particular, an increasingly comprehensive body of research greatly advanced our understanding of how technological change comes about and the role of the state within it. However, the reappraisal of industrial policy emerges out of an opposition to the WC – and it is this opposition that shapes the debate. In this sense, the crucial contributions of the evolutionary schools with regard to state-fostered productivity increases are also self-limiting in other respects. While the last section focussed on documenting the advances made in research on industrial development especially in the context of SSA, this section investigates which areas have received less attention by research. *Firstly*, while the opposition to the WC challenges the type of supply-side policies necessary to sustain (industrial) growth, it does not, as set out in the previous section, challenge the

notion that industrial development is essentially determined on the supply-side. While evolutionary growth theory does not postulate a unique long-run and hence allows the short-run to impact on the course of the long-run, it does not depart from Say's law. While in principle feasible to incorporate a rejection of Say's law into evolutionary theory, the few models linking evolutionary supply-side theory to demand-side dynamics in the context of industrialisation do so in relation to exogenous (and supposedly growing) export demand. This is itself a consequence of the stronghold of neoliberalism and industrial development being tied to trade by the WC. In opposition to the WC's free-trade paradigm, a major analytical concern was to show that policy had to prepare the ground before a successful integration into world markets would be possible. One of the consequences of this is that macroeconomic policy in support of industrial development is greatly impoverished, being essentially reduced to exchange rate interventions and the stabilisation of inflation through monetary policy.

Secondly, although state and markets are increasingly seen as potential complements, the state-market dualism remains, more often than not, the starting point with market failures providing the basis of analysis. The legitimacy of state intervention then rests on the assertion that the state actually has the capacity to improve upon market outcomes. This, in turn, will provide the grounds for questioning the practical feasibility of industrial policy, especially in SSA.

2.1. EXPORT-CENTRISM AND ITS IMPLICATIONS FOR THE CONCEPTUALISATION OF MACRO-ECONOMIC POLICY IN SUPPORT OF INDUSTRIAL DEVELOPMENT

2.1.1. From export-led growth to the new export-centrism in developmental states

Acknowledging the transformative role of industrial policy raises, of course, the question why precisely this type of policy had failed previously in the African context. PWC schools and evolutionary traditions maintain that an initial phase of protection is necessary before infants *have to* be pushed into export markets. Contrary to the conclusions reached by the free trade paradigm, however, export promotion involves important government interventions and distorts free trade, generating the same deadweight efficiency losses as import substitution (Ocampo and Taylor 1998: 1539). The first lesson derived from the East Asian developmental states is that the success of industrial policy hinges on the degree to and speed at which infants are pushed into export-markets.

“Countries in “the rest” all allocated subsidies to the same set of mid-technology industries (...) What differed among countries was *how vigorously and rapidly exportables were extracted* from a sequentially rising number of import substitution sectors.” (Amsden 2001: 161, emphasis added)

The ‘lessons from East Asia’ are summarised as follows:

“(…) the vital issue is to develop *supply capacity* and lay the foundation for *expanding exports*.” (Shafaeddin 2012: 31, emphasis added)

“The common factor in the collapse of many African economies in the period since independence has been the collapse of their exports. The most prominent feature of the Asian tigers was the growth of their exports, in particular their manufacturing exports.” (Söderbom and Teal 2003: 3)

Overall, in the sub-Saharan African context, export-centrism is taken surprisingly far – to the extent that serving the domestic market seems almost inconceivable at times:

“Future growth will rest on the pace and composition of agro-industrial development and a robust services economy producing tradables that the *rest of the world demands*, and they must to varying degrees, figure in the strategies of all countries.” (Leipzig and Yusuf 2015: 241, emphasis added)

Explanations why the export-centrism characterising the WC is maintained in the revival of industrial policy include *firstly* institutional restraints to ensure productivity increases through exposure to international competition. Subsidies for infant industries are associated with an incentive problems because productivity growth is not entirely spontaneous, but depends on the active effort and investments from industrialists (Ocampo and Taylor 1998: 1536). From this follows the idea that industrial policy has to combine carrots and sticks appropriately (Hausmann and Rodrik 2003). Setting export targets is singled out as the quintessential feature that solved the incentive problem resulting from infant industry protection and thus explains the East Asian industrialisation success:

“The East Asian countries did so by using rule-based systems in which interventions were linked to past export-success.” (Greenwald and Stiglitz 2013: 42)

“Since protection itself reduces incentives to invest in FTC, it should (...) be offset by other incentives for increased efficiency. The best combination may be the selective and temporary protection of domestic markets, together with strong incentives for export activity and domestic competition.” (Lall 1992: 172)

Secondly, the export sector is claimed to be associated with greater “learning externalities” (Greenwald and Stiglitz 2013: 35) supported by “ample evidence that that is the case (evidenced by the success of export-led growth strategies).” (Greenwald and Stiglitz 2013: 42; see also Page 2012: ii94; Bigsten et al. 2004; Van Biesebroeck 2005).

Finally, and particularly important for SSA, the question of how to increase export revenues is put at centre stage with the increasing trade deficits and the debt crisis of the early 1980s.

“In Asia, ever since the late 1960s export promotion has been designed to meet the dual purpose of importing capital goods (and new technologies) and of exporting goods to boost

growth and maintain long-term equilibrium in the balance of payments, while in Africa, the majority of countries have remained focused solely on supplying their domestic markets. (...) The development of infant industries was helped along by restrictive trade policies that enabled them to build their competitive edge. At the same time, the country was wide open to the import of capital, intermediate and high-technology goods needed for the development of new industrial activities. Later on, trade liberalization was pursued for those products that had reached maturity.” (UNECA 2004: 65)

The subtleties of export-led industrialisation are well acknowledged in the work on developmental states in East Asia. Wade (2012), for instance, underlines the importance of generating exports provided that domestic supply-linkages can be formed. Singapore’s Economic Development Board and Taiwan’s Industrial Development Bureau, for instance, trained engineers to assist domestic firms to become suppliers of foreign affiliates and negotiated local content requirements in Joint Ventures with foreign firms. Similarly, Stein (2012) argues that Export Processing Zones (EPZ) can only become a useful policy tool to the extent that industrial policy helps to integrate these into the rest of the economy.

Yet, Stein (2012) further argues that in the SSA context, export-promoting policies and institutions like EPZs are often subverted by neoliberal agendas rather than becoming an instrument of and embedded in industrial policy. Acknowledging the necessity and feasibility of export promotion provides an entry point for those critical to an active role of the state in production and consumption to diminish the necessity for and scope of industrial policy. Bigsten and Söderbom (2011), for instance, at least question the need for government support for the tradable sector as a whole as opposed to supporting the export-oriented sector alone. After all, support for export-oriented industries can allegedly be achieved through minimal state intervention:

“A lower exchange rate represents a broad-based mechanism for industrial policy – firms themselves decide whether they can compete at that lower exchange rate. The government has identified broadly that the export sector has more learning externalities, and therefore that sector should be encouraged relative to others; but it doesn’t have to identify precisely which sub-sectors or firms should be encouraged. The market does that.” (Greenwald and Stiglitz 2013: 35)

2.1.2. Industrial development and the lack of endogenous theories of demand growth

If export-centrism in the literature on the East Asian developmental states needs to be understood in relation to the terms set by the WC, it has far-reaching implications for how macroeconomic policy in support of industrialisation is conceptualised. Macroeconomic policy advice remains deeply entrenched in mainstream macroeconomics, regarding in particular the relationship between supply and demand in the long-run. The few approaches

considering the demand-regime as an important determinant of the long-run (learning) dynamics do so with exclusive focus on export demand.

Evolutionary growth theory, while rejecting aggregate production functions and the idea of a unique long-run equilibrium, retains the assumption of Say's law (see for instance Nelson and Winter 1982: 209). In applied scholarship, the relevance of deficient demand for late industrialisation is either excluded and/ or limited to export demand. Amsden (1990), for instance, argues that developing countries are not confronted with problems of deficient demand, quite the opposite. Therefore governments would have to actually dampen demand to hold inflation under control. Otherwise, developing countries can always rely on export demand:

“(...) the underconsumptionist argument is untenable. The problem in developing countries is not that of too little effective demand but of too much, as different income groups and social classes struggle over the distribution of a puny pie. Governments are not confronted with the need to raise effective demand, but rather to dampen aggregate spending in order to check inflation. What they must raise is more foreign exchange, savings and public revenues; for these, and not effective demand, are the constraints on increasing the pie's absolute size. Moreover, any country, particularly a small one, can produce without regard to the size of its home market, so long as it can export. The problem is that most Third World countries cannot export because they are not competitive internationally, despite low wage rates. (...) Ultimately, therefore, as the Korea experience suggests, *the problem of industrialization is a problem of increasing productivity, not demand.*” (Amsden 1990: 11, emphasis added)

In a similar vein, Monga (2013) argues that for developing countries there cannot be a problem of finding market outlets, provided they successfully discover their niche in world markets:

“For low-income countries, included those in Sub-Saharan Africa, it will always be possible to find a niche in which in which a country may achieve low costs and thus penetrate advanced markets. The challenge will be to identify the niche, and design pragmatic and targeted policies to exploit these opportunities.” (Monga 2013: 154)

As theoretical and applied scholarship on structural change remains supply-side focused, the role of macroeconomic policy in support for industrial development is conceived in relation to the learning process:

“A focus on creating a learning society has broad implications for financial and capital market liberalization, the design of monetary and institutions, macroeconomic policies (...) – indeed for the entire economic regime. All need to be viewed through a learning perspective.” (Greenwald and Stiglitz 2013: 43)

Greenwald and Stiglitz (2013) argue that, in order to favour such a ‘learning society’, macroeconomic policy has to stabilise the economy. Economic instability, i.e. inflation and rapid cycles of booms and busts, are, they argue, detrimental to the learning process because firms go out of business, managerial attention is overly focussed on crisis management

rather than learning, firms will be prone to more risk adverse behaviour and capital less accessible or more costly (Greenwald and Stiglitz 2013). Similar arguments are found elsewhere:

“It seems clear that investment, at least in sectors outside extractive industries, has been hampered by both macroeconomic uncertainty and high costs of doing business. So improvements in these areas will make it easier to change the pattern of comparative advantage and production.” (Bigsten and Söderbom 2011: 168f)

Greenwald and Stiglitz (2013) argue that keeping the exchange rate low and stable (albeit through active intervention like capital controls and building up reserves), has the double benefit of reducing macroeconomic instability and making domestic export-oriented and import-competing firms more competitive.

The few theoretical approaches to industrial development which actually include a demand-side surprisingly arrive at the same conclusion. Cimoli and Porcile (2013) and Astorga, Cimoli, and Porcile (2014) propose an integrated demand-led evolutionary model where the process of structural change relies both on an expansion of effective demand and technological learning. They argue that a virtuous circle of cumulative output and employment growth is dependent on the simultaneous growth of productivity and aggregate demand. Productivity increases alone are not sufficient condition for the increase in output and employment (as it might simply result in the production of the same amount of output with less people). Conversely, purely demand-led output growth without any increases in productivity will be unsustainable. They argue that in many developing economies this virtuous cycle of productivity, output and employment growth fails to materialise. Indeed, we typically observe situations of pockets of efficiency in a limited range of export activities otherwise isolated from the rest of the economy coupled with the persistence of subsistence activities.

They conclude that the *growth* of aggregate demand has to go together with growth of productivity. Yet, somewhat surprisingly the only (relevant?) component of aggregate demand in the model is export demand. Correspondingly the “Keynes plus Schumpeter policy mix” (Cimoli and Porcile 2013: 76) consists of interventions into the real exchange rate coupled with supply-side support to facilitate the adoption and adaptation of imported technology. The apparently only macroeconomic policy tool to stimulate aggregate demand is a depreciation of the real exchange rate, which can serve as an initial demand stimulus though this would have to be combined with active support of industrial policy in the export-

oriented sectors. Astorga, Cimoli, and Porcile (2014) illustrate this with a four by four matrix where countries have either a combination of both active real exchange rate policies and industrial policies, rely on one or the other or practice neither of them – with four corresponding growth scenarios ranging from virtuous circle (both RER and IP) over labour absorption (only RER) and defensive rationalisation (only IP) to vicious circle (neither). This constitutes, as will be argued at greater length in section 4. (pg. 81ff), at best, a partial incorporation of demand in the long-run growth dynamics and does not contribute to counteract the impoverished understanding of macroeconomic policy and institutions in relation to industrial development.

Just how little the debate on ‘appropriate’ macroeconomic policies has evolved becomes clear when recalling that exchange rate devaluation is invoked by mainstream economists as one of the successful components of the adjustment package:

“It was the reversal of these policies that was the key policy that enabled export volume growth to occur. The evidence seems clear that policies which avoid an overvaluation of the real exchange rate are a precondition for the growth of exports.” (Söderbom and Teal 2003: 14)

Given the over-fixation on exchange rate policies as one of a rather limited number macroeconomic policy tools, discussions regarding problems in the implementation revert back to what is effectively a macroeconomic policy ineffectiveness proposition. Investigating ‘How macroeconomic policy can support industrialisation in sub-Saharan Africa’, Heintz (2013) argues that, in SSA countries, any potential competitive advantage for manufacturing industries from a nominal depreciation tends to be eroded by the high level of exchange rate ‘pass-through’ which closely links depreciation to a rise in the domestic price level. This is essentially a consequence of the high import dependence of African economies where depreciation makes imports of basic consumer goods like food items more expensive. The same is true for the often highly import-dependent manufacturing activities whether export oriented or import competing, for which a nominal depreciation actually makes the import of input and machinery more expensive. Contrary to the contemporary mainstream macroeconomic consensus (New Keynesian), Heintz (2013) argues that counteracting inflationary pressures through restrictive monetary policy would be counterproductive in the SSA context given the non-monetary origin of inflation (such as import dependence and exchange rate pass-through). He argues that a rise in interest rates would further discourage domestic investment and therefore the supply of goods and hence accelerate inflationary

tendencies. Fiscal policy, though not excluded on theoretical grounds, he argues, is significantly constrained by the low level of government revenues. Heintz (2013) then arrives at the conclusion that industrial policy will have to lay the foundations for “macroeconomic policy to reclaim its developmental role” (pg. 213), not the other way round. Policy efforts should focus on addressing the causes of high domestic price levels in SSA economies, in particular those relating to unit costs of production in the non-tradable sector, e.g. high transport costs, poor infrastructure, inefficient networks of distribution etc.:

“Improvements to the productivity of the non-tradable sector may be critical for determining the competitiveness of Sub-Saharan African countries relative to others. (...) [This] sounds more like industrial policy than macroeconomic policy.” (Heintz 2013: 205)

2.2. THE NEW ORTHODOXY AND ITS MAJOR DIVIDE: HOW EXTENSIVE SHOULD INDUSTRIAL POLICY BE?

2.2.1. From the invisible to the transparent hand

In addition to the strong emphasis on trade and export-led industrialisation, the state-market dualism remains, more often than not, the starting point of the new orthodoxy. The argument is made for “making markets work” rather than “letting markets work”, with states under certain conditions being able to improve upon market outcomes. Conceptually, this builds on a basic trade-off between the level of distortion created vs. the amount of market failure corrected. The crucial underlying factor then, is in essence a normative assessment as to when this balance becomes positive, i.e. whether or not the costs of government intervention are worthwhile given the chance at success in correcting market failures (Latsch 2008). Although evolutionary approaches and the PWC have restored the necessity and feasibility of industrial policy, a general scepticism remains. Even among those favouring industrial policy, the benefit of the doubt is given to the market:

“Hence, the empirical relevance of these ideas remains to be demonstrated. In the absence of such a demonstration, government intervention to promote industrial diversification *must be judged a risky strategy.*” (Rodrik 1996: 20)

Industrial policy is seen as something inherently dangerous that should be deployed with care and have a limited scope, generally favouring functional interventions and avoiding selective interventions as far as possible as they are too complex and exceed state capacity – a view which is building on the idea that the state cannot improve on the information provided by the market (Rodrik 2007). Weiss (2011), for instance, makes a case for a:

“*pragmatic and limited* approach to interventions as a means of stimulating industrialization (...).” (Weiss 2011: 1, emphasis added)

Lall and Wangwe (1998) – although at the forefront of re-establishing the theoretical case for (selective) industrial policy from the evolutionary perspective, advocate

“carefully targeted interventions” (p. 86) and “that existing patterns of intervention be thoroughly reformed, with *excessive and distorting interventions removed* and replaced by *policies that address specific market failures*. (...) well designed and truly selective interventions are needed to replace haphazard import-substituting strategies.” (Lall and Wangwe 1998: 85)

Similarly, Thirlwall (2013) maintains that interventions need:

“to be implemented with prudence and skill to avoid the protection of high-cost, inefficient industries and the pursuit of rent-seeking.” (Thirlwall 2013: 120)

The underlying reasoning – suggesting a trade-off with “inefficient” state intervention as a necessary evil to support industries in learning to compete – is taken far. Indeed, there are even empirical tests as to when the trade-off between government failure and market-failure becomes negative. Regressing a government intervention index on growth rates, Bjorvatn and Coniglio (2012) find evidence that “despite their *inherent inefficiency*” (p. 131, emphasis added) policy interventions can still promote big-push development. They find that ambitious policies are more likely to be successful in the least developed countries whereas in developed countries they may do more harm than good (Bjorvatn and Coniglio 2012).

If the role of the state is to set the conditions that allow the market to work, then one major problem in industrial policy might lie in the lack of capacity of the state to do so, not only because it is inherently getting in the way of markets, but also because it may, generally, not be working well. The limitations of industrial policy given by state capacity are highlighted early by the opponents of industrial policy as for every success, there are cautionary tales. These are explained either by highlighting that most of the East Asian success can actually be explained by policies that did not distort the market (World Bank 1993) or by highlighting that the East Asian experience unfolded against the background of a very favourable political economy and is thus not easily replicable:

“Obviously we would recommend *caution*. (...) The policies deployed were exceptionally complex and were implemented by the Asian countries *under conditions of political stability and highly competent bureaucrats*. Attempts to emulate their experiences in the absence of these political precursors could easily result in *counterproductive interventions and corruption*.” (Noland and Pack 2003: 100, emphasis added)

Pack and Saggi (2006), although acknowledging that there might be a theoretical case for industrial policy, deem the risk of government failure to be more pervasive:

“Overall, there appears to be *little empirical support* for an activist government policy even though market failures exist that can, in principle, justify the use of industrial policy.” (Pack and Saggi 2006: 1, original emphasis)

For similar reasons, Noland and Pack (2003) argue that relying on broad spectrum growth enhancing measures, which do not “differentiate among sectors”, such as large scale investments in education and infrastructure, is preferable (Noland and Pack 2003: 101).

Scepticism regarding state capacity is particularly prominent in the SSA context where both administrative capability and institutional quality are deemed to be particularly limited (see for instance Soludo and Ogbu 2004: 27). The 2012 special issue of the Journal of African Economies on the subject of structural change stands exemplarily for this. While all authors assert that SSA economies lag behind in structural change, only Page (2012) is optimistic about the feasibility of industrial policy as long as “embeddedness” is guaranteed by a steady and strong information flow between firms and government (Page 2012). Both Aryeetey and Moyo (2012) and Monga (2012) highlight institutional capacity as a major limitation for the otherwise positive role of industrial policies.

In the literature, the success of industrial policy is seen as dependent on the right implementation within the right set of institutions. This ultimately ties successful industrial policy to ‘good governance’. Rodrik (2009) singles out “three key design attributes that industrial policy must possess”: embeddedness, carrots-and-sticks, and accountability (Rodrik 2009: 1). Industrial policy in SSA countries can only work “with good governance in place” (Bigsten and Söderbom 2011: 169):

“Countries that can put competent and non-corrupt governments in place, will have a good chance of achieving an economic take-off based on manufacturing when the costs of labour increase among its Asian competitors.” (Bigsten and Söderbom 2011: 169)

Given the widespread scepticism about African bureaucracies and considering the lack of ‘entrepreneurial capacity’ in SSA economies (see for instance Söderbom and Teal 2001; Bigsten and Söderbom 2011; Sonobe, Akoten, and Otsuka 2009), SSA governments might also want to focus on “soft” industrial policy including the improvement of the investment climate, infrastructure and in particular the managerial skills of entrepreneurs.

“It is hard to target individual firms or to pick winners and few economists want to see this type of policy back on the agenda. However other forms of industrial policy covering a broad-spectrum of measures, now feature in the policy debate again.” (Bigsten and Söderbom 2011: 167)

Based on case studies of Ghana's pineapple industry, Kenya's cut flower industry, South-African apparel and Nigeria's shrimp industry, Subramanian and Matthijs (2007) identify a number of critical “*market-related success factors*”: price, speed-to-market, labour productivity, flexibility and product quality. For them, the role of policy is to improve these

critical factors through “supportive policy” along with the “appropriate institutional regime” and appropriate infrastructure (Subramanian and Matthijs 2007).

2.2.2. Towards processes of accumulation: what is the state?

These considerations reflect, doubtless, important political constraints on industrial policy. A discussion of state capacity and incentive structures is important when trying to define the role of the state in the process of industrial development. However, the question has been approached in a very limited way. Crucially, the ability of the state to assume an interventionist role is seen to be located in the ‘autonomy’ of the state, i.e. the autonomy of the bureaucracy from vested interests.⁴ This theme is shared by various different theories of the state and occurs as much in the liberal, ideal-type Weberian tradition as in neo-Marxist traditions of theories of the state.

Neo-Weberian theories of the state compare reality to an ahistorical universal ideal-type state that would emerge under ‘rational, correct utopia’. This is used as a tool to understand reality through its divergence from the axiomatic ideal (Solli and Leysens 2011). In neo-Weberian theories of the state, states are structures super-imposed to society and the market and thus seen as the source rather than the outcome of power-relationships within a society. The ideal-type state enjoys an unchallenged monopoly of legitimate use of coercion within a given territory. This legitimacy, for Weber, stems from the emancipation of the state from society, i.e. the state’s pursuit of an independent rational-legal logic in pursuit of the common interest, which is assured through impersonal, bureaucratic rule based on meritocracy.

“To limit the ability of state actors to exploit (...) rent-seeking opportunities made possible by state involvement in the economy”, a Weberian ideal-type administration is established as “*absolutely necessary* for a developmental state” (Lange 2005: 57, emphasis added). Similarly, Öniş (1991) concludes:

“Developmental states are characterized by tightly organized, relatively small-scale bureaucratic structures with the Weberian characteristics of highly selective, meritocratic

⁴ Autonomy can take different forms in theories of the state, for instance relative to the interests of the dominant class or relative to all class interest where the state mediates between different conflicting interests without being subordinate to any. Further autonomy of the state can also be understood as the state pursuing its own imperatives being itself composed of bureaucrats and lower level institutions. Finally, state autonomy can refer to the separation of economic from political or ideological factors, the state only taking a prominent role in the latter (Fine and Rustomjee 1996: 58).

recruitment patterns and long-term career rewards, which enhance the solidarity and the corporate identity of the bureaucratic elite.” (Öniş 1991: 124)

In Marxist theories, the state is not understood through its shortfall from the ahistorical ideal but rather reflects the class-interests that act upon it even though the state cannot be mechanically reduced to material interests because its location in the sphere of politics implies a certain degree of independence from the influence of the economy (Chang 2013: 91). Neo-Marxist theories relate the developmental nature of states to this relative autonomy and derive the notion of “embedded autonomy”, a situation in which the state is autonomous from yet constrained by the society they represent. This would hinder the emergence of a self-serving bureaucratic elite that appropriates whatever surplus is created from growth-enhancing industrial policies (Evans, Rueschemeyer, and Skocpol 1985; Evans 1995). Taking the concept of relative autonomy from Marxist theory and rendering it absolute, neo-Marxist theories of the state ultimately arrive at a similar separation of the state and society as ideal-type Weberian theories of the state (Chang 2013: 91). The overlap between the two traditions is substantial. Evans and Rauch (1999), for instance, though writing in the neo-Marxist tradition, find a positive correlation between a “Weberianness Scale” and total GDP per capita growth over a period from 1970-1990 in 35 developing countries.

The conclusion that successful developmental states have to stand aloof from the market and the vested interests found within it builds on the state-market dichotomy set by the Washington Consensus and essentially takes as a point of departure that state involvement in the economy creates rent-seeking opportunities (see Krueger 1998 discussed above). This is misleading because both state and market are social constructs. The state through its regulations defines and limits what is the (legal) market. At the same time, no such regulation and not even the absence thereof is neutral with respect to distributional outcomes but will benefit certain groups of interests. In that sense, there is no state intervention and no ‘letting markets work’ free of vested interests. For example, privatisation within the framework of the state-market dichotomy is interpreted as a shift in favour of the market against the state – with a corresponding value judgment of seeing the former as the more apt institution to organise societal relations and distributional outcomes than the latter. This, however, conceals the distributional effects and underlying material interests inherent in any regulatory choice, including the choice of no regulation. Privatisation, for instance, is really nothing more than a state intervention in favour of those in the material position to buy off state assets (Fine and Rustomjee 1996: 52). Once power imbalances and differences in

endowments, are considered, it becomes misleading to abstract from the distributional effects of any shift in the regulatory environment while claiming that these are value neutral. A supposedly neutral scientific paradigm is used to justify distributional outcomes of societal relations.

This aside, for analytical purposes, thinking of the state as separate from the market and the existence of vested interests as a deviation from the ideal-type norm is problematic as it conceals how specific vested economic, political and ideological interests come about, what sustains them (materially and ideologically) and how they change over time (Fine 2013a).

Firstly, the embedded autonomy framework remains too general in this respect. Khan (various years) argues that while good governance (such as transparency, the stable rule of law or low levels of corruption) is desirable in itself, the focus on such conditions diverts attention from other more important institutional arrangements needed for successful industrial policy. For subsidy schemes to work, the threat of removing the subsidy has to be credible (Khan 2013b). In that sense, industrial policy is not so much about picking winners – and having the right information to do so – but about eliminating losers. The feasibility of this depends on the *nature* of patron-client networks not their absence. The success of industrial policy hinges upon the fit between the institutional design and the type of political settlement (Khan 2013a). Hence, industrial strategies have to be adapted to the organisational and structural distribution of economic and political power within specific countries (Khan and Blankenburg 2009) rather than trying to bring institutions closer to the axiomatic Weberian ideal. Analysing the nature of the political settlement for what it is rather than what it is not, i.e. analysing the relative power of different organisations helps to explain why a similar set of policies has produced very different outcomes across different countries. By extension, this type of analysis will also help us to find out which institutional arrangements have worked in similar types of political settlements (Khan 2013a).

For instance, in South Korea, the ruling coalition could impose its authority on its own lower levels while political organisations outside of the ruling coalition had very limited power. Within this political settlement, firms benefitting from the learning rents would have to satisfy the requirements of the highest layers of authority to retain their rents. This made it possible to ‘tame’ the big industrial conglomerates that were driving industrialisation in South Korea. The political settlement in Taiwan was very different from the South Korean setting, with Kuomintang power being much less firmly entrenched. However, Taiwanese

financing instruments used to foster industrial development matched these power structures. Technology acquisition strategies here focussed on smaller firms in high-technology sectors. These firms were politically unable to link up with sub-structures within the KMT or challenge their authority entirely (Khan 2013a).

The finding that developmental outcomes are not as such explained by the absence or presence of neopatrimonialism but the organisational and structural distribution of economic and social power within specific societies is confirmed for the sub-Saharan African context by an increasing body of literature. Whitfield et al. (2015), for instance, show that ‘pockets of efficiency’ in productive sectors can emerge in different ‘political settlements’ whether marked by vulnerable authoritarian, weak dominant party, strong dominant party or competitive clientelist coalitions to the extent that mutual interest forms between capitalists and ruling elites. However, a key political challenge lies in the mediation of mutual interests in competition with one another, for instance along a supply/ demand chain where processors interest to pay the lowest price on inputs collide with the producers’ objective to obtain the highest price for their output. For the case of Tanzania, Gray (2015) shows that the persistence of factions and their fragmented distribution of power within the ruling party in Tanzania have sustained primitive accumulation instead of productive industrial policy. For the Ugandan case, Kjer (2015) finds that to the extent that policies run against the interests of powerful factions, political support wanes and initiatives are not implemented in the intended way.

Secondly, the embedded autonomy framework remains too narrow in the sense that it assesses the developmental state through state-business relations alone. Amsden (1990), for instance, maintains:

“Labour repression is the basis of late industrialization everywhere, though in Korea as in other late industrializers a militant trade unionism contests this. Developmental differences among late industrializers are best explained in terms of the discipline imposed on big business, not labour (...).” (Amsden 1990: 18)

However, structural transformation is also a process of social transformation and invariably associated to distributional conflicts over a growing pie. Understanding which (distributional) conflicts emerge during this process of rapid social change and how these are resolved through the state and through the market is indispensable to determine what is and what should be the role of the state (D. Chang 2013). Crucially, this will have to involve capital-labour relations and industry-finance relations to understand patterns of domestic demand

growth and investment. Drawing on Fine (2004), the following set of questions is helpful to understand the nature of accumulation dynamics in a particular societal context: what is the relationship between classes and the state and how do they resolve and sustain a system of wealth accumulation, what is the relationship between the financial and the industrial system, how does the world order (trends and tensions in the internationalisation) interact with these specific dynamics of accumulation?

Taken together, understanding the nature of the accumulation process requires an understanding of what motivates investment (for domestic and export markets), what constrains the growth of output on the demand side and the supply side. In addition, the conjunction of different agency relations needs to be examined:

- State-business relations: How and under which conditions can the state discipline businesses within a particular political settlement?
- Capital-labour relations: Which (distributional) conflicts occur in the growth process, how are these resolved through the state and how do they affect the spending behaviours of different social strata?
- Industry-finance relations: Under which conditions are savings channelled into productive sector investment opportunities?

The post-WC literature has produced a marked reversal of intellectual fortunes as the “whether” of industrial policy is less in doubt than under the WC. This section has, however, shown that the conceptualisation of the state underlying the post-WC often limits the extent to which it can successfully explore the questions listed above. **Box 3** summarises issues which received few research attention.

Box 3. Under-researched issues relating to IDP	
Demand-side and macroeconomic policy in support of IDP	<ul style="list-style-type: none"> • Focus on export-promotion through exchange rate manipulation • Focus on ‘macroeconomic stability’ (low inflation and stable investment climate)
Agency relations that can explain patterns of success and failure in policy making	<ul style="list-style-type: none"> • Strong focus on state-business relations

3. NEW INDUSTRIAL POLICY PARADIGMS: FROM ‘HOW TO MAKE IT WORK’ TO ‘WHICH INDUSTRIES SHOULD BE TARGETS OF INDUSTRIAL POLICY’

The analysis of China’s impact on the world economy is linked to a new trend in scholarship, which increasingly asks *which* industries should be the focus of policy attention. Thus, the debate moves beyond “how” (how extensive and how to make industrial policy work) to include an element of “what” thereby widening the debate to one of industrial strategy rather than just industrial policy. Two competing China-related paradigms emerge. On the one hand, there is Justin Lin’s *Growth Identification and Facilitation Framework (GIFF)*, which is closely linked to the hypothesis that China’s industrial upgrading will provide a chance for SSA economies to integrate Global Value Chains in light manufacturing. On the other hand we find Raphael Kaplinsky’s *Resource Based Diversification (RBD)* strategy, which is based on the assertion that the Chinese competitive threat in light manufacturing as well as a reversal in relative prices of manufactures and primary commodities requires a profound rethinking of viable industrial strategies – away from light manufacturing towards commodity based diversification. The next two sub-sections will discuss the propositions by Lin and Kaplinsky and argue that both bring to the fore the necessity of theorising the demand side of the economy in relation to manufacturing sector development and conceptually extend the role of macroeconomic policy in support of industrial development. Kaplinsky’s ‘walking (stumbling?) on two legs’ strategy starts from the observation that demand in certain export markets is saturated while expanding in others but can industrial policy makers only react to tides of global demand or actually influence, at least, the domestic demand regime? The flying-geese paradigm relies on competitive cost advantages but, as pointed out by its critics, can easily result in a competitive downward spiral (‘fallacy of composition’), unless there is an expansionary global and domestic demand regime – again raising the question of how to explain those endogenously.

3.1. NEW STRUCTURAL ECONOMICS (NSE) - AN ABSTRACT DEBATE ABOUT COMPARATIVE ADVANTAGE DETERMINING THE “STRATEGY”

3.1.1. Comparative advantage – comparative schmadvantage: a theory in need for theory

Even within the World Bank, the idea of an enhanced role of the state gains momentum. Justin Lin’s *New Structural Economics (NSE)* derives the necessity for industrial policy from Hausman and Rodrik’s market failure framework (rather than the evolutionary schools),

maintaining that the state has to assist the private sector in discovering the comparative advantage of an economy. Lin's NSE draws on Akamatsu's (1962) *flying geese theory*⁵ and the idea that the comparative advantage of an economy changes over time and as function of spatial changes in comparative advantage across nations along different stages of development. In this context of changing patterns of regional specialisation, China's industrial upgrading is seen as one of the most important transfigurations in this respect as this will "free up nearly 100 million labour intensive jobs in manufacturing" (Lin 2012a: 2). Thus, the sheer size of the Chinese economy and, by extension, its industrial sector, gives rise to the presumption that this will be a game-changing development, a vision pushed in particular by World Bank economists.

"Tectonic plates could shift further. Africa missed out on the manufacturing revolution that lifted East Asia's economies out of poverty and into prosperity. But Africa no longer needs to be left behind. (...) Today's shifts open new opportunities. As the global crisis hit, some Chinese recognized that it was time to move beyond toys and footwear (...) Chinese companies, in turn, could move lower value-added manufacturing elsewhere, including to Africa (...), following China's resource developers and construction enterprises." (Zoellick 2010, emphasis added)

Lin (2012a) deems that China and to a lesser extent other emerging economies "will provide *golden opportunities for industrialization* in lower income countries". (Lin 2012a: 8, emphasis added). Estimating the total manufacturing employment in Africa (including North Africa) at most 10 million at the moment, it stands to reason that the relocation of

"even a small share of China's 85 million labor intensive manufacturing jobs would go a long way toward creating new opportunities for employment and sustained growth in Africa. Clearly, the potential opportunities for Africa's labor intensive economies, which today are exporting mostly minerals, are enormous." (Lin 2012a: 9) Another counter-factual suggests the following dynamic: "Let us assume that as a result of rising wages, *1 per cent of China's production of apparel is shifted to lower wage African countries. All things equal, that alone would boost African production and exports of apparel by 47 per cent.*" (Lin 2012a: 9, emphasis added)

In this vision, what remains to be solved, is the question of how to move into the industrial space left by China? When firms choose to enter the economy in an industry compatible with the country's comparative advantage, "the economy is most competitive", i.e. maximises aggregate profits, which in turn are re-invested thereby contributing to the accumulation of physical and human capital over time. For this to materialise, markets need to reflect relative

⁵ Akamatsu (1962) observed a number of empirical regularities in the patterns of industrial development in East Asia. Firstly, production evolves in three consecutive phases – from importing over processing to exporting. Secondly at the inter-industry level there is pattern of upgrading from consumer goods to capital goods. Thirdly nations are aligned along different stages of development due to the fact that more mature economies drive technological development by investing in newer industrial projects and thus freeing up space for latecomers (Akamatsu 1962).

factor prices (Lin and Monga 2011: 267). Even though the comparative advantage changes over time, there is a case for not letting the transition entirely up to the market. The state has a positive role to play in determining the direction and speed of change by providing 'hard infrastructure' (transportation and energy supply) and 'soft infrastructure' (education for the otherwise unskilled labour force), as well as 'information' to first movers (Lin and Monga 2011: 267).

To seize the “golden opportunity” provided by the industrial upgrading of China and other leading geese, Justin Lin argues that countries in SSA should “avoid the policy mistakes of the past” and “implement the winning strategy” (Lin 2012a: 10). This "winning strategy" is his GIFF. In a first step, the late-industrialiser should look at a number of countries with a similar endowment structure (e.g. in terms of natural resource endowments, population size, etc.) with a per capita income 100 per cent higher than the latecomer. To assist the market in its self-discovery process, policy makers should identify sectors which have been successful in these comparator countries. At the same time, policy makers should identify sectors in which the market has already self-discovered profitable industries. In a second step, supply side bottlenecks that hinder the take-off of the potential growth sectors need to be addressed. These constraints include infrastructure, business environment, access to finance, technical and vocational training and trade policy (Lin and Monga 2011a; Lin 2012b).

The success of this state-facilitated industrialisation, according to Lin, hinges on the promotion of the *right* industries. Successful countries like the Asian NICs or 19th century Europe adopted strategies that promoted industries relatively close to their current comparative advantage while the non-successful were too ambitious:

“A common feature of the industrial upgrading and diversification strategies adopted by successful countries (...) was the fact that they targeted mature industries in countries not too far advanced compared with their own levels of per capita income. This may have been the single most important cause for their success.” (Lin and Monga 2011: 274f)

By contrast what stands out in the “pervasive failures” of industrial policy in South Asia, Latin America and Africa is that:

“Too often, such industrial policy defied the prevailing comparative advantage of many poor countries where factor endowments were characterised by the abundance of labour. By implementing the capital-intensive heavy industry-oriented development strategy, they were not able to build firms capable of surviving in open, competitive markets. Because of their high capital needs and their structurally high production costs, these public enterprises were not viable.” (Lin and Monga 2011: 278)

The GIFF has been criticised for its (at least implicit) advocacy for the free market paradigm, the role of the state being reduced to one of a facilitator rather than a participator in production and consumption. As Singh (2011), for instance, argues, in terms of advocated policies, the GIFF does not differ much from the WC (Singh 2011: 458). Apart from this, the GIFF picks up where the post-Washington Consensus discussion left off, notably under which conditions is state intervention legitimate: should industrial policy defy the comparative advantage or not, is the state allowed to distort the market for the purpose of dynamic structural transformation? (See Lin and Chang 2009; and Lin 2012b; Krueger 2011; Amoako 2011; Lin and Monga 2011b; Amsden 2011).

The more fundamental criticism, however, concerns the circularity in Lin's argument: for industrial policy to work, only those industries in which the country has a (latent) comparative advantage should be promoted but the only way to ascertain *ex post* that the country effectively had a (latent) comparative advantage is by seeing if the industrial policy has worked (Fine and Van Waeyenberge 2013). Comparative advantage then, is nothing more than a theoretical artefact used to 'explain' certain empirical regularities, to justify (policy) comparison with other countries and interventionist policies.

Indeed, there appear to be empirical regularities in the patterns of structural change within the manufacturing sector. Haraguchi and Rezonja (2011) show that there are typical patterns of structural change within the manufacturing sector. As GDP increases, the share of certain industries as a percentage of total GDP first increases and then decreases again. The turning points can be estimated and suggest the following stylized patterns of structural change: typical early industries which show their sharpest growth at low levels of income up until \$3000 include textiles, food and beverages, chemicals (such as soaps and fertilisers) and non-metallic minerals (such as building materials). It should be noted that the last three categories are typically domestically oriented industries characterised by high labour absorption and relatively high domestic demand. In between \$3000 and \$5000, the apparel, electrical machinery and motor vehicles/ transport sub-sectors accelerate while typical late industries are machinery and equipment reaching their peak at \$27,000 (Haraguchi and Rezonja 2011).

Yet, if there are these typical patterns of industrial development (which are also in line with Akamatsu's ideas), then what precisely are the dynamics at play? The theoretical void and reductionism of New Structural Economics perhaps becomes most apparent when

considering its own empirical applications, which have to bring in causal relations through the back door. Although there is no foundation for this within the theoretical setting of New Structural Economics itself, its empirical applications include, among the identification criteria for industries suitable for government support, factors like sources of increasing returns to scale, expanding domestic and international consumer markets, employment generation and labour-intensity of industries. For instance the application of the GIFF to Nigeria in Chapter 4 of “New Structural Economics”: evaluates to what extent the strong growth performance of Nigeria translates into employment and income generation and highlights that a considerable amount of labour actually flows back into the informal and subsistence sector, which is a problem that can be partially explained by the high levels of investment directed towards capital intensive industries rather than labour absorbing industries. Both the size of the domestic market and the labour intensity of industries are used as selection criteria (Lin 2012b: 238). These dynamics can only be analysed implicitly because NSE provides no theoretical foundation for their analysis. The empirical applications of the GIFF implicitly identify factors that are important for the growth of industries for which there is no theoretical justification at all in NSE.

3.1.2. GIFF: a theory that needs to explain domestic and global demand growth

The fact that a whole range of different, potentially theoretically incompatible policies can be included within the framework of the GIFF, of course, raises doubts about the usefulness of the framework in the first place. In the pessimistic reading it opens the doors to subversion of industrial policy by neoliberal policy recommendations. For instance, one explanation for spatial shifts in ‘comparative advantage’ comes out of labour arbitrage of multinational companies. Such models are based on international comparison of unit labour costs (ULCs) or unit production costs (which other than wages would also include transaction costs, transportation costs, energy and water) (see Monga 2013; Ceglowski, Golub, and Mbaye 2015).

“[Sub-Saharan Africa can attract] most of the estimated 119 million jobs that will be relocated – provided that it can outcompete other low-income regions of the world by quickly and effectively implementing key strategic reforms that are required to accommodate domestic and foreign investors.” (Monga 2013: 156f)

Because investment is entirely dependent on the costs of production, reaping the “job dividends in a multipolar world” can be achieved by supply-side policies such infrastructure development and labour market deregulation, including flexible hiring and firing practices,

ensuring wage moderation by weakening the position of wage bargaining institutions etc. (Monga 2013; see also Ceglowski, Golub, and Mbaye 2015).

The tensions of making long-run growth and investment decisions exclusively dependent on production costs are readily exposed when considering the effect of policies like wage moderation on the demand-side. While wage moderation might help to attract FDI in labour-intensive export-oriented industries, the deflationary impact on wages limits a vital source of domestic purchasing power. Furthermore, while Nijinkeu, Lohi, and Djiofack (2013) see textiles and apparel as “trigger for the industrial revolution in SSA” (pg. 413), labour-cost seeking relocations of production intrinsically imply a process of uneven development within hierarchical systems of global production structures. Accumulation logics focussing on cheap labour resources export-oriented assembling activities might lead to the emergence of a basic manufacturing base but does not allow for reaching knowledge and research intensive activities that are the basis for the growth of income and wages (Hart-Landsberg and Burkett 1998; Frobel, Heinrichs, and Kreye 1976). Lipietz (1982) calls this development trap ‘peripheral Fordism’ characterised by a manufacturing base otherwise delinked from the local economy. Incomes generated by this type of industrial activity are too low to sustain local industrialisation and trigger production for the home market and productivity increases are not fast enough as production focuses on profit realisation through cheap labour rather than productivity increases (Lo 2011; Lipietz 1982; Hart-Landsberg and Burkett 1998).

Given surplus capacity relative to international demand in certain manufacturing sectors (Palley 2004), competition between developing countries for the same export markets through intense price and wage competition has resulted in declining terms of trade for low value-added manufacturing products (Sarkar and Singer 1991). The fallacy of this race to the bottom is a systemic deflationary downward spiral because the concurrent attempt of each country to boost its competitiveness through wage depression further undercuts a vital source of domestic purchasing power and further contributes to the deflation in world demand (Razmi and Blecker 2008).

Amsden (1990: 19f) accepts the demand-side limits to exports of low-value added manufactures but maintains that this does not pose a problem for as long as supply capacity is developed in higher value-added sectors and the export structure gradually upgraded. But again, while this can prove a convincing strategy for one country, it cannot become one for all countries because this flying-geese-type process must necessarily happen at unequal

speed (and therefore systematically exclude some countries) for it otherwise reproduces the systemic price effects we currently observe for low-value added manufactures at an even higher level – unless there is a continuous rise in aggregate demand in the world economy as a whole.

On a more practical level, the limitations to global demand capacity bring to the fore the role of domestic demand growth in sustaining late-industrialisation. One way to break away from the under-consumption and balance of payments constraints is by adapting and adopting imported technology for domestic market production (Lo 2011):

“The mechanism runs from industrial relocation or technology transfer (producing for local market) to productivity improvement, growth of income, and further expansion of local market. So, *market formation stands at both the beginning and ending points*. It is the existence (and growth) of the domestic market which *attracts technology transfer*. It is also the domestic market which *sustains indigenous industrial expansion*.” (Lo 2011: 20, emphasis added)

It should be emphasised that East-Asian industrialisation occurred in a very specific global demand context, marked by strong export demand for light manufactures on the European and American markets (Bienefeld 1982). However, this demand context has changed (Wade 1990: 346) and even within the East Asian NICs domestic demand expansion played an important role. In South Korea, for instance, 53% of industrial output growth could be attributed to domestic demand expansion (H. B. Chenery and Syrquin 1975). Similarly, earlier stages of China's industrialisation process (1978-1990) were sustained by a strong boom in (domestic) consumer demand. From the early 1990s onwards, intermediate consumption has driven growth (Lo and Zhang 2011).

3.2. INTEGRATING COMMODITY VALUE CHAINS: RESOURCE BASED DIVERSIFICATION (RBD)

Kaplinsky, Morris and Kaplan argue that given the harsh competition with China in light manufacturing it is unlikely for SSA economies to become a large cog in these global value chains. On the other hand, the sustained boom in raw material prices,⁶ the emergence of Southern based innovation systems and the tendency of commodity producing multinationals to outsource their non-core competences opens the possibility for an alternative industrialisation strategy which combines resource based diversification (RBD) with

⁶ Kaplinsky, Morris and Kaplan deem that there is a strong possibility that this price trend will be sustained for a while, due to both demand effects (increased demand from Asian drivers) and supply effects (exhaustion of low cost extraction methods). Between 1970 and 1992, prices for manufactured goods increased by 436%, after 1992, however, there was a sharp fall in prices. Since 2006 manufacturing prices are on the rise again but at much slower pace than in the period 1970-1992.

domestically oriented production of ‘bottom of the billion products’ (Morris, Kaplinsky, and Kaplan 2011a; Morris, Kaplinsky, and Kaplan 2011b). This forms the basis of UNIDO 2012 authored by Kaplinsky; UNECA (2013) authored by Morris and is further conceptualised in Kaplinsky (2013).

On the one hand, emerging middle classes in developing countries like China or India drive demand for new types of consumer products and induce innovation thereof. While innovation occurring in high-income countries generally relies on large in scale and capital intensive technology, for the production of this new type of bottom of the billion products,⁷ small-scale labour-intensive technology becomes efficient. To promote the diffusion of market-driven pro-poor innovation, Kaplinsky (2013) suggests to direct low-cost capital to investors in pro-poor technologies via micro-credit schemes, to redirect national support systems so as to include below-the-radar pro-poor producers, to strengthen the role of non-market actors in the provision of public goods to make them more aligned to the needs of the poor and to launch public-private partnerships to cater for the poor and finally to redistribute income to induce demand for pro-poor innovation (Kaplinsky 2013: 188f).

On the other hand, the prolonged commodity price boom of the 2000s goes together with a reorganisation of production that started in the 1970s involving the outsourcing of non-core activities. This trend can also be observed in mining and commodity production. Policy attention should focus on speeding up and deepening the development of linkages in the commodity sector. The precise factors that will inform policy-making in this respect are context-specific and will depend on factors like ownership structures, production technology etc. In terms of general policy conclusions, Kaplinsky (2013) emphasises, that SSA countries should focus on market driven linkage development and ‘low-hanging fruit’, i.e. further promote already existing linkages and should not be over-ambitious but focus instead on incremental rather than big-push type of approaches (Kaplinsky 2013: 190f).

The case studies of Botswana, Angola, Nigeria, and Gabon show that there is, indeed, scope for the provision of intermediate inputs in the commodities sector. In Angola, for instance, we witness localised production of cables which link sub-sea oil wells to surface vessels and

⁷ Examples include the Tata Nano car in India, produced for less than \$2,500 and exclusively targeted at low-income consumers; Haier in China produces redesigned their washing machines so that they can wash both cloths and potatoes in response to consumer demand from rural markets in China. Below the radar and at much smaller scale, we can observe for instance firms like DMT Mobile toilets who produce and rent portable toilets in West Africa (Kaplinsky 2013: 182).

land, in Nigeria local companies supply IT services to the major oil companies and in Sudan Chinese owned oil companies encouraged substantial local supply responses. It stands out that most countries tend to focus on the creation of forward (down-stream) linkages, e.g. Angola invests in the construction of refineries. Kaplinsky Kaplan and Morris argue that this negative view on backward (upstream) linkages is unwarranted, especially taking into account the nature of production (in GVCs) and the recent price booms (Morris, Kaplinsky, and Kaplan 2011a).

The resource based diversification approach constitutes a significant point of departure from seeing industrial policy through the lens of neoclassical economics. *Firstly*, contrary to the NSE-GIFF framework, the RBD includes very extensive and detailed analysis of the global economic context – both on a macro-level (prices and global competition) as well as on the micro-level via trends in the evolutions of firm-structures (organisation of global production). *Secondly*, and importantly, the question of industrial strategy is based on a comprehensive theory of industrial development (in this case Hirschman’s linkage theory) and not just on empty notions which are nonetheless neoclassical shibboleths such as, for instance, the notion of comparative advantage. Kaplinsky highlights the need for a much broader understanding of industrial policy as productive sector support policy, where intersectoral linkage formation plays a crucial role. The RBD paradigm has a much wider understanding of industrial development than labour intensive, export-oriented light manufacturing. The potential for manufacturing production is not narrowly confined to what “the rest of the world demands” (Leipziger and Yusuf 2015: 241) but instead, involves upstream linkages (stemming from the demand for inputs), downstream linkages (i.e. any processing activity whether smelting, refining or agro-processing) as well as side-stream/ intersectoral linkages like fertilisers or chemicals (Jourdan 2013). Similarly, domestically oriented production of bottom of the billion products transcends the export-centrism that marks scholarship on industrial development, at least in SSA.

Thirdly, RBD considerably departs from other industrialisation paradigms in that demand is recognised as a constraint to investment and industrial development. RBD starts from the observation that demand in certain export markets is saturated while expanding in others and more or less implicitly looks for alternative sources of demand. This is hardly surprising given RBD’s link to Hirschman’s general linkage theory, which, at its core, is a theory of ‘induced’ demand, inspired by and building on Keynesianism. Hirschman (1958)

distinguished between autonomous and induced investment demand and Hirschman (1981) identifies fiscal linkages, consumer linkages and production linkages as mechanisms through which chains of induced and autonomous investment demand can emerge.

Yet, while demand is recognised as a constraint, the tendency for demand to be inflationary or deflationary is not explained endogenously and correspondingly not something that can be influenced by policy. Instead the reason for linkages failing to develop is sought on the supply side:

“(…) generally due to a lack of technological adaption (backward linkages) because of deficient national learning or innovative capacity, arising from low investment in human capital and scientific infrastructure.” (Jourdan 2013: 375)

And the only policy dimension recognised to potentially counteract deficient demand is regional integration:

“The development of regional resources inputs industrial clusters is also critically constrained by the small national markets of individual states. Even the South African Customs Union market (Africa’s largest market) generally lacks the requisite demand for world-scale viable plants. The establishment of regional common markets would greatly increase the possibility of a successful resource-based development strategy.” (Jourdan 2013: 376)

Taken together, the RBD derives from a Keynesian inspired framework and incorporates changing global demand patterns within its own theoretical framework but leaves the question which policies can affect domestic or regional demand-side dynamics largely unexplored.

4. FINANCIALISATION AND THE SYSTEMIC TENDENCY TOWARDS DEFICIENT DEMAND IN CONTEMPORARY CAPITALISM

Deficient demand for manufacturing output is not a transitory problem for sub-Saharan African economies, one that might be confined to the post-independence period. In fact, in consequence of the restructuring of capitalist accumulation dynamics in advanced economies starting around 1980, best summarised by the term ‘financialisation’, demand deficiency has arguably become a systemic tendency. The financialisation of developed and, increasingly, developing economies, tends to be associated with the crowding out of production in the real economy, a worsened income distribution and depressed consumer demand. While net exports of many SSA economies increased in the first decade of the 21st century owing primarily to a boom in the price of primary commodities (Bagnai, Rieber, and Tran 2016), SSA economies face a systemic tendency towards deficient demand for outputs other than primary commodities. This is compounded by increasing supply-capacity across the developing world itself not least in China shown to displace SSA manufacturing products (Kamau, McCormick, and Pinaud 2009; Ceglowski, Golub, and Mbaye 2015; Kamau 2013; Kaplinsky and Morris 2008). This makes the question of how to maintain and how to unlock new sources of demand for manufacturing outlets outside the export market as pressing as ever.

4.1. EXPLAINING THE RISE OF FINANCE...

The disproportionate rise of finance and financial activities relative to real economic activity has been widely noted and acknowledged even in mainstream circles, which start acknowledging that after a certain point financial sector growth can become detrimental to growth. This phenomenon of ‘financialisation’ is either defined simply by its empirical appearance without specifying its time period, and geographical extension and without providing an analytical frame for its causes and consequences – or alternatively, as a distinct phase of capitalism starting roughly in 1980 (Sawyer 2013).

Defining financialisation as distinct phase of contemporary capitalism points to a fundamental restructuring of the production, distribution, and accumulation of surplus value, which ultimately sets the context against which commodity production in developing economies takes place. Understanding the growth of finance, in that sense, requires in the first instance a brief characterisation of the functions of money in the economy at the

theoretical level. Standard neoclassical macroeconomic theory describes the functions of money around three main functions, including money as a *unit of account* (i.e. an agreed measure for stating the prices of goods and services), a *store of value* (i.e. an object expected to retain its value in a reasonably predictable way over time) and a *medium of exchange* (i.e. object that is generally accepted in exchange for goods and services). All of these are valid descriptions of the functions of money but they also partially misconceive the nature of money by overemphasising its role as a medium of exchange that enabled the transition from the subsistence economy to an exchange economy. Instead, what distinguishes the subsistence economy from the capitalist economy is not so much the prevalence of exchange but of credit relations (McLeay, Radia, and Thomas 2014).⁸ This has to do with the timing of the exchange, producers not necessarily wanting to or being able to consume at the time of production. The centrality of the timing of exchange can be readily illustrated replicating the standard textbook example of emerging exchange relations between Robinson and Crusoe. The central function of money is not to reduce transaction costs associated to barter trade but bridging the decisions of production and consumption diverging in time with trust. If Robinson produces berries in summer but Crusoe only catches fish in autumn, then Crusoe acquires berries by issuing the promise to pay fish against the berries at a later point in time (an IOU). Money, then, is a special form of IOU, namely one that everyone trusts (McLeay, Radia, and Thomas 2014). The implications of conceiving money as an IOU are far reaching. For those who receive it, it is a financial asset, which ultimately can itself be traded. Correspondingly, money then is also always a financial liability, i.e. someone else's debt, irrespective of whether or not there is interest being paid on it or not.⁹

While money, defined as a universally accepted IOU, is always is a form of credit itself, classical Marxist theory emphasises that the act of borrowing and lending against interest can serve two fundamentally different purposes in the process of production. Money can be

⁸ This definition of money is closely linked to the classical separation between the real and the money economy (**classical dichotomy**) and the proposition that **money is neutral**: Money in this definition is simply a medium of exchange, whose growth in supply has no fundamental bearing on the functioning of the economy other than reducing the costs of transaction associated to exchange. Money is just a numeraire, a yardstick by which to measure the relative prices (and therefore scarcities) of the various goods. Conceived merely as numeraire, money cannot affect any real variables such as employment and overall activity, themselves determined by technology and preferences independent of money. Thus, the monetary economy just determines the absolute prices for goods whose demand and supply is determined by preferences and the state of technology. Thus, the quantity of money in the economy does not affect agents' decisions to consume and produce (Dimakou and Fine 2016: 32ff).

⁹ Note, this definition is derived from accounting identities and abstracts from different power relationships embodied in different types of debt.

advanced against interest to allow for other purchases¹⁰ or it can be borrowed and lent to expand production in the anticipation of profits. The former merely amounts to a redistribution of monetary wealth in place. By contrast, the latter, termed by Marx as so-called ‘interest bearing capital’ (IBC), intends an expansion of that wealth through new production. Yet, while the successful payment of interest on IBC, in principle, depends on the successful expansion of production and profitable activity, IBC can take a life of its own being itself an asset from the perspective of the lender that can be sold and traded and therefore generate price dynamics of its own. This independent circulation of IBC is termed by Marx ‘fictitious capital’, fictitious because financial assets deriving from IBC can circulate and perform independently of the underlying real accumulation process (Fine 2013b).

The dynamics of accumulation (and growth of prices) of fictitious and real capital have the potential to diverge from one another because real accumulation intentions may not be realised in practice and are contingent upon outcomes determined separately from intentions while fictitious accumulation may have diffuse real knock-on effects.¹¹ This divergence between fictitious and real accumulation, in a nutshell, describes the ongoing processes in contemporary capitalism starting around 1980 with prices of financial assets – at some point and increasingly distantly related to the production of commodities – spiralling out of control while real accumulation stagnates. Hence, following Fine (2013b: 55), financialisation refers to the “intensive and extensive accumulation of fictitious capital”. Intensive, in that the growth and proliferation of financial assets have accelerated substantially; and extensive, in that more and more things are drawn into the realm of tradable financial assets. The extensive accumulation of fictitious capital generates hybrid and complex forms of money advanced against interest for instance in the form of bundled and traded mortgages¹² and

¹⁰ This category includes for example consumer credit advanced by banks or retail credits advanced traders (such as lease-purchase deals proposed by car dealers)

¹¹ Even the best intentions may fail to realise accumulation because actual outcomes in profitability depend on a myriad of factors such as how the economy is functioning as a whole. By contrast, even fictitious capital can lead indirectly to successful real accumulation, for instance by creating consumer markets facilitating production elsewhere in the economy.

¹² Mortgage lending is not as such IBC but merely an advance to facilitate a purchase. Yet, once a portfolio of mortgages is bundled and traded as a financial asset, it enters the realm of fictitious capital because money is being advanced in the expectation of realising a surplus.

subjects provision in the realms of social reproduction to flows of fictitious capital, for instance in the provision of water and housing (Fine 2013b).¹³

This theorisation of financialisation through fictitious and interest bearing capital is not undisputed (see for instance Lapavitsas 2011; Boyer 2000; Stockhammer 2004; van der Zwan 2014) and there are various issues open to debate beyond that, most importantly, the two-way causal relationship between the poor performance of the real sector and the rise of finance as well as the factors explaining this restructuring of capital accumulation in the first place, with explanations ranging from an over-accumulation crisis starting in the 1970s, the decline of US hegemony, the disintegration of the Fordist regulation regime and the rise of neoliberalism (Lapavitsas 2011).

4.2. AND ITS CONSEQUENCES

4.2.1. Depressed productive sector investment demand

Bearing in mind these ongoing debates, what is important for the problem of profitable commodity production in developing economies is that the latter face a global economic context which is marked by depressed or stagnating real economic production. Leaving aside the causal relationships underpinning this process, what is clear is that real economic production in developing economies is increasingly unlikely to be driven by investment demand from high-income economies (1) or to be sustained by growing consumer markets in the latter (2).

Firstly, one of the characteristics of the financialised accumulation regime characterising contemporary capitalism are depressed levels of investment outside the fictitious. In other words, investment is increasingly *less* likely to be linked to productive sector investment and this trend extends to (foreign) investment in developing countries. By way of example, the UK's substantial increase in private sector leverage since the 1970s is not matched by a corresponding increase in new capital investment. In 2012, a mere 14% of total bank lending in the UK was extended to businesses for non-real estate purposes. The remainder is distributed between residential mortgage lending (65%), commercial real estate (14%) and consumer credit (7%) (Turner 2016). Not only does this feed real estate bubbles and cause

¹³ Water provision in the UK, for instance, is controlled by financial holding companies. Crucially, the growth of water provision assets held by those companies is decoupled from the actual collection and distribution of water and the degree to which this is done efficiently.

financial instability but it also restructures corporate finance, with business increasingly relying on bond markets for finance, a trend which tends to disfavour smaller business and riskier and more long-term oriented capital investment like research and development (Turner 2016). In the UK, for instance, business expenditure on research and development, a key driver of innovation and long-run productive capacity has fallen as a share of GDP since the mid-1980s (Reed and Mohun-Himmelweit 2012).

Quite apart from developing countries being increasingly exposed to banking and currency crises (Kaltenbrunner and Paineira 2015), investment flows to developing countries are highly uneven with sub-Saharan Africa being situated at the rear end of the spectrum (Wade 2006) and increasingly focused on financial not real sector activities. The rapid increase in traded financial assets relative to real assets coupled with the crisis of profitability (i.e. limited real investment opportunities) means that too much money chases too few real investment opportunities giving prevalence to speculative investment motives. This, in turn, disfavours would be producers in developing countries and makes it increasingly difficult for infant industries to get established and grow (Wade 2006).

On aggregate, empirical evidence on the effects of financialisation on investment in developing countries suggests a reduction in productive sector investment, in particular manufacturing (see Demir 2007; Demir 2009; Araújo, Bruno, and Pimentel 2012; Bonizzi 2013). In part this is due to the restructuring of investment flows emanating from developed economies. In 2012, services account for 63% of the total global FDI stocks, more than twice the share of manufacturing (26%). What is more, an important part of that constitutes investment in real estate or financial sector companies. In Africa (including North Africa), services account for 48% of total FDI instocks in 2012 followed by primary commodity production (31%). In turn, a staggering 56% of FDI instocks in the service sector are held in finance (UNCTAD 2015).

The trend towards decreasing shares and levels of productive sector investment in developing economies is also explained by the replication of typical patterns of financialisation in developing economies, for instance in terms of bank lending behaviour, shareholder orientation or derivatives speculation of non-financial corporations (Bonizzi 2013). Of particular relevance for the case of sub-Saharan African economies in this respect is the surge and financialisation of micro-finance operations. Not only go micro-financed businesses quickly out of business while posing a disproportionately high interest burden on

the poorest households,¹⁴ micro-financed loans are increasingly used to finance consumption expenditure and micro-finance investment funds (MFIs) dominating the industry have transformed microloans into investable assets (i.e. fictitious capital) by bundling and trading securitised microloan-backed assets. Bateman (2015) therefore argues that micro-finance drags resources away from productive industries, contributes to informalisation and displaces more developmentally effective financial institutions.

4.2.2. Coupled with an eroding consumer demand base in high income countries

A second consequence of financialisation with immediate relevance for the potential of commodity production in developing countries is the tendency of financialisation to undermine the broader social conditions in which real economic accumulation can take place. One of the consequences of the finance-led, asset-driven accumulation regime is increasing inequality of income and wealth as well as between wages and profits which make deficient consumer demand a systemic rather than transitory phenomenon (Stockhammer 2012; Szymborska 2016).

Financialisation can of course be directly linked to the financial crisis erupting in 2007/8 and the resulting recession from which advanced economies still have in no way recovered. Taking the example of the UK, in 2013, the level of real GDP stood more than 3% *below* its pre-crisis peak, and close to 20% below the level that it would have achieved had it continued to grow at its pre-crisis average rate (BoE 2013).

But not only have advanced economies witnessed the worst financial crisis and resistant recession in almost a century, financialisation has also governed economic and social restructuring by systemically and systematically producing and reinforcing inequality of income and wealth. The resulting slow growth in purchasing power, in turn, undermines profitability in the real economy and exacerbates trends towards stagnation and slow growth outside the financial sector.

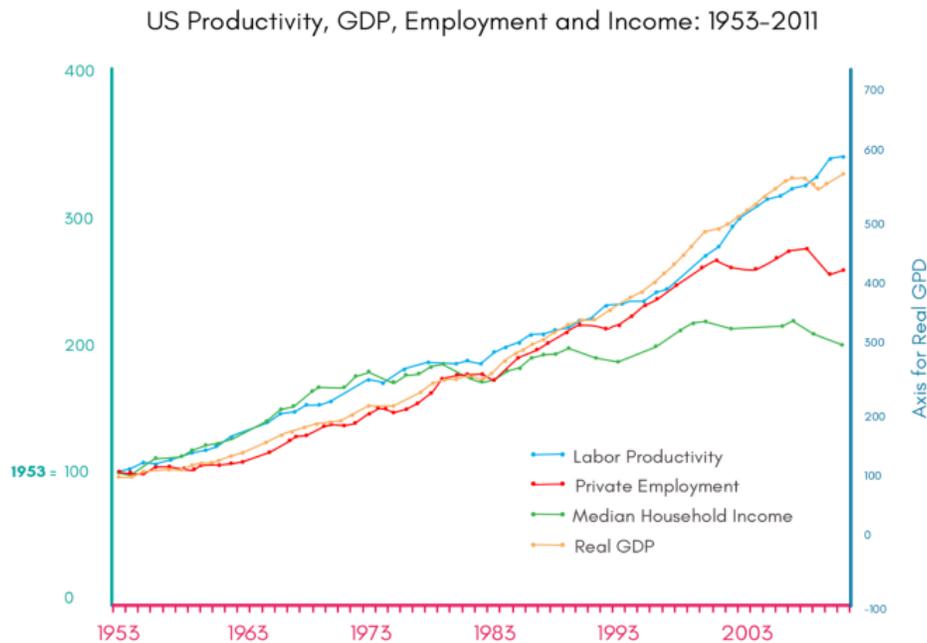
Empirical evidence suggests that barring few exceptions, OECD economies are wage-led (Lavoie and Stockhammer 2012), investment and ultimately growth being driven by increases in consumer spending (Blackley 2014). Yet, between 1977 and 2008, most OECD

¹⁴ The average interest paid on microloans across the developing world is 35%, reaching grotesque heights of close to 90% in Uzbekistan (Bateman 2015).

countries did witness a decline in the share of wages in national income and a corresponding rise in the share of profits, though this happened to varying degrees, the fall in the UK's wage share being among the highest. The fall in the wage share in UK income, in turn, is associated with rising levels of inequality and stagnating median annual earnings of full-time workers, which in the UK would have been £7,000 per full-time earner higher, had the wage share stayed at its 1977 level. For the UK, estimates reveal a negative correlation between the profit share and levels of business investment (Reed and Mohun-Himmelweit 2012).

A similar picture emerges for the United States. *Graph 1* plots the evolution of labour productivity, median household income, private sector employment and real GDP in the US over the period 1953-2011. What stands out is that, initially, in the period between the end of the Second World War and 1973, output, productivity, median income and employment increase at similar rates. From the early 1980s up until around 2001, employment growth kept up with productivity increases but median income stagnated and fell further and further behind the rate of productivity increase. It is thus a period of increasing inequality though coupled with employment creation in the low skill-segments of the labour market that kept employment growth in line with the rates of output and productivity growth. Between 2001 and 2011, median incomes stagnated even more to the extent that they have been lower in 2011 lower than they were in 1996 and employment growth also decoupled from growth of output and productivity.

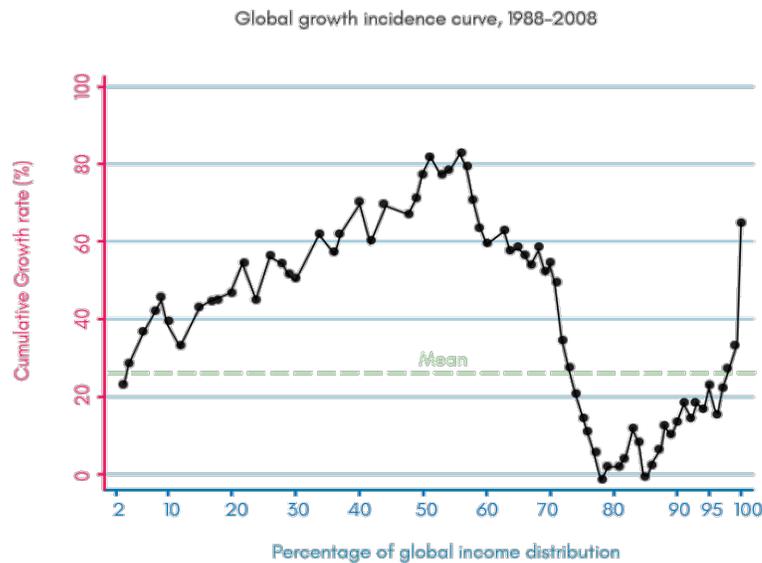
Graph 1. US Productivity, GDP, Employment and Income: 1953-2011



Source: McAfee (2012) based on Census Bureau, Bureau of Labor Statistics

Drawing on data compiled by Lakner and Milanovic (2016), an equally striking picture emerges from **Graph 2**, plotting the cumulative growth of income between 1988 and 2008 by percentile along the distribution of income. Strikingly, the top 1% of income earners realise strong increases of over 60% over the period 1988 to 2008. By contrast, in the 75th – 90th percentile of the global income distribution, i.e. among the working and middle classes of advanced countries, incomes grow much more slowly than those in the rest of the world and those of top earners in their own countries. Incomes of those in the 50th to the 60th percentile globally, i.e. the new middle classes in emerging countries like Indian and China, also increase strongly but, it should be noted, comping from a very low base and lagging in absolute terms still significantly behind incomes in developed economies.

Graph 2. Global Growth Incidence Curve, 1988-2008



Source: Lakner and Milanovic 2016: 229

These tendencies are systemic reflecting the growing power of (financial) capital over labour and therefore not easily reversed or rebalanced. This is illustrated not least by the policy response to the financial crisis, in which the state has played a major role in the restoration of finance but not in preserving the productive system (Fine 2013b). Apart from lowering and maintaining the bank rate at a historic low of 0.5% (and pressuring commercial banks into lowering the LIBOR), the main policy response to the financial crisis in the UK consisted of large-scale central bank asset purchases (quantitative easing, QE). Very little of the money created through QE boosted the real (non-financial) economy. The Bank of England estimates that the £375 billion of central bank asset purchases authorised in several rounds of QE led to 1.5-2% growth in GDP (BoE 2012). The BoE (2012) further estimates that QE boosted bond and share prices by around 26%, which would be equivalent to an increase of asset wealth of £10,000 per person if assets were perfectly evenly distributed. In reality, however, asset wealth is and was very unevenly distributed with 40% of the stock market is owned by the wealthiest 5%. So estimates show while the vast majority of the UK's population saw no benefit from QE, the richest 10% of households would have each been between £128,000 and £322,000 better off (Nef 2013). This boost to the wealthiest segments of the population happened and happens at a time when fiscal austerity – imposed by the coalition government since 2010 with recourse to arguments of ‘expansionary

austerity’ (see for instance: Alesina and Ardagna 2010; Guajardo, Leigh, and Pescatori 2014; Trichet 2010) – disproportionately affects the poorest in society.

Taken together, developing economies face systemic pressures of stagnating or at least slow-growing global demand-base for goods and services, while investment demand outside financial services is depressed.

5. BRINGING DEMAND BACK IN

From laissez-faire and “neutral” trade regimes, over the acknowledgement of a set of reasons for industrial policy, to discussions about “which” industries to promote, the debate has certainly moved on. While there is an increasingly comprehensive body of research regarding the dynamics of productivity growth through learning, there is little work regarding the demand conditions necessary to sustain accumulation in the productive sectors of the economy, with corresponding implications for how the role of macroeconomic policy in support of industrial development is understood. Section 3 had further argued that China-related industrialisation paradigms expose the need to understand what determines the growth of demand and how the growth of demand can be supported by (macro-)economic policies, especially when considering the systemic tendency for deficient demand coming from capitalist accumulation dynamics restructured towards financialisation (section 4).

The growth of demand was an important concern in early development theory, if never fully elaborated. Starting from the observation of “*frustrated savings*”, i.e. mobilisable savings not offset by decisions to invest in productive activities but, instead, showing up in hoarded gold, foreign exchange, luxury consumption or indeed capital flight, Hirschman (1958), for instance, maintains that the starting point for understanding modern sector development must be “a consideration of the forces that determine investment in underdeveloped countries” (p. 35). Yet, neither mainstream nor heterodox growth theories offer much help in understanding the growth of demand, because the growth of demand is not recognised as a phenomenon that needs explanation beyond the short-run. In mainstream growth theory and most heterodox growth theories supply determines demand in the long-run hence the focus

on factors that determine supply.¹⁵ This section explores demand-side dynamics relevant for manufacturing sector growth drawing on old development theory (in particular Rosenstein-Rodan, Hirschman and Kaldor) and post-Keynesian scholarship (in particular theories of wage-led growth). It distinguishes between a Keynesian-type demand constraint linked to autonomous investment demand and entrepreneurial expectations and a Kaldorian-type demand constraint linked to induced investment demand and the differential growth of prices across forwardly and backwardly linked production chains.

5.1. LINKING STRUCTURE, SCALE AND DEMAND

Productivity increases in manufacturing production are not merely a *function of knowledge* but also *of scale*. This is reflected in Kaldor's second growth law (Kaldor-Verdoorn law), which states that there is a circular cumulative relationship between output and productivity in the manufacturing sector. Productivity growth leads to output growth and output growth leads to further productivity growth (Toner 1999: 133ff; Thirlwall 1983). Economies of scale, stemming among other things from the division of labour, drive productivity increases in individual firms. These can translate into increasing returns to scale at the industry or even economy level through pecuniary externalities, i.e. externalities linked to monetary and price effects (Scitovsky 1954). Cheaper output of good A also reduces the input costs of good B, allowing for further economies of scale in the production of good B, which again creates positive pecuniary externalities for other firms and so on. The bigger the size of the market, the greater the number of inputs produced under increasing returns to scale. Thus, increasing returns to scale at the economy level depend on the economy's volume of production, i.e. the simultaneous growth of a number of interlinked economic undertakings operating each on large scale. This fundamental relationship between the size of the market and productivity is first explored by Adam Smith (Blitch 1983) and picked up by Young (1928) and later Kaldor (2007: 59).

Linking the scale of industrial production to the premise that the economic system is driven by demand, to which supply adapts within limits, Kaldor maintains that manufacturing

¹⁵ The conclusion that demand does not matter in the long run derives from the separation of the real economy from the money market (classical dichotomy). The plan to demand a commodity must necessarily go together with the plan to supply another commodity of equivalent value. Because any decision to produce ultimately reflects a plan to demand, aggregate supply equals aggregate demand, though not necessarily in the right markets but price adjustments will ensure equilibrium of aggregate demand and supply.

production (unlike agriculture where subsistence production and auto-consumption are theoretically possible) is dependent on and therefore constrained by demand for its products:

“The industrial producer, on the other hand, can only operate in a social setting: his activities are dependent on the *demand* for his services, or on the products of his labour, by others. The industrial producer, whether he is an artisan producing on a small scale mainly by his own labour, or a manufacturer with many employees, is engaged in producing for the market, and his success or failure depends on the strength of the market demand for his products.” (Kaldor 2007: 55, original emphasis)

And concludes that cumulative causation is dependent on the growth of ‘autonomous’ sources of demand since all other sources of demand are ultimately endogenous, i.e. expenditures derived from the production process itself. By definition these cannot exceed production costs and consequently cannot serve as a source of profits (Kaldor 2007: 33).

“And industrial activities, unlike agricultural activities, are not "self-sustaining" - they are dependent on the demand for their goods coming from *outside* the industrial sector. This does not imply, however, that such "outside demand" accounts for the whole or even the major part of industrial activities. It implies only that the element of "outside demand" is the ultimate causal factor which accounts for all other activities, since it is the proportion of incomes derived from sales to outsiders which determines how much income will be generated in other industrial groups as a result of sales to insiders.” (Kaldor 2007: 57, original emphasis)

Thirlwall (1986) formalises Kaldor’s two-stage two-sector model, in which agricultural and export demand are established as the two fundamental sources of autonomous demand. Demand from the agricultural sector sustains manufacturing growth in earlier stages, export demand in later stages of development. Growth of agricultural purchasing power is given by the price of investment goods obtained per unit of agricultural output (i.e. terms of trade between industry and agriculture): the lower industrial terms of trade, the higher the agricultural sector’s growth rate, the higher demand for industrial output. Growth of manufacturing sector supply, in turn, is positively related to industrial terms of trade because less industrial output has to be exchanged for food (and by extension spent on wages) thereby increasing the size of industrial profits that can be reinvested. The equilibrium growth rate at which manufacturing sector growth is neither constrained by demand nor supply is given by the relative price level at which the two sectors’ growth rates equalise. If terms of trade were higher, industrial output could theoretically grow even faster but demand growth from agriculture would not warrant it at this level of relative prices (Thirlwall 1986: 203ff).

Over time, exports will come to dominate demand from agriculture as source of autonomous demand. The ratio of export to agricultural demand inevitably changes over time because

agricultural purchasing power faces a secular long-run trend to decline (due to diminishing returns to land). Growth of the industrial sector becomes *balance of payments constrained*, as summarised in the following equation known as Thirlwall's law:

$$y_{i,bop} = \frac{\hat{\varepsilon} \cdot y_{world}}{\hat{\pi}} \quad (1)$$

Where y_{world} is the growth of world income, $\hat{\varepsilon}$ and $\hat{\pi}$ are the income elasticity of demand for exports and imports respectively. Export earnings have to finance (capital goods) imports. However, in line with Prebisch (1950) and Singer (1950), generally income and price elasticities for exports from developing countries are lower than their income and price elasticities for (capital) imports. As no country can permanently run a deficit, (manufacturing sector) growth is limited by growth in demand on world markets (Thirlwall 1986: 215ff).

Equation (1) is the most basic version of Thirlwall's law depending on strong assumptions, namely that the current account must be balanced in the long run, that changes in relative prices are irrelevant in the long-run, that there is only one trading partner and there is only one good traded. Yet, these assumptions can and have been relaxed in extensions of Thirlwall's model. Capital account dynamics, for instance, have been incorporated by Thirlwall and Hussain (1982) and Moreno-Brid (1998).¹⁶ Araujo and Lima (2007) provide a multi-sector extension of the model¹⁷ and K. S. Nell (2003) provides a multi-country extension taking into account different income elasticities of demand from different trading partners. Some empirical studies also relax the assumption of constant relative prices and include estimates for both income and price elasticities (e.g. Alonso 1999; Bagnai, Rieber, and Tran 2012). Bagnai, Rieber, and Tran (2012, 2016) for instance, find that about half of the relaxation in the balance of payments constraint comes out of improving terms of trade with Northern (i.e. developed) economies.

¹⁶ Capital account dynamics can be incorporated by including the weighted sum of the growth rates of exports and real capital inflows into the numerator (Thirlwall and Hussain 1982) or within a sustainable deficit framework, i.e. by taking the current account as a constant share of GDP (Moreno-Brid 1998).

¹⁷ Araujo and Lima (2007) provide a multi-sector extension of Thirlwall's model, which allows to account for sector specific income elasticities of demand and shows that a change in the structures of production towards sectors with higher income elasticity of demand for exports and away from sectors with high income elasticity of demand for imports allows for faster growth rates even if world income stays constant (see Gouvea and Lima 2010 for an empirical investigation).

5.2.1. The formation of markets in transformational growth theory

Empirical support for balance of payments consistent growth establishes a close correlation between the growth of exports and the growth income both in the developed and the developing country context (see Thirlwall 2013: 111ff).¹⁸ Yet, the body of existing econometric evidence cannot uncover the direction of causality (McCombie 1989), which could run from (exogenous) growth of world demand to growth of country *i*'s exports to growth of domestic income (equation 2) or from growth of country *i*'s capital stock to growth of domestic income (supply) to growth of country *i*'s exports with imports adjusting accordingly (equation 3).

$$\uparrow \Delta Y_{world} \rightarrow \Delta X_{i,world} \rightarrow \Delta Y_i \rightarrow \Delta M_{i,world} \quad (2)$$

$$\uparrow \Delta K_i \rightarrow \Delta Y_i \rightarrow \Delta X_{i,world} \rightarrow \Delta M_{i,world} \quad (3)$$

The balance of payments constrained growth literature leans towards the former interpretation though not excluding the latter. Thirlwall (1979), for instance, proposes a number of mechanisms through which export-demand raises output and productivity growth, namely by encouraging investment thereby augmenting the capital stock and triggering technological progress, or by increasing the demand for labour in higher productivity sectors and by increasing the ability import. By contrast, Razmi (2015) argues that the alternative scenario where domestic capital accumulation facilitated, for instance, by favourable relative prices causes an expansion of the export sector, allowing for an increased volume of imports is at least equally if not even more plausible (Razmi 2015).

One important element to note in this debate is that the world economy as a whole is a closed economy. So even though the growth of export demand is undoubtedly in many instances exogenous to individual economies, it ultimately rests on the growth of investment and purchasing power in some constituent parts of the world economy. In principle, sustainable simultaneous expansion of exports of all countries is possible, because an increase in exports of country₁ also increases that country's demand for imports from the rest of the world, leading to growth of world income and export demand (Balassa 1989). In practice, however, we observe a simultaneity problem ('fallacy of composition'): intense

¹⁸ For estimations focussing on developing economies see for instance: Perraton 2004; Ansari, Hashemzadeh, and Xi 2000; Alencar and Strachman 2014)

price and wage competition between developing countries for the same export markets has resulted in declining terms of trade for low value-added manufacturing products (Sarkar and Singer 1991). The fallacy of this race to the bottom is that it results in a systemic deflationary downward spiral in which each country's attempt to boost its competitiveness through wage depression further undercuts a vital source of domestic purchasing power and further contributes to the deflation in world demand (Razmi and Blecker 2008).

Put differently, simultaneous export growth, while conceivable in theory, is not a question of free-trade but one of a continuous rise of aggregate demand in the world economy as a whole (Blecker 2002).¹⁹ This raises the question of what determines expansion in demand (be it export or domestic) in the first place. Nothing is solved by introducing foreign trade to the model if we look at the question from the point of view of the *world* market. While the simultaneous growth of exports is feasible in theory, the world economy as a whole cannot be export-led. Initially, markets must form independent of the growth in export demand in one or more constituent parts of the world economy even though this will generate multiplier effects in some other economies through the growth of export demand.

Transformational growth theory provides some answers linking the formation of mass-markets to a historical process involving changes in household production and consumption in relation to industrial production following some stylised historical patterns. In the first stage, new markets form because a newly formed industrial working class starts purchasing basic goods previously produced by households. This transition requires the alienation of the peasantry from the material inputs to domestic production, as for example, during the English enclosure movement. In the second stage, productivity-enhancing effects of mass-production technology raise real wages. As commodities cheapen, they become affordable for a larger range of customers and customers who had already purchased a particular commodity will widen their consumption basket. In the third stage, changes in the composition of demand resulting from income growth transform the household into an almost pure consumption unit. For example, without the raw materials and labour time required to spin cotton, households purchase ready-made textiles and sewing machines, thereby creating a mass-market for sewing machines. As real income growth continues, life-style changes eventually lead to mass-markets for ready-made apparel (Argyrous 2002).

¹⁹ Blecker (2002) includes potential systemic shortfalls in world demand for certain manufacturing commodities by including an adding-up constraint into the balance of payments consistent growth model.

E. J. Nell (2002) argues that the growth of demand can be broken down into two components: the life cycle of existing markets and the emergence of new markets. Consumer goods markets typically follow cyclical evolutions from the early beginnings over rapid expansion to maturity and stagnation. This draws on the observation that increases in income of existing consumers are not spent proportionately on the existing consumer basket. Instead households introduce new goods into their consumption basket, making existing markets expand at a pace slower than the income of their customers. However, cost-cutting innovations may allow a drop in price sufficient to make the product affordable for a whole new range of potential new customers causing a new sales drive and an expansion of firms. Hence existing markets tend to expand through incorporation effects along the income distribution curve. The emergence of new markets is more complex and, for instance, related to life-style changes of households as incomes increase which induce the development of new products. The higher the level of wages the larger the potential market of customers willing to buy such products (E. J. Nell 2002).

To find an answer to the question of what constrains investment demand, Hirschman distinguishes between autonomous and induced demand. Correspondingly, we can distinguish between two types of demand constraints on industrial output growth: a *Keynesian-type* and *Kaldorian-type* demand constraint. These reflect different ways an economy could depart from Say's law, which are usually conflated in the balance of payments consistent growth literature.

5.2.2. The Keynesian-type demand constraint

The first type of demand problem is a *Keynesian-type demand problem* concerning the level of aggregate demand, or more specifically, entrepreneurial expectations of what this level will be.

Some authors writing in the classical tradition and under the assumption that Say's law holds, anticipated the possibility of Keynesian problems of shortfalls in aggregate demand. Rosenstein-Rodan's (1943), shoe-factory argument, for instance, relies on the observation that mass production also requires mass consumption. Given the necessity for mass production to achieve economies of scale, a modern (shoe) factory produces more of a single good than its owners or workers could ever consume. Manufacturing production only becomes viable and only triggers cumulative causation of pecuniary externalities at a given

minimum level of consumer demand. Rosenstein-Rodan (1943) therefore advocates a 'big push' strategy, in which a number of large-scale horizontally linked investments in consumer goods production are centrally planned and pursued simultaneously in order for pecuniary externalities to be internalised by individual firms and thus for production to become viable (pp. 205f). In addition, Rosenstein-Rodan advocates, in line with the general development discourse at the time, public investments into infrastructure and human capital, seen as investments that are not profitable to individual firms (Rosenstein-Rodan 1943: 205 also see Lewis 1954: 145). Even further back, Malthus and Sismondi argued that oversaving and mass poverty respectively could lead to underconsumption (Bleaney 1976). In the Malthusian tradition, underconsumption problems are explained by oversaving, i.e. capitalists save and invest so much so as to leave no further incentive for production due falling prices and profits. In the Sismondian tradition, underconsumption is explained by the inability of labour to buy its own product given low wages (Bleaney 1976).

Crucially, for Rosenstein-Rodan as for Young, "*(...) the size of the market [and by extension the realisation of pecuniary externalities] is determined and defined by the volume of production*" (Young, 1928: 533). In other words, everything that is produced will also be consumed, i.e. Say's law is assumed to hold. In these early theories of cumulative causation, late-industrialisation breaks down to a coordination problem that can be overcome by government coordination of investments provided that increased supply is produced under conditions of increasing returns and that the demand for commodities is elastic in order for lower price of one commodity to result in increased demand for other commodities (Blitch 1983).

Yet, while the recognition of deficient demand as an empirical phenomenon dates back centuries, Bleaney (1976) argues that for this to be consistent at the theoretical level requires a rejection of Say's law, i.e. it must be considered possible that money is not invested (back) into the economy. Say's law underpinning both classical political economy and marginalist theory breaks down with the introduction of money and credit, which separates the decisions to spend and produce. Goods can be demanded without production of goods needed to pay for them (see section 4 for further elaboration). While the growth of demand can be separated from the growth of supply, the growth of supply cannot be separated from the growth of demand. In the Keynesian reading, there is no reason to assume that realised profits will lead automatically to new investment and an expansion of capacity. How realised

profits are spent depends on the (expected) growth of the market. If the growth of consumer demand is sluggish, there is little reason to invest in an expansion of capacity even if profitability is high. Hence, capacity is planned to service demand and, by extension, investment decisions are determined independently from savings (E. J. Nell 2002). Savings do not by themselves increase the deposits or funds available for banks to make loans. If the money/ income had not been saved but instead been spent on goods and services, then it would simply appear on the deposit accounts of the firms producing those goods and services. The driving factor that increases the amount of overall deposits is investment through credit creation by banks. Savings adjust correspondingly, e.g. through growth of wage incomes following from investments or retained earnings/ profits generated out of new investment (McLeay, Radia, and Thomas 2014).

Once allowing for the possibility that profits are not reinvested into an expansion of capacity as a result of slow growth of demand, investment becomes the causal variable determining profits ('capitalists earn what they spent'). Leaving Marx' reproduction schemes open on the demand-side, Kalecki shows that investment demand is ultimately dependent on the growth of consumption demand. In Marx' reproduction scheme, a profit squeeze in the consumer goods sector due to the gradual depletion of the reserve army of labour spurs investment in the capital goods sector to expand labour savings methods of production. Hence the fall in investment demand in the consumer goods sector is off-set by the increase in investment demand in the capital goods sector. This is no longer the case under the assumption that capacity is planned to service demand, which establishes a hierarchy between the consumer goods and backwardly linked capital goods sector. An increase in unemployment (the reserve army of labour) would imply a fall in demand for consumer goods leading to underutilisation of equipment in the consumption goods sector and therefore also reduce rather than increase investment in the capital good sector. The reduction of capacity utilisation in the consumption sector results from the possibility that money is not spent on goods and services ('paradox of thrift') (Halevi and Taouil 2002).

Keynesianism offers an explanation for how this might happen by stressing the role of entrepreneurial expectations of future demand in determining current investment levels and hence current effective demand (Bleaney 1976). Post-Keynesian growth theory builds on this and establishes a close link between investment demand and income distribution. A very unequal distribution of income means manufactured goods can only be sold to the relatively

few rich. Given their small numbers, they cannot sustain demand for mass production, leading to a short-fall of demand for industrial output which, in turn, limits investment and decelerates manufacturing output growth (Dutt 1984). However, the impact of an increase in the wage share of income is ambiguous: while it increases aggregate demand, it also decreases the profit share of income, hence reducing the scope for profitable investments. Depending on the respective size of these effects, the economy is said to either be wage-led or profit-led (Bhaduri and Marglin 1990; Sasaki 2012). Empirical evidence suggests that most OECD economies are wage-led (Lavoie and Stockhammer 2012). Data for the US economy, similarly, reveal a strong correlation between private investment and private consumption as well as the unemployment rate but not with real interest rates, thus lending further support for post-Keynesian models of investment (Blackley 2014). Relatedly, Lautier and Moreaub (2012) find that domestic investment is a strong catalyst for investment of foreign companies who tend to follow domestic market formation. It is, however, worth noting that most studies quoted above are concerned with developed countries – the potential for wage-led growth in the developing country context having thus far received little scholarly attention.

5.2.3. The Kaldorian-type demand constraint

The second type of demand problem comes out of the *Kaldorian tradition*²⁰ and is largely independent of entrepreneurial expectations. It stems from differences in productivity growth rates across sectors, which imply differences in the growth of purchasing power. The size of the market does not only have implications for the costs of production and productivity growth but also for the demand side because pecuniary externalities also imply a potential investment multiplier process for an increase in the volume of production of good A also *induces* demand for future production through technical complementarity (necessary inputs), consumption complementarities or simply the replacement of capital depreciated in the production process (Scitovsky 1954; Hirschman 1958).

While this constitutes a mechanism for increases in demand independent of the anticipation of future consumer demand in the Keynesian sense (Hirschman 1958: 33), each commodity producer relies on demand provided by someone else while the decision to produce is left to

²⁰ Although most models on Kaldorian lines focus on the external constraint, some models explore intersectoral balances further (see for instance Canning 1988; Dutt 1990; McCombie and Roberts 2008; or Skott 1999).

the individual producer. A cumulative demand feedback loop can stagnate or fail to realise in the first place for a number of reasons. In particular, backwardly linked industries can face demand constraints to the extent that the growth of purchasing power varies along the demand chain.

Kaldor (1975) for instance, shows that Say's law does not hold in an economy in which different sectors – each linked through reciprocal demand and supply – grow at different paces. For instance, lower growth rates of productivity in the agricultural sector also imply lower growth rates of agricultural purchasing power, which, in turn, limits growth of the manufacturing sector. Because the price of labour in terms of food cannot fall below a certain minimum subsistence level, there will be a point at which the prices of manufacturing products cannot fall any further to deplete excess supply of industrial goods and adjustment must necessarily happen through quantities. Differences in the nature of competition come to play: while in agriculture perfect competition ensures that demand and supply adjust through prices, monopolistic competition in industry allows for mark-up pricing and quantity adjustment prevails (Kaldor 1975). Similarly, Thirlwall introduces a demand constraint on (industrial) output growth, but this only stems from exogenous income (productivity) growth and differences in demand elasticities (Dutt 1992). Nothing accounts endogenously for changes in the saving/ investment behaviour of industrialists. Hence, Thirlwall's model does not account for changes in effective demand. Instead, his model remains based on the implicit assumption that all savings are re-invested (Dutt 1992). In fact, an independent investment function is deliberately excluded by Thirlwall (1986) in footnote 7.

There are thus different interpretations of what constitutes a departure from Say's law. While Dutt (1984) introduces an endogenous investment function breaking up the assumption that all profits are invested back into the economy, Kaldor and Thirlwall show that even if profits are invested back, shortfalls in demand can arise in an economy with more than one sector, which are linked through reciprocal demand and supply chains to the extent that there are differences in the rates of growth of the value of output and therefore purchasing power (Thirlwall 1992).

As pointed out above, the pace of induced demand is not independent of the level of aggregate demand and entrepreneurial expectations. Effective growth of and expectations about final consumer demand are ultimately the pace-setting element for investment demand because other goods (intermediate inputs or investment goods necessary to replace depleted

capital goods) in the last instance relate to consumer goods production. However, the Kaldorian-type demand constraint outlined above highlights that there is no reason to assume that the growth of demand is smooth and proportionate along the demand chain given various factors influencing the growth in the value of output and therefore purchasing power along the demand chain. These include different patterns of productivity growth, different elasticities of demand, or market structures and corresponding power relationships in the determination of prices. Consider, for instance, a rise in expectations about the demand for consumer electronics, which would also spur the demand for inputs such as copper and quarrying machinery. Yet, there might be a situation in which a smelting cartel keeps prices for copper artificially low despite rising demand. This would result in slow growth of purchasing power of copper mining companies, therefore reducing their own demand for inputs like machinery with further ripple through effects on the demand for processed iron etc.

5.2.4. The specificity of export demand

Export demand is specific in that it links the Keynesian and Kaldorian type of demand problems. Export demand is a component of aggregate demand and as such affects entrepreneurial expectations and decision making in the Keynesian sense, with corresponding demand multiplier effects. Beyond providing market outlets, the actual relevance of Thirlwall's model is that export demand constrains imports necessary for (ongoing) production processes.

“This is the fundamental significance of the balance-of-payments constraint for an understanding of growth-rate differences between countries; and the fundamental importance of exports as a component of demand is that it is the *only* component that can provide the foreign exchange to pay for the import content of other components of demand – consumption, investment, and government expenditure.”
(Thirlwall 1997: 380, original emphasis)

The introduction of an import demand function effectively spans a link between the demand side and the supply side of the developing economy, which is absent from other models of growth or structural change. Industrialisation requires mechanisation and to the extent that capital goods are not yet produced domestically, investment demand can leak into imports for which current production capabilities have to pay in the form of exports. Given current domestic supply structures (reflected in the import-function), an exogenous rise in export demand might not achieve a sustainable path of export-led cumulative causation if it leads to a disproportionate rise in imports. Similarly, unless coupled with efforts to build supply

capacity, domestic demand stimuli could leak into import demand without boosting exports (Blecker 2009). Hence, the pace of structural change is constrained by world market demand for current domestic production.

The example of industrial policy in India prior to liberalisation in 1991 illustrates the extent to which the government's ability to promote changes to the structure of production is itself limited by the growth in export demand. A large fiscal expansion in the period 1980-1990 allowed for a faster growing domestic demand regime. This contributed to the deterioration of the current account and cumulated in the 1991 balance-of-payments crisis. Liberalisation and export-growth contributed to resolving the crisis but only under the condition that production structures had changed as a result of the restrictive trade regime and domestic demand-led productivity growth which preceded liberalisation (K. S. Nell 2013). Domestic demand-led productivity growth had to lay the foundation for accelerated export growth, while export growth was necessary to sustain an expansionary domestic demand regime.

Thirlwall's basic model and its extensions of the model provide a useful empirical tool to determine the extent to which the economy is constrained by export demand and in particular the impact of changes in policy, changing trade partners and changing structures of production. For a sample of Asian and Latin American countries, Gouvea and Lima (2010) show that a change in the structures of production towards sectors with higher income elasticity of demand for exports and away from sectors with high income elasticity of demand for imports allows for faster growth rates in four Latin American and four Asian countries even if world income stays constant. Bagnai, Rieber, and Tran (2012, 2016) apply a multi-country model to a set of 20 sub-Saharan African countries and show that an increase in the proportion of those countries' exports which is going to 'Developing Asia' is the second most important factor in relaxing their balance of payments constraint (after the favourable evolution of terms of trade). Pacheco-Lopez (2005) show that trade liberalisation in Mexico in the mid-1980s had negligible effects on export growth. By contrast, the propensity to import has grown at faster rates than the propensity to export thereby worsening Mexico's balance of payments position.

5.3. SOME POLICY DIMENSIONS OF DEMAND CONSTRAINED CAPITAL ACCUMULATION

From the previous sections follows that the role of policy in sustaining industrial development is to ensure simultaneous increases in demand and supply capacity in order to

prevent capital from flowing out of the country or alternatively investments from not being made. As put most succinctly by Palley (2006: 27):

“Developing the demand side of the economy should be viewed as a complement to developing the supply side. Productive capacity is needed to produce, but demand is needed to ensure that productive capacity is used. Strong demand is also an incentive to add to capacity. Moreover, additions to capacity in the form of investment spending are themselves part of demand.” (Palley 2006: 27)

As shown by the Kaldorian growth literature and mirroring the experiences of successful developmental states, exports constitute an essential part of aggregate demand and therefore serve as accelerator to industrial development. Yet supporting the demand side of the economy goes much beyond active intervention of the exchange rate, as stipulated by current research on industrial development.

There are two important lines of argument worth considering: one is concerned with macroeconomic policy in support of autonomous investment demand and the other with macroeconomic policy in support of induced investment demand.

5.3.1. Macroeconomic policy in support of autonomous investment demand

Firstly, macroeconomic outcomes are determined by the growth in autonomous investment demand, which forms in relation to expanding markets. Modern sector employment generation being itself an essential factor in the emergence of mass-markets, we can assert the importance of targeting labour intensive industries. Haraguchi and Rezonja show that there are certain empirical regularities as to when, at what speed, and for how long employment increases during the expansion of an industry. Early industries that have a strong potential for labour absorption include textiles, food and beverages, chemicals, non-metallic minerals (Haraguchi and Rezonja 2012).

If demand growth is among other things a function of income distribution, then supporting manufacturing sector development will involve policy choices on the distribution side, notably with respect to the regulation of labour compensation and wage-bargaining institutions as well as income re-distribution through taxation. In the US, for instance, the government’s post-war subsidisation of middle-classes through building roads, backing mortgages and guaranteeing incomes through the welfare state enabled workers to buy cars and other mass-produced goods (Mazzucato 2015).

Government spending is itself a component of aggregate demand. This implies a central role of fiscal policy and government procurement of manufacturing output coupled, with targeted

support for backwardly linked industries. The importance of government spending in sustaining high levels of aggregate demand, is highlighted, for instance, by Joan Robinson, Sweezy and Kalecki, who, in the Cold War context, put specific emphasis on the role of military expenditure (Bleaney 1976). More recently, Mazzucato (2015) and Blackley (2014) provide historical and econometric evidence that government spending can be market shaping and crowd-in private investment into markets that would not have otherwise existed. The most famous, contemporary, example being that of the iPhone, whose most important components, including the internet itself, GPS, touchscreen and voice recognition derive from government-funded and market-shaping research (Mazzucato 2015).

Furthermore, policy efforts would have to focus on closely aligning demand side and supply side incentives. Lo and Wu (2013) analyse the example of Chinese industrial policy in the car industry. Although the chosen business model matched the industry and conditions for technology transfer were all set, initially the industrial policy measures failed because demand for cars was insufficient to encourage the joint ventures to increase their investments. Only after the Chinese government massively invested into expanding the infrastructure network in China, did demand for cars take off. Providing this infrastructure, in the end, not only had supply side effects, it also steered demand towards the car industry (Lo and Wu 2013). A similar point can be made for Germany's policy towards green industries. Not only has their supply been promoted through government incentives (subsidised research etc.), also demand for these products was incentivised (e.g. tax breaks for hybrid cars or for the installation solar panels).

Post-Green Revolution India shows the importance of closely aligning demand side and supply side support. Policy incentivised agricultural production through a support price system. The stimulation of rural purchasing power without at the same time creating the conditions for the expansion of domestic industries, resulted in a situation in which the urban poor were unable to afford the agricultural surplus, while at the same time agricultural households were saving their incomes instead of spending them on domestically produced manufactures (Bhaduri 2006: 225ff).

5.3.2. Macroeconomic policy in support of induced investment demand

Secondly, macroeconomic outcomes are also determined by induced investment demand which is potentially constrained by differential growth in prices and therefore purchasing power along the demand-chain. Kaldor and Thirlwall highlight in particular the rate of agricultural productivity increases as a pace-setting factor for backwardly linked manufacturing industries like fertilisers and machinery. There is ample empirical support for this in the development experiences of newly industrialised countries (Ikpe 2013; Brautigam 1995). For example, Taiwanese inter-sectoral policies included state investments towards increased agricultural output growth and a land reform leading to a substantial redistribution of wealth towards to farmers (Ikpe 2013: 192f).²¹

Further given diminishing returns in agriculture and the demand constraints this imposes on industrial growth, land-savings innovation and technological progress in the agricultural sector is integral part of late-industrialisation (Kaldor 2007: 47). For mutually supportive productivity growth in agriculture and industry to be achieved, sharp falls in commodity prices should also be avoided (Kaldor 2007: 51).

Of particular relevance when considering the possibility for and effectiveness of fiscal linkages (or in Keynesian terms government expenditure multipliers) is Hirschman's (1958: 99f) distinction between the potential *importance* of linkage effects, for instance the volume of output being called forth and the *strength* of the linkage effect, defined as the probability of these industries actually coming into being. The important points to take away for the present discussion are firstly that this potential of linkage effect is not limited to demand and supply chains between agriculture and industry but may just as well emerge from other sectors such as construction or indeed intra-industry chains. Secondly, anticipating the conclusions of future theories on balance of payments consistent growth, Hirschman's analysis suggests that there is not necessarily a case for trying to systematically replace all consumer goods imports by domestic production.

Hirschman (1958) heavily contests 'big-push' industrialisation strategies such as proposed by Rosenstein-Rodan though not over disagreement with the theoretical relevance of increasing returns to scale and pecuniary externalities, but because he deems a big push would exceed the resources available to developing countries in terms of capital and skilled

²¹ For more examples on the interaction between agricultural and industrial sectors in the process of industrial development in Taiwan and South Korea see (Kay 2002)

labour. He, instead, proposes to rely on mechanisms of ‘induced’ demand deriving from forward and backward linkages. On a practical level, Hirschman conceives the possibility of fiscal and production linkages within and across sectors very widely, for instance, in terms of demand chains stemming from construction activities, a sector generally not thought to lead to increased productivity:

“An example (...) is cement and reinforcing steel rods in the construction, say, of downtown office buildings. (...) the existence of new office buildings strengthens demand for a great variety of goods and services: from modern office furniture and equipment (still fairly rigid), to parking and restaurant facilities, stylish secretaries and eventually perhaps to more office buildings as the demonstration effect goes to work on the tenants of the other buildings.” (Hirschman 1958: 68)

He maintains that any attempt to plan all these complementarities would be “futile because of the virtually infinite number of complementarity repercussions” (pg. 69). Instead, he maintains that an initial development move already provides enough potential to trigger a process of ‘one thing leads to another’, via an unbalanced growth mechanism, provided that subsequent complementarities are carefully nursed.

Backward linkages are seen as the more important driver of industrial diversification since they do not require an anticipation of demand (Hirschman 1958: 116). In addition, the focus on consumer goods production would imply that a large proportion of capital and intermediate inputs would leak into imports (Hirschman 1958: 119). Instead, positive demand and supply externalities would be maximised when consumption and investment patterns are altered in a way that maximise linkages within sectors rather than across sectors. Thus an optimal growth path would be marked by a series of uneven advances of one sector followed by the catching-up of other sectors (unbalanced growth) (Toner 1999). Consequently, the role of the state is to select and sequence investment projects where the focus should lie on vertical integration and producer goods industries.

CONCLUSIONS

This chapter has argued that one factor largely side-lined by research on industrial development and policy concerns the conditions under which demand for commodity production remains or becomes expansionary. This is of particular relevance SSA economies today as they face a global economic context tending towards systemic deficient demand. Financialisation in developed economies crowds out long-term productive investment and tends to worsen the distribution of income and wealth thereby depressing consumer demand.

What is more, intense competition from China has been shown to displace African manufacturing exports.

Disentangling the conditions under which this occurs or the reasons why it does not can provide important additional insights into patterns of growth and stagnation of manufacturing activities in SSA. *Figure 2* summarises the key tenets of the theoretical framework developed in this chapter.

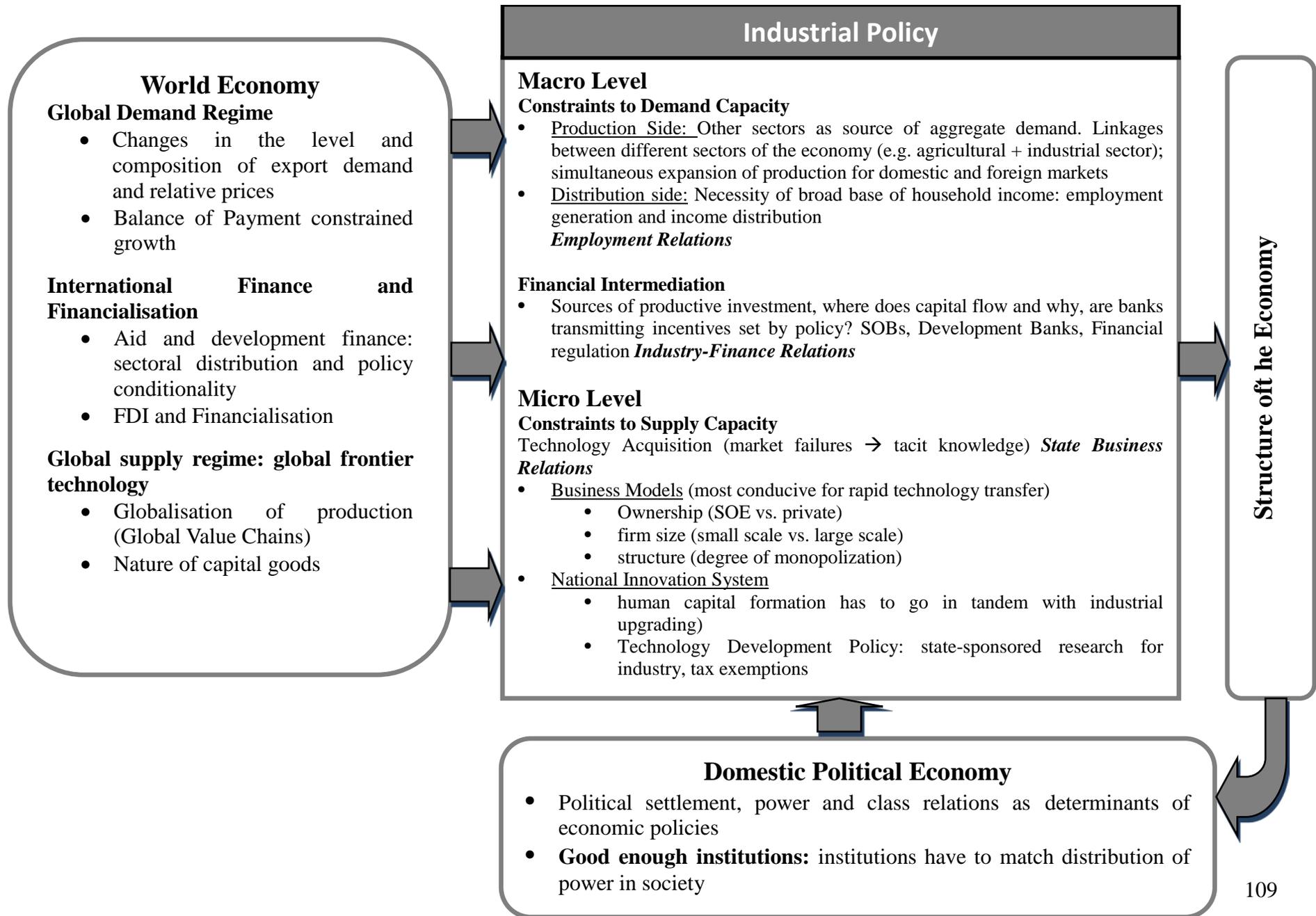
Evolutions of the world economic context shape patterns of industrial development in developing countries in various ways. These global economic factors act on the demand side through changes in the level and composition of export demand as well as changes in relative prices, all of which affect the growth potential consistent with a balanced current account. The restructuration of global capitalism towards asset-driven wealth accumulation exerts deflationary pressures on world demand growth and shapes patterns of foreign and domestic investment in developing countries. Geo-politics shape the allocation aid and development finance while evolutions in global frontier technologies and the price of capital goods as well as restructurings in the organisation of production in global value chains shape competition and supply side dynamics.

At the domestic policy level, it has been argued that against the context of shrinking space for export-led industrialisation, domestic developmental policy has to mobilise and support the growth of domestic consumer and intersectoral demand. Other than policies necessary to accelerate growth in supply capacity such as support for technology acquisition, policy also needs to support increases in demand capacity. On the production side this includes the promotion of linkages between different sectors of the economy (e.g. a close alignment between agricultural and industrial policies or building on chains of induced demand emanating from other sectors of the real economy such as construction or mining). On the distribution side this includes policies affecting aggregate purchasing power in the economy such redistributive policies, labour market policies, housing policies etc.

Finally, it has been argued that agency relations that research on state-led development ought to dissect in order to understand patterns of success and failure should include state-business relations, capital-labour relations and industry-finance relations. State-business relations are important to understand how a state can discipline businesses within a particular political settlement; capital-labour relations to shed light on distributional conflicts occurring in the

growth process and how these affect the spending behaviour of different social strata; industry-finance relations to understand under which conditions savings are channelled into productive sector investment.

Figure 2. Industrial Development and Policy – A Theoretical Framework



CHAPTER 2. SITUATING CHINA-RELATED EFFECTS ON THE PROSPECTS FOR INDUSTRIALISATION IN SSA AND THE ROLE OF POLICY

INTRODUCTION

The ambition of this chapter is twofold – firstly, to document and describe the main characteristics of economic ties between China and SSA and secondly to present existing evidence of how China’s systemic impact on world markets and its growing interaction with SSA economies affects the industrialisation processes in SSA. Chapter 1 had documented the emergence of two China-related industrialisation paradigms in this respect. On the one hand, potential relocations of labour-intensive export-oriented manufacturing from China are seen as a ‘golden opportunity’ (Lin 2012a: 8) for African economies. To ‘[win] the jackpot’ (Monga 2013: 135) African countries should practice a combination of wage moderation and labour market liberalisation coupled with infrastructure development (Monga 2013; Ceglowski, Golub, and Mbaye 2015). On the other hand, the preponderance of Chinese manufacturing exports on world markets is seen to perpetuate unevenness in capitalist development by blocking the path to export-led industrialisation and by locking SSA countries into unfavourable trade structures. This would call for an alternative two-tier industrialisation strategy of breaking into manufacturing export markets where demand is rapidly expanding, notably resource processing, and supporting domestically oriented production of ‘bottom of the billion products’ (Kaplinsky 2013). Underlying these conflicting propositions is both an empirical disagreement over which out of a multitude of China-related effects prevails as well as a theoretical controversy over what drives and sustains (inclusive) structural transformation. Chapter 1 has argued that labour cost arbitrage of multinationals cannot provide a sustainable base for structural transformation because the logic of investments is incompatible with continuous rises in incomes, which are both the ultimate aim of and a precondition for manufacturing output growth if not reducible to it. Therefore, the question is rather whether Chinese investments are *not* predominately labour-cost seeking.

To discern the nature of Chinese engagement with SSA economies, this chapter reviews existing research linking China to the prospects of industrial development in SSA and

combines this with extensive descriptive statistical analysis of the main economic ties between China and SSA economies. It is argued *firstly*, that existing evidence lends itself to support positive effects of Chinese investment and trade on productivity and skill development in SSA economies. In fact, existing evidence suggests that manufacturing investments are predominately market-seeking and indicates productivity enhancing spill-over effects in the form of technology transfer and skill development. Furthermore, Chinese state support for its own construction industry supports the development of infrastructure in SSA, which has been identified as a key bottleneck of industrial development in SSA. Chinese capital goods, in turn, provide cost-efficient manufacturing equipment for producers without sufficient access to finance. Available evidence on these supply-side related effects of Chinese investment and trade will be disentangled in Section 1.

While supply-side channels are comparatively well established and point, on aggregate, to a positive developmental impact of economic ties with China, it is *secondly* argued that China-related effects are conceptually limited by the broader research agenda on industrial development. This applies in particular to China-related demand-side effects, which focus on export demand, or skewed trade structures more generally, while clear research gaps emerge with respect to how economic ties with China affect the growth of domestic consumer and investment demand. Section 2 sets out to investigate China-related demand-side effects holistically. On the one hand, changes in export demand cannot be narrowly analysed through the displacement of manufacturing exports. Instead, looking at balance of payments effects as a whole we find that quantity and price effects in other export sectors positively affect SSA countries' ability to import capital goods and inputs. Crucial in this setting is therefore the causal relationship between export demand, domestic market formation and domestic investment. Having concluded in chapter 1 that late-industrialisation depends as much on building the domestic-demand side of the economy as it does on supporting technology acquisition and export-capacity, section 2 further argues that the nature of Chinese economic engagement with SSA countries can, in fact, support domestic market formation, if supported by domestic policy. Chinese FDI and construction activities are associated to employment generation which can affect the growth of disposable income and consumer demand. These activities can also trigger chains of induced investment by creating a market for building materials, thus having a multiplier effect. These considerations reveal a missing policy and political economy dimension in the China-related industrialisation

paradigms, namely how to support the growth of domestic demand, whether autonomous or induced, on the back of economic ties with China, or rather what are the hindrances to it.

Last but not least, tracing economic ties between China and SSA economies, we find large variations across countries on all of these vectors of engagement. China related effects on industrialisation are therefore likely to vary considerably in both size and composition across SSA economies.

1. SUPPLY-SIDE CHANNELS: POTENTIALLY PRODUCTIVITY- ENHANCING EFFECTS OF CHINESE INVESTMENT, CONSTRUCTION ACTIVITIES AND TRADE

1.1. TECHNOLOGY TRANSFER THROUGH CHINESE INVESTMENTS

Section 1 traces the specificities of Chinese FDI in SSA. Quantitative evidence, though bound by the quality of aggregate data and discrepancies between different data sources, suggests that Chinese FDI constitutes a substantial source of investment for SSA economies. What is more, Chinese FDI also has a number of distinct characteristics coming out of the regulations guiding Chinese overseas investment activities and the development imperatives these serve. China's support for the overseas expansion of Chinese firms is part of a wider effort to support growth in the productive sectors of the Chinese economy and to counteract systemic tendencies of contemporary global capitalism towards speculation-oriented financial activities which started to encroach on the Chinese economy after the 2008 financial crisis. This regulatory frame has implications for ownership structures and distribution of outward investment flows. While China's 'Go Global' policy pledges support for enterprises of all ownership types, the 'national team' overseas is dominated by state-owned enterprises (SOEs). In SSA, the activities of Chinese SOEs are concentrated in the mining and construction sectors. However, Chinese OFDI in SSA are not more biased towards resource-seeking investment than total FDI in SSA and case study evidence suggests that Chinese mining SOEs have been operating with a longer time-horizon than their Western Stock Exchange listed counterparts. By 2014, Chinese construction related investments overtook mining in SSA in terms of accumulated stocks. Africa is, in fact, the only region in which 'Construction' and 'Scientific Research and Technical Services' figure among the top five sectors in Chinese OFDI stocks, indicating that the 'Go Global' policy pursues a wide range of objectives, such as securing overseas market outlets for Chinese

construction services, preparing the ground for private investment or building strategic political alliances. Manufacturing investments, though remaining a small component of Chinese FDI in SSA, is shown to follow predominantly market-seeking objectives. Overall, econometric, survey and case study evidence all point towards productivity enhancing knowledge and skill transfer on the back of these investments.

1.1.1. Chinese FDI in SSA – a quantitative perspective

Data sources and sources of discrepancies

This section sets out to provide an overview of Chinese investment activities in SSA economies since the turn of the century. The Chinese Ministry of Commerce (MOFCOM) publishes data on overseas investment activities of Chinese firms in the Statistical Bulletin of China's Outward Foreign Direct Investment (e.g. MOFCOM 2015) including breakdowns by host countries and sectoral distribution of investment flows aggregated by macro-regions. This makes it comparatively easy to get a sense of the importance of Chinese investments in SSA from a Chinese perspective, i.e. relative to total Chinese OFDI.

What is more challenging is to trace the importance of Chinese OFDI in SSA from an African perspective, i.e. relative to total FDI inflows/ -stocks in SSA. Data on FDI outflows reported by MOFCOM follow the same reporting guidelines as those reported by OECD countries. They derive from MOFCOM's records of companies' foreign assets and include all components of FDI, and crucially, reinvested earnings (see for instance: MOFCOM 2015). However, there are various potential sources of discrepancy between different outflow/ -stock data series. Even more problematic, total FDI stocks and flows have to be derived from the *inflow/ -stock* series provided by the SSA host economies, which, in most cases, rely exclusively on the foreign exchange records of the central banks, which adds further potential discrepancies outlined below.

Foreign direct investment (FDI) refers to an investment made to acquire lasting interest in enterprises operating outside of the economy of the investor (IMF, BMP5). A long-lasting interest, in turn, is defined as the attempt to gain an effective voice in the management of the enterprise. 10% equity ownership is applied in the definitions of the IMF and the OECD as a threshold for an effective voice in the management of the foreign enterprise (OECD 2008; IMF 1993). Despite these clear definitions, there are various sources of discrepancies between data series. *Firstly*, there can be substantial differences between inflows/- stocks

and outflows/ -stocks reported by home and host countries. The components of FDI include equity capital, reinvested earnings and other capital, mainly intra-company loans (OECD 2008). Data on reinvested earnings require company survey data because they do not involve foreign exchange transactions and therefore do not figure in the central banks' statistics on cross-border financial flows. This is particularly a problem for data reported by developing countries, which often rely exclusively on the foreign exchange records of the central banks.

Secondly, there might be mismatches between stocks and flows reported. The only accurate source for stock data are company surveys to account for changes in valuation due to depreciation and reinvested earnings. Yet, in the absence of extensive company survey data, stocks are often approximated from the cumulative flows obtained through foreign exchange records, which can considerably under- or over-estimate existing stocks.

Thirdly, if FDI records derive primarily from the international transaction records, data on the sectoral composition of FDI are even more limited. Some countries have periodic censuses or benchmark surveys to complement information on the sectoral composition. In some countries, such as Australia, Canada and the United States, these even constitute the main sources of FDI information. In developing countries, however, sectoral information on foreign investment is often limited to information provided by the national investment promotion agencies. This introduces new sources of uncertainty, because not all FDI may be registered with the investment promotion agency. Similarly, it is possible that only new investment projects are recorded (not reinvested earnings), or in some cases some projects might be miss-classified to benefit from additional investment incentives in certain sectors and data may only cover approved projects rather than actually implemented projects. In addition, the industrial classification used may be based on either the primary activity of the parent company, or the primary activity of the affiliate. Exceptions are found in German and United States FDI data, which are compiled in accordance with both of those criteria. In most countries, outward FDI is classified according to the industry of the parent company, while inward FDI is attributed to the industry of the foreign affiliate in the host economy.

Fourthly, another difficulty is that equity capital, changes in intra-company loans between parents and affiliates, and reinvested earnings tend to fluctuate considerably between years and can be substantially revised. Although there may be attempts to revise the FDI flow-data series accordingly, it can be difficult to attribute revisions to particular previous years. For that reason, proper adjustments are normally made only at the time of comprehensive

surveys. Surveys also allow for a revaluation of assets which helps to ensure a more accurate assessment of investment stocks.

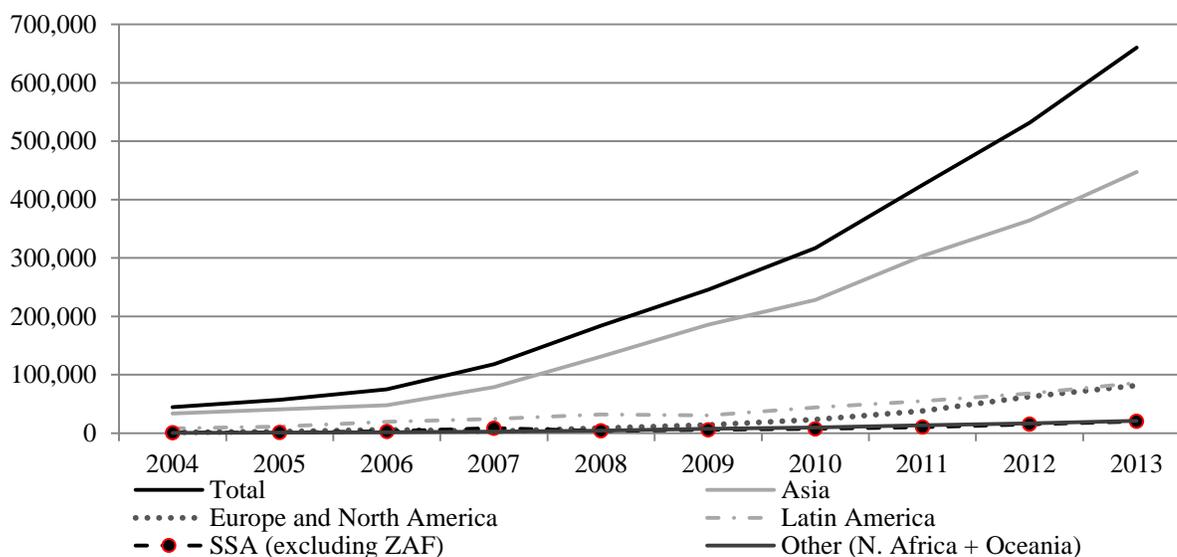
Fifthly, the geographical distribution of FDI flows is difficult to establish because of increasingly complex ownership structures of multinational companies and because the ultimate beneficial owner can be blurred if and when investments are channelled through holding companies in offshore tax havens such as Panama, Bermuda or the Cayman Islands. Survey data can reduce this problem if it distinguishes between the immediate and ultimate owner of the offshore holding company (the latter being often the parent country itself).

Considering all these issues in the collection of FDI data, information is not fully comparable across countries and likely to involve a considerable error margin. The most challenging issue is to quantify total FDI instocks and –flows to SSA economies, which can only be derived from the sum of the inflow or total instock series reported by the SSA host economies. These rely almost exclusively on central bank records. Bearing these limitations in mind, a descriptive analysis of different data series from Chinese, OECD and host country sources is still useful to unlock a number of broad trends.

Chinese FDI outstocks and outflows in SSA

Seen from the Chinese perspective, outward FDI flows and stocks to SSA economies remain marginal, with OFDI flows to SSA increasing in absolute terms but barely relative to other regions: FDI stocks in SSA made up for 1.8% of total FDI stocks in 2004, and 3.7% in 2013. In absolute terms, Chinese FDI stocks in SSA increased from \$780 million in 2004 to \$20.3 billion in 2013 (excluding South Africa; Source: Statistical Bulletin of Chinese Outward FDI). The vast majority of Chinese outward FDI goes to Asian countries (\$447 billion in 2013), while the fastest growing market is Europe and North America (**Graph 3**).

Graph 3. Chinese OFDI stocks by region 2004-2013 (current USD, millions)



Source: 2013 Statistical Bulletin of China's Outward Foreign Direct Investment

These seemingly small figures need to be put into perspective. Pairault (2014) points out that the large volumes of Chinese OFDI to Asia are mainly investments in Hong Kong used by mainland firms for ‘round tripping’, i.e. outward flows to Hong Kong to benefit from incentives for outward FDI followed by reinvestment in the mainland to benefit from investment incentives for inward FDI. Investments to other tax havens like the Cayman Islands, in turn, might obscure investment flows to third countries. Because it is impossible to trace the actual investment destinations through tax havens, Pairault (2014) proposes to look at the non-tax haven investments only. Following the definition of tax havens deployed by Hines and Rice (1994),²² **Table 1** shows how sub-Saharan Africa is actually the third largest investment destination of Chinese - non-tax haven bound - outward FDI, at 10%.

²² Tax havens include: Belgium, Bahamas, Belize, Bermuda, Switzerland, Cayman Islands, Cyprus, Dominica, Gibraltar, Hong Kong, Ireland, Jordan, Lebanon, Liechtenstein, Luxemburg, Panama, Singapore, Turks and Caicos Islands, St. Vincent and the Grenadines, British Virgin Islands, Anguilla, Jersey, Guernsey, Channel Islands

Total OFDI stocks	658,707	
<i>tax havens total</i>	480,450	% of tax haven total
<i>Hong Kong, China</i>	377,093	78.5%
<i>Cayman Islands</i>	42,324	8.8%
<i>British Virgin Islands</i>	33,903	7.1%
<i>Other</i>	27,130	5.6%
<i>non-tax haven total</i>	178,257	% of non-tax haven total
<i>OECD</i>	84,324	47.3%
<i>Asia</i>	40,403	22.7%
<i>SSA (excl. S. Africa)</i>	19,006	10.7%
<i>BRICS</i>	16,163	9.1%
<i>MENA</i>	9,739	5.5%
<i>Latin America (excl. OECD)</i>	6,894	3.9%
<i>Oceania</i>	1,000	0.6%
<i>Europe (excl. OECD)</i>	728	0.4%
<i>Calculations based on: Statistical Bulletin of Chinese Outward FDI (various years)</i>		

While China has invested in 45 out of 48 sub-Saharan African economies (plus South Africa), nearly 75% of Chinese outstocks in SSA are concentrated in 14 countries. In 2013, the three top destinations of Chinese OFDI in SSA are Zambia followed by Nigeria and Angola, together accounting for nearly one third of total Chinese OFDI stocks in SSA (**Table 2**). This partially mirrors the global distribution of FDI in SSA. Some of the top SSA recipients of FDI also rank high in terms of total Chinese FDI stocks, e.g. Nigeria, Sudan, Ghana and Zambia and Angola.²³

²³ Note, Angola used to be the second largest recipient of FDI in SSA up until 2010. Since then, the Angolan Central Bank (BNA) started to record large negative inflows of FDI, which by 2013 cumulate to negative stocks. This is likely to understate total Angolan FDI stocks (see methodological issues above) primarily because it is inconsistent with outstocks and outflows which major OECD investors and China report for Angola. In fact, total FDI outstocks in Angola reported by the major OECD investors and China amount to \$25 billion in 2012, which makes Angola one of the largest recipients of FDI, second only to Nigeria (\$76 billion according to Nigerian inflow records).

Table 2. Top destinations of Chinese OFDI stocks in SSA in 2013, current USD million

Country	FDI stock China 2013	% of total Chinese FDI in SSA	Rank in Chinese SSA FDI outstocks	Rank in total FDI instocks
Zambia	2164.32	10.9%	1	8
Nigeria	2146.07	10.8%	2	1
Angola	1634.74	8.2%	3	***
Zimbabwe	1520.83	7.6%	4	25
Sudan	1507.04	7.6%	5	2
Congo, DR	1091.76	5.5%	6	15
Lesotho	913	4.6%	7	40
Mauritius	849.59	4.3%	8	20
Ghana	834.84	4.2%	9	4
Ethiopia	771.84	3.9%	10	13

Source: Statistical Bulletin of Chinese Outward FDI and UNCTAD bilateral FDI Statistics

By contrast, other countries, such as Zimbabwe, Lesotho, Mauritius and Ethiopia, figure among the top 10 recipients of Chinese FDI but actually rank low in terms of total SSA FDI stocks, which indicates that China makes up for an important part of total investments in these countries.

Chinese FDI in SSA compared to other sources of FDI

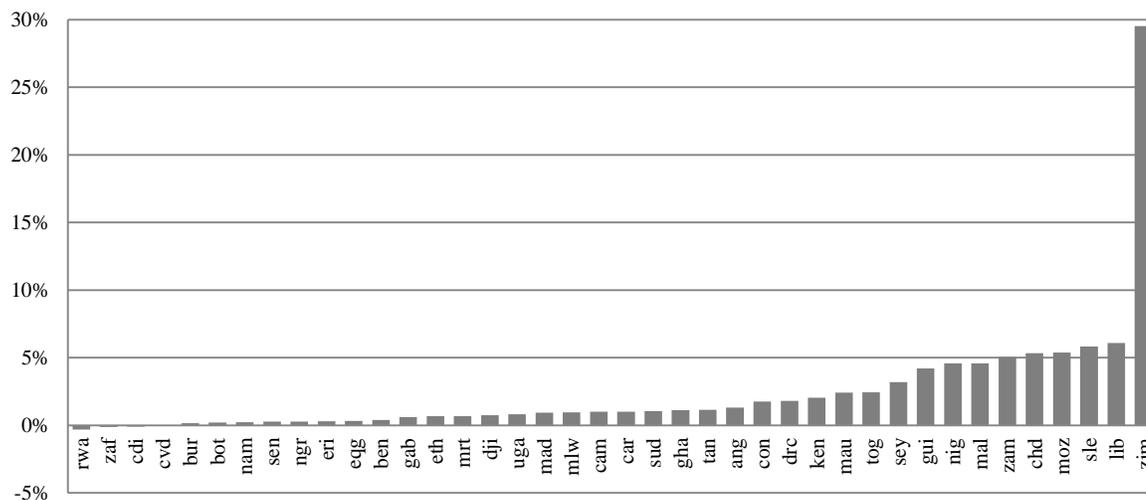
The following compares OFDI in SSA reported by China to those reported by the major OECD investors in SSA, i.e. the US, France, Italy and Portugal as well as to total inflows reported by SSA countries. This shows that seen from the African perspective, Chinese FDI not only grows quickly but also constitutes an important source of investment. In 2013, outstocks reported by China amounted to approximately 6.5% of total instocks reported by SSA countries (**Table 3**). What is more, and in line with the findings of W. Chen, Dollar, and Tang (2015), in absolute terms, China's FDI stocks in SSA approach those reported by major OECD investors. In 2013, China's FDI stocks in SSA (excluding South Africa) amount to \$20.3 billion compared to \$25.4 billion reported by the US and \$28.6 billion reported by France in 2012 (**Table 3**). As laid out above, information on shares has to be interpreted with care because these derive from mixing instocks and outstocks reported by different sources. Total FDI records are derived from instocks data reported by the SSA countries, while information on the individual reporters comes from the outstocks records of the main foreign investors.

Reporter	2006	2007	2008	2009	2010	2011	2012	2013
France	10,009	17,907	18,987	23,763	25,798	25,975	28,668	n.a.
USA	10,051	10,891	12,587	18,038	24,805	25,005	25,394	n.a.
China	2,946	8,650	4,011	5,895	7,525	10,558	15,447	20,375
Portugal	1,282	1,787	4,212	3,388	4,479	5,291	6,227	n.a.
Italy	0	813	1,459	1,740	1,426	1,402	251	n.a.
SSA total	122,441	145,541	166,724	198,537	221,533	252,641	282,779	314,846
China % of SSA total	1.57%	2.10%	2.34%	2.87%	3.29%	4.07%	5.18%	6.33%

Calculations based on: UNCTAD bilateral FDI statistics (outstocks France, USA, Portugal, Italy), Statistical Bulletin of Chinese Outward FDI (outstocks China) and UNCTAD instocks (for SSA total)

However, considerable variation across SSA economies can be observed when comparing Chinese FDI flows relative to gross fixed capital formation (GFCF), ranging from 29% of GFCF in Zimbabwe to -0.3% in Rwanda in 2013. The median of Chinese FDI as a ratio to GFCF in SSA economies is 1.01%, and the average 2.45% (**Graph 4**).

Graph 4. Chinese OFDI flows as % of Gross Fixed Capital Formation (2013)



Calculations based on: China Statistical Bulletin on Outward FDI and UN National Accounts

1.1.2. Chinese FDI in SSA a qualitative perspective: between flying geese and resource colonialism?

The question, of course, is not just about the order of magnitude of Chinese FDI, but also about the nature and investment motives of Chinese firms, which influence the likelihood of spill-over effects on labour productivity and technology transfer. There are a number of hypotheses why Chinese investment might actually support spill-overs, including the smaller

technology gap and therefore a better possibility for the absorption of spill-over effects from South-South/ Chinese investments (Amighini and Sanfilippo 2014) or the lesser degree of financialisation of Chinese firms which could positively impact on the time-horizon of investments (Lo, Wenzhe, and Lixia 2011). The exact causal relations between Chinese investments and technological spill-over effects will have to be established on a case by case basis but there are a number of stylized characteristics of Chinese investments worth pointing out at the aggregate level, which include the strong degree of state-guidance of investments through China's 'Go Global' Policy and the market-seeking nature of manufacturing investment.

State-directed FDI: China's 'Go Global' and the implications for the nature of Chinese investments in Africa

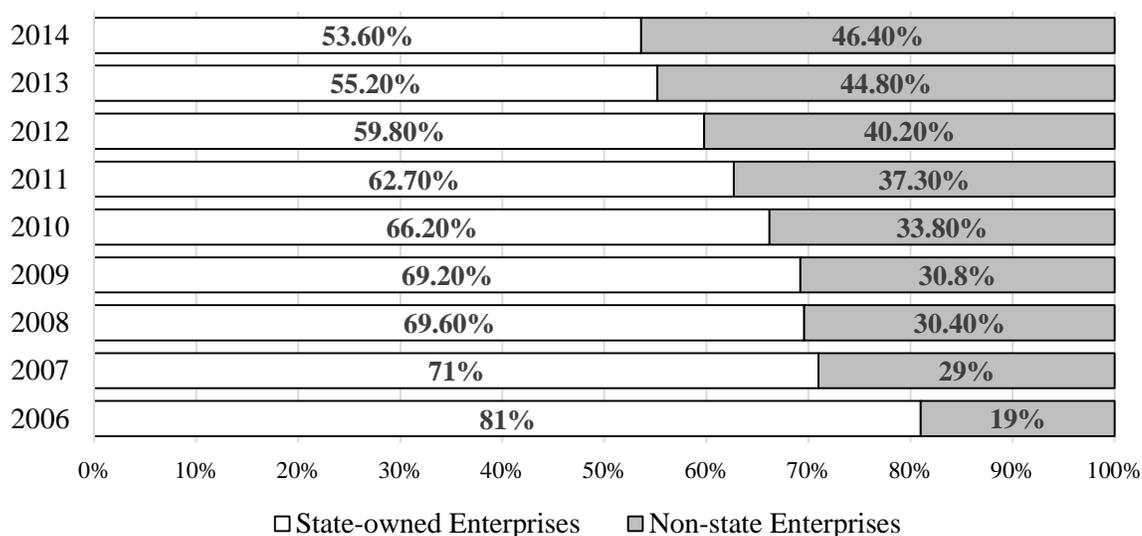
Up until the 2008 financial crisis, China's economic transformation has been driven by the synchronous growth of both productivity and wages, laying the basis for the simultaneous growth of investment and consumption (Lo 2016a; Lo and Li 2011; Lo and Zhang 2011). This challenges the common perception of Chinese growth being driven by labour-intensive export-oriented light manufacturing, which, in fact, constitutes only an enclave in the Chinese economy accounting for no more than 5% of GDP in 2009 (Lo 2016b). Lo argues that, productive sector investment being the driving force underpinning GDP growth, the Chinese economy withstands systemic pressures in contemporary global capitalism towards speculative financial activities without being entirely shielded against them. Quantitative easing in advanced economies, for instance, resulted in outflows of 'hot money' from developed to developing economies including China. As a result, the Chinese economy has suffered from booms and busts in various asset markets, rapid fluctuations of portfolio capital and consequently of the exchange rate. Though mediated to some extent by Chinese capital controls, in- and outflows of 'hot money' did cause crowding out effects in productive sector investment and Chinese industrial firms did become increasingly speculation-oriented themselves. The Chinese leadership has launched a number of initiatives aimed at regulating and counteracting these tendencies domestically and at the global governance level (including 'One Belt One Road', the Asian Infrastructural Investment Bank and the New Development Bank) (Lo 2016b).

The regulation of Chinese outward investment continues and reinforces Chinese efforts to promote China's development priorities in productive sector activities. These include

supporting ‘national champions’ in getting access to advanced technologies, in their search for new market outlets, in the procurement of natural resources which are scarce domestically as well as the circumvention of international barriers to trade (see for instance the joint guidelines published by the National Development and Reform Commission (NDRC) and China Exim-Bank in 2004; NDRC and CHEXIM 2004). For the cases of SSA economies, the latter three priorities are arguably the most relevant. “Go Global” or “Go Out” (*zou chu qu* 走出去) was first introduced in China’s Tenth Five-year Plan in 2001, marking a milestone of the market reforms, which hitherto emphasised the utilisation of foreign capital inside China. Indeed outward foreign investments had been tightly controlled by the government even after the market reforms in 1978 and were only gradually liberalised in late 1980s and 1990s. The government actually tightened the approval procedures for overseas venture in wake of the Asian financial crisis in 1997/98 before consolidating the “Go Global” strategy in 2004 (Salidjanova 2011: 5). The 2004 *State Council Decision on Reforming the Investment System* codified the “Go Global” policy with concrete guidelines and targets. State-owned enterprises were now given greater decision-making powers and only government-funded capital projects required state approval (State Council 2004). State support for the overseas expansion of Chinese firms operates through direct and indirect subsidies as well as subsidised finance through credit lines from Chinese state-owned banks such as China Exim-Bank or the China Development Bank (Liao and Zhang 2013).

Although the “Go Global” strategy pledges support for enterprises of all ownership types, in reality, it has been mainly the “national team” of state owned enterprises, which successfully goes global (Liao and Zhang 2013). This is mirrored in the ownership structures of Chinese OFDI stocks, with SOEs accounting for more than 53% of China’s OFDI in 2014 (*Graph 5*).

Graph 5. Proportion of State-owned enterprises and Non-state enterprises in China's Outward FDI Stock 2006-2014



Source: MOFCOM, 2015

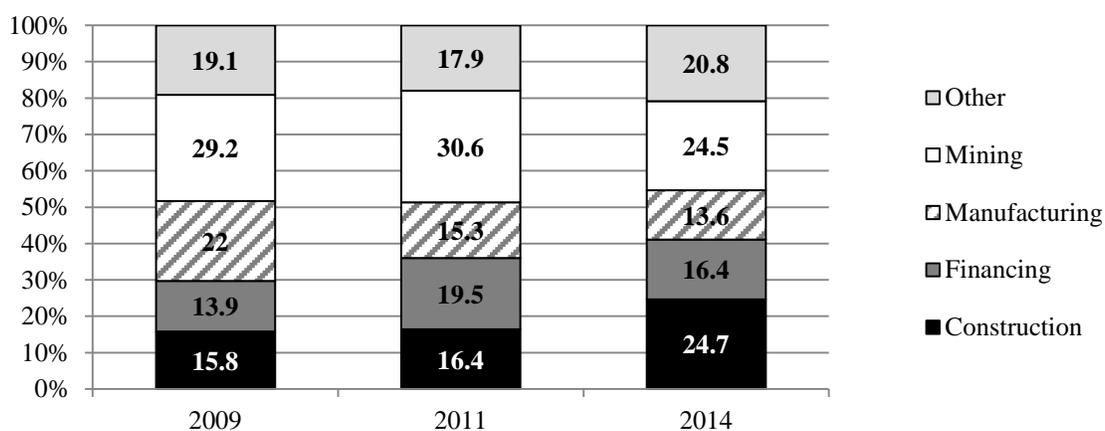
However, the proportion of OFDI owned by non-state enterprises has been increasing; from 19% in 2006 to 46.4% in 2014 (*Graph 5*). As SOEs operate mainly in the construction and mining sectors, the increasing number of Chinese private enterprises and manufacturers in Africa (W. Tang and Pigato 2015) may signify a division of labour between the state and the private sector, where SOEs prepare the ground for private investment by building and expanding necessary infrastructure.

68% of Chinese OFDI stocks in SSA are in resource-rich countries (calculations based on China Statistical Bulletin of Outward FDI 2013).²⁴ Mining and construction related investments make up for a high share of Chinese OFDI in Africa (24.5% and 24.7% of total Chinese FDI stocks in Africa in 2014, see *Graph 6*, which includes North Africa). In fact, Chinese OFDI appears to follow global patterns of seeking natural resource wealth. The coefficients for resource wealth as explanatory variables for the spatial distribution of FDI flows in Africa are in fact similar for Chinese and overall FDI (W. Chen, Dollar, and Tang 2015). In fact, the share of mining related activities in Chinese OFDI is actually *below* its

²⁴ The definition of resource-rich countries follows the definition of the IMF (see Lundgren, Thomas, and York 2013), i.e. countries whose exports of non-renewable primary commodities account for more than 25% of total export revenues. In 2013, these include: Angola, Botswana, Cameroon, Congo-Brazzaville, DRC, Equatorial Guinea, Gabon, Ghana, Guinea-Conakry, Mali, Namibia, Nigeria, Niger, Sierra Leone, Tanzania, Zambia, and Zimbabwe (calculations based on UN Comtrade).

share in overall OFDI to Africa (mining accounts for 35% of total FDI in SSA in 2012; UNCTAD 2015).

Graph 6. Sectoral distribution of Chinese FDI to Africa by selected years (% of total stocks)



Source: Statistical Bulletin on Chinese Outward Foreign Direct Investment, various years

In addition, it is worth noting that the share of mining related investments in Chinese OFDI has actually fallen (i.e. grew less quickly than other types of investments), falling from a high of 30.6% in 2011 to 24.5% in 2014. The relative decline of mining related investments is explained by the growth of construction related investments, which, by the end of 2014, overtook mining in China's OFDI stock in Africa (**Graph 6**). In terms of flows, mining related investments come only 4th in 2014 behind construction, transportation/ storage/ postal service and manufacturing. In 2014, Chinese OFDI flows to the construction sector in Africa are over \$759 million, which is about \$340 million more than the flows to mining (MOFCOM 2015: 99).

What is more, Chinese investments in mining and construction have been shown to operate with a long-term strategic view, either to penetrate the African construction market for market outlets (C. Chen and Orr 2009) or to secure access to raw materials. For instance, being more interested in the use value than the market value of copper, Chinese SOE's have bought the least performing mine in Zambia that could not attract any investors after privatisation and lay idle for 13 years. Yet, from the Chinese perspective, this mine was still more profitable than copper mines in China (Lee 2009; Lee 2014). The long-term oriented nature of Chinese investments has implications for the business strategies and practices of Chinese firms. The response to the first slump in copper prices early 2009, for instance, illustrates the different accumulation logic of Chinese SOEs and other foreign firms in the Zambian copper mining industry. To protect the short-term financial interests, all mines

listed in the London Metal Exchange reacted to the market fluctuation by laying-off workers and freezing wages. By contrast, the Chinese owned mine maintained production, staff and wage levels (Lee 2014). Given their long-term and territorially specific interest in copper production, NFCA – that is Non-ferrous China Africa, a subsidiary of China Non-ferrous Metals company (CNMC) holding majority shares of the Chambishi Copper Mine – has also been shown to be more sensitive to demands of workers (Lee 2009). This is in line with other evidence showing that Chinese SOEs invest in longer-term and higher-risk infrastructure projects, which are usually refused by private enterprises (Poon 2014). China’s continuous and even stronger growth of outward FDI flows at the time of the global recession in 2008, with a year-on-year growth rate of OFDI flow in 2008 of 110.9%²⁵ is a very noticeable difference compared to the global trend (W. Tang and Pigato 2015: 10).

“Go Global” is very much a state-led project with the primary aim to further China’s own developmental objectives. However, the policy is also used for political and strategic purposes in building South-South cooperation in areas outside of immediate economic gains. It is worth to note that Africa is the only region in which ‘Construction’ and ‘Scientific Research and Technical Services’ figure among the top five sectors of Chinese OFDI stocks (MOFCOM 2015).

The market-seeking and long-terms oriented nature of Chinese FDI and government guidance of investment

In 2014, 13.6% of Chinese FDI stocks in Africa were in manufacturing activities (**Graph 6**, pg. 123). This is below the average of total FDI stocks in SSA countries, for which manufacturing accounts for 20% in 2012 (UNCTAD 2015). The share of manufacturing in Chinese OFDI in SSA has also declined from 22% in 2009 to 13.6% in 2014. As outlined above, this is mainly explained by the exponential rise of construction related investments dominated by SOEs. Among private firms, manufacturing amounts to as much as 31% in 2013 (Shen 2015).

The composition of and motivations behind these investments are of interest because, as discussed in chapter 1, labour arbitrage of multinational companies and the relocation of labour intensive-export oriented industries from China is discussed as a potential driver of

²⁵ even if to exclude the \$5.6 billion purchase of 20 percent share in South Africa’s Standard Bank the FDI level would remain constant during 2008-09

structural change in SSA (Zoellick 2010; Lin 2012a; Dinh et al. 2012; Monga 2013). Existing evidence does not lend itself to support a wide-spread relocation of labour intensive export-oriented manufacturing from China to Africa. Tang (2014) finds that Chinese investment in traditional apparel production bases in South-Eastern Africa remain small to medium in scale, with few exceptions including the China JD group in Tanzania and the Huajian shoe factory in Ethiopia (X. Tang 2014).

By contrast, survey and qualitative firm-level evidence suggests that more than half of private sector-led Chinese FDI is attracted by the large domestic markets of African countries (Shen 2015). This is confirmed by Gu (2011) who finds that the most frequently mentioned motives of Chinese firms to move to Africa are accessing the local market and intense competition in China. Similarly, Warmerdam and van Dijk (2013), for the Ugandan case, find that domestic market potential was Chinese firms' main reason to invest in Uganda and, in fact, none of the companies interviewed was interested in the global market from their Ugandan base. Similarly, 12 out of 16 firms interviewed by Huang and Ren (2013) in South Africa said their investment was market-seeking.

Even in Ethiopia, often presented as a model case for flying-geese type relocations of Chinese labour intensive industries (Geiger and Goh 2012), survey data of the Ethiopian Central Statistical Agency (CSA) suggest that about 84% of Chinese manufacturing firms in Ethiopia are local market-seekers (Seyoum, Wu, and Yang 2015). The two most frequently mentioned investment motives of the 45 Chinese manufacturing firms in Ethiopia interviewed by Geiger and Goh (2012) are the 'good understanding of the investment climate (from social networks)' and the 'local market in Ethiopia'. 'To take advantage of cheap labour in Ethiopia' is ranked on average 'neither agree nor disagree' among Chinese manufacturing firms, though Chinese firms in the service sector 'strongly agree' (Geiger and Goh 2012).

Zooming further into the type of Chinese manufacturing sector investment in Ethiopia shows that these are very diverse covering a total of 78 sub-sectors at the 4-digit level. To put this into perspective, US manufacturing investments only cover 42 sectors. Textiles, garments and footwear production together dominate in Chinese investments in Ethiopia with 140 out of 691 investment projects recorded by the Ethiopian Investment Commission (EIC) between 2000 and 2015. However, these are closely followed by, most likely domestically oriented, consumer goods production, like plastics, furniture, TVs and radios, which account

for 128 investment projects reported by the EIC over the same period. These are followed by inputs for the Ethiopian construction industry, with 70 projects recorded in concrete, cement, lime, plaster, iron and steel. The largest employment generators are textile, garments and footwear projects, generating together, 38% of all employment in the projects recorded by the EIC, but plastics and cement projects are also large employment generators, with 9% and 11% respectively (*Annex 2, Table 38,*).

Evidence of spill-over effects from Chinese investments

While Elu and Price (2010) find no evidence for productivity enhancing effects of Chinese investments in Africa, more recent econometric evidence finds positive correlations between Chinese/ South-South FDI and export-diversification in African countries, especially in low-technology sectors such as agro-processing, textiles and apparel production. Contrary to FDI from OECD countries, South-South FDI flows are also positively correlated to the unit value of exports (Amighini and Sanfilippo 2014).²⁶ Seyoum, Wu, and Yang (2015) find that Chinese FDI in Ethiopia is positively correlated to domestic firms' productivity, when the technology gap is small. Small firms and non-exporting firms benefit more from spill-over effects than do other types of domestic firms.

Econometric studies like the above face problems of endogeneity (e.g. is there a causal relationship between Chinese investments and productivity or are Chinese investments simply attracted to higher productivity environments), appropriate parameterisation and control variables as well data quality more generally. Yet, survey evidence confirms that the operations of Chinese firms facilitate technology transfer. In a survey with over 250 Chinese overseas enterprises (36% SOEs, 63% POEs), of which 27% invest in Africa, 87% said they have transferred technologies or have technological cooperation with host countries (UNDP, SASAC, and MOFCOM 2015: 57). 51% of firms transfer technology to their own subsidiaries, 17% transfer technology to other developing countries, 16% engage in the transfer of complete sets of equipment (i.e. turn-key projects) and 8% have technological exchange with developed countries. 77% of the contractors for construction projects, of which 46% operate in Africa (pg. 29), said they will recommend the host countries to adopt their own or China's engineering quality standards if they are higher than the host country's

²⁶ The unit value of exports is defined as the ratio of value relative to quantity exported and is commonly used as a measure of export quality.

standards (UNDP, SASAC, and MOFCOM 2015: 49). Other examples of technology transfer from Chinese firms include, for instance, the Rwandan case where the government has negotiated technological upgrading and transfer of expertise with ZTE and Huawei, as part of the broader government strategy to enhance the country's ICT sector (Gu and Carty 2014). Early evidence from Brautigam (2008) also suggests that Chinese trading networks have spurred a small boom in the production of spare auto parts in the Nigerian town of Nnewi. This is confirmed by more recent survey studies across a range of different manufacturing industries in Nigeria showing Chinese firms to transfer technology through equipment sales and technical training schemes, in particular in the automotive and construction materials sectors (Y. Chen et al. 2016).

Spill-over effects can also be observed in terms of workers' skill formation. For instance, evidence from Angola suggests that the number of semi-skilled workers such as brick layers and masons on Chinese construction projects increases (Corkin 2011; for more detailed evidence see Cheng, Oya, & Wolf, forthcoming). For market-seeking investors, training of staff and promotion into managerial positions is often imperative because it allows Chinese firms to draw on the expertise of the local business environment and also allows Chinese firms to establish a "good brand" reputation within the host country. For instance, in the telecommunication sector, ZTE and Huawei try to establish themselves as provider of price-leading, yet reliable and good quality products in the African market before venturing into Europe and North America. Building a good corporate image is part of this wider effort to establish brand reputation. In Africa, this involves various CSR practices²⁷ but also training and promotion of host country nationals into managerial positions (Cooke 2012). In Uganda, ZTE has explicit indigenisation targets where 70% of managerial positions and 100% of lower level positions are to be filled with nationals (Warmerdam and van Dijk 2013). In Nigeria, Chinese firms are shown to engage at least in on the job training, while some even invest more heavily in training. However, Chinese firms often reported difficulties in retaining in house trained staff due to lower wages offered (Y. Chen et al. 2016).

Despite observable spill-over effects in terms of knowledge and technology transfer and the market-seeking, long-term oriented nature of Chinese FDI to SSA, problems remain. In particular, survey evidence suggests that only 31% of the 250 companies believe spill-over

²⁷ Corporate Social Responsibility practices, which include private firms' voluntary contributions to environmentally sustainable production and social standards.

effect is significant; 51% believe it has brought some benefits to the locals; 17% do not think there is any improvement to the local technologies and management. This could be due to “technology mismatches and language barriers, and the limited capacity of companies and industries in host countries to assimilate the technologies being transferred, which is especially pronounced in less developed countries.” (UNDP, SASAC, and MOFCOM 2015: 58).

1.2. TRADE-RELATED SUPPLY-SIDE EFFECTS: TECHNOLOGY TRANSFER THROUGH CHINESE CAPITAL GOODS IMPORTS

China has emerged as SSA’s most important individual trading partner over the course of a decade. The type and composition of these imports have implications for manufacturing sector development to the extent that Chinese merchandise imports can enter in competition with and cause displacement of domestically produced goods but they can also be a source of cost-efficient inputs. This section explores the link between capital goods imports from China and productivity capacity of SSA economies. Balamoune-Lutz (2011) finds evidence that the share of imports from China relative to total imports has a robust positive effect on growth in African economies (including North Africa). Explanations for this include positive supply-side spill-over effects from imports of Chinese capital goods as supported by evidence from Munemo (2013) who finds a positive correlation between the import of Chinese capital goods and growth rates of GDP in SSA, both when measuring Chinese capital goods as share of GDP and as share of total imports from China. The following sections highlight *firstly* that only in a few countries do Chinese imports of final consumer goods and processed food and beverages constitute a substantial part of total output. *Secondly* that domestic policy shapes and regulates the composition of imports from China and *thirdly*, that sector level evidence from four SSA countries suggests productivity enhancing spill-over effects from imports of Chinese capital goods.

1.2.1. Sino-African import structures: An overview

The following section investigates SSA’s trade with China in terms of magnitude and sectoral composition in order to establish to what extent trade with China is different from trade with other countries. In doing so, the following section draws on import data derived from UN COMTRADE (ISIC rev. 3, harmonised 2002). Following standard practice, all analysis is based on ‘mirror data’, i.e. imports of partner j from SSA country i are counted as

exports of SSA country i to partner j, while exports of partner j to SSA country i are counted as imports of SSA country i from partner j.

All SSA aggregates exclude South-Africa and the French overseas departments (DROMs) Mayotte and Reunion. All import data are deflated to 2005 constant dollars based on import deflators for each country, which have been calculated as the ratio of that country's import value index over its import volume index, both of which are provided in the World Bank's World Development Indicators. For SSA aggregate figures the deflators are constructed based on the trade-share weighted average of these deflators. Export data have been deflated in the same way using the export value and volume index.

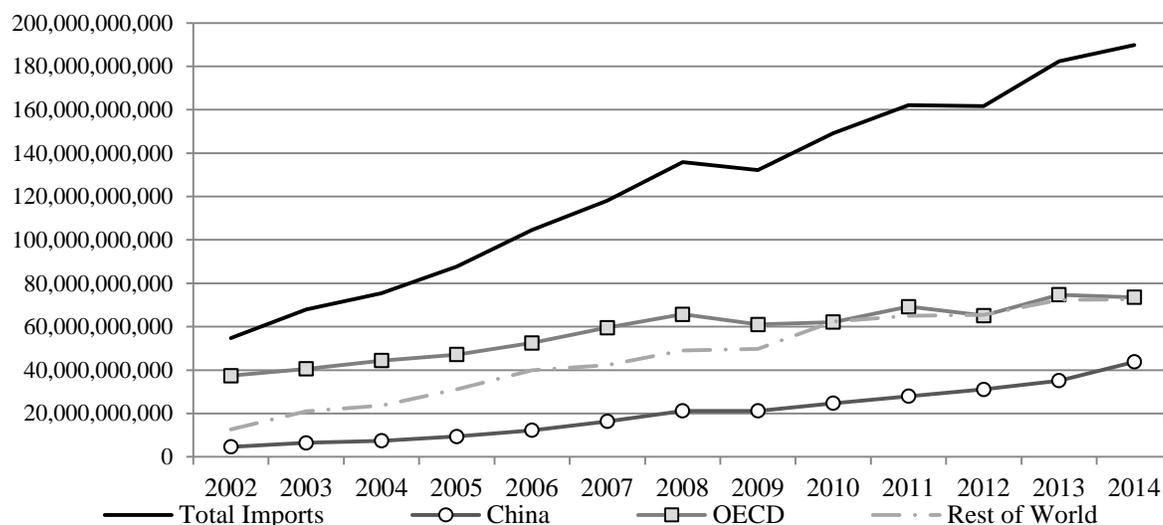
For sub-sectoral breakdowns of exports and imports, 4 digit ISIC (rev. 3, harmonised 2002) data have been re-grouped by degree of processing and broad economic use of the goods as follows (see *Annex 1*, pg. 328 for details):²⁸

- “Raw Materials” include unprocessed agricultural and mining commodities
- Manufacturing products have been sub-divided into different categories: “Food and Beverages”, “Final Consumption Goods”, “Intermediate Inputs” and “Machinery”,
- the rest is classified as “Public goods” (neither private consumption nor private production) and includes “Medical Equipment”; “Public Transport Equipment”, and “Military”;
- finally, products falling into neither of these groups: “Luxury” and “Services”

Over the course of a decade, China becomes the largest individual trading partner of SSA, with imports increasing from \$4.6 billion to \$43.7 billion in 2014 (in 2005 constant dollars) (*Graph 7*) and accounting for 23.2% of total SSA trade in 2014.

²⁸ These categories are not always clear-cut. For instance, product code 3150 comprises electric lamps and lightening equipment, which can be used both for private consumption and as serve as production equipment in firms. Even passenger cars (code 3410) and motor cycles can serve as essential equipment for firms. However, all of the above have been counted as final consumer products due to the presumed predominant use of these goods.

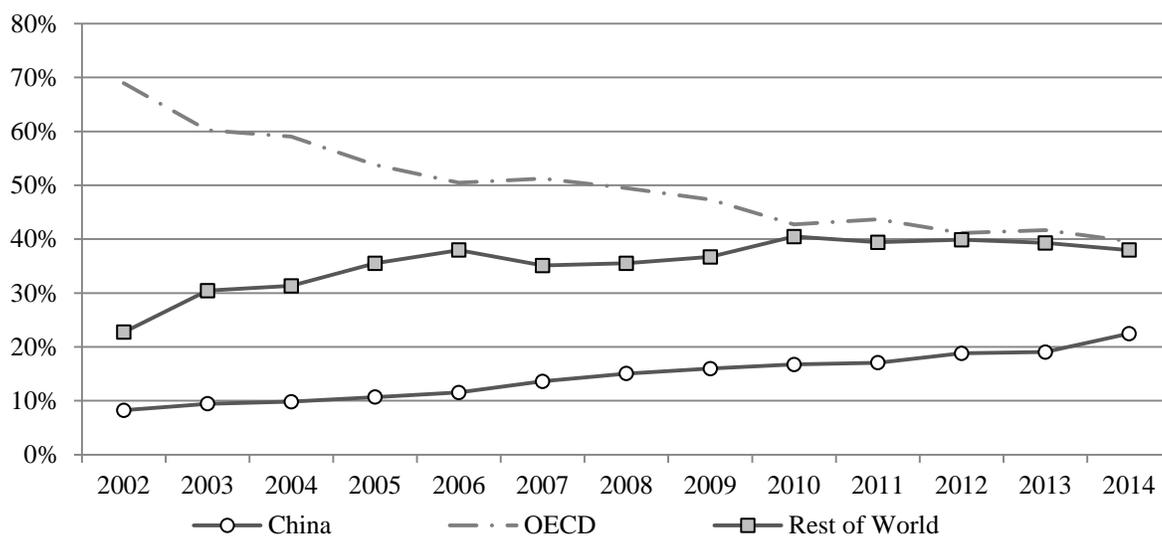
Graph 7. SSA imports by partner 2002-2014 cons. 2005 USD (excluding South Africa)



Source: UN COMTRADE (ISIC rev. 3) and World Bank WDI (for trade deflators)

In fact, in 2014 imports from China are more than twice as much as imports from SSA's second most important trading partner South Africa, which accounts for 9.6% of SSA's imports followed by India (8.4%). Only then we find the US (5.1%) and France (4.8%). This also reflects a general decline in imports from OECD countries (*Graph 8*).

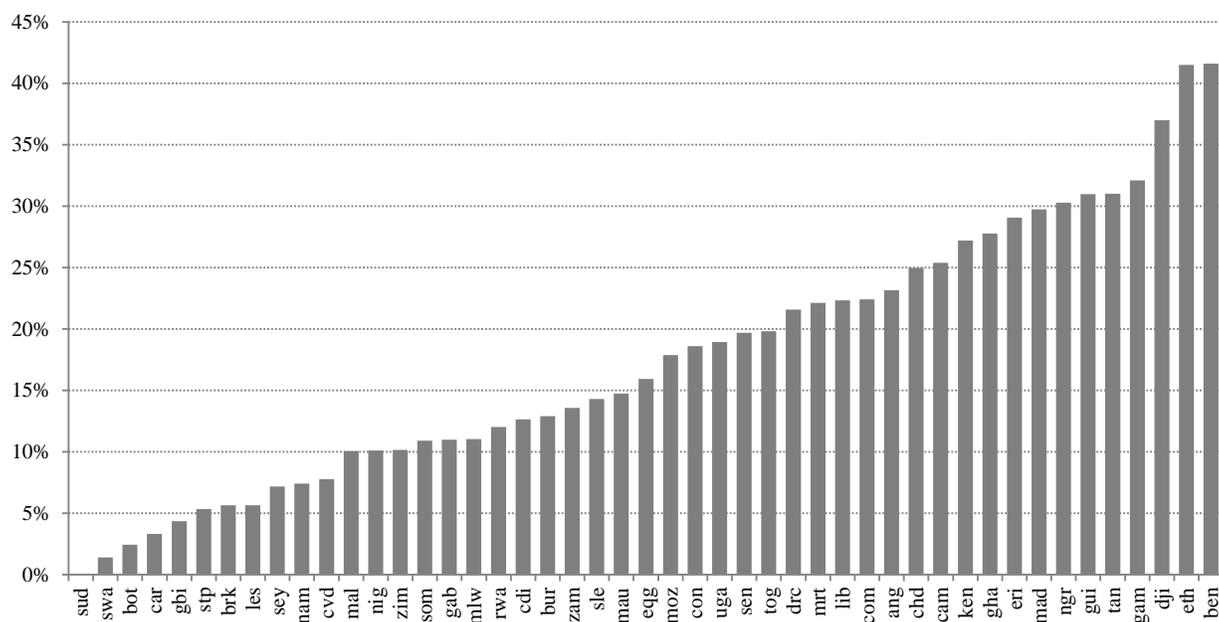
Graph 8. SSA imports by trade partner as % of total imports, 2002-2014 (excluding S. Africa)



Source: UN COMTRADE (ISIC rev. 3)

Even though China is a significant trading partner of most SSA countries, its importance relative to total imports varies considerably, ranging from 41.6% of total imports in Benin and 41.5% in Ethiopia to just 1.4% in Swaziland (*Graph 9*).

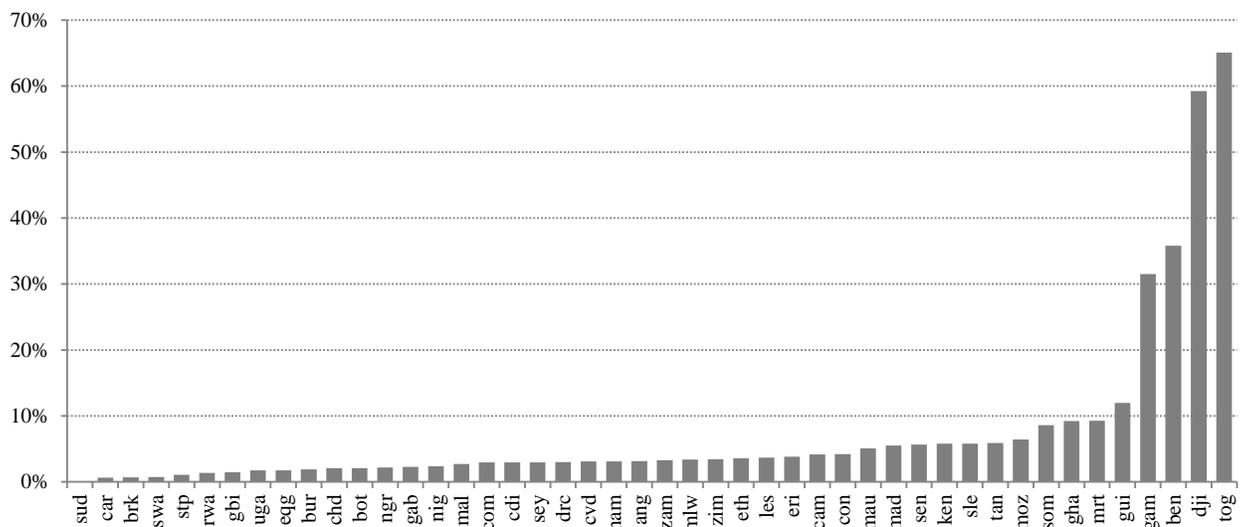
Graph 9. Imports from China as % of total imports, 2014



Source: UN COMTRADE (ISIC rev. 3)

When scaled relative to GDP, the GDP weighted average of SSA economies' imports from China is 4.2% for the period 2011-13 (calculations based on UN COMTRADE and UN National Accounts in current terms). There are, however, some noticeable outliers when breaking this measure down by country such as Togo, Djibouti, Benin, Gambia and Guinea-Conakry, importing Chinese merchandises worth more than 10% their domestic output (*Graph 10*). Note that the high values of Djibouti and Togo, where imports from China account for 59% and 65% of GDP respectively, might be driven by the fact that these two countries are major trading routes into other African countries.

Graph 10. Imports from China as % of GDP, average 2011-2013



Source: UN COMTRADE (ISIC rev. 3) and UN National Accounts

1.2.2. Unfavourable trade structures?

The rise of China as a trading partner of African countries is a source of concern within academia and among policy makers in Africa because trade patterns appear to be unfavourable for African countries, with imports consisting mostly of manufacturing goods and exports primarily of raw materials (see section 2.1. for more details). This leads the Nigerian Central Bank governor to the assessment that trade with China is a new form of colonialism contributing to de-industrialisation in SSA:

"China takes from us primary goods and sells us manufactured ones. This was also the essence of colonialism. China is (...) an economic giant capable of the same forms of exploitation as the West. China is a major contributor to the de-industrialisation of Africa and thus African underdevelopment." (Lamido Sanusi, Central Bank Governor Nigeria, cited in Chima 2013)

In fact, at first sight trade patterns with China appear to be even less favourable than trade structures with OECD countries. **Table 4** shows SSA's imports by product type as share of total imports from different trade partners/ regions. Taking an average over the period 2012-14, the highest share of imports from China (35.7%) were manufactured products in the form of final consumer products. By contrast, final consumer goods accounted for just 14.2% of all goods imported from OECD countries, 7.9% of imports from other African countries and 18.3% in SSA's total imports from the world. Even though imports of (processed) food & beverages make-up for a much higher share in total imports from OECD countries than in imports from China, 38% of imports from China were either final consumer products or food

& beverages compared to 24% of imports from OECD. However, manufactured products mainly used for public consumption such as public transport equipment and military goods accounted for a larger share of imports from OECD countries than of imports from China.

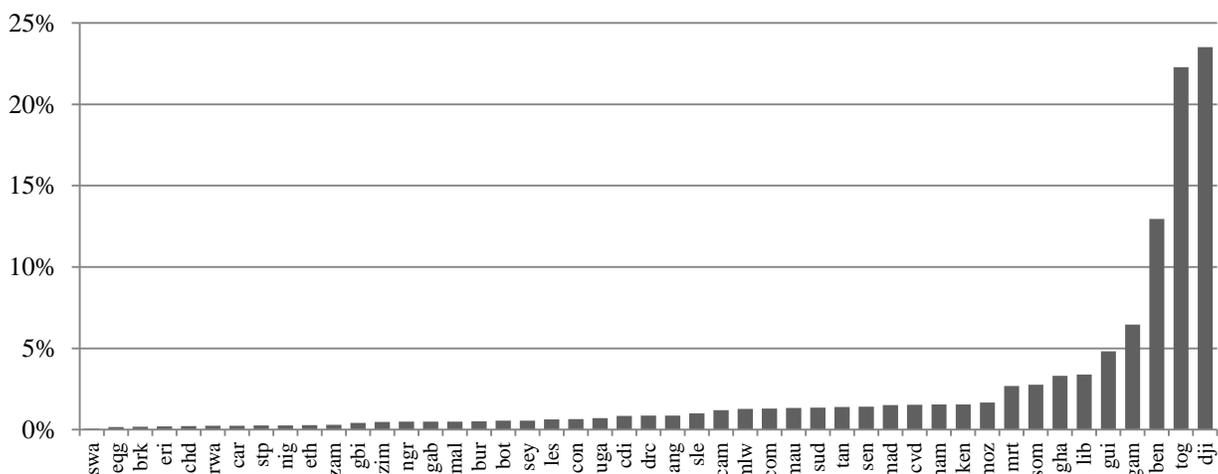
Table 4. Imports by type and region (as % of total imports from that partner)

	Trade partner/ region	China	OECD	intra-SSA	World Total
Broad Category	Detail	avr.2012-14	avr.2012-14	avr.2012-14	avr.2012-14
Public goods	Military	2.04%	5.4%	0.6%	3.9%
	Medical Precision	0.00%	0.1%	0.1%	0.1%
	Public Transport Equip.	3.94%	7.6%	8.5%	5.2%
	Public goods total	5.99%	13.1%	9.2%	9.2%
Raw Materials	Agriculture, Forestry, Fish.	0.16%	3.9%	8.7%	3.4%
	Mining	0.04%	1.0%	25.5%	3.5%
	Raw Materials Total	0.20%	4.9%	34.2%	6.9%
Manufacturing	Food & Beverages	2.66%	10.3%	13.6%	12.9%
	Final Consumer Products	35.73%	14.2%	7.9%	18.3%
	Intermediate Inputs	39.94%	37.7%	30.7%	38.1%
	Machinery	15.35%	18.3%	2.8%	13.7%
	Manufacturing Total	93.68%	80.5%	55.0%	82.8%
Other	Luxury	0.01%	0.2%	0.0%	0.1%
	Services	0.13%	1.2%	1.6%	1.0%
	Other Total	0.14%	1.5%	1.6%	1.1%

Source: UN COMTRADE (ISIC, rev. 3)

It is, however, appropriate to issue three caveats to these figures. *Firstly*, only in few SSA economies do Chinese imports of consumer goods and food and beverages account for substantial shares of total output. When scaling all consumer goods imports from China (i.e. final consumer products and food and beverages) relative to total output, what stands out is that only few SSA economies are ‘flooded’ by Chinese products. Consumer goods imports relative to GDP range from 24% in Djibouti to 0.06% in Swaziland. Only in four SSA economies – Djibouti, Togo, Benin and Gambia – do consumer goods and food and beverage products imported from China account for more than 5% of total output over the period 2011-13 (*Graph 11*). For Djibouti and Togo the high values will be reflective of their aforementioned role in the trade between China and the rest of SSA.

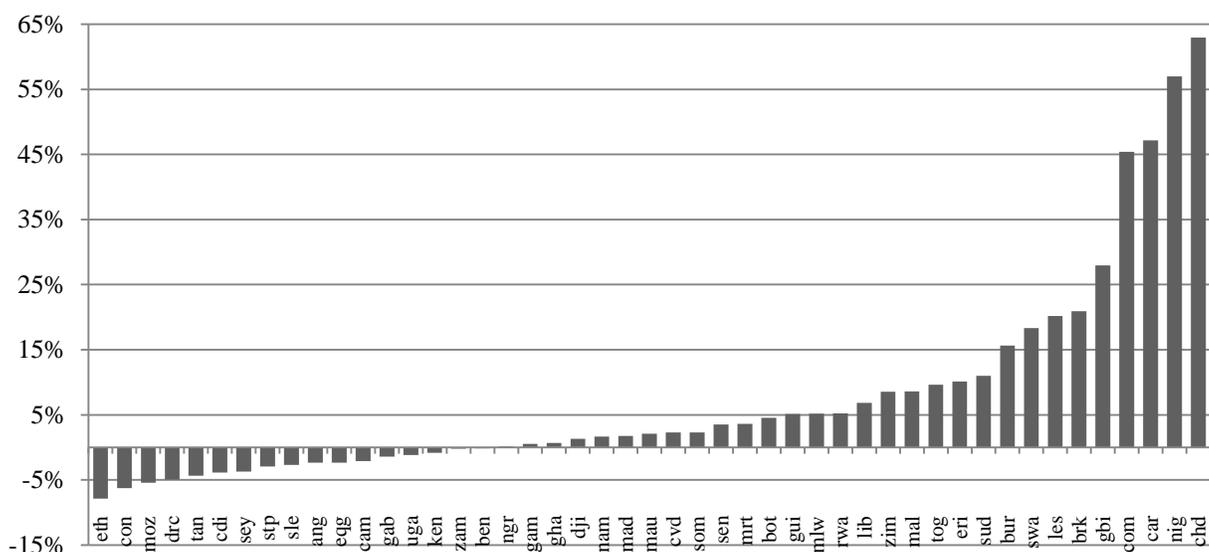
Graph 11. Consumer goods and food and beverage imports from China as share of GDP, 3 year average 2011-13



Calculations based on UN COMTRADE (BEC, rev. 2) and UN National Accounts

Secondly, while the share of consumer goods imports from China out of total consumer goods imports increased for SSA on aggregate, some economies managed to reduce their share of Chinese consumer goods imports relative to other imports from China (notably capital goods imports). 20 countries in the sample had negative average growth rates of Chinese consumer goods imports in their import mix from China – including notably Ethiopia, Botswana, Congo-Brazzaville, Mozambique, the DRC, Tanzania, Côte d’Ivoire, the Seychelles, Sao Tomé and Príncipe, Sierra Leone, Angola, Equatorial Guinea, Cameroon, Gabon, Uganda, Kenya, Zambia, Benin and Nigeria. By contrast, in Guinea Bissau, Comoros, the Central African Republic, Niger and Chad, the consumer goods imports have increased quite substantially in the import mix from China with average annual growth rates ranging from 28% to 43% (*Graph 12*).

Graph 12. Average annual growth rates of consumer goods imports from China out of total imports from China, 2000-2013



Calculations based on UN COMTRADE (BEC, SITC rev. 2)

In this respect it is worth pointing out the role of policy in regulating the composition of imports from China. Several studies have reported that Chinese investments in SSA have followed a rise in import-tariffs on consumer goods, which makes relocation a more profitable way to penetrate the local market than exporting (Shen, 2015: 98). For instance, three of the twelve market-seeking firms interviewed by (Huang and Ren 2013) specifically indicated that they wanted to avoid tariff barriers. Similarly, in the Nigerian case the rise of trade volumes alerted Chinese manufactures of consumer goods to the market potential in Nigeria. The rise in import tariffs on numerous goods imposed by the Nigerian government in 2004 then prompted Chinese manufactures of furniture and textiles who had previously exported to Nigeria to look for alternatives and relocated production to Nigeria (Mohan and Lampert 2013). This has triggered wider spill-over effects. The ban of certain consumer goods imports also incentivised former Nigerian traders to set up manufacturing plants and the employment of Chinese workers enabled productivity-enhancing demonstration effects among the domestic workforce (Mohan and Lampert 2013). Spill-over effects of the Nigerian tariff scheme even extend to supply chain formation. By 2009, a number of Chinese shoe manufactures had moved their assembly lines to Nigeria and actively inquired the possibility of producing inputs like rubber soles locally (Brautigam and Tang 2014). The venture eventually failed due to financial troubles affecting the parent company in China, but this policy induced process of chain investment reveals something interesting about the relation between trade and domestic market formation: Chinese manufacturers are only

alerted to the sales potential of Nigerian market through the high volumes of import demand from African traders. Chinese manufacturers' decision to relocate production lines was a consequence of changes in Nigerian economic policy.

1.2.3. Evidence for the productivity-enhancing properties of Chinese capital goods imports

Last but not least, qualitative and survey evidence suggests that Chinese (and other Southern sourced) capital goods have a number of distinct features, which makes them easier to adopt and adapt especially for poorer producers and those targeting the domestic consumer market. *First* and foremost, Chinese sourced capital goods are cheaper than those sourced from advanced economies. The acquisition costs of Chinese machinery relative to those sourced from high income economies are about 66% for sewing machines in the Ugandan apparel sector (Hanlin and Kaplinsky 2016), 50% for agricultural machinery in Tanzania (Agyei-Holmes 2016), 20-25% for aluminium processing equipment and 5% for plastics production equipment respectively in Nigeria (Y. Chen et al. 2016) and 1% for wood-working machinery for furniture production in Kenya (Atta-Ankomah 2016). *Second*, capital goods sourced from China are designed for lower rates of output, which makes them economically more efficient for the small market sizes of African economies allowing for much higher rates of capacity utilisation than capital equipment from Northern countries (Hanlin and Kaplinsky 2016). *Third*, capital goods from China that have a shorter life-span, require more frequent repair and more learning by using experience due to the fragile nature of parts. However, the more frequent breakdown does not entail higher repair costs because spares are easily available including in rural settings. Repairing equipment requires less technological know-how (Agyei-Holmes 2016) and there are domestic capabilities for retrofitting and hybridisation. In the case of wood-working machinery in Kenya, for instance, technology has been adapted by installing motors from OECD-sourced machines into the Chinese original equipment to extend the life-span of machines (Atta-Ankomah 2016).

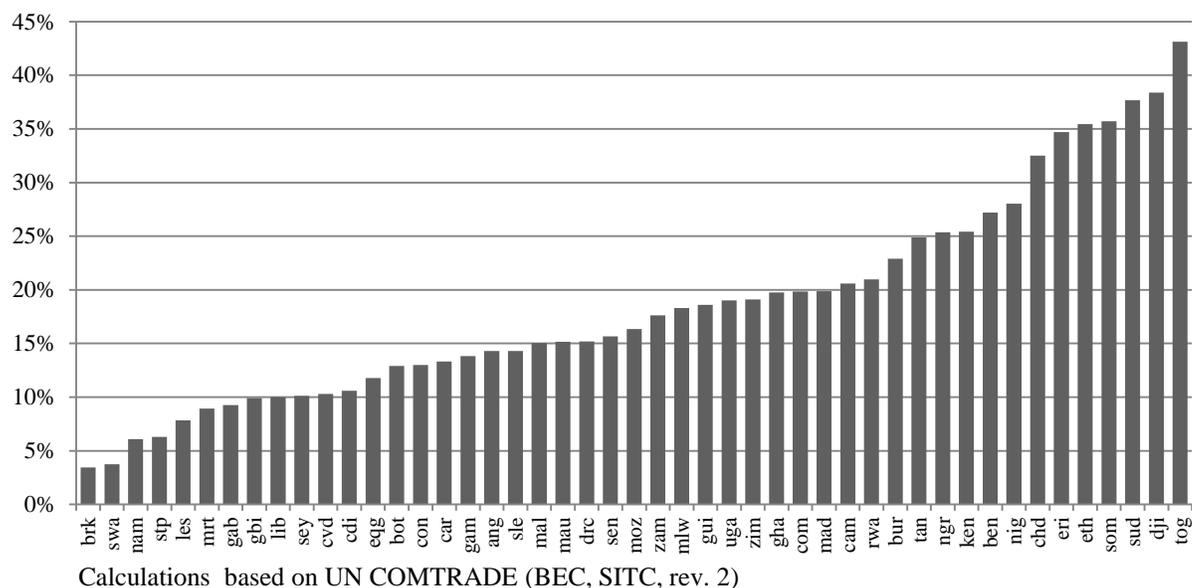
These characteristics of Chinese capital goods favour acquisition by smaller and poorer producers, including women (Agyei-Holmes 2016; Hanlin and Kaplinsky 2016), those operating in rural (Agyei-Holmes 2016) and informal settings (Atta-Ankomah 2016). In the case of Kenyan furniture producers, the informal producers target the technologically less sophisticated, lower income brackets of the domestic market (Atta-Ankomah 2016). In this sense, Chinese capital goods also support domestic market formation by allowing producers

with limited ability to raise external finance to service emerging domestic consumer demand in low income brackets.

China has become a major source of capital goods imports in Africa, as can be seen from China's share in Africa's total capital goods, increasing from 3% in 2000 to 26% in 2014. There are, however, large variations between sectors and countries. China's share of total imports of sewing machines, for instance, accounts for 68% in 2014, while Chinese sourced tillers and woodworking machinery 34% and 26% of their respective totals (Hanlin and Kaplinsky 2016). **Graph 13** shows that a number of countries source large shares of their capital goods imports from China. In Benin and Togo, 65% and 47%, respectively, of all imported capital goods come from China – note that again, for Togo, this is partially reflective of its role in the wider trade between China and other SSA countries. In Chad, Liberia, Sudan, Niger, Ethiopia and Gambia, Chinese capital goods account for more than 25% of all imported capital goods. The observed productivity enhancing effects related to Chinese capital goods are therefore likely to be both sector- and country-specific.

On a general level, Kaplinsky (2013) argues that changes in the nature of consumer products and the technology used to produce them require a rethinking of appropriate policies in support of technology acquisition. Policies aiming at improving the capacity for technology acquisition within the national innovation system have to lay the foundations, not only for the adoption of global frontier technologies, but also to identify below the radar providers of bottom of the billion products and provide them with targeted support. This might, for instance, involve directing low-cost capital such as micro-credit, to investors in pro-poor technologies and small scale entrepreneurs (Kaplinsky 2013).

Graph 13. Capital goods imports from China as share of total capital goods imports, 3 year average 2011-2013



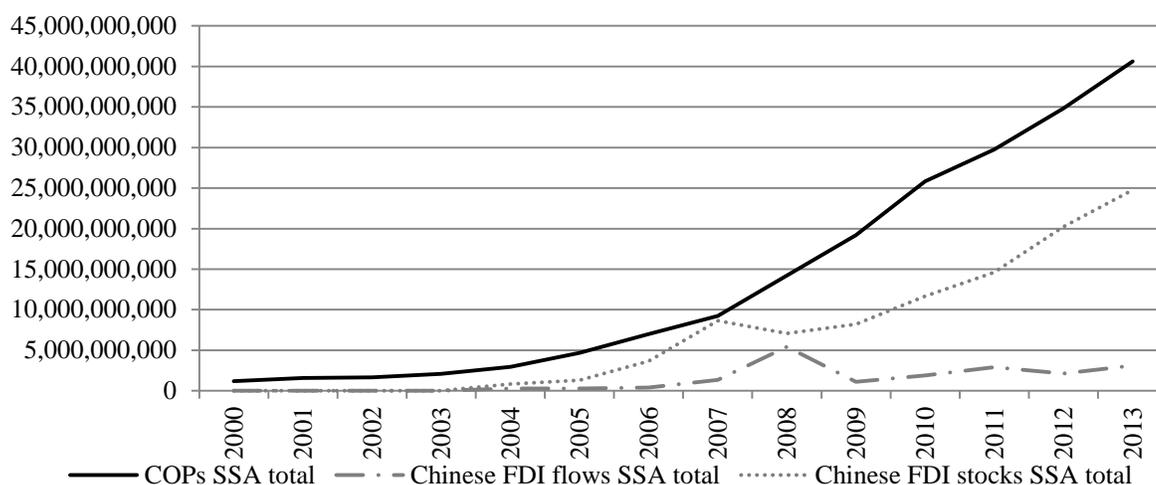
1.3. TRADE-RELATED SUPPLY-SIDE EFFECTS: CHINESE CONSTRUCTION SERVICES AND CHINESE INFRASTRUCTURE DEVELOPMENT IN SSA

Not covered in the data on Chinese outward FDI and merchandise imports from China is another crucial aspect of Sino-African economic ties, namely Chinese overseas construction projects. Chinese contracted overseas projects (COPs) should not be conflated with ‘investment’ (as is often done, especially in news media). Investments involve the acquisition of liquid and/ or fixed assets in the interest of generating a future stream of profits. By contrast, COPs are merely market outlets of Chinese construction firms overseas, i.e. technically Chinese service exports. The China Statistical Yearbook measures COPs as the total value of overseas construction contracts in the year in which the project is completed by Chinese firms in the host country. These include construction contracts financed through Chinese, host country or third sources:

“Chinese Overseas Contracted Project refers to projects undertaken by Chinese contractors (project contracting companies) through bidding process. They include: (1) overseas civil engineering construction projects financed by foreign investors; (2) overseas projects financed by the Chinese government through its foreign aid programs; (3) construction projects of Chinese diplomatic missions, trade offices and other institutions stationed abroad; (4) construction projects in China financed by foreign investment; (5) sub-contracted projects to be taken by Chinese contractors through a joint umbrella project with foreign contractor(s); (6) housing development projects. The business income from international contracted projects is the work volume of contracted projects completed during the reference period, expressed in monetary terms, including completed work on projects signed in previous years.” (National Bureau of Statistics of China 2009).

Chinese newly signed international contracts expanded at about 10% between 2012 and 2013. This reflects, on the one hand, a saturation of China’s domestic market and, on the other hand, policy and financial support from the Chinese government for “go global” enterprises as well as increasing competitiveness of the “go global” enterprises – not only in infrastructural and housing development, but also in electrical power generation, telecommunications and petrochemical areas (CICA 2014: 3). In terms of magnitude, COPs are far more important than Chinese firms operating through FDI (see **Graph 14**), with \$3.1 billion in FDI flows standing against a face-value of \$40.6 billion of COPs completed in 2013. Investigating the characteristics and spill-over effects of Chinese contracted overseas projects is therefore essential, not least because macro-level effects are more likely to come through COPs given their sheer size.

Graph 14. Chinese FDI (stocks and flows) compared to Chinese Overseas Contracted Projects SSA aggregate (2000-2013, current USD)



Source: China Statistical Yearbook (various years) and Statistical Bulletin of China's Outward FDI

The sectoral composition of Chinese construction projects has diversified. Transport and logistics were still the top areas in China’s newly signed international contracts in 2013, standing at 21.9%; followed by housing construction at 18% and electricity construction at 15.9%. Telecommunications and petrochemical areas sat at 13.5% and 13.3% respectively. Other areas include irrigation system construction, manufacturing facilities construction, sewage systems and industrial infrastructure (CICA 2014: 7f).

COPs and Chinese infrastructure finance for SSA

Institutions like the China Development Bank, ExIm Bank or the China Africa Development Fund finance some of these projects. However, not all Chinese-contracted projects are also

Chinese-financed projects (see definition above) and not all Chinese-financed and – contracted projects qualify as official development assistance (ODA) (Brautigam 2011). Chinese lending to Africa amounts to a total of \$86.9 billion over the period 2000 to 2014, with 68% of all loans coming from China Exim-Bank, 16% from the China Development Bank and 16% from other sources (Hwang, Brautigam, and Eom 2016). Angola and Ethiopia are by far the largest recipients of loans from China, receiving \$21.2 billion (23%) and \$12.3 billion (14%) respectively. In 2013 alone, \$7.4 billion worth of construction projects have been completed in Angola as a counterpart of these loans, and \$3.5 billion in Ethiopia.

Three different types of finance can be distinguished. *Firstly*, there are export credits, which are subsidised by the aid budget and therefore often modestly concessional (with a grant element in between 22% - 37%). They come either in the form of loans to third countries (export buyer's credits) or Chinese firms (export seller's credits) (Brautigam 2010a). Export seller's credits are particularly important in Ethiopia, accounting for about one third of total Chinese lending to Ethiopia over the period 2000-2014 (Hwang, Brautigam, and Eom 2016).

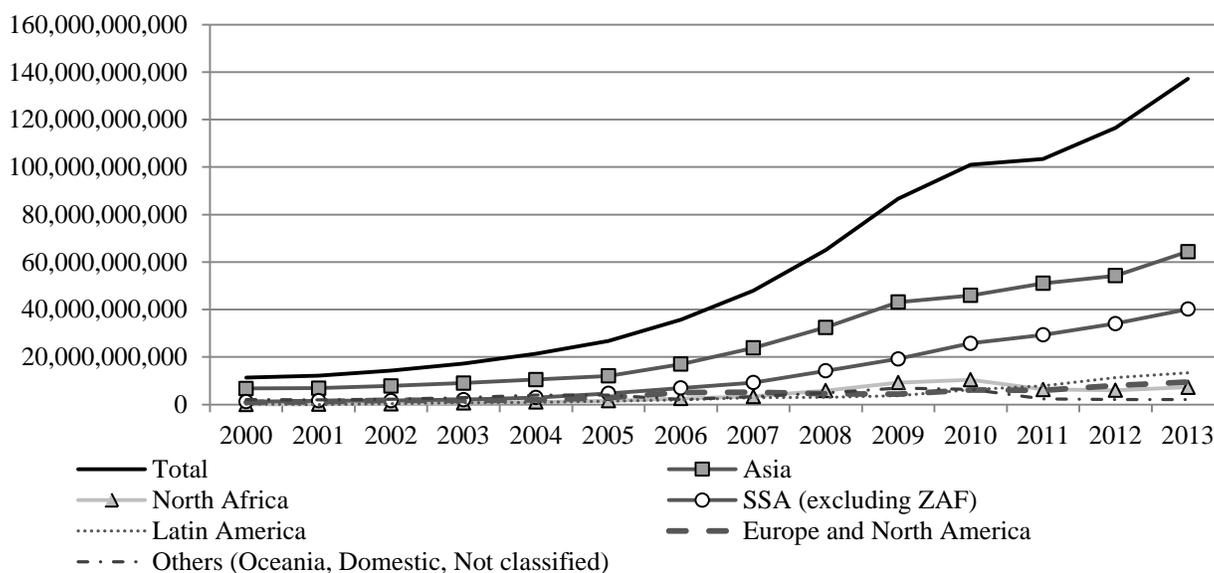
Secondly, there are natural resource-backed lines of credit which constitute another alternative financing mode. Typically issued by China ExIm Bank, these are usually loans at non-concessional rates and secured by natural resource exports (Brautigam 2010b). Examples of SSA countries having negotiated such loans include, for instance, Angola and the DRC. In the Congolese case the government negotiated a \$6 billion loan (initially \$9 billion) in 2007 which was secured by a newly created Chinese-Congolese mining joint venture of which the Chinese held 68% of the shares. The loan is paid back through the export of minerals and used to pay for civil engineering contracts with Chinese firms for the construction of large scale infrastructure projects (e.g. 6000km roads to connect Kinshasa to the East, 3000km railways etc.), hospitals, schools and social housing. Angola has received two ExIm Bank credit lines of \$2 billion (2004) and \$2.5bn (2007), which are to be repaid in commodity exports and which are used for the construction of 1,300 km of railways and 300 km of roads in Angola, as well as hospitals, schools, social housing, telecommunications network and investment in agriculture (Christensen 2010; Marysse and Geenen 2009; Tan-Mullins, Mohan, and Power 2010)

Finally, there are so-called 'mixed credits', which combine export buyer's credit (given to the borrowing country), export seller credits (issued to the Chinese company) and concessional loans. They are mostly issued for specific projects. Up until 2006, the ExIm

Bank had signed deals with Congo-Brazzaville, Ethiopia, Equatorial Guinea, Nigeria, Mauritania, Ghana, Namibia and Eritrea. In 2007 in Ethiopia, for instance, a \$208 million credit was used for the development of a cement and hydro-electric industry (Brautigam 2010a).

Seen from the Chinese perspective, SSA is the second most important overseas market for Chinese construction firms, second only to Asia, with a \$64.3 billion contracted value in Asia in 2013 against \$40.2 billion in SSA (*Graph 15*), i.e. 29.6% of all overseas construction projects completed in 2013.

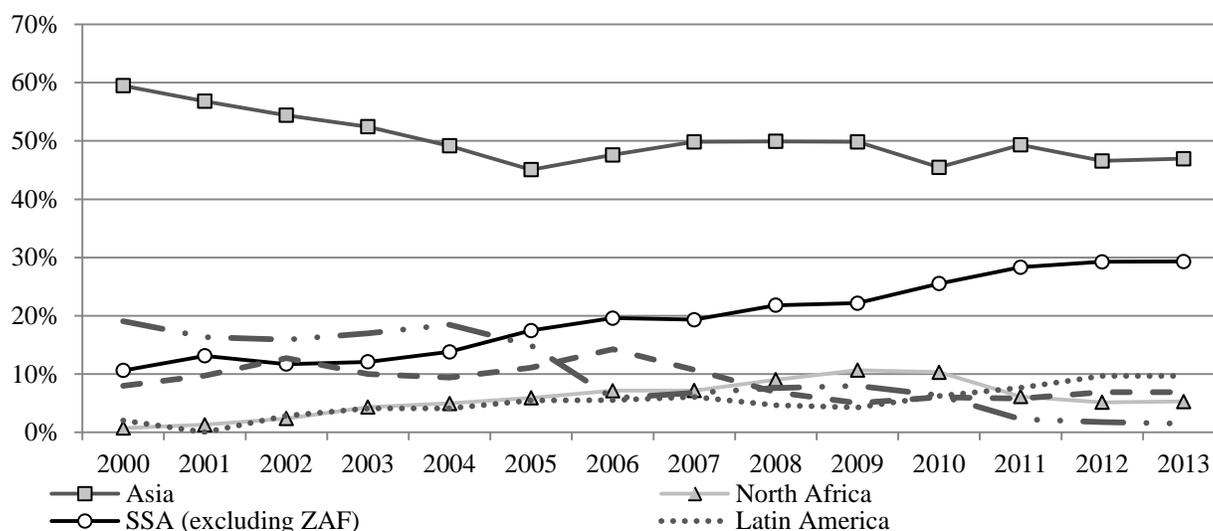
Graph 15. Chinese Overseas Contracted Projects by region (current USD)



Source: China Statistica Yearbook (various years)

Not only is SSA the second most important overseas market for Chinese construction firms, but the contract value of projects carried out in SSA also increases at faster rates than in any other regions, which is reflected in SSAs growing share of total COPs, increasing from 10.6% in 2000 to 29.6% in 2013 (*Graph 16*).

Graph 16. Chinese Overseas Contracted Projects by region (% of total)



Source: China Statistical Yearbook (various years)

Table 5 summarises the 10 top ten SSA countries in which Chinese firms have obtained construction contracts, indicating the value of projects completed in the year 2013 as well as the share of total projects completed in SSA in 2013. Angola is the largest market for Chinese construction firms in SSA, followed by Nigeria and Ethiopia. Despite Chinese firms carrying out projects in nearly all SSA countries, the top ten markets account for 71% of all Chinese contracted overseas projects in SSA.

Year	Country	Chinese contracted projects	% of total SSA COPs
2013	Angola	7,450,400,000	18.3%
2013	Nigeria	4,273,520,000	10.5%
2013	Ethiopia	3,556,630,000	8.8%
2013	Equatorial Guinea	2,627,670,000	6.5%
2013	Zambia	2,490,500,000	6.1%
2013	Sudan	1,984,350,000	4.9%
2013	Congo-Brazzaville	1,876,340,000	4.6%
2013	Ghana	1,771,270,000	4.4%
2013	Tanzania	1,709,760,000	4.2%
2013	Kenya	1,447,400,000	3.6%

Compiled based on: China Statistical Yearbook

Chinese contractors become also more important seen from an African perspective

In fact, in 2014 revenues of the top 250 building contractors listed by the Engineering News Record²⁹ from projects outside of their home country were 4.1% lower than in 2013. This is the result of the debt crisis in Europe and the slowdown of the Chinese economy, both of which entail a reduction in government spending on infrastructure development. The African market is an exception to this trend with project revenues from international contractors in Central and Southern Africa increasing by 14.7% relative to 2013. Up until 2014 the share of revenues realised by the top 250 international contractors in Africa has increased from 9% of total revenues outside of the home country in 2004 to 14% in 2014 (Reina and Tulacz 2015).

In this dynamically expanding African construction market, Chinese contractors have secured an increasing share. In 2004, the African construction market was still dominated by European contractors realising 50% of total revenues. 25% of the African market was covered by French firms alone. This picture changed dramatically within just a few years: by 2006, Chinese contractors overtake French contractors and by 2008 the revenues of Chinese firms realised in the African market overtakes those of all European countries taken together. By 2014, 49% of all contracts carried out by the top 250 international contractors are carried out by Chinese firms in Africa, up from 15% in 2004. The spectacular rise of Chinese construction firms in Africa is mirrored in the decline of European contractors whose share in revenues in the African market decreased from 50% in 2004 to 29% in 2014, even though revenues still increased in absolute terms. Only American contractors lost revenues both in absolute and relative terms, with American contractors' revenues in the African market decreasing from \$1.9 billion in 2004 to \$955 million in 2014. Some non-Chinese and non-European players increased their market shares and revenues over the past years, namely Turkey and Brazil (*Table 6*). Not all of those Chinese-contracted construction services are also Chinese-financed. Between 2007 and 2015 Chinese firms, have for instance, won 30.3% of World Bank financed infrastructure projects in SSA, up from 18.1% between 2000 and 2006 (Farrell 2016).

²⁹ A world leading construction industry magazine, news forum and data base

Table 6. Market shares of top 250 international contractors in Africa (selected years)

	2004		2006		2008		2010		2012		2014	
Contractor	rev. Mil.\$	%										
All firms	14,284	100	17,911	100	50,885	100	60,592	100	56,865	100	70,949	100
European	7,130	50	7,442	42	18,166	36	22,530	37	17,963	32	20,322	29
French	3,527	25	3,804	21	5,033	10	5,903	10	5,063	9	6,084	9
Italian	1,294	9	1,200	7	8,309	16	9,999	17	7,401	13	7,917	11
Spanish	348	2	355	2	1,707	3	1,890	3	1,458	3	2,414	3
Other Europ.	1,960	14	2,083	12	3,116	6	4,738	8	4,041	7	3,906	6
Chinese	2,107	15	5,084	28	21,578	42	23,468	39	25,487	45	35,015	49
USA	1,977	14	2,015	11	3,028	6	4,396	7	2,652	5	955	1
Brazilian	0	0	0	0	0	0	0	0	2,305	4	2,717	4
Turkish	285	2	556	3	1,871	4	2,198	4	2,316	4	4,667	7
Others	2786.3	20	2815.3	16	6242.7	12	8000.9	13	6142	11	7273	10

Compiled based on: Engineering News Record

Out of the top ten international contractors in Africa whose revenues account for 41% of total revenues in Africa, six are Chinese. The dominance of Chinese contractors in the African market becomes even more apparent when looking at the top five international contractors only, of which four are Chinese (*Table 7*).

Table 7. Top 10 international contractors in Africa

Rank 2014	Rank 2013	Company Name	Home Country
1	1	China Communications Construction	China
2	5	Power Construction Corporation of China	China
3	2	Saipem	Italy
4	3	China Railway Group	China
5	**	China Civil Engineering Construction Group	China
6	4	Vinci	France
7	10	Construtora Noberto Odebrecht SA	Brazil
8	8	CITIC Construction Co. Ltd.	China
9	**	Ozturk Holding Co.	Turkey
10	6	China State Construction Engineering Corporation Ltd.	China

Source: Engineering News Record

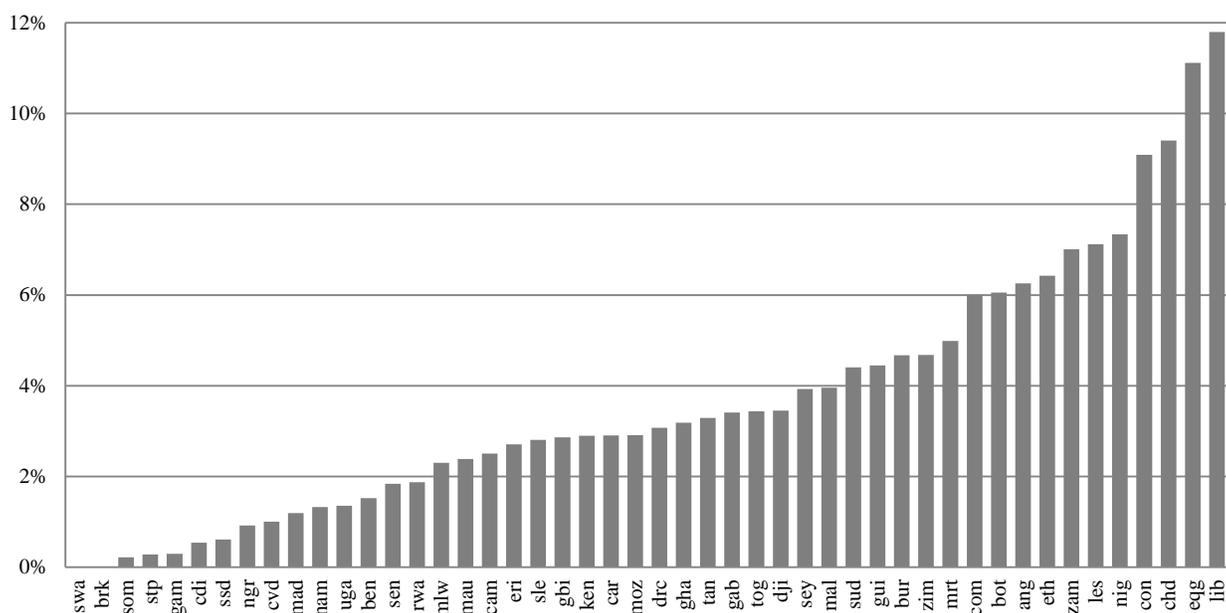
Economic impact of Chinese construction projects

The relative importance of these projects measured as a share of GDP varies considerably.

Chinese contracted projects as a share of GDP range from 0.000004% in Swaziland to 11.7%

in Liberia, when considering the 3 year average of 2011-2013. In Liberia and Equatorial Guinea the share of these projects in GDP exceeds 10% (average 2011-2013). African economies in which the face-value of COPs amounts to 5% to 10% of GDP include Angola, Ethiopia, Comoros, Botswana, Zambia, Lesotho, Niger, Congo-Brazzaville and Chad. Countries where Chinese projects account for less than 1% of GDP include: Swaziland, Burkina Faso, Somalia, Sao Tomé, Gambia, Côte d'Ivoire, South Sudan and Nigeria (*Graph 17*).

Graph 17. Chinese Overseas Contracted Projects relative to GDP (average 2011-2013)



Given the size of COPs relative to Chinese FDI, macro-level effects on manufacturing sector development related to Chinese firms are more likely to come through COPs than FDI.

Chinese contracted projects are likely to have significant supply side effects, which is the main angle from which resource-for-infrastructure deals are approached (see for instance Sandrey and Edinger 2011; Sindzingre and Robinson 2012; Orr and Kennedy 2008). Given the importance of infrastructure for export diversification (see for instance Hummels 2007) and the well documented infrastructure gap in SSA (see for instance Center for China Studies 2011; Foster et al. 2009), this could remove important bottlenecks to industrialisation in SSA. Estimations of the Africa Infrastructure Country Diagnostic from 2009, for instance, suggest that approximately \$93 billion were needed across the continent over the following decade to achieve national development targets (Pearson 2015). This

infrastructure gap is partly addressed by China providing a projected \$11 billion in finance for infrastructure compared to \$13.7 billion by the G-8 countries in 2008 (Schiere 2010). Hwang, Brautigam, and Wang (2015), for instance, find that a total of 17 large Chinese-financed hydropower projects implemented between 2000 and 2013 added approximately 6,771MW of power generation capacity to SSA. Add to this a number of smaller projects below 50MW and Chinese-contracted hydropower projects financed by third funders (Hwang, Brautigam, and Wang 2015).

In particular, Chinese loans address shortages in specific sectors (such as infrastructure and industry), thereby complementing ODA from high-income countries, which have strongly pivoted away from industrial development and infrastructure finance towards the provision of support for social sectors (Dahman-Saidi and Wolf 2011).

Some anecdotal, mainly news media-led (see for instance: *The Economist* 2011), evidence has suggested quality issues with Chinese contracted infrastructure. This does, however, not withstand the test of quantitative scrutiny. A systematic review of the World Bank's impact assessments for Chinese constructed, World Bank financed infrastructure projects reveals no statistically significant difference in quality between Chinese-contracted and OECD-contracted projects financed by the World Bank in SSA, both scoring on average between moderately satisfactory and satisfactory. Chinese-contracted projects did however have more variation in their outcome scores. The negative reputation of Chinese firms might be explained by news media disproportionately picking up on very low scoring projects (Farrell 2016).

Pheng, Jiang, and Leong (2004) find that the cost-advantage of Chinese firms relies on lower wage-levels of engineering staff compared to Western firms and low-cost construction machinery. On more sophisticated projects, Chinese firms enter in joint ventures with Japanese, British and German contractors. Zhao and Shen (2008) find that Chinese contractors even have technological advantages vis-à-vis Western contractors. Due to the rapid expansion of the construction market in China itself which involved increasingly technologically complex projects, Chinese construction firms have developed world-class, advanced construction technologies in highways and railway bridge construction, tunnels and underground work, structures for deep foundation pits, super high rise buildings, blasting technology, large structure and equipment hoisting, pre-stressed concrete and mass-concrete pouring. Therefore, Chinese firms are now more capable of undertaking technically

complex projects and have, according to survey results from Zhao and Shen (2008), built a reputation for cost saving and quality performance including in the African market.

2. DEMAND-SIDE CHANNELS: BETWEEN REDUCED SCOPE FOR EXPORT-LED INDUSTRIALISATION AND INCREASED POTENTIAL FOR DOMESTIC MARKET FORMATION

Supply-side implications of economic ties with China for manufacturing sector development in SSA are comparatively well established and mostly shown to be positive, with Chinese trade and investment being associated to technology and skills transfer, infrastructure development and access to low cost capital goods. The picture for demand-side channels is much less clear. In line with the general trend in research on industrial development, existing research focusses on export-demand pointing at the displacement of African manufacturing exports on world markets, though overall export earnings and therefore the balance of payments consistent growth potential increase when considering an SSA average. This section argues that the displacement of African manufacturing exports exposes the fallacy of assuming unlimited export markets for late-industrialisers. At the same time the increase in (non-manufacturing)-exports raises the question of how and under which conditions export earnings can translate into productive sector investment, i.e. how export demand links to autonomous and induced investment demand. Building the backbone of a dynamically expanding manufacturing sector by harnessing the demand potential embodied in the domestic market (whether in the form of inputs or final consumer demand) is all the more important given increasingly intense competition for manufacturing products on export markets. The nature of Chinese engagement with SSA countries has itself the potential to promote such domestic market formation if supported by appropriate policies.

2.1. AFRICAN EXPORTS IN TIMES OF CHINA: EVOLUTIONS IN VOLUMES AND COMPOSITION OF AFRICAN EXPORTS

China is the most important destination of SSA exports, with export volumes increasing from \$6 billion in 2002 to \$36 billion in 2014 (in 2005 constant dollars). Exports to China out of total SSA exports increased from 7% in 2002 to 22% in 2014. The second most important destination for African exports is India (10%), followed by the US (6%), Spain (5%) and France (5%). Interestingly, SSA's exports to the United States declined in absolute value and not just in shares, with exports decreasing from \$23 billion in 2002 to \$9.8 billion

in 2014. Correspondingly, shares of exports to the US fell from 27% in 2002 to 6% in 2014. By contrast, India emerged from virtually nothing in 2002 to the second most important export destination, with total export volumes amounting to \$16 billion in 2014 (calculations based on UN COMTRADE, ISIC rev. 3).

Looking at export-structures, we see that 90% of exports to China (yearly average 2012-14) are raw material exports compared to 79.9% of the same exports to OECD countries. The share of raw materials in total exports to China also exceeded the average of all trading partners (“world”) standing at 80.2% (*Table 8*). Ceglowski, Golub, & Mbaye (2015) emphasise a similar point. Dividing products into primary products and four types of manufacturing products (natural resource-intensive products; unskilled labour-intensive products; human capital-intensive products; and technology-intensive products) they show that SSA’s bilateral exports consist overwhelmingly of primary products and that the small share of manufactured exports has become increasingly concentrated in natural resource-intensive products. This section further disentangles SSA exports to China and the rest of the world providing evidence of export displacement in labour-intensive manufacturing, on the one hand, and increased overall export earnings due to China’s accelerated demand for raw materials and its indirect impact on world market prices of those, on the other hand.

Table 8. Exports by type and region/ partner (% of total exports to that partner)

		China avr. 2002-04	China avr.2012 -14	OECD avr. 2002- 04	OECD avr.2012 -14	intra- SSA avr. 2002-04	intra-SSA avr.2012- 14	ROW avr. 2002-04	ROW avr.2012 -14	World avr. 2002-04	World avr.2012 -14
Public Goods	Medical Precision	0.0%	0.0%	0.1%	0.1%	1.1%	1.0%	0.2%	0.1%	0.2%	0.1%
	Military	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
	Public Transport Equip.	0.0%	0.0%	1.3%	0.3%	0.6%	13.4%	0.5%	0.1%	1.1%	1.1%
	Total Public Goods	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Raw Materials	Agriculture, Forestry, Fish.	13.3%	6.1%	14.2%	9.2%	6.5%	4.4%	23.6%	10.9%	14.9%	8.7%
	Mining	83.1%	83.9%	62.3%	70.8%	27.4%	30.8%	53.7%	74.4%	62.1%	71.5%
	Total Raw Materials	96.3%	90.0%	76.5%	79.9%	33.9%	35.2%	77.4%	85.3%	76.9%	80.2%
Manufact. Goods	Food & Beverages	0.5%	0.2%	7.0%	4.3%	14.1%	12.2%	5.2%	2.3%	6.4%	3.5%
	Final Consumer Products	0.0%	0.0%	4.5%	1.5%	6.4%	4.1%	1.1%	1.1%	3.8%	1.3%
	Intermediate Inputs	3.1%	8.9%	9.6%	12.6%	41.0%	30.5%	13.6%	9.2%	10.6%	12.2%
	Machinery	0.0%	0.0%	0.4%	0.2%	1.9%	2.3%	0.7%	0.4%	0.4%	0.4%
	Total Manufacturing	3.6%	9.1%	21.5%	18.7%	63.5%	49.0%	20.6%	13.0%	21.2%	17.5%
Other	Luxury	0.0%	0.6%	0.3%	0.5%	0.0%	0.0%	0.2%	0.2%	0.2%	0.4%
	Services	0.1%	0.2%	0.3%	0.5%	1.0%	1.4%	1.1%	1.3%	0.4%	0.7%
	Other total	0.1%	0.8%	0.6%	1.0%	1.0%	1.4%	1.3%	1.5%	0.6%	1.1%
		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

2.1.1. Some evidence for export-displacement

Table 8 also shows that the share of manufacturing goods decreased relative to the total exports of SSA countries to the world, falling from an average of 21.2% in the period between 2002-2004 to 17.5% between 2012 and 2014. This relative decline is most visible in final consumer products (decreasing from 3.8 to 1.4% of total SSA exports) but also applies to food and beverages (decreasing from 6.4 to 3.5% of total SSA exports). This pattern points to a further concern: not only are trade structures with China skewed towards the import of manufacturing products and the export of raw materials to a greater degree than with other trading partners, but also, Chinese products displace African products on world markets. China supplies around 13% of total world exports, roughly 34% of which are exports in textiles and clothing, and around 50% of the world exports in footwear (calculations based on UN COMTRADE). This could prove problematic by way of blocking the stepladder to export-led industrialisation (Kaplinsky 2008; Kaplinsky and Morris 2009).

The first studies which specifically assess the economic impact of Asian drivers on other developing countries are the ones by Kaplinsky, McCormick, and Morris (2007) and Goldstein et al. (2006). These very first studies did not have a “thematic focus” but rather tried to assess the overall impact of the Asian drivers on “development” and weighting all good impacts vs. all negative impacts, including on governance, industrialisation etc., depending on a number of country specific factors, notably resource endowments. The first thematic studies that explicitly addressed the question of industrialisation focused on the crowding out of African manufactured exports. Interestingly, the first wave of empirical literature relating to the prospects of industrialisation builds on a reduced version of the Kaplinsky, McCormick and Morris (2007) framework outlined above, focussing exclusively on the trade channel and inadvertently reducing the question of industrial development to one of trade.

The assessment of China's impact is rather gloomy at first: in the light of Chinese export growth, Morris (2006) deems that “(...) we are witnessing a zero-sum game” (Morris 2006: 47). Kaplinski (2008) argues that there is a clear and measurable indirect competitive effect which stems from Chinese competition in labour-intensive industries, notably textiles which comprise more than 50% of Africa's tiny manufactured export base. The same can be observed in the timber and furniture sector: “(...) China competes directly in labour-intensive and low-technology industrial sectors which are widely seen as the stepladder for SSA's industrial growth.” (Kaplinsky 2008: 19).

The displacement hypothesis also inspired a large body of empirical literature. Initially the effect is measured using trade/ export-similarity indexes and export overlap indexes (see for instance: Goldstein et al. 2006; Jenkins and Edwards 2006; Stevens and Kennan 2006). Later, more complex econometric methods do lend further support for the displacement hypothesis. Geda & Meskel (2008) are the first to test for crowding-out using a gravity model with panel data from 13 exporters of clothing and accessories over the period 1995-2005.³⁰ Their results show that Chinese exports of clothing and accessories had a negative impact on African exports of the same products, with a statistically significant elasticity coefficient of minus 2.25. The results of Giovannetti & Sanfilippo (2009) suggest that a 1% increase in Chinese exports is associated with a reduction of 0.07% in African exports of the same good in the same time period. Villoria (2009b) does a counterfactual simulation which suggests that if China's supply capacity had remained at 1995 levels, by 2006 wearing apparel exports from Kenya, Mauritius and the Southern African Customs Union (SACU) would have been 30 to 50% higher than actually observed (Villoria 2009b).

Econometric evidence is complemented by survey and case study evidence. Kamau, McCormick, and Pinaud (2009) show that following the end of the multi-fibre agreements in 2005, textile producers relocated from Kenya to China, and Kenyan market shares in the US declined relative to Chinese and Indian market shares. New preferential trade agreements such as the African Growth and Opportunity Act (AGOA) make it easier for SSA producers to break into the textile trade market but textile exports from Kenya, Lesotho and Swaziland have nonetheless declined as a result of competition with China (Kamau 2013). Survey data from Gebre-Egziabher (2009) revealed that out of 98 small and medium sized enterprises in the Ethiopian footwear industry, 60 per cent were forced to closed down or to rationalised their activity as a result of Chinese competition (Gebre-Egziabher 2009). Further anecdotal evidence points to the same conclusions. Brautigam (2009) reports that in Nigeria, between 2004 and 2008, 17 fabric factories had to shut down following Chinese competition, 6 of which employed more than 1000 workers (Brautigam 2009).

³⁰ **Gravity models** estimate trade displacement effects as follows: how much increase (decrease) in imports of country i from African country j at time t can be observed when exports from China to country i increase (decrease). This is effect is corrected for a number of factors that also determine the magnitude of trade between two countries, notably income and distance between countries plus some additional variables like colonial historic links or trade agreements. Another econometric assessments use **general equilibrium models** from the Global Trade Analysis Project (GTAP).

A closer look at 4 digit export data prints a similar picture. In real terms (constant 2005 USD),³¹ total SSA consumer goods exports fell from \$3.6 billion in 2002 to \$2.2 billion in 2014. This is mainly due to a reduction in OECD market shares in apparel and knitted fabrics. SSA apparel exports halved from \$1.8 billion in 2002 to \$900 million in 2014. 96% of wearing apparel is exported to OECD countries. SSA exports of knitted fabrics dropped from \$1.2 billion in 2002 to \$472 million in 2014. 98% of knitted fabrics are exported to OECD countries. Similarly, SSA exports of food and beverages fell from \$6.9 billion in 2002 to \$5.9 billion in 2014 (in 2005 constant USD). This decline is explained mainly by the decline of exports of processed fish (calculations based on UN COMTRADE).

2.1.2. Labour intensive export-oriented manufacturing remains feasible but faces simultaneity problems

The displacement of SSA manufacturing products on world markets is as much a problem of sluggish growth of OECD markets as of competitive pressures between developing countries. What is more, given the low level of manufacturing exports in sub-Saharan African economies, an increase in manufacturing exports by 30% to 50% would not necessarily be equivalent to profound structural change. In other words, competition from China may somewhat contribute to the de-industrialisation of SSA, but cannot explain the lack of industrial development in the first place. At the same time, reduced scope for labour-intensive export-led manufacturing does not mean either that the entire global demand for labour-intensive manufacturing products is met by China. Econometric studies cited above suggest that the displacement effect is not unequivocal. Giovannetti and Sanfilippo (2009) confirm that the negative effect of Chinese exports was strongest in the manufacturing sector and notably for textiles and clothing (in particular footwear) and machinery (in particular motor vehicle parts and agricultural machinery) (Giovannetti and Sanfilippo 2009: 509f). More importantly, Geda and Meskel (2008) also find that the displacement effect decreases and even turns positive after 2000 (Geda and Meskel 2008). Their results are limited to 13 countries and one sector and the period of 1995-2005 but are in line with case study evidence from Ethiopia, Kenya and Mauritius where the curse reportedly turned into a boon (Brautigam 2009: 19). Tang (2014) finds that while the traditional apparel production bases in South-Eastern Africa suffer from Chinese and Asian competition, Chinese investments bring advanced

³¹ Note: in current terms exports of these product groups still increase

technology and management techniques to this sector, which help in the survival of local producers in niche markets such as fast fashion, uniforms and work wear (X. Tang 2014).

The example of Ethiopia shows that labour-intensive textile and footwear manufacturing cannot only thrive despite Chinese competition on world markets, but can, in fact, be driven by Chinese investments. Footwear manufactures which survived Chinese competition are now growing dynamically with sales to local and international markets (Sonobe, Akoten, and Otsuka 2009). In contrast to the wider trend in SSA, final consumer goods exports from Ethiopia increased from 2% of total Ethiopian exports in 2002 to 6% in 2014. This is mainly due to an increase in exports of apparel up from an annual average of \$2.3 million in 2002-2004, to \$21 million in 2012-14. Of this apparel, 99.2% is exported to OECD markets. Exports of knitted fabrics increased from an annual average of \$1.1 million in 2002-2004 to \$19 million in 2012-14, 99.8% of which serves OECD markets. Ethiopian footwear exports grew from \$57,000 to \$13 million in 2012-2014, and 88.8% of these are exported to OECD markets (calculations based on UN COMTRADE).

Brautigam (2009) emphasises the role of industrial policy in facilitating the rebound of the Ethiopian leather industry. The Zenawi government had set-up industrial parks (and within that large factories) and encouraged learning spill-overs from foreign firms among others from Chinese investors (Brautigam 2009), the most famous example being the Huajian shoe factory. Chinese shoe manufactures relocating their production to Ethiopia are particularly attracted to Ethiopia's quota-free access to the EU and US markets, though some problems remain regarding supply-chain formation (Oqubay 2015; Abebe and Schaefer 2015). Even though inputs like leather are already produced domestically, Chinese tannery firms are reluctant to supply Chinese shoe manufactures in Ethiopia because they would lose their tax benefits if products were sold domestically instead of being exported (Brautigam and Tang 2014).

While the Ethiopian case illustrates that labour intensive, export-oriented manufacturing remains feasible despite Chinese competition and is even facilitated by Chinese investments, the more fundamental issues are the extent to which this sector can lead to structural transformation in Ethiopia and the extent to which the Ethiopian case is, indeed, replicable in other SSA countries. Most Chinese SME investments in South-Eastern African apparel focus on cutting, trimming and packing operations, which have low capital requirements. Moving costs being low, these firms often go after subsidies or even cheaper (labour/ production) costs and therefore have a tendency to relocate quickly

rather than sustaining a lasting production base (X. Tang 2014). This confirms broader contradictions in the accumulation logics of these ventures explored at further length in chapter 1: flying-geese type relocations of labour-intensive export-oriented industries are driven by the search for cheap labour, i.e. follow a logic of primitive accumulation. For countries at the rear end of the flying geese formation, productivity increases are not fast enough to reach knowledge and research intensive activities that would generate high incomes. At the same time, under-consumption problems arise as the incomes generated by this type of industrial activity are too low to sustain production for the domestic market (Lo 2011; Lipietz 1982). Intense price and wage competition between developing countries supplying highly substitutable products to the world market causes a race to the bottom. The terms of trade for low value-added manufacturing products are declining (Sarkar and Singer 1991; Kaplinsky and Farooki 2012) and the concurrent attempt of each country to boost its competitiveness through wage depression further undercuts a vital source of domestic purchasing power and further contributes to the deflation in world demand (Razmi and Blecker 2008). This raises doubts about industrial development strategies proposed by Ceglowski, Golub, and Mbaye (2015) or Monga (2013) advocating wage moderation and labour market deregulations to attract the flock of geese to Africa.

X. Tang (2014) argues that very large-scale apparel investments might base investment decisions on more long-term rationales. For instance, the investment by the China JD Group in Tanzania, which employs about 28,000 workers in Asia and about 1,000 in Tanzania, accepted losses for the first years of the plant's operation to gain experience in the local market (X. Tang 2014). However, these types of large-scale, potentially long-term oriented investments in export-processing remain, for the time being exceptions (X. Tang 2014) and the likelihood they will become a widespread trend in the future is doubtful. Ozawa and Bellak (2011) argue that China is far from having reached the "Lewis turning point" (or period): there is an approximated number of 160 million Chinese rural migrants plus 70 million potential more migrants. All in all, 750 million Chinese live in the countryside where wages are one third below their urban counterpart. The Chinese government undertook massive rural infrastructure development and economic stimulus programmes with the aim of encouraging the relocation of industries to the hinterland. Also, none of the multinationals that drive China's labour-intensive export sector have shown any sign of relocating their activities to sub-Saharan Africa, though some moved to the hinterland or nearby countries in Asia (e.g. Foxconn relocated 200,000 jobs to the cheaper inland provinces) (Ozawa and Bellak 2011; Ozawa 2015).

2.1.3. Displacement of manufacturing exports only affects some groups of products

To put Ethiopia's export revenues from footwear and textiles into perspective: Ethiopian footwear exports of \$27 million in 2014 (in current terms) stand against a total world trade volume in footwear of \$125 billion in 2014, \$63 billion of which are provided by China (calculations based on UN COMTRADE). They also remain woefully small compared to other sources of export revenues in Ethiopia. In 2014, exports of unprocessed agricultural goods amounted to \$1.1 billion. This represented 75% of total exports in 2014, up from 65% in 2002. Similarly, in the group of intermediate inputs, "basic non-ferrous metals" generated average annual export revenues of \$193 million in 2012-14 in current terms.

This lends support for the resource-based diversification paradigm (RBD, see chapter 1) maintaining that upgrading the value-added content of semi-processed manufacturing exports is an equally, if not more important challenge for late industrialising countries in SSA, especially given rising demand on world markets. While SSA's exports of final consumer products and food & beverages decreased, exports of intermediate inputs increased from 10.6% of total SSA exports to 12.2% of total SSA exports in the period 2012-2014. This is particularly so for exports to China and the OECD. SSA exports of intermediate goods increased from 3.1% of total exports to China in the period 2002-2004 to 8.9% in the period 2012-2014. In the case of exports to OECD countries, SSA exports of intermediate inputs increase from 9.6% in the period 2002-2014 to 12.6% in the period 2012-2014 (*Table 8*).

This group of products includes semi-manufactured goods, which, as opposed to raw materials, have undergone some degree of value addition. Looking at the yearly averages between 2012-2014, the most important item in this group was 'basic precious and non-ferrous metals', which accounted for 52% of all intermediate goods exports. This group, for instance, includes the smelter and (electrolytic) refinement of non-ferrous base metals like copper, lead, chrome etc. China was the largest export destination for this product group with 23% of all 'basic precious and non-ferrous metals' being exported to China. The second most important item of intermediate goods exports was 'refined petroleum', 44% of which was exported to OECD countries and 35% to other SSA countries. The third most significant intermediate goods item was 'sawmilling and planing of Wood', for which China was the largest export destination. This was followed by 'basic chemicals' (mainly exported to the US and India) and 'nuclear fuels' (88% of which was exported to OECD markets). These examples of manufactured products in which SSA

exports increased illustrate that there is room for African manufacturing exports on world markets. But the policy question is to what extent the value added and the degree of processing of these resource-based commodities can be increased by African producers, especially within the context of global value chains.

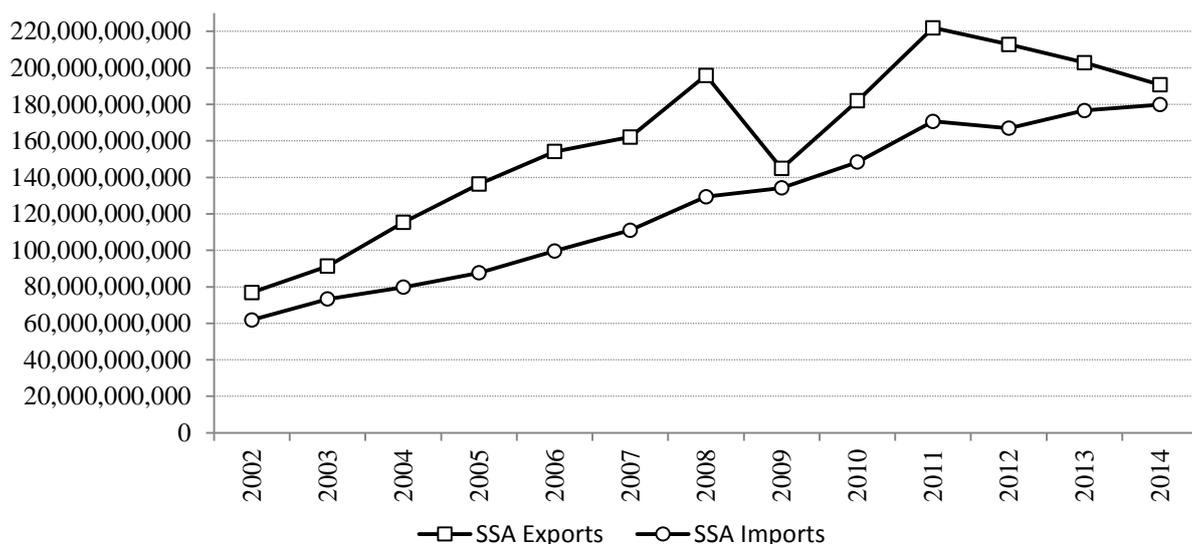
2.1.4. Increased balance of payments constrained growth rates and increasing terms of trade

Irrespective of export displacement in some sectors, for some SSA economies, China's accelerated demand for raw materials and semi-processed commodities has actually had a positive effect on their balance of payment position and, by extension, their capacity to import capital goods. Bagnai, Rieber, & Tran (2012) find that, on average, the balance of payment consistent growth rate in SSA countries has increased from 2.2% in the period 1990-99 to 5.4% in the period 2000-08. About a third of this improvement was due to the expansion of export markets in "developing Asia" (an aggregate of China and 13 other countries in low and lower-middle income countries in South- and South-East Asia) (Bagnai, Rieber, and Tran 2012). However, the contribution of "developing Asia" to the relaxation of the balance of payments constraint varies considerably across different SSA countries, ranging from 91% in DRC to -20% in Mozambique (Bagnai, Rieber, and Tran 2012).

The sample of Bagnai, Rieber, and Tran (2012) only considers the largest 20 SSA economies in terms of GDP, though the trend for SSA on aggregate is easily illustrated when considering the evolution of real imports and export earnings over the period 2002 to 2014 (*Graph 18*).³² Over this period, aggregate export earnings have approximately doubled in real terms. This has allowed for rising volumes of imports. These have increased at a rate faster than exports but only equalised with aggregate real export earnings in 2014. In other words, it is hard to argue that up until 2014, manufacturing output growth for SSA countries on aggregate was constrained by export earnings. It is also worth noting the drop in real export earnings after the financial crisis 2007/08 and the sluggish growth of export revenues since then, which suggests that the causes for any export-demand constraints on SSA manufacturing output have to be sought in sluggish income growth in OECD economies just as much as in intense competition with China over OECD markets.

³² Aggregate export earnings and imports have been deflated by SSAs aggregate GDP deflator.

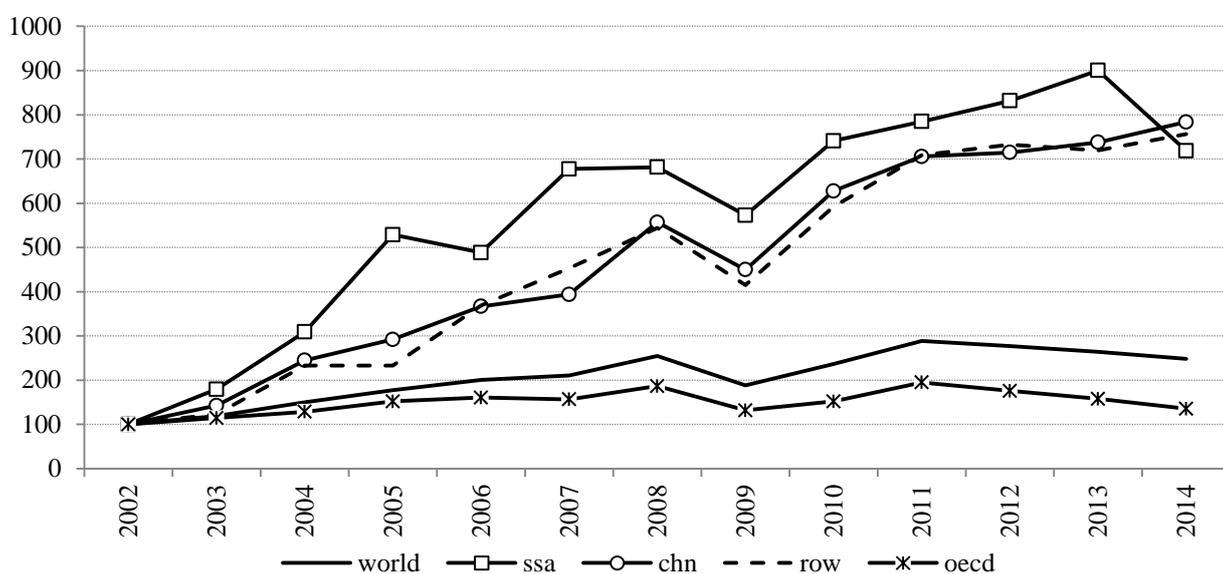
Graph 18. SSA Real exports and imports (2005 constant USD)



Source: UN COMTRADE (Isic rev. 3) and World Bank WDI (for trade deflators)

In fact, comparing the growth of SSA export earnings by region/ trade partners relative to their base in 2002 (*Graph 19*), we see that exports to OECD countries stagnate, increasing by only 36% in real terms when compared to 2002, while exports earnings from China, the rest of the world and intra-SSA trade all more than septupled.

Graph 19. SSA export index by partner (2002=100, based on real export earnings)

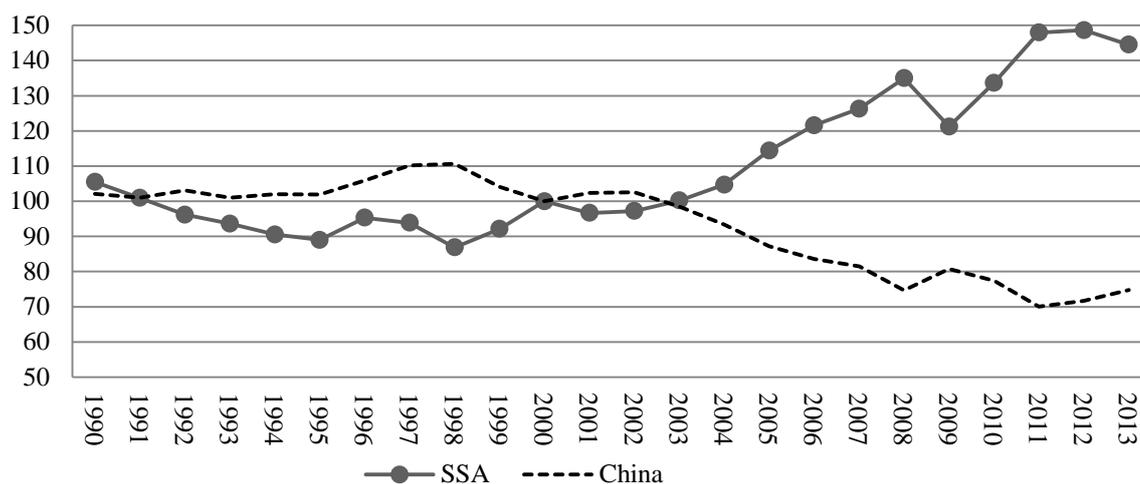


Source: UN COMTRADE (Isic rev. 3) and World Bank WDI (for trade deflators)

Further, Chinese demand for raw materials and semi-processed inputs not only affects SSA countries' balance of payments position through quantity but also through price effects. Kaplinsky and Farooki (2012) show that China's demand for raw materials has spurred world market prices for hard and energy commodities. At the same time, China's large supply of final consumer goods also put downward pressure on world market prices

of manufactured goods (Kaplinsky and Farooki 2012). As a result, sub-Saharan African countries producing mineral and energy commodities benefitted - at least temporarily until the 2015 drop in oil prices - from an improvement in their terms of trade and a (temporary) reversal of the Prebisch-Singer hypothesis. **Graph 20** illustrates this broad trend: from the early 2000s onwards, on aggregate, terms of trade of SSA countries have improved while China's own terms of trade have declined.

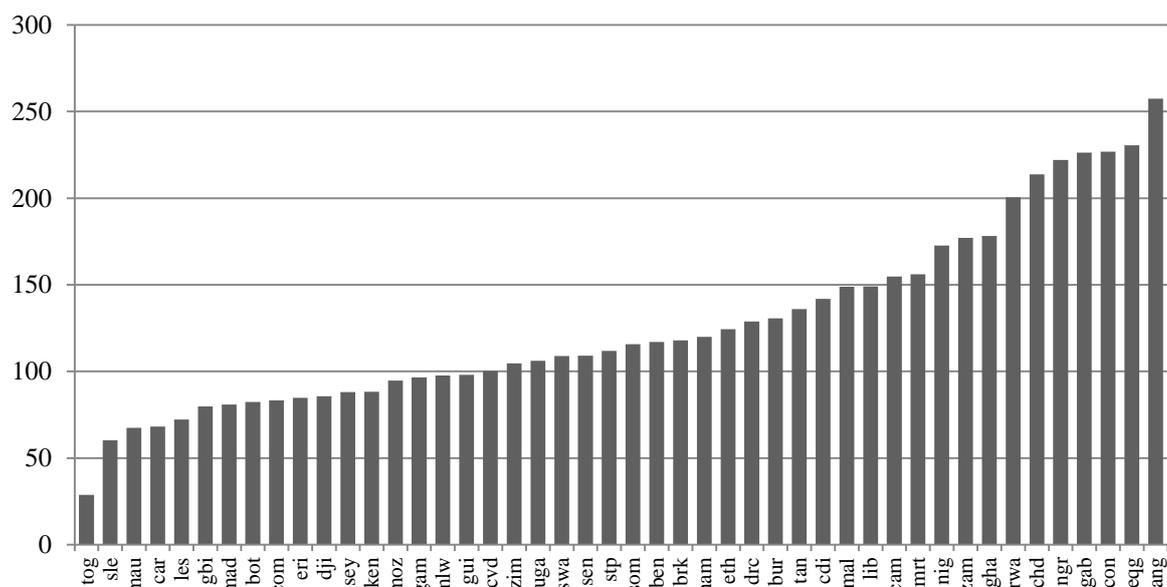
Graph 20. Terms of Trade Index Sub-Saharan Africa and China 1990-2013 (2000=100)



Source: IMF WEO (for SSA) and WB WDI (for China)

However, improvements in terms of trade vary considerably across SSA countries and, in fact deteriorate in 17 out of 47 SSA economies studied – Togo being the most extreme case with its terms of trade in 2013 amounting to merely 28% of their value in 2000. At the other extreme, we find seven SSA economies whose terms of trade had more than doubled compared to the 2000 baseline, including Rwanda, Chad, Nigeria, Gabon, Congo-Brazzaville Equatorial Guinea and Angola (**Graph 21**).

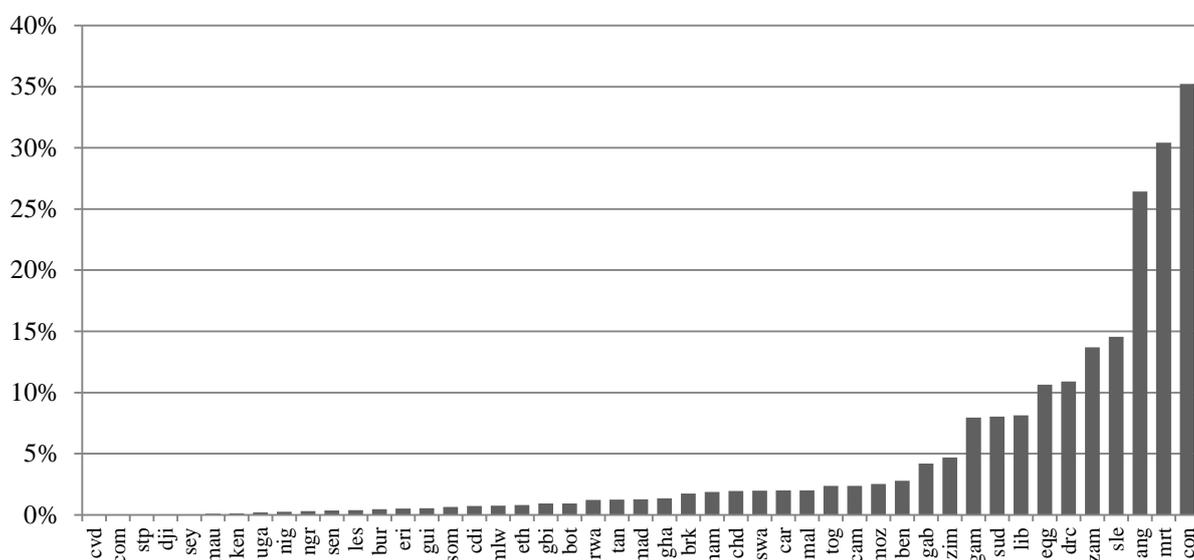
Graph 21. Terms of trade index in 2013 (2000=100)



Calculations based on World Bank, World Development Indicators

When scaled by GDP, we can observe similar differences in the importance of Chinese exports. For Angola, Mauritania and Congo-Brazzaville, exports to China make up for more than 25% of GDP when considering the average of 2011-2013, while accounting for less than 1% of GDP in 21 SSA economies (*Graph 22*).

Graph 22. Exports to China as share of GDP, average 2011-2013



Calculations based on UN COMTRADE (BEC, SITC rev. 2) and UN National Accounts

Improved terms of trade and higher export demand make it easier for some countries to finance capital goods imports, if policy channels the export earnings into productive investments and not, for instance, imports of luxury consumption goods. Hence, understanding the nature of the demand constraints faced by SSA economies is crucial.

Chapter 1 had argued at greater length that export demand constrains manufacturing output in two distinct ways. Firstly in so far that they provide market outlets for mass-produced manufacturing commodities and secondly in that they provide income for imports which are necessary for ongoing production processes. The above analysis shows that the first issue has intensified with the growth of Chinese supply on world markets coupled with sluggish global demand growth, itself linked to the restructuring of accumulation around financial assets. Yet, the second issue has actually become less of a problem for a number of SSA economies. So for this group of countries, the question is primarily how to mobilise domestic sources of demand as alternatives for manufacturing outlets on world markets.

Taken together, this suggests that even though Chinese demand is highly skewed towards mineral and energy commodities, this does not necessarily result in anti-developmental effects provided that the increased export-revenues are channelled into imports for the productive sectors, in particular capital goods and inputs for the manufacturing sector. If this is not the case, however, Chinese demand patterns can lock-in SSA countries to unfavourable production structures and make it harder for SSA countries to diversify away from a natural resource based and low value-added export profile (Sindzingre and Robinson 2012; L. A. Johnston, Morgan, and Wang 2013). Thus, the quintessential question is how and under which conditions (non-manufacturing) export earnings can support domestic market formation and domestic investment in productive sector activities. This, as will be argued in the next section, is the missing link in the resource-based diversification paradigm which has been set out in chapter 1.

2.2. INCREASED OPPORTUNITIES FOR DOMESTIC MARKET FORMATION

Recent developments, including the slowdown of Chinese growth and the fall in raw material prices starting in 2015 underline that the positive effects of Chinese demand on SSA countries export earnings may not last forever or at least weaken over time.³³ Given this, it is particularly important to note that, beyond indirect effects related to China's impact on world market prices and demand structures, more direct China-related effects through the operations of Chinese firms may also support the process of domestic market formation – and, indeed, span a link between African export revenues and domestic

³³ However, at this stage it is too early to predict whether the slump in raw material prices is temporary (similar to the drop in 2008/2009) or a long-term trend. A (temporary) current account deficit does not necessarily imply falling import capacity coupled with a depreciation of the currency, if the current account deficit is matched by a surplus on the capital account. This can happen for instance through credit, or FDI/portfolio flows or drawing on foreign exchange reserves.

demand growth. The following sections will discuss Chinese FDI and COPs in view of their potential effect on domestic market formation.

2.2.1. Employment and income effects broadening the domestic demand base

As argued in chapter 1, employment generation and a broad income distribution play an important role in creating wide-spread consumer demand that can sustain mass-production for the domestic consumer market. There are, in fact, some signs of an expanding consumer demand base for foodstuff, beverages, cosmetics and household goods in SSA. These ‘fast-moving consumer goods’ sectors in SSA have been traditionally dominated by Western multinationals such as Unilever, Nestlé, Heineken, Diageo, SABMiller, Castel and others, who have been rapidly expanding their investments on the continent over the past decade. Expecting to triple sales to \$2.2 billion by 2023, Nestlé Nigeria invested \$446 million between 2003 and 2014 and plans another \$635 million before 2023; Unilever announced its expansion in South Africa and intention to build a plant in Ethiopia during 2014. There is also a significant expansion in the brewing industries across the continent led by SABMiller and the Castel Group, who entered a strategic alliance in which they each acquired stakes in the other’s soft drink and beer operations in Africa to secure increasing market shares. SABMiller doubled its capital investment in SSA from \$200 million a year in 2010 to \$400 million since then. Diageo and Heineken also increase their footprint, Diageo, for instance, now sell more Guinness in Nigeria than in Ireland. Coca Cola committed to invest \$20 billion between 2010 and 2020, more than double their investment realised in SSA between 2000 and 2010. In addition, African owned and managed companies increasingly tap into gaps in domestic and regional markets, especially in food processing and beverages production. Examples include Nigeria’s Dangote Group with a core business in cement, and the company has subsidiaries across a range of agro-processing industries including fruit juice, dairy, bottled water and pasta production. Beloxxi Biscuits and Leventi Foods are among the largest bakery and snack producers in Nigeria. The food processing company Zambef is the market leader in Zambia, now expanding into Nigeria, Ghana and Uganda. Dairibord is among the largest dairy processing companies in Zimbabwe, now expanding into Malawi while Kenya’s KenAfrica Industries manufactures foodstuff for export into other African markets and Bidco, a Kenyan manufacturer of soaps and edible oil operates in three other East-African countries. Further, smaller local brands, known as B-brands, grow quickly. Tanzania’s Azam Cola, produced by a family owned business entered the market in 2011 gaining 30% market shares over the course of just 18months. SABMiller

moved into brewing Cassava based beer to tap into low income brackets of the African market (Games 2015).

The mode of Chinese engagement with SSA, in particular through overseas contracted projects, may have played a part in the formation of this demand base. In some countries, Chinese Overseas Contracted Projects make up for a large part of GDP – e.g. up to 12% in Liberia (see section 1.3). Thus, in these countries Chinese projects could be a source of employment/ income generation, which broadens the demand base. **Table 9** provides an overview of employment figures cited in various case studies across different sectors and various SSA countries. Research findings from survey data unanimously confirm that the local labour content in Chinese firms is substantial. Depending on country and sector, the average host country labour content in the firms sampled is 75%. Out of 49 studies or cases reviewed, 41 report a domestic labour share of 50% or higher. Of these, 27 report a domestic labour share of over 80% (**Table 9**). SOEs tend to have higher percentages of local workforce. Survey data of 32 Chinese companies in the construction sector in Angola reveal that 51% of the labour content is sourced locally (Corkin 2011). X. Tang (2010) estimates the share of Angolan labour in Chinese companies at 60% on average with variations across sectors. The share is lowest in telecommunications and highest in agriculture. In the DRC these figures are even higher with 76% of labour being sourced domestically (X. Tang 2010). Having interviewed 42 Chinese companies in Kampala (Uganda), Warmerdam and van Dijk (2013) find that the interviewed Chinese firms employ a total of 9,845 workers of which 89% (8,841) are Ugandan. SOEs had a higher percentage of Ugandans in their workforce with 67% of SOEs employing 75% or more locals. By contrast, only 56% of private enterprises and 33% of mixed ownership enterprises employed more than 75% locals. Based on interviews with 16 Chinese companies operating in various sectors in South Africa, Huang and Ren (2013) find that the interviewed Chinese firms have created a total of 4991 jobs out of which 4207, i.e. 84% are host country nationals.

Data provided by the Ethiopian Investment Commission (EIC) suggests that between 2000 and 2015, planned Chinese investment projects planned to generate a total of about 120,000 jobs in Ethiopia (**Annex 2**). According to Bashir 2015, Chinese firms accounted for 6.5% of the total full-time employment in the formal non-agricultural sector in Ethiopia (Bashir 2015).

Table 9. Domestic labour content in Chinese firms by activity indicated in various reports

Sector	firm/ project	No. of domestic workers	No. of Chinese workers	Domestic workers (% of total)
construction	55 projects in 15 different SSA countries	29,703	19,349	60.6%
manufacturing	6 textile manufactures in 4 different countries	2,405	57	97.7%
services	5 companies	2,269	1,188	65.6%
various	459 companies	55,131	12,033	82.1%
		89,508	32,627	73.3%

Compiled based on: Baah and Jauch (2009), CARI-SAIS, Angola MINFIN, Akorsu and Cooke (2011), Cooke (2012), Kokouma and Xu (2013), Lee (2009), Tang (2010), Mohan and Lampert (2013), Huang (2013), Warmerdam and Dijk (2013)

In addition, beyond direct employment generation Chinese companies also generate a large amount of indirect employment. For instance, in the DRC and Angola, Chinese traders support growth in other service sectors such as distribution and transport. X. Tang (2010) estimates that, in the DRC, Chinese telecom operators have, on top of 300 direct jobs for local employees, created about 4,000 indirect jobs mainly in the distribution channels.

Overall, this suggests that, over and beyond their potential positive effect on the supply side, Chinese contracted projects and FDI could play a role in generating employment in SSA countries, thereby contributing to domestic market formation and creating the potential for positive demand feedback loops. But again, there is a role for government policy to play in facilitating appropriate vocational training and skill formation alongside appropriate labour market and redistributive policies to strengthen the growth of the final consumer demand base.

Chinese firms and labour standards in African countries

As argued in Chapter 1, the growth of wages is one factor among others that affects the growth of purchasing power and, by extension the growth of a domestic consumer demand base. Hence, what is important is not just the amount of employment generated by Chinese firms but also wage and non-wage labour standards in Chinese firms across SSA. Limited research investigates this topic, though a number of concerns regarding wages and casualisation have been raised not least by news media and advocacy groups (Human Rights Watch 2011; Amnesty International 2016; The Economist 2011; Clark, Smith, and Wild 2008; Hitchens 2008). Many of these reports suffer from problems of overgeneralisation with advocacy groups selectively picking-up on cases of abuse which are ultimately blown out of proportion and often they grapple with finding appropriate comparators and case mix adjustments. The conclusions emerging out of this, to date,

scarce and methodologically fragile body of literature are that labour market outcomes in Chinese firms are both sector- and country-specific and evolve as a function of sector-specific business imperatives and the domestic bargaining position of labour, which is often hollowed out as a consequence of neoliberal labour market deregulations following structural adjustment.

Evidence on wages in Chinese firms operating in SSA is scarce and difficult to compare given the lack of a common comparator, some studies comparing wages of African workers in Chinese firms to the national minimum wage, others to foreign competitors in the same sector, and others to Chinese wages in the same company. The general trend seems to be that Chinese firms comply with national minimum wage legislations but in some cases offer lower wages than their competitors in the same sector.

Evidence collected by the NGO advocacy group Human Rights Watch (2011) for Chinese-owned copper mines in Zambia suggests that despite being above the national minimum wage, wages were significantly below those offered by other mining companies. In fact, wages paid by Chinese mining companies were between one sixth and one third of OECD competitors for comparable work. In addition, according to HRW over-time was not appropriately compensated in Chinese companies (Human Rights Watch 2011). Looking beyond the Zambian copper sector, evidence from the telecommunications sector points to a similar direction: wage levels for inexperienced new local recruits at Huawei and ZTE are lower than those of western competitors in the local market (Cooke 2012). Similarly, although highlighting the inherent difficulties of comparing wage-levels across countries and sectors, Baah and Jauch (2009) conclude that Chinese firms in Angola, Ghana, Namibia, South Africa and Zambia tended to pay the lowest wages when compared to local and other foreign firms (Baah and Jauch 2009).

Yet, findings on wage levels in Chinese firms are by no means unambiguous. For instance, Huang and Ren (2013) find that wage levels in the 16 South Africa based Chinese owned companies were in line with both national legislation and industry averages (Huang and Ren 2013). Similarly, the median wage in Chinese firms operating in the formal non-agricultural sector in Ethiopia is \$916, i.e. over 60% higher than that of domestic firms (Bashir 2015: 8). At GUMCO, a Chinese ceramic manufacturer in Ghana, wages of Ghanaian workers (ranging between \$2.2 and \$10 per day) were both above the national minimum wage of \$1.9 per day (as of 2008) and also above those of an Indian comparator plant, offering \$1.9 per day (Akorsu and Cooke 2011). Giese (2013) finds that Chinese traders voluntarily pay wages significantly higher than the national

minimum wage and sector average, as a means to ensure loyalty, diligence and commitment at work from their Ghanaian employees.

Evidence on wages is not only conflicting but also needs to be interpreted with care not least for the way in which it is presented in relation to comparators. Data cited by Human Rights Watch (2011), for instance, does not take a weighted average of wages paid to permanent staff and wages paid to casual staff. In fact, taking into account that casual workers at Glencore operated Mopani receive even less than national minimum wage, makes the pay gap between Chinese and non-Chinese operated mines shrink significantly (Sautman and Yan 2012). What is more, as argued by Sautman and Yan (2011), Non-Ferrous Cooperation Africa (NFCFA) is only one of more than 800 major Chinese enterprises in Africa but the disproportionate attention to the bad ones can easily lead to overgeneralisation which also entails many biases. For instance, Human Rights Watch (2011), on more than one occasion singled out the Glencore operated Mopani copper mines in Zambia for best practices in the sector, while leaving aside the fact that Glencore has been reported to deprive the Zambian government of millions of tax revenues through transfer pricing schemes (Henn 2013) and leaving substandard labour practices for non-permanent staff unreported.

Other than concerns relating to wages, available evidence points to casual employment being a matter of serious concern in Chinese firms. For example, comparing labour practices of a Chinese (GUMCO) and an Indian (AMIIN) manufacturing plant in Ghana, Akorsu and Cooke (2011) find that for the Chinese plant 250 out of 253 workers were Ghanaian (i.e. 99%). However, 142 out of 250 domestic workers (i.e. 57%) were casual workers even though they had worked in the company for several years and Ghanaian labour market regulations stipulate that casual contracts have to be transferred into permanent ones after 6 months of continuous employment. In Angola, 86% of the workers surveyed by the Centre for Scientific Research (CEIC) at the Catholic University of Angola have been employed without contract (Corkin 2011). Lee (2009) points out an equally problematic tendency for employment of casual labour by comparing the Chinese employment practices in the Zambian copper mine of Chambishi and the Tanzanian textile manufacturing plant Urafiki. While 92% of the workforce in the Zambian copper mine are Zambians, only 56 out of 2063 (i.e. 0.03%) were employed on a permanent basis prior to the workers' strike in 2007. The rest were employed on casual or fixed-term contracts ranging from 6 months to 3 years. In the Tanzanian textile mill, around 52% of the workforce were employed on a casual basis (Lee 2009).

Various examples show that wages as well as casual employment relations evolve over time due to workers' mobilisation. For instance, wild-cat strikes in Zambia have led to substantial improvements in working conditions in Chinese-owned copper mines in Zambia. However, as Lee's (2009) comparison between Chambishi and Urafiki illustrates, the extent to which such resistance is crowned by success varies. Both Zambian miners and Tanzanian textile workers engaged in several rounds of strikes (2004 and 2006 at Chambishi and 1997, 2002 and 2005 at Urafiki) but only the Zambian copper miners obtained substantial improvements to their work contracts following the new collective bargaining agreement in 2007, gradually converting all casual contracts into permanent, pensionable ones (Lee 2009). Wages have also significantly improved, and the lowest wages in the Chambishi mine having been raised by a factor of more than three (Sautman and Yan 2012). Lee (2009) proposes two reasons to explain these diverging outcomes between Zambia and Tanzania. On the one hand, the extent to which Chinese firms respond to workers' resistance depends on sector specific business imperatives and strategies. On the other hand, it responds to political economy dynamics, in particular the bargaining position of labour, which is both sector-, time- and host-country specific but which is generally weakened as a consequence of structural adjustment.

Firstly, Lee (2009) shows that it is the nature of Chinese capital itself which determines the extent to which Chinese managers respond or not to workers' demands. Low wage-levels in Chinese firms can, indeed, be linked to the low-cost business models of Chinese firms. However, conflicting (and sector-specific) business imperatives like building a good reputation or difficulties retaining trained staff are a counteracting force that drives evolutions in wages and non-wage remunerations. The Chinese SOE operating Chambishi operates with a long-term interest in the stable production of ores (Lee 2014; see also section 1.2, pg. 120ff in this chapter). Contrary to their London Metal Exchange listed counterparts who focus solely on the maximisation of shareholder value, for Chinese SOEs copper does not only bear an exchange value but also a use value, namely securing physical resources for production in China. The response to the first slump in copper prices in early 2009 further illustrates the different accumulation logics of Chinese and other foreign firms. To protect the short-term financial interests, all London Metal Exchange listed mines reacted to the market fluctuation by laying off workers and freezing wages. By contrast, the Chinese owned mine maintained production, staff and wage levels (Lee 2014). Given their long-term and territorially specific interest in copper production, "NFCA's long-term interest in Chambishi and the Copperbelt region makes it very sensitive to local popular sentiments, and attempts are made to shore up its image

as a good corporate citizen.” (Lee 2009: 659). This explains why the company has set up a CSR plan in 2007 sponsoring various community projects and agreed to substantial improvements of workers’ rights in the new CBA in 2007. By contrast, the textile sector (Urafiki) is more footloose, facing lower profit margins and tougher international competition (Lee 2009).

Similar dynamics of Chinese firms responding to business imperatives such as building a good reputation have been observed in Chinese mining companies operating in other countries and in Chinese firms operating in other sectors. In the mining sector, the Sichuan–Zimbabwe subsidiary was requested by the local government to sponsor the building of a new primary school, which was accepted by the Chinese headquarters in view of raising their local reputation and help develop good relationships with the local community (Cooke et al. 2015). In the telecommunications sector, ZTEs and Huawei’s struggle to retain in-house trained staff in SSA due to their lower wage levels when compared to their competitors. HR practices adapt to accommodate this tension. Therefore, other than training host country nationals in the Chinese headquarters and promoting them through the ranks to improve their reputation, Huawei and ZTE also opt for various forms of non-wage labour compensation such as providing African employees with guarantee letters so they can raise mortgages or offering annual bonuses (Cooke 2012). In addition, Chinese firms try to save costs through means other than wages. For instance, to keep labour costs low, Chinese firms also refrain from advertising in recruitment and make little use of ‘time-consuming’ recruitment practices (Kamoche and Siebers 2015).

Secondly, other than sector specific business imperatives (and tensions thereof), Lee (2009) further highlights that political economy dynamics in the African host countries play out differently. In Zambia, the centrality of copper to the national economy made miners part of the ‘labour aristocracy’ which enjoyed not only social prestige but also numerous benefits like free housing, water and electricity as well as health care for their dependents. Being a major political constituency, miners get to the central stage of the political game prior to the 2006 presidential elections during which the opposition actively uses working conditions in Chinese firms to support a political campaign based on resource nationalism. Having to show that miners’ interests are respected by the incumbent party as well, the government lend their support to the miners’ strike in Chambishi. By contrast, in Tanzania, the fact that collective bargaining is traditionally more restricted by the state (although compensated for by a set of minimum workers’

rights such as minimum wages), is coupled to a weak bargaining position of workers in the foot-loose textile sector (Lee 2009).

A crucial point to highlight in this respect is that labour market deregulations and privatisation following structural adjustment reforms have hollowed out the bargaining position of labour. Informalisation and casualisation observed by Lee (2009) is an industry- and country-wide problem and not specific to Chinese firms. Privatisation and labour market deregulations caused a substantial reduction of the workforce which negatively impacted on the bargaining position of labour and facilitated the industry-wide introduction of short-term, fixed contracts and flexible work schemes that come without pensions or other forms of securities (Lee 2009). Although the percentage of casual and informal labour is higher than average in Chinese mines, just about 53% of workers in the five largest Zambian copper mines are employed on pensionable full-time contracts. Less than half of the workforce in the largest Zambian mine Mopani are on full-time pensionable contracts. The Chambishi copper mine bought by NFCA is a comparatively low-productive mine that did not attract the interest of multinational investors after privatisation. The mine laid idle for almost 13 years making workers willing to accept employment on unfavourable terms (Lee 2009). In a similar vein, Akorsu and Cooke (2011) emphasise that following trade liberalisation and labour market deregulation in Ghana, local competitors are collapsing and workers desperate for some income become vulnerable to exploitation.

Within the institutional structures created by neoliberal labour market reforms and in the context of weakened labour movements, the possibilities for workers' resistance are limited. Even in Zambia, where miners' interests came to the fore in the 2006 electoral campaign and NFCA had various reasons to respond to workers' demands, strikes organised were wild-cat strikes within the general context of declining influence of the Mine Workers Union of Zambia (MUZ). MUZ broke away from the Zambia Congress of Trade Unions (ZCTU) in 1994 (re-joined in 1999), because the MUZ leadership at the time vehemently supported privatisation and the general direction of economic reform whilst ZCTU started to cast doubt on these reforms. MUZ's break away led other unions to follow suit causing irreparable damage to the formerly strong and unified labour movement, which had successfully forced the government to abandon IMF-advised structural reform in the 1980s. This was coupled with a general decline in unionisation levels which weakened the labour movement in Zambia (Mulenga 2011).

Unrelated to employment practices in Chinese firms operating in SSA, Adolph, Quince, and Prakash (2017) investigate whether there is a negative ‘Shanghai effect’ of trade with China on labour practices in Africa due to lack of pressure from advocacy groups and consumer NGOs for better practices. They find over the period 1985 to 2010 there was a negative but small correlation between trade with China and African labour practices. A moderate ‘Shanghai effect’ could only be observed for a small number of SSA countries. Apart from methodological issues with estimates relying on simulations based on cross country data on labour market practices, whereby the quality and comparability of which stands to question, it should be noted that there is not necessarily any reason to assume that the ‘Shanghai effect’ should be negative. Lo (2016b) shows that real wages of both urban and migrant workers in China have grown faster than productivity. This stands in stark contrast to the trend in OECD economies towards declining median wages and falling wage shares (see chapter 1).

2.2.2. Demand chain formation through construction projects: market for building materials

As will be shown in greater detail in chapter 3, GDP growth in SSA over the past decade has been driven by the growth of the construction sector. The literature linking infrastructure and economic development reduces the causal link to the reduction of production costs (Moreno, López-Bazo, and Artís 2002) and spill-over effects on human capital formation (Agénor 2010). Beyond the positive impact of Chinese constructed infrastructure on the supply side, the construction boom also has implications on the demand-side: the boom in demand for a wide range of building materials, ranging from cement over roofing to pipes glass and door frames, creates new profit-making opportunities for companies. As pointed out in chapter 1, the construction sector was, in fact, recognised by Hirschman (1958) as a source of induced investment demand:

“An example (...) is cement and reinforcing steel rods in the construction, say, of downtown office buildings. (...) the existence of new office buildings strengthens demand for a great variety of goods and services: from modern office furniture and equipment (still fairly rigid), to parking and restaurant facilities, stylish secretaries and eventually perhaps to more office buildings as the demonstration effect goes to work on the tenants of the other buildings.” (Hirschman 1958: 68)

C. Chen, Goldstein, and Orr (2009) find that Chinese firms source large amounts of supplies and equipment through imports from China given the lack of (almost any) supply in the African hosts. Yet, this situation has started to change. One of the most noteworthy linkages forming between the construction and manufacturing sectors in SSA is cement production. Increased cement production is an Africa-wide trend. In 2000, only Nigeria, Ghana, Senegal and Kenya produced more than 1million tons annually. In 2014,

seven SSA countries produced more than 4 million tons, while another nine produced more than 1 million tons (calculations based on Global Cement Report database). Cement production per capita in SSA increased by a factor of more than five since 1990, and total cement production by a factor of more than 10 (*Table 10*).

<i>Table 10. Cement Production in SSA (selected years) excl. S. Africa</i>			
	1990	2000	2014
Total (Mta)	7.30	17.17	75.58
per capita (kg per person)	15.6	27.9	79.2
Compiled based on: Global Cement Report Database			

Production in African countries is dominated by (mainly) European multinationals, which also dominate world production, including Holcim (Switzerland) and Lafarge (France, merged with Holcim since 2014), Heidelberg Cement (Germany), Cemex (Mexico) and Italcementi (Italy). Lafarge and Heidelberg Cement are major players in almost all of the cement producing countries in sub-Saharan Africa whose installed capacity exceeds 4Mta. In Ghana, Heidelberg Cement accounts for 67 percent of installed capacity, while Lafarge accounts for 44 percent in Cameroon, 26 percent in Kenya and 23% in Nigeria (calculations based on Global Cement Report database). Noticeable exceptions are Nigeria, Senegal, Angola and Ethiopia where production is dominated by domestic firms and/ or MNCs from emerging countries including China.

The breath-taking development of Nigeria’s cement industry, moving from a primary cement importer to a self-sufficient producer to exporter and key investor in third African markets over a period of less than 10 years, is illustrative in this respect. Still a major importer of cement in 2007, the build-up of the Nigerian production base started following successful lobbying of local cement importers (mainly the Dangote Group) and subsequent government protection in the form of licences, tax breaks and import duties imposed by the Obasanjo Government. The Nigerian government has phased out import licences since 2012. Those with existing licences can only import under the condition of developing further domestic production. Over the course of just a few years, Nigeria became one of the largest cement producers in sub-Saharan Africa, second only to South Africa. What is more, Nigeria’s Dangote became a major investor in other African countries – successfully competing with the South African Pretoria Cement Corporation (PCC) and the major European multinationals over the rapidly expanding African cement market (White 2015).

As of 2015, Dangote operates cement plants in eight SSA countries and reported a 25.6% rise in revenues in 2015 (\$2.47bn) (ICR Newsroom 2016a). Apart from further planned

expansions of its African cement operations, the company has reported plans to expand beyond Africa into Asia and Latin America (ICR Newsroom 2016b). Pushed by the Obasanjo government to move away from cement imports and into cement production, Dangote can be considered an important catalyst for manufacturing in Nigeria, not only because the group has successfully accumulated capital in the lucrative cement business and even expanded abroad, but more importantly, because this capital has been reinvested domestically in labour intensive agro-alimentary (including fruit juice, dairy, bottled water and pasta production) as well as petro-chemical activities (oil refinery and a fertiliser project). Quoted in the Financial Times, Dangote maintains that Nigeria’s growing population and, by extension, “demand for basic supplies” was a driving force behind his decision to reinvest in Nigeria (Wallis 2013).

Interestingly, outward FDI in building materials production is also actively encouraged by the Chinese state. The “Guiding Opinions on Promoting International Production and Equipment Manufacturing Cooperation” released by the State Council in 2015 encourages enterprises to invest in cement, glass, and other production lines linked to the construction industry to enhance the industrial capacity of the host countries (China State Council 2015).

2.2.3. Problems in terms of linkage formation

Supply, of course, adjusts to demand within limits. Illustrative for this point: in SSA countries, the ratios of FDI to Gross Fixed Capital Formation (GFCF) are high compared to world and developing country averages. *Table 11* shows that FDI flows amount to 16.1% of GFCF in the period 2008-2014, which is considerably above the world and developing country average (9.2% and 10% respectively). This suggests that SSA countries are relatively successful in attracting FDI inflows, but less so in stimulating domestic investment and linkage formation.

<i>Table 11. FDI flows as share of GFCF</i>			
	1990-1999	2000-2007	2008-2014
World	6.9	10.4	9.2
Developed countries	6.5	9.6	8.2
Developing countries	8.7	12.2	10.0
SSA (excl. S. Africa)	11.0	18.2	16.1
<i>Source: UNCTADstat</i>			

A similar issue arises for Chinese investment in SSA. Induced demand may be a necessary condition for production, but is in no way sufficient. In fact, Chinese firms operating in light manufacturing processing industries such as textiles, tannery and wood

processing have also indicated at being attracted by the availability of agricultural raw materials (Shen, 2015: 96). But existing evidence suggest that localised procurement remains sluggish. 72% of the companies state that they prefer to source local products, but only 38% actually use the host country as their main procurement channels (UNDP, SASAC, and MOFCOM 2015). This is in line with the findings of Corkin (2011) and Gu (2011).

The reasons include unfamiliarity with the host market, cultural and language differences, lack of experience in transnational operation and management, but also the availability and quality of domestic supplies (UNDP, SASAC, and MOFCOM 2015). The lack of supply capacity on the African side leads Chinese firms to turn to the established, reliable and cost-competitive suppliers in China (Gu 2011). Sluggish linkage formation is an issue even for more long-term oriented investments. In Tanzania, for instance, the China JD group so far has not sourced fabrics domestically, even though Tanzania is one of the few African countries which still has a substantial textile production sector (X. Tang 2014).

W. Tang and Pigato (2015) echo the same problem maintaining that: SSA firms do “not position themselves within China’s value chains, which limits the impact of Chinese investment on economic transformation and export diversification in SSA” (W. Tang and Pigato 2015: 4). The reasons include “the small size of many economies in SSA, the low capacity of critical public institutions, the absence of complementary private markets, bottlenecks in essential infrastructure, and the lack of regional integration, all of which can make the establishment of large economies of scale very difficult to achieve.” (W. Tang and Pigato 2015: 4).

In certain sectors, linkage formation to the domestic economy is also weak because of the specific business models of Chinese firms. Chinese firms in the commodities sector, for instance, have greater access to “patient capital” (due to higher savings rates and support by the government) and could thus be expected to participate actively in the lengthy process of local linkage development. In reality, however, Chinese commodity firms form fewer linkages than their Western counterparts. Partially, this is because they are more reluctant to outsource parts of their non-core activities. Also, contrary to Western multinationals in the commodities sector, they have no local supply chain development programmes. Entry barriers may be lower in the case of Chinese supply chains, but exit is more frequent and no support is provided on the part of the Chinese lead firms (Morris, Kaplinsky, and Kaplan 2011a).

However, the findings of UNDP et al. (2015) also indicate that the proportion of procurement from host countries increased with the investment scale, i.e. 20% for investment of less than \$1 million, 38% for investments between \$5million and \$10 million and 49% for investment of over \$50 million. The percentage is also higher for firms with over 10 years of overseas experience (UNDP et al. 2015: 58).

CONCLUSIONS

Industrialisation is a complex socio-economic process, which unfolds through the interplay of various external and domestic factors. China's growing engagement with SSA economies is one such external factor. Given the complexity and diversity of China-SSA interactions, we cannot expect to find a simple relationship between China's growing presence in Africa/ world markets and manufacturing output growth in African economies. This chapter has explored the main characteristics of economic ties between China and SSA as well as existing evidence on how these ties link to patterns of manufacturing sector development in SSA economies.

On the supply side, the operation of Chinese firms can have a positive impact resulting from productivity enhancing technology and skill transfer. Chinese firms have not (systematically) engaged in a scramble over African labour or mineral resources but have, in fact, been shown to be predominately market-seeking or long-term oriented with positive implications for technology transfer and skill development. In addition, Chinese infrastructure construction projects improve the enabling environment for manufacturing sector development by improving on and extending basic infrastructure. Finally, Chinese capital goods are potentially more appropriate to serve domestic demand for bottom of the billion products.

On the demand-side, increases in export demand and improvement of terms of trade can positively impact on SSA economies' balance of payments position, though this effect may be outweighed by displacement effects on home and domestic markets. This raises the question about the causal mechanisms through which such exogenous increases in export demand can become a driver of domestic manufacturing production. In particular, the question is how export demand translates into domestic consumer and investment demand and how to mobilise domestic sources of demand for mass-produced manufactured goods. This chapter has further argued that Chinese contracted projects can

contribute to employment and income generation, thereby broadening the demand base for consumer durables which can induce demand for the production of building materials. While Chinese engagement with African economies can, indeed, have positive impacts on industrialisation, these will largely depend on policy mediation. What constitutes 'appropriate' policy is itself dependent on our understanding of the workings of the economy and society. This chapter has further argued that policies which further domestic market formation can be considered a core challenge of late-industrialisation within this new setting. In particular, given China's role in world markets, export-led industrialisation has to be complemented by building up intersectoral demand chains (in particular linkage formation to the construction, agricultural and mining sector), strengthening final consumer demand through labour market and redistributive policies, and the adaption of supply formation to new sources of domestic demand (bottom of the billion products).

CHAPTER 3. EMPIRICAL RESEARCH DESIGN AND METHODOLOGY

INTRODUCTION

Chapter 2 has shown that the literature on China in Africa explores a myriad of potential channels through which economic ties with China might influence patterns of industrial development in SSA, even though these channels are more or less well established and there are a number of largely unexplored channels on the domestic demand-side. Chapter 2 has further concluded that none of the China effects can be analysed in isolation from domestic policy mediation and the size and composition of these effects varies considerably across different countries.

This chapter starts by tracing the evolution in the manufacturing sector in SSA countries over the period 1990 to 2013 and shows that these are by no means uniform across SSA countries. Some countries did experience a significant structural break at the time when Sino-African economic ties intensified, others experienced stable patterns of decline or growth, and others experienced structural breaks at different points in time. The link between these patterns and China's systemic impact on the world economy or growing presence in SSA countries is therefore not straight forward. One thing is safe to conclude: the impact will not be uniform across all SSA countries but needs to be studied in conjunction with domestic factors (in particular the political settlement and industrial policies) and other factors shaping the global economy such as global value chains, financialisation etc.

Therefore, an empirical investigation would have to separate which of the differences in manufacturing sector performance can be attributed to *firstly*, the diverse nature of Chinese engagement. As demonstrated in chapter 2, China affects manufacturing sector development in SSA through a number of different channels, the size and distribution of which differs across SSA countries. *Secondly*, empirical investigation has to separate effects that can be attributed to differences in policy mediation across SSA countries. While global trends such as China's rise in the world economy may act as constraints or accelerators to industrial development, domestic policy plays an important role in shaping the effect of these constraints/ accelerators on the domestic economy. *Thirdly*, empirical investigation needs to account for effects that can be attributed to differences in other factors that shape the global economy.

The aim of this chapter to discuss methodological approaches to disentangle these relationships. It is argued that the case study method is best suited to disentangle multifaceted and multi-dimensional processes likely to underlie the relationship between economic ties with China and industrial development in SSA. Yet the case study method has been criticized on account of its inability to generate generalizable conclusions. Section 2 discusses the main limitations of case study analysis and proposes to use cluster analysis as tool to inform the choice of the case study and to situate the case with respect to other cases so as to facilitate empirical generalization. The cluster is constructed to find groups of SSA countries with distinct China-related demand-side patterns. The results of the cluster analysis are used to inform the choice of case study and to situate the case with respect to other cases so as to enhance the generalisability of the conclusions drawn from the case.

1. CHANGES IN MANUFACTURING VALUE ADDED IN SUB-SAHARAN AFRICAN COUNTRIES: 1990-2013

1.1. STYLIZED PATTERNS OF ECONOMIC GROWTH IN SSA RELATIVE TO OTHER DEVELOPING REGIONS: 1990-2013

Average real annual GDP growth rates in SSA (excl. South Africa) have picked up since the turn of the century, averaging 6.5% in the period 2001-2013 against 2.5% over the 1990s. Average annual growth rates of the manufacturing and agricultural sectors were higher when compared to the 1990s but fell slightly short of overall GDP growth rates, which were driven by the construction sector. High growth rates of construction activities are a general trend characterizing developing economies over the 2000s. The construction sector was the only sector of the real economy, which realized higher growth rates than total GDP in all developing regions. Yet, this trend is most pronounced in SSA, where average annual growth rates of the construction sector exceeded those of GDP by more than 3%. Growth rates of the construction sector in SSA were highest across developing regions with 9.6% over the period 2000-13, even ahead of the BRICS (9%) (*Table 12*). The African construction market also withstood the global slow-down in the construction industry following the debt crisis in Europe and the slowdown of the Chinese economy. While, on a global scale, 2014 revenues of the top 250 contractors listed by the Engineering News Record from projects outside of their home country were 4.1% lower than in 2013, revenues of international contractors in Central and Southern Africa increased by 14.7% relative to 2013. The share of revenues realised by the top 250

international contractors in Africa has increased from 9% of total revenues outside the home country in 2004 to 14% in 2014 (calculations based on Engineering News Record).

A number of points should be highlighted regarding manufacturing output growth in SSA specifically. The increase in output growth of the manufacturing sector below GDP average goes together with slow increases or even decreases in indicators of structural change. On the one hand, manufacturing output in SSA grew at faster average annual rates than in most other developing regions apart from the BRICS. The BRICS are the only region in which average growth rates of the manufacturing sector exceed those of total GDP. In the BRICS, real manufacturing value added per capita increased from \$188 in 1990 to \$759 in 2013. This is equivalent to an average annual increase in real manufacturing value added per capita of 7.5%. By contrast, average annual growth rate of real manufacturing output per capita in SSA countries were merely 3% in the period 2001 to 2013. Though a substantial improvement when compared to the period 1990 to 2000 (-2.5%), this is second lowest in the developing world. On the other hand, real manufacturing value added per capita increased only from \$68.40 in 1990 to \$78.10 in 2013. In 2013, manufacturing value added per capita ranged from \$5.60 in Somalia to \$1,054 in Mauritius. By comparison, in 2013 manufacturing value added per capita in China amounted to \$1,267 and as much as \$8,013 in high income countries like Germany. In 2013, 30 out of 48 SSA countries found themselves among the 20% least industrialised countries in the world, another 12 among the 40% least industrialised countries. Only Botswana, Namibia and Gabon were among the 60% most industrialised countries while Mauritius, Seychelles and Swaziland can be found among the 40% most industrialised countries in terms of manufacturing output per head in 2013 (calculations based on UN National Accounts). Relative to GDP, manufacturing value added even decreased in SSA from 11.8% in 1990 to 8.7% in 2013 (*Table 12*).

Table 12. Evolution of the Manufacturing Sector in the Developing World

		Manufacturing VA*		Average real annual growth rates by sector						
		per capita (2005 USD)	% of GDP	agri.	manu.	constr.	Mining	non-mining	GDP total	manuf. p.c.
Dev. Asia (ex. China)	1990-2000	188.1	19.3%	1.9%	4.5%	1.9%	3.7%	3.7%	3.7%	2.6%
	2001-2013	379.3	20.1%	3.4%	5.0%	6.2%	3.5%	5.4%	5.2%	3.6%
BRICS	1990-2000	188.1	19.9%	2.6%	5.7%	1.8%	2.7%	4.2%	4.0%	4.4%
	2001-2013	758.8	27.6%	3.7%	8.8%	9.0%	5.2%	7.5%	7.3%	7.3%
Lat. America (ex. Brazil)	1990-2000	587.9	19.8%	2.0%	3.3%	2.4%	3.6%	3.2%	3.3%	1.6%
	2001-2013	796.7	17.5%	2.5%	2.6%	5.0%	2.1%	3.7%	3.5%	1.2%
SSA (ex. S. Africa)	1990-2000	68.4	11.8%	3.1%	0.2%	3.7%	2.0%	2.6%	2.5%	-2.5%
	2001-2013	78.1	8.7%	5.6%	5.9%	9.6%	3.9%	7.0%	6.5%	3.0%

Calculations based on UN National Accounts
* shares calculated for 1990 and 2013 respectively

1.2 THE DIVERSITY OF MANUFACTURING SECTOR GROWTH PERFORMANCES ACROSS SSA

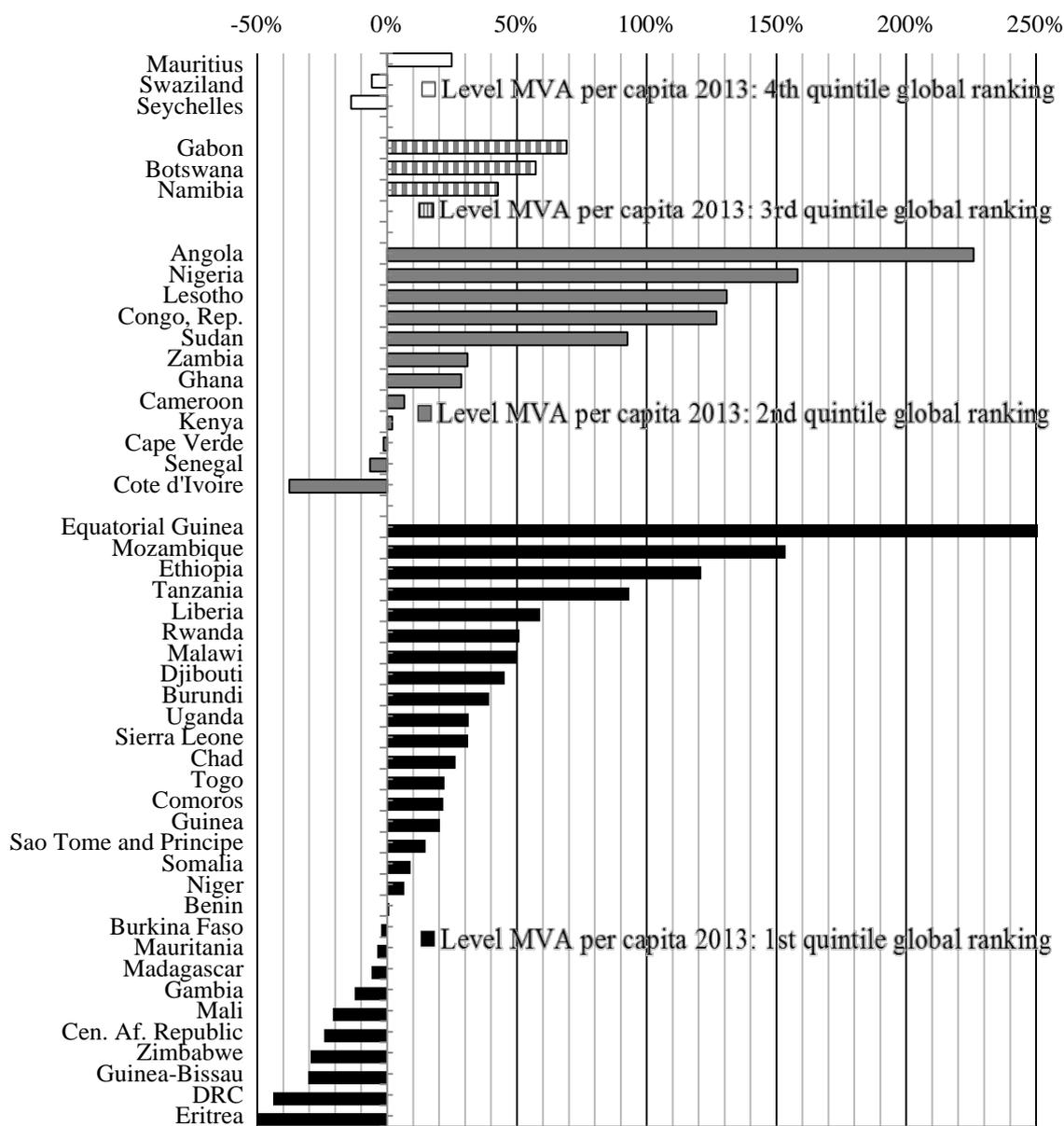
What stands out empirically is that manufacturing sector growth has been highly unequal across different SSA economies over the past decade. Measuring the percent increase of manufacturing value added per capita over the past decade (2013 relative to a baseline given by the 1996-2000 average output), we find 15 SSA countries that experienced a decrease in their manufacturing output per capita, 19 countries recorded increases of less than 70% and 11 countries observed an increase of more than 70%, of which six experienced increases of more than 120% (*Graph 23*).³⁴

Any changes in manufacturing output have to be assessed both in terms of growth rates and levels. A doubling of manufacturing output per head from \$5 to \$10 is not easily comparable to a 50% increase from \$200 to \$300. To make these growth rates comparable, *Graph 23* groups SSA countries according to their degree of industrialisation relative to world quintiles. In SSA economies falling in the first quintile in terms of manufacturing output per head (i.e. are among the 20% least industrialised countries in the world), three countries – Equatorial Guinea, Mozambique and Ethiopia more than doubled their manufacturing output in this period. In another four countries, this increase was more than 50%: Malawi, Rwanda, Liberia and Tanzania. A total of ten

³⁴ Increases in manufacturing output are scaled by population rather than GDP given the different degrees of resource wealth across SSA countries (and therefore the difference in importance of the mining sector biasing this measure). Scaling manufacturing output by GDP could lead to counter-intuitive results because the pace of industrialisation as captured by this measure is not only dependent on the growth rates of the manufacturing sector but also on the growth rates of other sectors. A country might appear to de-industrialise even though its manufacturing output expands just because other sectors such as mining expand at a similar pace/ more quickly. Also, if GDP is very small calculating manufacturing output as share of GDP might give biased results (the manufacturing sector appearing bigger than it is).

countries – Eritrea, the DRC, Guinea Bissau, Zimbabwe, Central African Republic, Mali, Gambia, Madagascar, Mauritania and Burkina Faso – witnessed reductions in between 2% and 56%. In SSA countries that fall in the 2nd quintile, Côte d'Ivoire, Senegal and Cape Verde have witnessed a reduction of manufacturing output per capita between 1.4% and 38%. Kenya, Cameroon, Ghana and Zambia stagnated with increases of manufacturing output in between 0% and 30%. Sudan, Congo-Brazzaville, Lesotho, Nigeria and Angola realised substantial increases in manufacturing output per head in between 90% and 225%. In the third quintile, all three countries realised moderate increases in manufacturing value added per capita relative to the baseline, strongest in Gabon (69%), followed by Botswana (57%) and Namibia (42%). All three countries in the fourth quintile either stagnated or saw their manufacturing output per head decrease.

Graph 23. Manufacturing Value Added per capita, % increase 2013 relative to 1996-2000 average



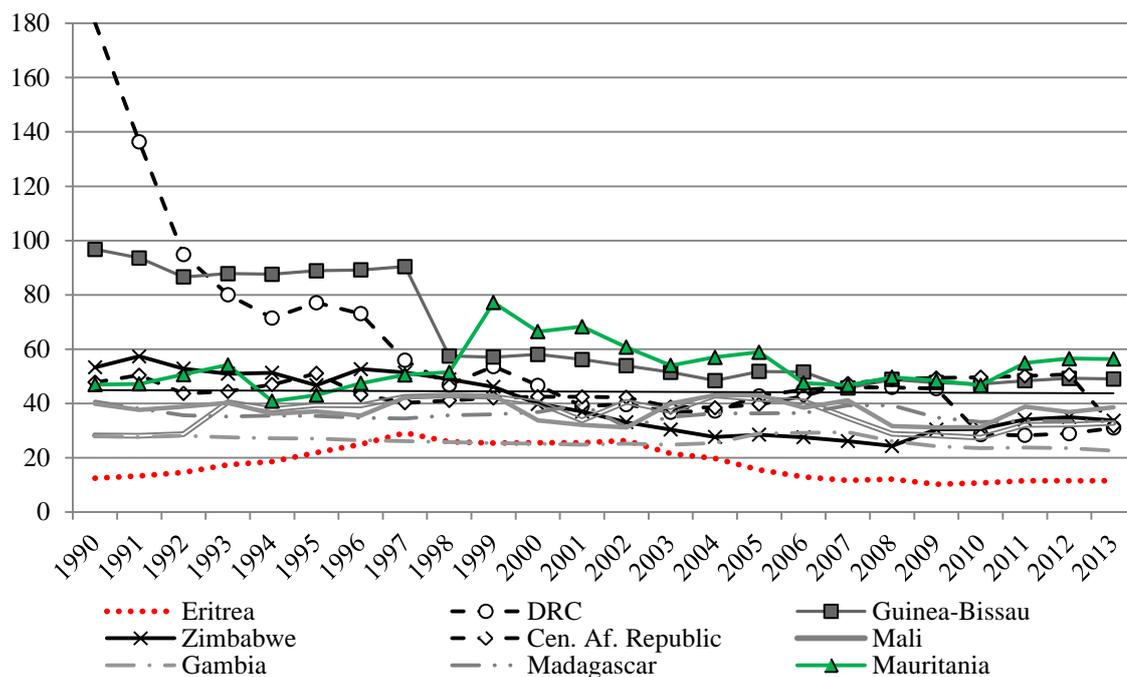
Calculations based on: Un National Accounts

The question is not merely whether manufacturing output per head has increased or decreased over the past decade but also whether there are cases in which trends in manufacturing output changed significantly (both positively and negatively) since 2000. Grouped by quintile, the following sections will trace the evolution of manufacturing sector output by country between 1990 and 2013, in order to investigate whether we can find countries whose manufacturing output started to change substantially since 2000 when economic ties with China intensified. Countries that fall in the first quintile globally in terms of manufacturing output per capita have been sub-divided into three groups (decreasing, stagnating and increasing) to facilitate readability of the graphs.

Graph 24 shows real manufacturing output per capita of the ten SSA countries in the first quintile whose manufacturing output in 2013 decreased relative to the baseline average 1996-2000. In this group we find a number of countries whose manufacturing output decreased substantially, by more than 20%, since 1990, including Eritrea, the Democratic Republic of Congo, Guinea-Bissau, Zimbabwe, the Central African Republic, and Mali. **Eritrea, Mali** and **Mauritania** witnessed a decrease at an accelerated pace since the turn of the century. In **Eritrea**, manufacturing output increased rapidly over the early 1990s increasing from \$12 in 1990 to \$30 in 1997. Ever since, **Eritrea's** manufacturing output decreased (and even at an accelerated pace since 2004) and fell to \$11 in 2013. **Mali** is another case where manufacturing output suddenly collapsed over the course of the 2000s. Manufacturing output in **Mali** increased steadily from \$28 in 1990 to \$42 in 1999 and then fell back to \$32 in 2013. In **Mauritania** there was accelerating manufacturing output per capita over the course of the 1990s, when output rose from \$46 in 1990 to \$77 in 1999. Since then, we observed a rapid decrease in manufacturing output per capita decreased to \$56 during the course of the 2000s (**Graph 24**).

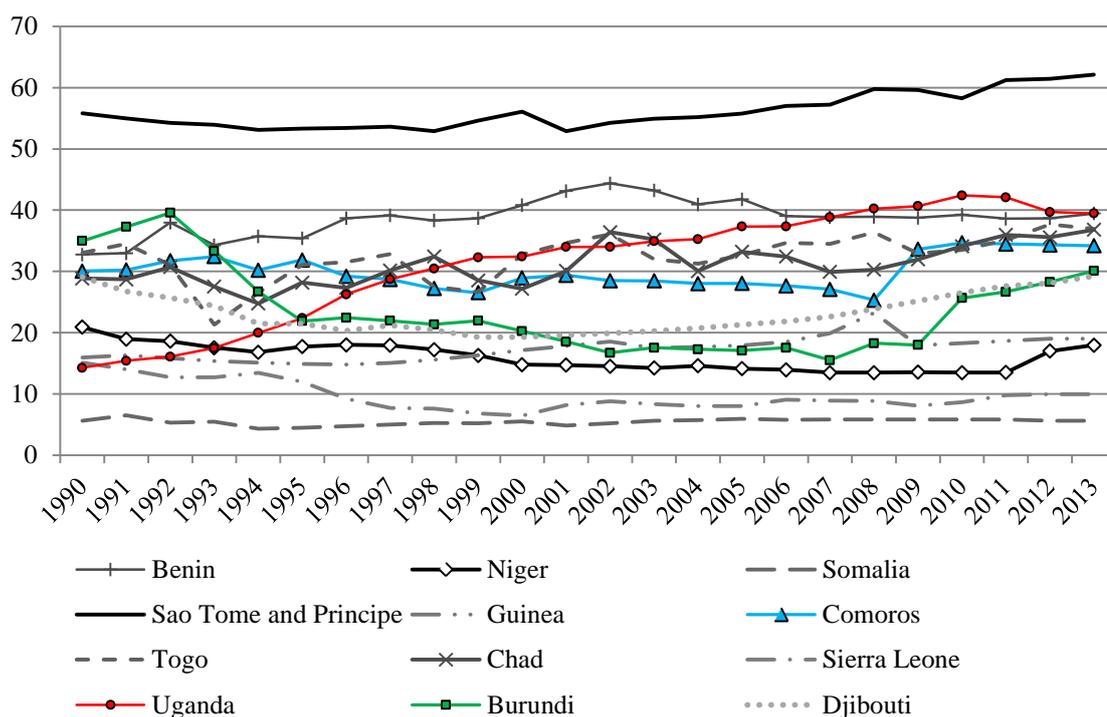
In the **Democratic Republic of Congo** we observe a particularly substantial fall in manufacturing output per capita from \$180 in 1990 to \$30 in 2013. It should be noted, however, that this de-industrialisation occurred mainly over the course of the early 1990s, thus prior to the intensification of Sino-Congolese relations. Since 2000 manufacturing output has stayed more or less constant. In **Guinea Bissau** we observe a strong decrease in manufacturing output per capita which fell from \$97 in 1990 to \$49 in 2013. The big drop in manufacturing output occurred from 1997 to 1998. Ever since then, we observe slower rates of decrease. **Zimbabwe** witnessed a steady decrease over the course of the 1990s, with manufacturing output per capita decreasing steadily from \$53 in 1990 to \$24 in 2008. Over the past five years, we observe a mild recovery with output increasing to \$33 in 2013 (**Graph 24**).

Graph 24. Real Manufacturing Output per capita 1st quintile SSA countries (decreasing) – 1990-2013 (2005 USD)



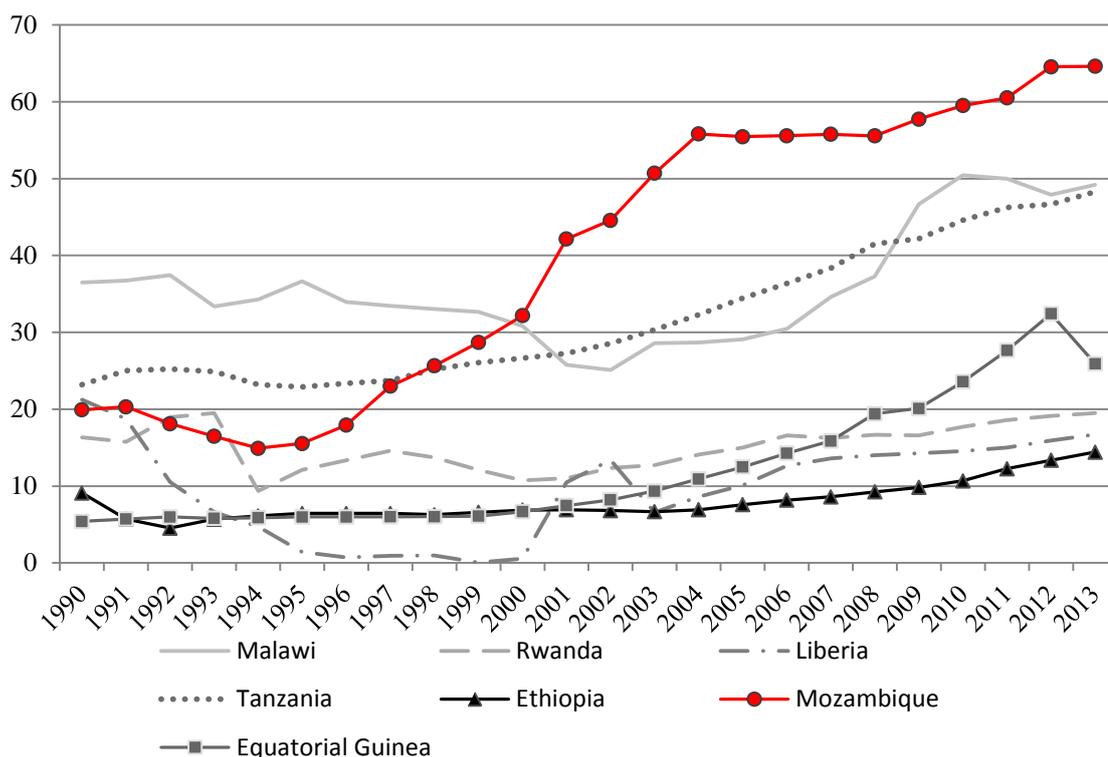
Graph 25 shows the second sub-group of 1st quintile countries, whose manufacturing output per capita has stagnated since the turn of the century. Of these, Uganda and Burundi are of particular interest. **Uganda** started off with very low levels of manufacturing output in 1990 when output was only \$14. Since then there was a gradual increase to \$39 in 2013, though at a much slower pace since 1999. By contrast, **Burundi** manufacturing output per capita reduced from \$35 in 1990 to \$15 in 2008. The trend is slightly upward moving over the past five years to \$30 in 2013.

Graph 25. Real Manufacturing Output per capita 1st quintile SSA countries (stagnating) 1990-2013 (USD 2005)



However, we also observe a number of countries in the first quintile whose manufacturing output increased, in some cases even at an accelerated pace since 2000, e.g. Equatorial Guinea and Ethiopia (*Graph 26*). In *Equatorial Guinea*, manufacturing output stagnated around \$5 between 1990 and 2000 before increasing at an accelerated rate to \$25 in 2013. The manufacturing output of *Mozambique* increased from \$19 in 1990 to \$64 in 2013 and this at an accelerated pace since the mid-1990s. *Ethiopian* manufacturing output stagnated around \$6 over the period 1990 to 2004, since then we observe an increase to \$14 in 2013. Similarly, in *Tanzania*, manufacturing output per capita stagnated over the course of the 1990s staying at approximately \$25 between 1990 and 1998. Since then, we observe a rapid acceleration to \$48 in 2013. *Liberian* manufacturing output decreased from \$21 in 1990 to practically \$0 in 1996 and recovered since then at a steady pace to \$16 in 2013. In *Malawi*, manufacturing output decreased from \$36 in 1990 to \$25 in 2002 and then recovered to \$49 in 2013 (*Graph 26*).

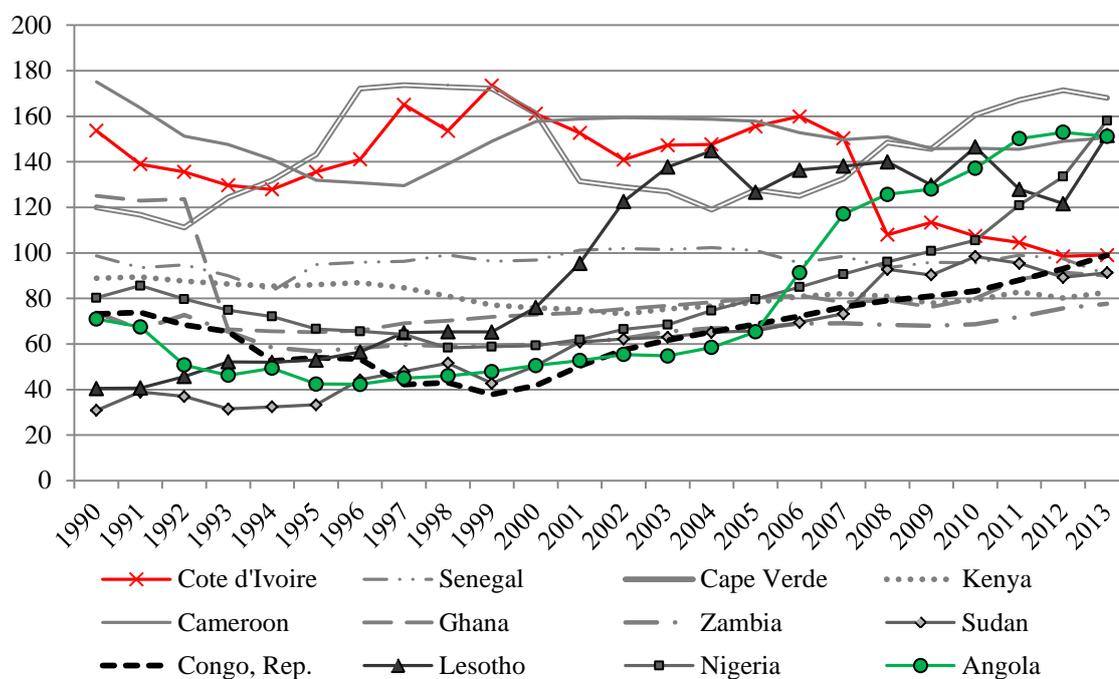
Graph 26. Real Manufacturing Output per capita 1st quintile SSA countries (increasing) 1990-2013 (USD 2005)



Graph 27 shows the evolution of manufacturing output per capita for SSA economies falling into the second quintile. What stands out is that contrary to the group of 1st quintile countries, we observe no cases of rapid decreases in manufacturing output. Rather, we observe either stagnating patterns or rapid accelerations since the early 2000s. The only noticeable exception to this is *Côte d’Ivoire*, where manufacturing value added per capita followed a slight upwards trend over the 1990s, and then rapidly declined from 2006 onwards. Countries with rapidly increasing manufacturing output include Angola, Nigeria, Lesotho, Sudan and Congo-Brazzaville. In Angola, Nigeria and Congo-Brazzaville, we observe the trend reverse. In *Angola*, manufacturing output decreased from \$71 in 1990 to \$47 in 1999 and increased to \$ 151 in 2013. *Congo-Brazzaville* followed a very similar pattern, with manufacturing output decreasing from \$73 in 1990 to \$37 in 1999, although manufacturing output only increased to \$98 in 2013, i.e. much less rapidly than in Angola over the period 2000 and 2013. *Nigeria* started off with a manufacturing output of \$80 per capita in 1990 which decreased until 2000. Since then, there was a recovery and manufacturing output per capita rose to \$158 in 2013. Both *Sudan* and *Lesotho* witnessed a period of slowly increasing levels of manufacturing output between 1990 and 1999, followed by a period of much more rapidly increasing levels of manufacturing output per capita between 2000 and 2013. *Sudan’s*

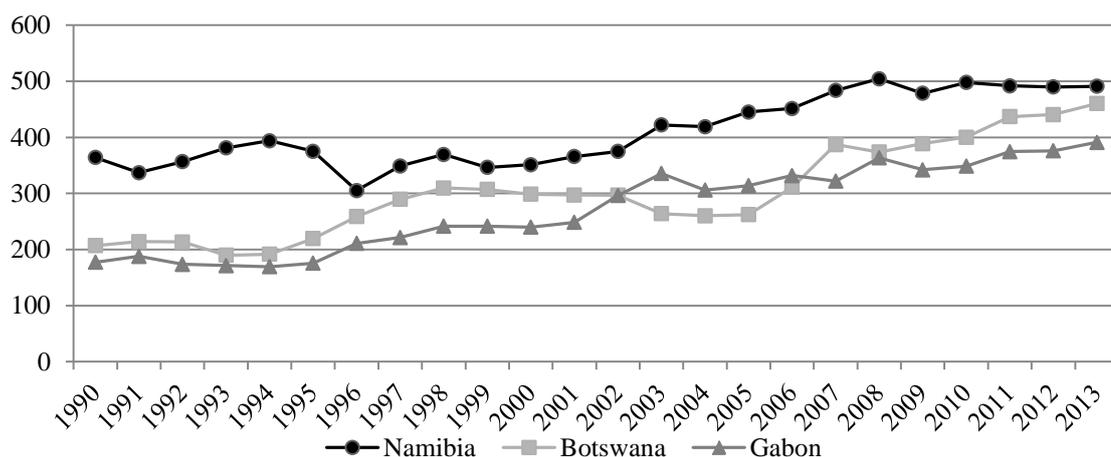
manufacturing output increased slowly over the period 1990-2000 from \$31 in 1990 to \$50 in 2000 and then grew at an accelerated pace to \$91 in 2013. In *Lesotho*, manufacturing output increased steadily over the whole period 1990-2013 from \$40 in 1990 to \$65 in 1999 and then to \$151 in 2013.

Graph 27. Real Manufacturing output per capita in 2nd quintile SSA countries 1990-2013 (2005 USD)



All SSA countries falling into the third quintile globally in terms of manufacturing output per capita witnessed a steady increase in manufacturing output per capita, though at different paces. The fastest rates of increase can be observed in *Botswana*, where manufacturing output per capita increased from \$206 in 1990 to \$460 in 2013. *Gabon* follows an almost similar pattern though falling a bit behind Botswana from the mid-2000s onwards. Still, manufacturing output more than doubled in Gabon increasing from \$177 in 1990 to \$390 in 2013. *Namibia* had significantly higher levels of manufacturing output in 1990 with \$364 manufacturing output per head, increasing steadily but more slowly than Botswana to \$490 in 2013 (*Graph 28*).

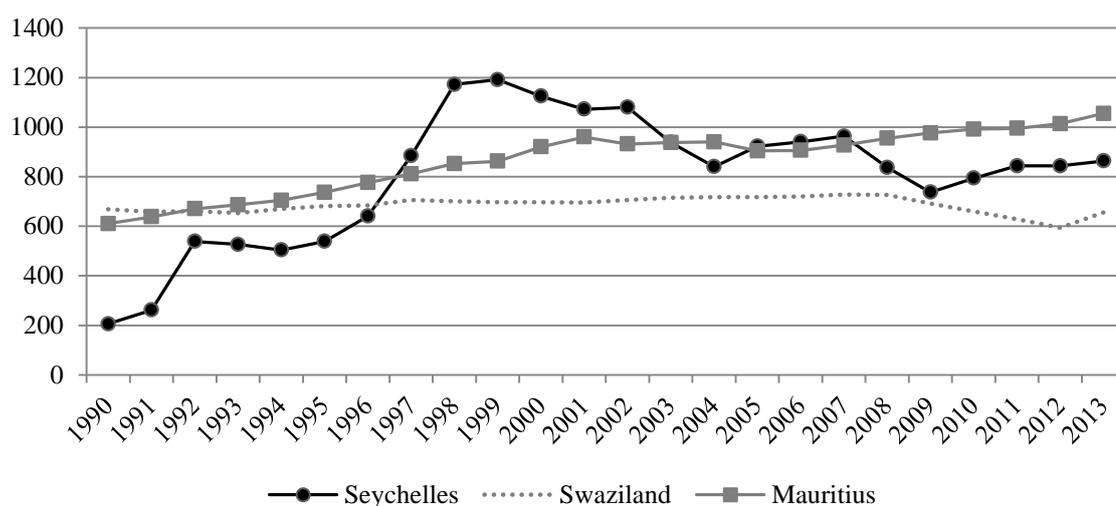
Graph 28. Real Manufacturing Output per capita in 3rd quintile SSA countries 1990-2013 (2005 USD)



Source: UN National Accounts Database

Contrary to SSA countries in the 3rd quintile, SSA countries falling in the 4th quintile globally witnessed patterns of stagnation or even mild decreases. In *Swaziland*, manufacturing output per capita stayed practically constant over the period 1990 to 2008. Since then we observe a mild decrease from \$726 in 2008 to \$655 in 2013. *Seychelles* had a large increase in the period 1990 to 2000 from \$205 in 1990 to \$1191 in 1999 but then had a decrease to \$863 in 2013. *Mauritius* is the only country in this group where manufacturing output increased slow and steadily from \$610 in 1990 to \$1054 in 2013 (*Graph 29*).

Graph 29. Real Manufacturing Output per capita in 4th quintile SSA countries 1990-2013 (2005 USD)



Source: UN National Accounts Database

2. METHODOLOGICAL APPROACHES IN FINDING CAUSAL RELATIONSHIPS BETWEEN CHINA-RELATED EFFECTS AND MANUFACTURING SECTOR DEVELOPMENT

2.1. METHODOLOGICAL APPROACHES

The question is whether those countries, which experienced a decline in manufacturing output, are also those experiencing predominantly negative China-effects and vice versa. The answer to this question is not straightforward. In order to establish if any differences in manufacturing output across SSA countries can be linked to China, one must separate the effects linked to differences in the size and composition of various China-effects from those effects linked to differences in policy mediation and those effects that can be explained by differences in other factors that shape the global economy (see Figure 3).

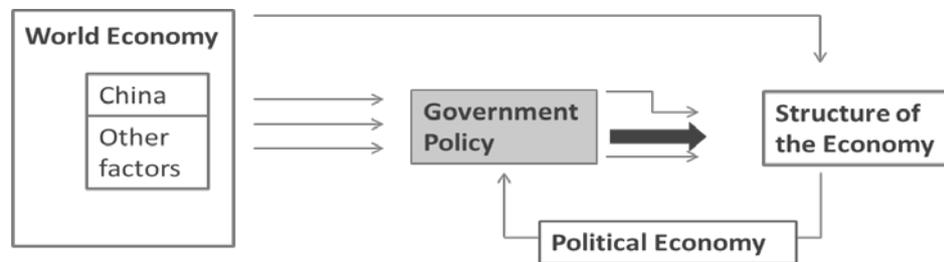


Figure 3. China and Structural Change in SSA

To approach these questions empirically, this thesis relies on the methods of case study and cluster analysis. The choice of methods is informed by the nature of subject matter and stands largely in opposition to the methods critical to mainstream applied growth theory, namely cross-section or panel regressions. A standard criticism of regression analysis is that establishing correlation is not tantamount to establishing causation. This would not rule out the use correlations in view of generating working hypotheses, the causal relationships behind which could be further investigated on a qualitative basis. Yet for the subject matter at hand and given the paucity of data available at cross-country level, the meaningfulness of such correlations is questionable in the first place. Fixed effect models would allow controlling for both unobservable time-invariant individual heterogeneity (unobservable country specific characteristics like endowments in natural resources) and unobservable time variant effects invariant in individuals (such as macro-economic shocks affecting all countries) (Baltagi 2005: 33ff). Latent class models would even allow correcting for unobserved groups in the panel (see Cullmann 2012; Greene 2005; Orea and Kumbhakar 2004). However, such models would exceed the requirements on the quality of data. Jerven (2013) points out that even the most basic macro-economic aggregates like GDP are subject to a considerable margin of error and

uncertainty in the SSA context and therefore questions econometric modelling and maintains:

“In most cases a useful analysis can be conducted if quantitative analysis is based in careful criticism of data sources and is supplemented by qualitative investigation.”
(Jerven 2013: 7)

Also, following Figure 3, domestic (industrial) policy is a variable related to both dependent and independent variables which makes individual heterogeneity variant in time. The regression would thus be biased by this and other such variables which cannot be meaningfully parametrised. In short, for the subject matter at hand, which depends on a myriad of contexts and time-specific causal relationships, panel regressions would not be meaningful to generate working hypotheses let alone establish causality.

The case study method has the advantage of producing the type of context and time dependent knowledge needed to trace the complexity of multi-dimensional, path-dependent and path-shaping processes likely to underlie the relationship between economic ties with China and industrial development in SSA. For the subject matter, context-specific and time-specific knowledge is required not just to trace the evolution, formation, and effects of domestic policies but also to understand the spending behaviour of different social strata, the state, and even historically formed ownership structures within the industrial sector which create path-dependencies.

However, case studies have been criticised on account of their inability to produce generalizable conclusions. Some case-study researchers have pointed out that the aim of drawing law-like generalisations akin to natural sciences is problematic in the context of social sciences given the context and time specific nature of the observed phenomena (Lincoln and Guba 2000). They maintain that, instead, the value of case studies lies in building ‘naturalistic generalisations’, i.e. the wealth of detail derived from a multitude concrete case studies helps the researcher to build a tacit understanding of a multitude of causal processes which can be subjectively and intuitively applied to other problem sets (Stake 2000). Alternatively, case studies are useful for the formulation working hypotheses depending on their ‘transferability’, i.e. the fit in terms of similarities between source and target cases (Lincoln and Guba 2000).

However, even the concepts of ‘transferability’ and ‘naturalistic generalisation’ imply that the findings of one case can be extrapolated to a wider, however defined, set of cases, even though this need not to be understood in a deterministic law-like way. Synthesising

the epistemological approaches of eliminative induction³⁵ and analytical induction,³⁶ Gomm, Hammersley, and Foster (2000b) point out that sound induction needs to be both theoretically informed and systematically tested across and within groups of cases. That is theoretical induction *firstly* relies on a process of conceptual thinking in formulating what is to be explained and the factors explaining it. *Secondly*, researchers have to seek a large number of cases where the explanatory factor is present so as to check whether and under which conditions it has the effect predicted. This requires a relatively large number of cases and case study researchers building on one another's work.

“While this problem does not necessarily rule out use of comparative method, it does mean that case study researchers must build on one another's work. Follow-up studies need to investigate further cases selected specifically to develop and test the theory in new ways.” (Gomm, Hammersley, and Foster 2000b: 249)

Taken together, this suggests a number of methodological issues that need to be addressed to exhaust these boundaries of case study research. The *first* one concerns the theoretical premises and prism. In this regard, chapter 1 had argued at greater length that the conditions under which demand for manufactured goods remains or becomes expansionary needs to be integral part of the study of industrial development. *Secondly*, in order to facilitate empirical generalisation, the studied case has to be situated relative to other cases or groups thereof. This chapter draws on cluster analysis techniques (section 2.2) to operationalise the empirical classification of cases in a systematic way. *Last but not least*, which case is chosen has itself a bearing on the kind of generalisations that can be drawn from it. Section 2.3 discusses various criteria for the selection of cases.

2.2. CLUSTER ANALYSIS

2.2.1. Cluster analysis as a tool to inform the choice of case studies

Gomm, Hammersley and Foster (2000a) maintain that once a case study is used beyond an intrinsic purpose (e.g., an impact assessment of a specific policy) and is then used to shed light on what is going on more generally, the extent to which the specific case is symptomatic or significant for a wider phenomenon needs to be established empirically. They argue that empirical generalisation is not confined to survey research provided that the case study is situated with respect to the wider population of cases. Empirical

³⁵ **Eliminative induction:** systematic investigation of cases in search for factors which always occur when a particular outcome results (necessary condition) and differences between cases that display a particular type of outcome and those that don't (sufficient condition).

³⁶ **Analytical induction:** The key concern is the character of what is to be explained. Analytical induction picks out phenomena likely produced by the same cause and relies on hypotheses that fit a small number of cases. These hypotheses are refined and reformulated based on further cases. Investigation continues until additional cases no longer require to revise the hypothesis.

generalisation is understood as tendencies or patterns which can, under certain conditions, reoccur in different circumstances. Empirical generalisation involves inferences about a larger but finite population of cases on the basis of a case drawn from that population. At the most general level, this involves reaching conclusions about the distribution and co-occurrence of particular features within that population of cases.

“We need to think about how the case(s) we are studying might be typical or atypical in relevant aspects – or, indeed, of what population it (or they) might be typical; and to use what is actually known about the cases and the wider population to get a fix on where the former fits in terms of the diversity likely to be present in the latter. (...) Without knowledge of the location of the cases studied in terms of relevant dimensions of likely heterogeneity in the target population, we cannot know how far empirical generalization drawn from them will be sound” (Gomm, Hammersley, and Foster 2000a: 105)

Gomm, Hammersley, and Foster (2000a) advocate collecting and presenting information about the case and the population by way of extensive analysis of secondary data to the extent that these are available. For instance, the findings of a case study of differential treatment by teachers of different racial groups in a specific school would require one to compare some relevant dimensions like social class representation, ability profiles etc. of the specific school to the nationwide average. If there are no secondary data to draw on, then the potential risks involved in generalisation should still be noted, preferably, via specification of likely types of heterogeneity that could render the findings unrepresentative.

Applied to the present research, there might be case(s) in which China-related demand-side dynamics are more likely to occur or case(s) in which demand-side effects occur in tandem with a distinct set of supply-side effects and so on. Going back to Figure 3, this is dependent on though not reducible to the size and composition of economic ties with China (arrows on the left hand side), which as documented in chapter 2 varies substantially across the sample of SSA countries. These sources of heterogeneity need to be documented using available secondary data. To operationalise the empirical classification suggested by Gomm, Hammersley, and Foster (2000a) in a systematic way, this chapter draws on cluster analysis techniques.

In practical terms, the aim of cluster analysis is to find groups in data that have a maximum degree of similarity within each group and a maximum dissimilarity across different groups. Cluster analysis is an exploratory and not an explanatory data analysis technique. Correspondingly, it does not contain any p-value analysis and is used to generate hypotheses rather than testing them. For the research at hand, the purpose of the cluster is primarily to identify groups of countries with a similar set of China-related influences and thereby to help to both select a case and situate the case with respect to

other cases. Grouping countries into groups with different sets of China-related influences allows assessing whether there are any systematic differences *across* these groups of countries with similar China effects – for instance, whether the group of countries with predominantly positive China-effects fares systematically better than other groups. However, the purpose is not to explain the overall change in manufacturing output across countries. This change is dependent on a range of non-China related effects and transmission mechanisms, including domestic policy, domestic political economy and overall productive capacity. As noted earlier, these factors are difficult to parameterise and causality is better explored in case studies.

There are two basic approaches to clustering data – hierarchical clustering and optimisation clustering. Hierarchical classifications partition data through one of two different techniques, agglomerative or divisive, and are based on various proximity measures specified by the researcher. The agglomerative technique partitions the data through a series of successive fusions, in which all n -individuals are successively grouped into larger groups. With the agglomerative techniques, data are eventually reduced into a single group. The divisive technique partitions the data by a series of successive divisions, in which one group containing all n -individuals are successively split into finer groups until the entire data set is eventually split into n -groups. For both techniques, the researchers thus have to decide when to stop agglomerating or dividing (Everitt et al. 2011). Hierarchical clustering techniques produce graphical outputs in the form of dendrograms, which help the researcher to determine why and how different groups have been formed. Hierarchical cluster are primarily used for small data sets and/or those containing qualitative variables. For larger data sets, the tracing of the dendrogram becomes impractical, especially when there is more than one dimension, i.e. more than one variables which define the characteristics of an individual (Řezanková 2014).

The main limitation, however, is that agglomerative and divisive algorithms are irrevocable, i.e. once individuals are joined they cannot subsequently be separated or once they are divided they cannot subsequently be rejoined. This makes the technique highly sensitive to the first division or fusion and by extension to the choice of proximity measure and to outliers. The number of possible fusions and divisions is large and increases with the sample-size. The first step of an agglomerative algorithm considers $N \cdot (N - 1)/2$ possible fusions of observations to find the closest pair. This number grows quadratically with N . For divisive hierarchical clustering, the first step would be to

find the best split into two subsets, the total number of possibilities of which amounts to $2^{(N-1)} - 1$ comparisons. This number grows exponentially with N. For these reasons, Everitt et al. (2011) advise to be wary of using hierarchical methods if they are not clearly necessary.

Given the comparatively large scale of the sample of SSA countries and the absence of qualitative observations in the variables defining the characteristics of each SSA country with regards to their patterns of interaction with China, the following therefore draws on optimisation clustering techniques. Optimisation clustering produces a partition of the individuals into a number of pre-specified groups which maximises either cluster cohesion, i.e. how closely related are the objects in a cluster, or cluster separation, i.e. how distinct or well-separated is one cluster from another (Everitt et al. 2011).

This can be achieved by minimising the within sum of squares, which measures the within group sum of squares, i.e. the distance of individuals (x) to the group mean/median.

$$WSS = \sum_i \sum_{x \in C_i} (x - m_i)^2$$

or by maximising the between sum of squares, measuring the between sum of squares as the distance of the group means from one another (C_i being the size of cluster i)

$$BSS = \sum_i |C_i| (m - m_i)^2$$

The most commonly used algorithms are the k-means and kmedians algorithms, which minimize the sum of the distances from each observation to the nearest mean/ median (WSS) following a iterative procedure that begins with k initial group centers. Observations are assigned to the group with the closest center. The mean or median of the observations assigned to each of the groups is computed, and the process is repeated. These steps continue until all observations remain in the same group from the previous iteration. An observation will be reassigned to a different group only if it is closer to the other group center (Kaufman and Rousseeuw 1990).

The main empirical issue for optimizing cluster techniques is how to determine the optimal number of clusters. Informal methods for determining the optimal number of groups rely on graphical representations of the data, mapping and generating profiles (see Hartigan 1975 for an example of US intercity crime rates). Formal methods rely on

comparing clustering criteria generated for different numbers of potential groups k ($k = 1, \dots, K$) (Makels 2012).

For each potential number of groups, the within sum of squares (WSS) and its logarithm $\log(\text{WSS})$ is generated and compared. Logically, the larger the number of groups k , the lower the within sum of squares. The optimal number of k then appears in a kink in the curve generated from WSS or $\log(\text{WSS})$ for all cluster solutions, i.e. additional numbers of groups leading to only a small reduction in the distance from the group centroid. Other cluster criteria derived from WSS are the η^2 coefficient, which follows a similar principle as the R^2 in parametric estimations, or the proportional reduction of error (PRE) coefficient (Makels 2012):

$$\eta_k^2 = 1 - \frac{\text{WSS}(k)}{\text{TSS}}$$

$$\text{PRE}_k = \frac{\text{WSS}(k-1) - \text{WSS}(k)}{\text{WSS}(k-1)}$$

η_k^2 measures the proportional reduction of the WSS for each cluster solution k compared with the total sum of squares (TSS), i.e. the sum of squared distances from the mean or median of the unclustered data. PRE_k illustrates the proportional reduction of the WSS for cluster solution k relative to the previous solution of $k - 1$ clusters.

2.2.2. The choice of cluster variables

China impacts on the prospects of industrial development through a multitude of channels acting both on the supply-side and on the demand-side. On the supply-side, Chinese firms (operating both through Chinese contracted projects and FDI) can have productivity enhancing effects through knowledge and skill transfer (i). Chinese contracted projects can have a positive impact on the enabling environment for manufacturing sector development by improving basic infrastructure (ii). Finally, Chinese capital goods are potentially more appropriate to serve domestic demand for bottom of the billion products (iii).

On the demand-side, the increases in export demand and the improvement of terms of trade can positively impact on a countries balance of payments constraint (i). This effect may be outweighed by displacement effects on home and domestic markets (ii). Furthermore, Chinese contracted projects can contribute to employment and income generation thereby broadening the demand base for consumer durable goods (iii). Finally,

Chinese contracted projects can also induce demand for the production of building materials (iv).

Given this study's focus on the demand side, the *kmeans* partition method is applied to find distinct clusters for the following three characteristics of economic engagement with China likely to be related to the demand-side dynamics of SSA economies.

1. Chinese Contracted Projects as share of GDP: is used to capture potential effects of Chinese overseas contracted projects (COP) on manufacturing development. Chapter 2 has hypothesised that these projects could facilitate manufacturing development through both the supply side (infrastructure development and linkage formation) and the demand side (employment and income generation).

Data on COPs are taken from the Chinese Statistical Yearbook. For comparability, they were scaled by the contracting country's GDP. Note that this is different from the approach taken to make manufacturing output comparable across countries, which was to calculate manufacturing output per capita, which has been discussed earlier in this chapter (also see variable 5 below). This difference in approach reflects a difference in intended interpretation: manufacturing output per capita is a proxy for the degree to which the country in question has developed a manufacturing base, regardless of whether there are other sources of income, which might inflate GDP. While contracted projects as a share of GDP capture the relative importance of COPs as a source of demand or capacity over and beyond domestic sources. Seen from this angle, it is not the absolute amount value of COP per capita that is relevant but the extent to which this can relieve domestic constraints, i.e. how important COP spending is relative to the overall size of the economy. Even relatively copious amounts of COP-related spending in a country with already rich sources of domestic demand and supply are less likely to have a transformative impact on the domestic economy than comparatively smaller amounts of spending in an economy with limited activity at the outset.

On average, COPs account for 3.1% of GDP in 2013 in the sample countries. Overall, there is an increasing trend in all sample countries, which reflects China's increasing engagement in SSA, but COPs are nevertheless strongly focussed on individual countries. In 2013, 7 countries (Chad, Burundi, Zambia, Liberia, Congo Brazzaville, Equatorial Guinea and Lesotho) had a COP share of more than 10%, while 16 countries have COP share of GDP of less than 2%. The

highest COP share of GDP is 16% in Lesotho, while the lowest is only 0.008% in Swaziland.

2. Exports to China as a percentage of GDP is used to capture the possible effects of China's economic rise on the external demand constraint of SSA countries. Again, this is scaled by the country's GDP because the importance of external demand is relative to the size of domestic demand, i.e. the same amount of exports amounts to a smaller proportionate relaxation of the overall demand constraint than in a larger economy.

Data on exports to China are taken from UN COMTRADE database (BEC, SITC, revision 2). On average, exports to China make up for 4.8% of GDP in the sample in 2013, ranging from 40.7% in Congo-Brazzaville to 0.00014% in Cape Verde.

3. Consumer goods imports from China as share of GDP is used to capture the possible displacement effects on the domestic markets. This reflects one of the hypothesised channels through which China is thought to affect SSA countries' prospects for industrialisation, as set out in chapter 2, namely by crowding out (potential for) domestic supply of consumer products through cheaper imports from China. In addition, basic consumer goods, such as beverages, plastics or soaps and detergents are typically one of the first types of manufactured goods to be produced as a country increases its manufacturing base, so that substantive crowding out of consumer good production by imports from China risks negatively affecting SSA countries path to industrialisation.

Data on consumer goods imports from China are taken from UN COMTRADE database (BEC, SITC, revision 2) by calculating the sum of 'food and beverage products used mainly in household consumption' (code 122) and 'other consumer goods nec' (code 6). These two groupings contain the vast majority of goods that can be considered "consumer goods".

On average, consumer goods imported from China make up for 4.6% of GDP in the sample in 2013 but are highly concentrated in just three countries Djibouti (27.1%), Togo (21.1%) and Benin (13.5%). As noted previously the result for Djibouti and Togo is a bit of an artefact in that it reflects those countries role as staging point the wider trade between China and other SSA countries.

These three characteristics of economic engagement with China form the core of the grouping in the cluster. However, it is worth highlighting further differences within the

cluster groupings across countries, which serve to contextualise within-group differences. In what follows, the analysis has considered three such variables: terms of trade, population size and initial level of manufacturing per capita.

Terms of trade do not enter the main cluster (i.e. they are given a lower weight than the other characteristics of engagement with China) because improvements in terms of trade are only indirectly related to China through China's systemic impact on world market prices. Yet, other than export and import demand functions, relative prices form an essential component in the determination of balance of payments consistent growth and might explain differences in how the direct China-related effects worked out in practice. Therefore, the k-means partition method has been applied to generate three non-overlapping groups (low, medium, and high) for the index of Terms of Trade (2000=100):

4. *TOT - Terms of Trade* is used to capture the degree to which countries are affected (negatively or positively) by changes in relative prices on world markets.

Terms of trade is an index of export prices over import prices. For each country, the index value is set to 100 for the year 2000 (i.e. the beginning of the sample period). The highest improvement in terms of trade can be found in Angola (257), the lowest average in Togo (29). Data are extracted from the World Bank WDI database.

It is also worth considering some country specific characteristics to facilitate further case study comparison *within* groups of countries with similar China-related influences. For instance, the potential for domestic consumption-led industrialisation depends on the size of the domestic market. Thus, countries have been classified according to their:

5. *Manufacturing base as* measured by SSA countries' manufacturing output per capita relative to world quintiles, i.e. countries in the lowest quintile are among the 20% least industrialised countries, 2nd quintile among the 40% least industrialised countries, but above the 20% least industrialised countries etc.

Data are derived from UN COMTRADE. In 2013, SSA countries fall into the first quintile, 12 into the second, three into the third and three into the fourth. In 2013, the lowest manufacturing output per capita is realised by Somalia with \$ 5.6. The highest manufacturing output per capita is realised by Mauritius with \$1054.

6. *Population size is used* to approximate the size of the domestic market, with the grouping reflecting the quintile in which the country is found when compared

to all countries globally, i.e. a “large” country is among the 20% largest countries of the world, in terms of population.

Data are derived from UN COMTRADE. In 2013, the average population size across SSA countries is 18,554,022, the most populous country being Nigeria with a population size of 173,600,000. The smallest country in terms of population size are the Seychelles with 92,838 inhabitants.

Table 13 provides the summary statistics of the cluster variables and complementary country characteristics.

Variables	Average	Median	Min	Max
COPs % of GDP	3.7%	3.1%	0.0	11.8%
Exports to China as % of GDP	4.5%	1.3%	0.0	35.2%
Consumer goods imports from China as % GDP	2.4%	0.9%	0.0	23.5%
TOT	129.7	114	30	258
Population	18,554,022	10,495,583	92,838	173,600,000
Manufacturing VA pc 2013	133.3	48.3	5.6	1054.6

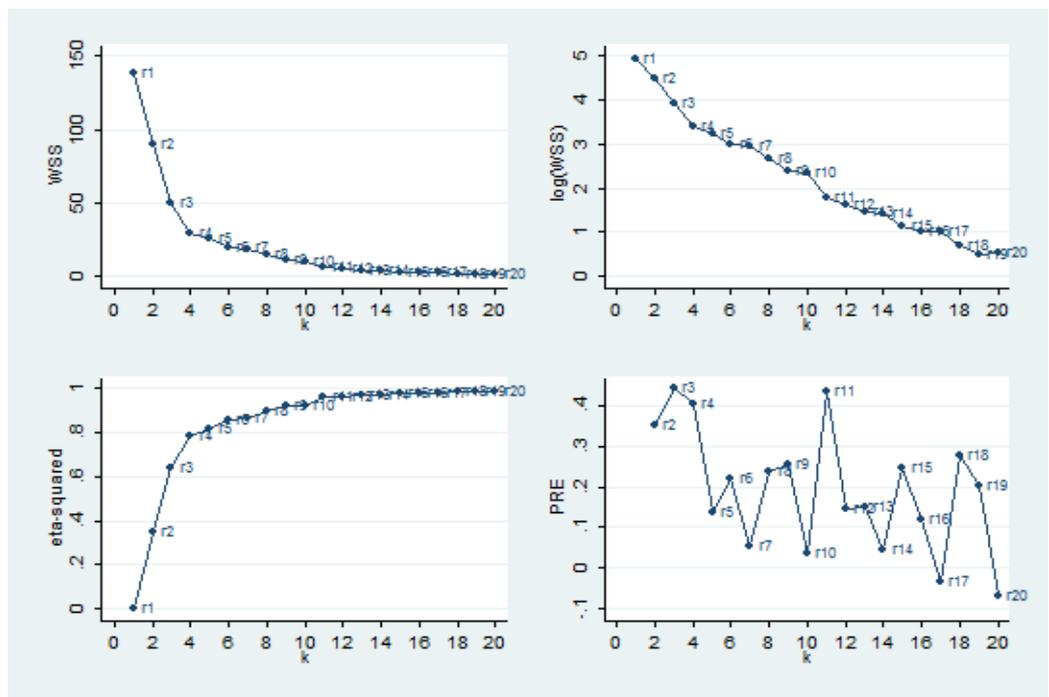
2.2.3. Selecting the number of cluster groups

The optimum number of cluster groups is determined based on the comparison of the four cluster criteria outlined above: WSS, $\log(\text{WSS})$, η^2 and PRE_k for 20 different cluster solutions, $k = 1, \dots, 20$. The results indicate clustering with $k = 6$ to be the optimal solution. At $k = 6$, there is a kink in WSS and $\log(\text{WSS})$. η_6^2 points to a reduction of the WSS by 85% relative to the solution with no clusters and the rate of increase in reductions of WSS for $k > 6$ is significantly smaller. PRE_6 to a reduction of about 21% compared with the $k = 5$ solution (**Table 14, Graph 30**).

Table 14. Cluster criteria by number of groups

WSS[20,5]	K	WSS	log(WSS)	eta-squared	PRE
r1	1	138	4.9272537	0	.
r2	2	89.735741	4.4968691	0.34974102	0.34974102
r3	3	50.04247	3.9128721	0.63737341	0.44233513
r4	4	29.841818	3.3959107	0.78375494	0.40367016
r5	5	25.72279	3.2473774	0.81360297	0.13802872
r6	6	20.116479	3.0015393	0.85422842	0.21795113
r7	7	19.069344	2.948082	0.86181635	0.05205358
r8	8	14.54874	2.6775044	0.89457435	0.23706136
r9	9	10.815707	2.3809995	0.92162531	0.25658802
r10	10	10.422315	2.3439491	0.92447598	0.03637235
r11	11	5.871942	1.7701854	0.9574497	0.43659905
r12	12	5.024716	1.6143689	0.96358902	0.14428379
r13	13	4.2706895	1.4517753	0.96905298	0.1500635
r14	14	4.0860443	1.4075773	0.97039098	0.04323546
r15	15	3.0876632	1.1274146	0.97762563	0.24433926
r16	16	2.7167672	0.9994426	3	0.12012193
r17	17	2.8054828	1.0315756	0.97967041	-0.03265485
r18	18	2.033957	0.7099831	4	0.27500644
r19	19	1.623222	0.4844130	6	0.20193887
r20	20	1.7342296	0.5505632	9	-0.06838721

Graph 30. Cluster criteria by number of groups



2.2.4. The typical patterns of economic ties with China across the six clusters

The following sections discuss the main characteristics of the cluster groups for a total number of six clusters, i.e. the distinct patterns of economic ties with China that differentiates the different clusters. It is further shown that we observe differences in average manufacturing output growth *across* these groups, but also *within* them.

Group A: Low impact group.

The first group of countries to be summarised is the group of low impact countries. What distinguishes this group is that all measurements for direct economic flows between them and China are below average. At the same time, consumer goods imports from China only make up for a small part of GDP. In this group, changes in manufacturing performance at the macro-level are least likely to be related to China's direct or indirect influence.

For these countries changes in terms of trade have been moderate – with the exception of Nigeria and Rwanda whose terms of trade have more than doubled since 2000. Even though the weight of direct economic ties with China is small when compared to total economic activity, they may have benefited indirectly from China's systemic impact on world market prices. For most of the 15 countries in this group it appears that China may well have been neither help nor a hindrance to their industrial development.

	Population	Country Size	MVA pc ⁱ	degre e indus.	Δ MVA pc ⁱⁱ	COP ⁱⁱⁱ	X _{chn} ^{iv}	M _{cons} ^v	ToT ^{vi}	
<i>Sample Mean</i>	18,554,022		133		38.7	3.7	4.5	2.4	130	
<i>Group Mean</i>	22,097,401		199		20.6	1.0	1.3	1.4	122	
S. Tome & Principe	192,993	very small	62.1	1	14.8	0.3%	0.0%	0.3%	115	A
Gambia	1,849,285	Small	22.5	1	-12.5	0.3%	8.0%	6.5%	96	A
Madagascar	22,924,851	medium-large	33.3	1	-6.0	1.2%	1.3%	1.5%	80	A
Burkina Faso	16,934,839	medium-large	38.6	1	-2.3	0.0%	1.8%	0.2%	128	A
Malawi	16,362,567	medium-large	49.2	1	50.1	2.3%	0.7%	1.3%	99	A
Rwanda	11,776,522	medium-large	19.5	1	51.0	1.9%	1.2%	0.2%	203	A
Uganda	37,578,876	Large	39.5	1	31.4	1.4%	0.2%	0.7%	113	A
Somalia	10,495,583	medium-large	5.6	1	9.0	0.2%	0.6%	2.8%	107	A
Cape Verde	498,897	very small	168.0	2	-1.4	1.0%	0.0%	1.5%	101	A
Cote d'Ivoire	20,316,086	medium-large	99.0	2	-37.7	0.5%	0.7%	0.9%	149	A
Senegal	14,133,280	medium-large	90.5	2	-6.6	1.8%	0.4%	1.4%	109	A
Nigeria	173,600,000	Large	158.1	2	158.1	0.9%	0.3%	0.5%	223	A
Namibia	2,303,315	Small	491.0	3	42.7	1.3%	1.9%	1.6%	121	A

Swaziland	1,249,514	Small	655.4 1054.	4	-5.9	0.0%	2.0%	0.1%	111	A
Mauritius	1,244,403	Small	6	4	24.9	2.4%	0.1%	1.3%	70	A
i) Manufacturing Value Added per capita in 2013 ii) % change manufacturing value added per capita 2013 relative to avr. 1996-2000 iii) Chinese Overseas Contracted Projects % of GDP, avr. 2011-13 iv) Exports to China relative to GDP, avr. 2011-13 v) Consumer Goods Imports from China relative to GDP vi) Terms of Trade, average 2011-13 (2000=100)										

Group B: Negative impact group.

The second group of countries includes three countries with low Chinese export demand, limited Chinese project presence, but, contrary to the low impact group, high shares of Chinese consumer goods imports relative to GDP. At a high-level, given these patterns, countries in this group are more likely to see adverse effects of China's economic emergence on their own manufacturing development. They are most likely to suffer from displacement effects on their home markets while benefiting the least from interactions with China that could support domestic market formation. On top of this, terms of trade have only slightly improved in Benin (by 22%), somewhat fallen in Djibouti (by 15%) and strongly fallen in Togo (by 70%) – even though this does not necessarily reflect China's impact on world markets.

However, the interpretation of results for this group is more difficult than for group A. In particular, as noted in chapter 2, both Togo and Djibouti play a particular role in the trading networks between China and SSA, which sees many Chinese exports to other SSA countries pass through these two countries. In this regard, the very high import levels for these countries are less likely an indication of displacement of locally manufactured consumption goods, but do show that inward trade from China is likely to play a considerable role in the economy of these countries even if just through activities associated with trade passing through, such as transport and logistics.

The examples of Togo and Djibouti underline the importance of a balanced, multipronged approach to using macro-economic data. Even leaving aside any potential concerns about data quality, it is clear that the point estimate for consumer goods imports from China, or indeed any other variable, will hide country-by-country variation in what drives these variables. Given this, as well as the relatively small number of observations available at this level of aggregation, further investigation requires other analytical techniques such as qualitative, historically grounded, country-specific case study to capture the idiosyncratic nature of the forces at play.

Country	Population	Country Size	MVA pc ⁱ	degree indus.	Δ MVA pc ⁱⁱ	COP ⁱⁱⁱ	X _{chn} ^{iv}	M _{cons} ^v	ToT ^{vi}	
<i>Sample Mean</i>	18,554,022		133		38.7	3.7	4.5	2.4	130	
<i>Group Mean</i>	6,004,463		35		22.7	2.8	1.7	19.6	79	
Djibouti	872,932	Small	29.2	1	45.3	3.4%	0.0%	23.5%	85	B
Benin	10,323,474	Medium	39.5	1	0.9	1.5%	2.8%	13.0%	122	B
Togo	6,816,982	Medium	36.9	1	22.0	3.4%	2.4%	22.3%	30	B
<p>i) Manufacturing Value Added per capita in 2013 ii) % change manufacturing value added per capita 2013 relative to avr. 1996-2000 iii) Chinese Overseas Contracted Projects % of GDP, avr. 2011-13 iv) Exports to China relative to GDP, avr. 2011-13 v) Consumer Goods Imports from China relative to GDP vi) Terms of Trade, average 2011-13 (2000=100)</p>										

Group C: Medium projects group.

The third group of 17 countries resembles group A in that countries in this group experience low or medium Chinese export demand, but also low Chinese consumer goods imports. Trade with China, thus, appears to neither positively nor negatively affect domestic production (possibilities). However, contrary to the low impact group (group A), in all the countries in group C, Chinese contracted projects are equivalent to a non-negligible proportion of local GDP, ranging from 2.5% to 4.4% of GDP, with 10 countries above 3%. The range in group A is 0.0% to 2.4%, with only two countries above 2%.

Country	Population	Country Size	MVA pc ⁱ	degre e indus.	Δ MVA pc ⁱⁱ	COP ⁱⁱⁱ	X _{chn} ^{iv}	M _{cons} ^v	ToT ^{vi}	
<i>Sample Mean</i>	18,554,022		133		38.7	3.7	4.5	2.4	130	
<i>Group Mean</i>	20,210,465		119		18.7	3.4	3.3	1.2	129	
Guinea-Bissau	1,704,255	Small	49.0	1	-30.5	2.9%	0.9%	0.4%	81	C
Eritrea	6,333,135	Medium	11.5	1	-56.1	2.7%	0.5%	0.2%	84	C
Cen. Af. Rep.	4,616,417	Medium	31.6	1	-24.3	2.9%	2.0%	0.2%	69	C
Sierra Leone	6,092,075	Medium	10.0	1	31.2	2.8%	14.6%	1.0%	60	C
Burundi	10,162,532	Medium	30.1	1	39.3	4.7%	0.5%	0.5%	147	C
Zimbabwe	14,149,648	medium-large	33.7	1	-29.5	4.7%	4.7%	0.5%	108	C
Mali	15,301,650	medium-large	32.8	1	-21.0	4.0%	2.0%	0.5%	163	C
Guinea	11,745,189	medium-large	19.0	1	20.4	4.4%	0.5%	4.8%	104	C
Mozambique	25,833,752	medium-large	64.6	1	153.5	2.9%	2.5%	1.7%	100	C
DRC	67,513,677	Large	30.9	1	-43.9	3.1%	10.9%	0.9%	136	C
Tanzania	47,884,470	Large	48.3	1	93.2	3.3%	1.2%	1.4%	143	C
Cameroon	22,253,959	medium-large	150.5	2	6.6	2.5%	2.4%	1.2%	158	C
Ghana	25,904,598	medium-large	90.0	2	28.6	3.2%	1.4%	3.3%	182	C
Kenya	44,353,691	Large	82.7	2	1.9	2.9%	0.1%	1.6%	91	C
Sudan	37,964,306	Large	91.3	2	92.6	4.4%	8.0%	1.4%		C
Gabon	1,671,711	Small	390.9	3	69.1	3.4%	4.2%	0.5%	227	C
Seychelles	92,838	very small	863.6	4	-13.9	3.9%	0.0%	0.6%	87	C

i) Manufacturing Value Added per capita in 2013
ii) % change manufacturing value added per capita 2013 relative to avr. 1996-2000
iii) Chinese Overseas Contracted Projects % of GDP, avr. 2011-13
iv) Exports to China relative to GDP, avr. 2011-13
v) Consumer Goods Imports from China relative to GDP
vi) Terms of Trade, average 2011-13 (2000=100)

Group D. High projects, low exports group

A fourth group includes all six countries with high Chinese project presence (equivalent to between 6.0% and 9.4% of GDP) but limited trade with China, i.e. low levels of exports to China, relative to GDP, and low Chinese consumer goods imports relative to GDP. This group is thus similar to group C, but with approximately twice as large a Chinese contracted presence. With up to 9% of GDP, Chinese Contracted Projects represent a significant structural influence on these economies.

Country	Population	Country Size	MVA pc ⁱ	degree indus.	Δ MVA pc ⁱⁱ	COP ⁱⁱⁱ	X _{chn} ^{iv}	M _{cons} ^v	ToT ^{vi}	
<i>Sample Mean</i>	18,554,022		133		38.7	3.7	4.5	2.4	130	
<i>Group Mean</i>	21,597,978		119.2		60.6	7.1	0.7	0.5	127	
Comoros	734,917	Small	34.2	1	21.6	6.0%	0.0%	1.3%	86	D
Niger	17,831,270	medium-large	18.0	1	6.6	7.3%	0.3%	0.3%	172	D
Chad	12,825,314	medium-large	36.8	1	26.3	9.4%	2.0%	0.2%	215	D
Ethiopia	94,100,756	Large	14.4	1	121.0	6.4%	0.8%	0.3%	131	D
Lesotho	2,074,465	Small	151.6	2	130.8	7.1%	0.4%	0.6%	72	D
Botswana	2,021,144	Small	460.2	3	57.2	6.1%	0.9%	0.6%	83	D

i) Manufacturing Value Added per capita in 2013
 ii) % change manufacturing value added per capita 2013 relative to avr. 1996-2000
 iii) Chinese Overseas Contracted Projects % of GDP, avr. 2011-13
 iv) Exports to China relative to GDP, avr. 2011-13
 v) Consumer Goods Imports from China relative to GDP
 vi) Terms of Trade, average 2011-13 (2000=100)

Group E. High projects, medium exports

Group E includes three countries with high ratios of Chinese contracted projects relative to total economic activity, medium exports to China and low consumer goods imports from China. In these countries, COPs are equivalent to 7% - 11.8% of GDP, i.e. they represent an important structural influence on these economies. In addition, as opposed to Group D, these countries also have substantial exports to China, which account for between 8.1% and 13.7% of GDP. At these rates, exports to China amount to a sizeable increase in aggregate demand. At the same time, comparatively few Chinese consumer products are imported (between 0.2% and 3.4% of GDP). Finally, terms of trade have also noticeably improved for these three countries with improvements between 48% in Liberia and 132% in Equatorial Guinea. Overall, these countries benefit from what appears to be relatively favourable China-related demand-side effects.

Country	Population	Country Size	MV A pc ⁱ	degree indus .	Δ MV A pc ⁱⁱ	COP ⁱⁱⁱ	X _{chn} ^{iv}	M _{cons} ^v	ToT ^{vi}	
<i>Sample Mean</i>	18,554,022		133		38.7	3.7	4.5	2.4	130	
<i>Group Mean</i>	6,529,910		40.1		137.1	10	10.8	1.3	189	
Liberia	4,294,077	small	16.7	1	59.0	11.8%	8.1%	3.4%	148	E
Equ. Guinea	757,014	small	25.9	1	321.5	11.1%	10.6%	0.2%	232	E
Zambia	14,538,640	medium-large	77.6	2	31.0	7.0%	13.7%	0.3%	187	E

i) Manufacturing Value Added per capita in 2013
 ii) % change manufacturing value added per capita 2013 relative to avr. 1996-2000
 iii) Chinese Overseas Contracted Projects % of GDP, avr. 2011-13
 iv) Exports to China relative to GDP, avr. 2011-13
 v) Consumer Goods Imports from China relative to GDP
 vi) Terms of Trade, average 2011-13 (2000=100)

Group F. High impact group.

Finally, group F includes three countries which rank high in both Chinese export demand and Chinese projects but low in Chinese consumer goods imports relative to GDP. COPs range between 5% and 9.1% of GDP, i.e. broadly in line with groups D and E. However, distinctively, for the three countries in this group, exports to China account for between 26.4% and 35.2% of total GDP providing about a third of overall demand in the economy. As with group E, there are few consumer goods imports from China (between 0.7% and 0.9%) and have seen strong improvements in their terms of trade (with increases between

59% and 158%). It is in this group we would expect the strongest positive China-related impact on the demand-side.

Country	Population	Country Size	MVA pc ⁱ	degree indus.	Δ manf. pc ⁱⁱ	COP ⁱⁱⁱ	X _{chn} ^{iv}	M _{cons} ^v	ToT ⁱ	
<i>Sample Mean</i>	18,554,022		133		38.7	3.7	4.5	2.4	130	
<i>Group Mean</i>	9,936,377		102		116.3	6.8	30.7	1.4	213	
Mauritania	3,889,880	Small	56.3	1	-3.9	5.0%	30.4 %	2.7%	159	F
Congo, Rep.	4,447,632	Small medium-	98.9	2	126.9	9.1%	35.2 %	0.7%	223	F
Angola	21,471,618	large	151.1	2	226.0	6.3%	26.4 %	0.9%	258	F

1) Manufacturing Value Added per capita in 2013
2) % change manufacturing value added per capita 2013 relative to avr. 1996-2000
3) Chinese Overseas Contracted Projects % of GDP, avr. 2011-13
4) Exports to China relative to GDP, avr. 2011-13
5) Consumer Goods Imports from China relative to GDP
6) Terms of Trade, average 2011-13 (2000=100)

Table 15 presents the summary of the results of the cluster analysis. What stands out is that the three groups (D, E and F), in which Chinese construction activities account for a large part of total GDP, appear to have, on average, realised higher rates of increases in manufacturing value added per capita relative to the baseline of 1996-2000. This pattern is even more pronounced for the two groups (E and F) in which high Chinese construction activities are combined with either medium or high Chinese export demand. The group realising the highest average growth of manufacturing value added per capita is group E (high projects, medium exports) with 137%, followed by group F (high projects, high exports) with 116%.

The low impact, negative impact, and medium projects groups (A, B, and C) all realise, on average, growth rates of manufacturing value added per capita of about 20%. In part, this might be driven by the larger group sizes in groups A and C, and hence the likelihood of different factors, whether located at the domestic or the global level, coming into play. However, even their group maxima of 158% (Nigeria) in group A and 153% (Mozambique) in group C are considerably below the maxima of groups E and F. What is more, when taking out the two countries in the low impact group whose terms of trade more than doubled since 2000, and who may have indirectly benefited from China's systemic weight on world market prices, the group average of the low impact group falls to 8%. The negative impact group has the same group size as groups E and F,

and yet, a considerably lower group average and maximum growth rate of manufacturing value added per capita.

Table 15. Summary Statistics: Δ Manufacturing VA per capita by Group

Group	Group Name	n	Group Average	Group median	Group min	Group max
A	Low Impact Group	15	20.6	9.0	-37.7	158.1
B	Negative Impact Group	3	22.7	22.0	0.9	45.3
C	Medium Projects Group	17	18.7	6.6	-56.1	153.5
D	High Projects, Low Exports	6	60.6	41.8	6.6	130.8
E	High Projects, Medium Exports	3	137.1	59.0	31.0	321.5
F	High Projects, High Exports	3	116.3	126.9	-3.9	226.0

It is, however, worth noting that there is considerable variation *within* groups of countries with similar China-related demand-side effects. For instance, the group average of Group D (high projects, low export demand) is largely driven by a 130% increase in manufacturing output per capita in Lesotho and the 121% increase in Ethiopia. The group average in group E is considerably pushed by Equatorial Guinea (321%). In the high impact group (Group F), Angola is performing relatively better than Congo-Brazzaville despite very similar patterns of interaction with China. In the medium impact group (Group C), Mozambique, Tanzania and Sudan perform considerably better than the other countries.

2.3. THE CHOICE OF CASE STUDY

Which case is chosen has itself a bearing on the kind of generalization that can be drawn from it. The following sections will discuss a number of general criteria for the selection case studies proposed by case study researchers and, based on this derive which group of cases identified in the cluster is most meaningful to shed light on the research questions and which case within that group is most meaningful for detailed investigation. Given the scope of this study, the number of cases studied in detail will be limited to one.

The case study method has been under attack for being biased towards verification of theories. Flyvbjerg (2006) argues that this bias applies to all methods and is actually least pronounced in case study research since it is often used for the purpose of falsification or extension of theory. However, he maintains that the ability of case studies to contribute to theory building relies on the appropriate choice of cases and suggests a number of criteria, which could inform the choice of the case study. These include, for instance, extreme cases of the ‘most likely’ and ‘least likely’ type, critical and paradigmatic cases. Eckstein (2000) and Flyvbjerg (2006) maintain that case studies are not only useful to generate hypotheses but also in testing theoretical propositions in social sciences. For

instance, demonstrating the existence of certain phenomena or causal relationships in extreme cases can serve to verify or falsify theories. Flyvbjerg (2006) cites the examples of Michels's grassroots organisations and Whyte's Boston slum neighbourhoods as examples where cases of the 'least likely type' and the 'most likely type' served to respectively verify and falsify theories.

"A model example of a 'least likely' case is Robert Michels's (1962) classical study of oligarchy in organizations. By choosing a horizontally structured grassroots organization with strong democratic ideals--that is, a type of organization with an especially low probability of being oligarchical--Michels could test the universality of the oligarchy thesis; that is, 'If this organization is oligarchic, so are most others.' A corresponding model example of a 'most likely' case is W. F. Whyte's (1943) study of a Boston slum neighborhood, which according to existing theory should have exhibited social disorganization, but in fact showed quite the opposite (see also the articles on Whyte's study in *Journal of Contemporary Ethnography*, vol. 21, no. 1, 1992). Cases of the 'most likely' type are especially well suited to falsification of propositions, while 'least likely' cases are most appropriate to tests of verification. It should be remarked that a most likely case for one proposition is the least likely for its negation. (Flyvbjerg 2006: 15)"

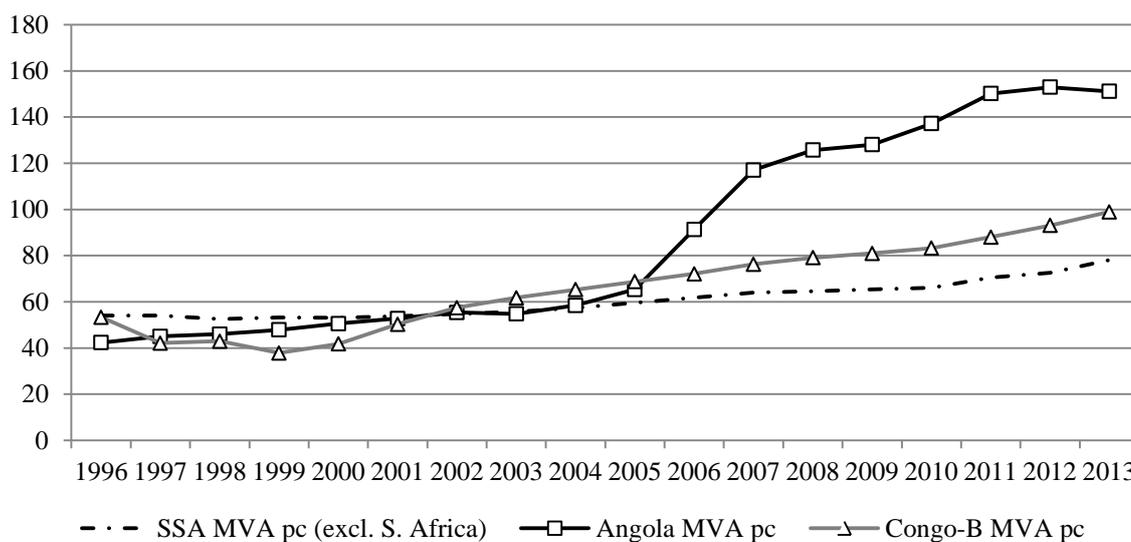
Alternatively, choosing a critical case can advance theory building by means of revealing different sets of causal relations at play. In other words, the theoretical relevance of a case study is not limited to ability to (dis)prove theoretical propositions but can also lie in its ability to reveal wider causal relationships (Flyvbjerg 2006). The case for further detailed investigation in chapter 4 is chosen with the latter rationale in mind, i.e. investigating the constraints to, the conditions under which and the factors despite which external demand stimuli, whether transmitted through Chinese export demand or construction and investment activities, can translate into domestic consumer and investment demand.

Based on the cluster analysis Angola was identified as a critical case – a critical case because it falls into the group of cases in which China related demand side effects on structural change are most likely to occur and because within that group of cases has realised the highest rate of manufacturing output growth since the turn of the century. Independent of its relations with China the Angolan economy exhibits a number of other structural features relevant for a larger set of SSA countries, namely it has a comparatively large domestic market and is a resource rich country, whose ability to undertake successful industrial policy has been questioned based on resource curse arguments. The Angolan case might therefore reveal something about the *combination* of causal relations at play: In combination with which other factors does Chinese demand and Chinese induced demand result in manufacturing output growth and despite which factors does it occur.

Looking at growth rates, Angola has the fastest growing manufacturing sector in sub-Saharan Africa (see **Graph 23**, pg. 180), as exemplified by the following graph showing the percentage change of real manufacturing value added in 2012 compared to its 1996-2000 average, showing that Angola's manufacturing output per capita has more than trebled since the early 2000s.

Graph 31 shows that Angola's manufacturing output per capita started growing from the mid-1990s onwards, growth rates rapidly accelerated since 2004. In 2007, Angola overtook the sub-Saharan African average. Interestingly, patterns of manufacturing output growth followed very similar paths in Angola and Congo-Brazzaville, which have also been identified as subject to very similar vectors of Chinese influence. Yet, while in both countries the manufacturing sector is growing, Angola's manufacturing output grew at much faster rates from 2005 onwards reaching \$ 151 in 2013 compared to \$ 99 in Congo-Brazzaville and \$ 78 for SSA on average. All this evidence points to a significant change in around the mid-2000s, which needs to be explained.

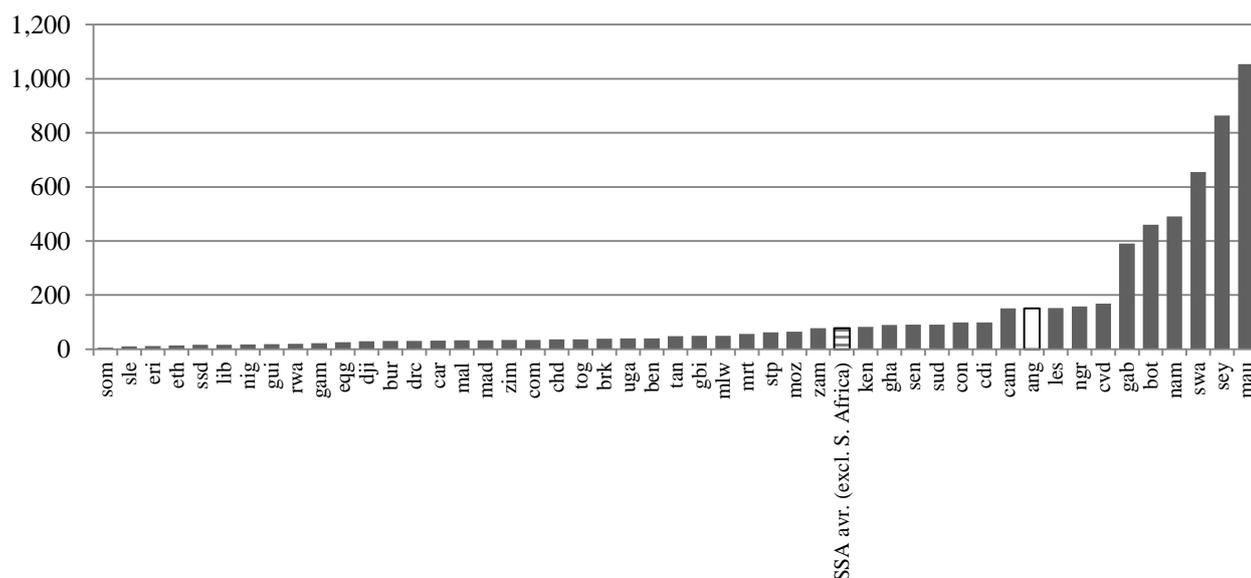
Graph 31. Manufacturing Value Added per Capita 1996-2013 (constant 2005 USD)



Calculations based on: UN National Accounts

Looking at the levels, we see that while Angola has the most dynamic manufacturing sector in sub-Saharan Africa and now produces more than the SSA average, the Angolan manufacturing sector still lags significantly behind the SSA leaders, namely Mauritius (\$1,054), Seychelles (\$863), Swaziland (\$655), Namibia (\$491), Botswana (\$ 460) and Gabon (\$390) (**Graph 32**).

Graph 32. Manufacturing Value Added per capita in 2013 (constant 2005 USD)



CONCLUSIONS

This chapter has explored methodological issues that need to be addressed to exhaust the boundaries of case study research. The *first* one concerns conceptual thinking about what is to be explained and the factors explaining it. This issue had been addressed already in chapter 1 advancing the argument that explaining manufacturing sector performance in SSA requires investigating the conditions under which demand for manufacturing output becomes expansionary.

Secondly, in order to facilitate empirical generalisation, the studied case has to be situated relative to other cases or groups thereof. This requires reaching conclusions about the distribution and co-occurrence of particular features within that population of cases. For this purpose, this chapter has drawn on cluster analysis techniques to find groups in data with a maximum similarity within groups and a maximum dissimilarity across groups along relevant vectors of economic ties with China. SSA countries have been clustered into six groups with distinct patterns of China-specific demand side interactions for the following aspects of economic engagement with China: exports to China as share of GDP, Chinese contracted projects relative to GDP and consumer goods imports from China relative to GDP. China-related demand-side effects would most likely be strongest in countries experiencing a strong increase in export demand from China and in which both construction and investment activities of Chinese firms are substantial. While differences in manufacturing sector performance are observable across groups with different China-related effects, we also observe that countries with more or less similar

and indeed very large China-related demand side effects have very different outcomes. For instance, countries with high Chinese export demand and high Chinese project presence have had, on average, higher manufacturing output growth than other groups. However, within this group, Angola performed better, from a similar starting point in terms of manufacturing per head, than for example, Congo-Brazzaville.

Last but not least, which case is chosen has itself a bearing on the kind of generalisations that can be drawn from it. Based on the cluster analysis Angola was identified as a critical case for further detailed investigation. The case is chosen with the rationale in mind of investigating the constraints to, the conditions under which and the factors despite which external demand stimuli, whether transmitted through Chinese export demand or construction/ investment activities, can translate into domestic consumer and investment demand in manufacturing activities. Angola is a critical case in this respect because it falls into the group of cases in which China related demand-side effects on structural change are most likely to occur and because within that group of cases has realized the highest rate of manufacturing output growth since the turn of the century.

CHAPTER 4. INDUSTRIALISATION IN TIMES OF CHINA: DOMESTIC MARKET FORMATION IN ANGOLA BETWEEN GLOBAL ECONOMIC CYCLES AND CHANGING ELITE INTERESTS

“Whether Chinese engagement leads to economic growth or deindustrialisation may depend not as much on the Chinese model as on internal dynamics within particular African states.” (Ovadia 2013b: 247)

INTRODUCTION

Chapter 1 has argued that studying the constraints and facilitators of domestic market formation has to be integral part in the study of late-industrialisation, in particular when considering the reconfigurations of world demand- and price structures linked to China’s systemic impact on the world economy as well as the restructuring of advanced economies towards asset-driven wealth accumulation. This chapter sets out to investigate the extent to which economic ties with China have influenced the evolutions of domestic consumer and investment demand in Angola with specific focus on the manufacturing sector.

Section 1 traces the main patterns of investment and output in the Angolan manufacturing sector since 2002 showing that since 2002, the Angolan economy as a whole and manufacturing in particular attracted an increasing volume of foreign and domestic investment. Over the period 2002 to 2012, average annual growth rates of the construction and the manufacturing sector were much higher than those of the mining sector (17% and 14% against 9% - albeit from a lower base than the mining sector) and available data point to increases in manufacturing productivity. However, manufacturing activities in Angola are not very labour absorbing and manufacturing sector employment accounts for only about 1.7% of total employment in 2015 on par with the enclave oil sector. Investment and output patterns in the manufacturing sector were themselves the outcome of a broader set of industrial policy measures. Angola’s industrialisation programme comprehends the ultimate aim of manufacturing sector development as serving domestic consumption needs.

Section 2 traces the political economy dynamics behind these active efforts in pursuit of manufacturing sector development. Post-independence in 1975, the Angolan economy collapsed due to a combination of factors that include the exodus of Portuguese settlers, unfavourable commodity price movements and the ongoing civil war that lasted from

1975 to 2002 (Bhagavan 1980). Only the oil sector, which had been dominated by non-Portuguese large-scale capital, survived the post-independence economic collapse and flourished as major foreign producers continued to do business in Angola (Soares de Oliveira 2007b). Attempts to re-establish domestic capacity in the formerly Portuguese dominated non-oil sector at first failed and were later abandoned altogether (Bhagavan 1985). With an increasingly weak production base, distributional conflicts intensified and rents generated by the oil sector primarily became a means to consolidate power around the ruling party (MPLA, *Movimento Popular de Libertação de Angola*). Since the turn of the century, two elements changed this situation. *Firstly*, with the end of the civil war and the elimination of UNITA (*União Nacional para a Independência Total de Angola*) military resistance to the hegemony of the ruling MPLA, the ruling elites around president dos Santos were looking for new ways to consolidate their political and economic domination. While the MPLA continues to resort to coercion and exclusion, there are also efforts to make allies and enlarge their basis of support among former opponents and the broader masses, among other through large-scale infrastructure reconstruction to demonstrate the government's ability to deliver basic services. *Secondly*, these reconfigurations of the political economy coincided with major reconfigurations of world demand and price structures, namely the oil-price boom and China's increased demand for Angolan oil, which resolved the chronic balance of payments problems that made accumulation outside the oil sector unprofitable in the post-independence period.

To uncover the demand-side dynamics behind Angola's nascent industrialisation process, section 3 combines an estimation of Angola's balance of payments (BoP) consistent growth potential with a qualitative analysis of how this exogenous increase in export earnings influenced domestic investment in Angola's main manufacturing industries, i.e. construction materials and beverages, to illustrate how markets form as a consequence of and precondition for growth of exports. Up until the drop in oil prices in 2015, growing Chinese demand for oil relaxed Angola's BoP-consistent growth rate substantially. This increase in export earnings allowed for higher volumes of imports of capital and intermediate goods, triggered expectations about rising consumer demand, especially in the beverage sector, and sustained high volumes of government spending on infrastructure, which, in turn, created a profitable market for building materials.

While external demand growth provided a crucial stimulus to manufacturing activities in Angola, there are various forces located at the domestic political economy level which slow down the growth of domestic investment and consumer demand growth. These

became particularly apparent when external demand growth slowed down in 2015, leading to reductions in government spending on infrastructure and straining domestic purchasing power given inflationary pressures from rising import prices stemming from the devaluation of the Angolan exchange rate. Inequality of income and wealth, structurally engrained in the late colonial period, has amplified in the post-independence period and power has been increasingly centralised around the president. Within this setting, all new business opportunities are tightly controlled by concentric circles around the presidency. Investments in the cement sector are controlled by circles close to the president's family and political allies and even MNC's investments in the beverage sector rely on close ties with the MPLA. This makes material success dependent on support for the ruling party and the president and allows the incumbent elites a close grip on the gains resulting from investment. These political economy dynamics have also influenced the evolutions of investment and consumer demand. First, Angolan capital being highly concentrated, investment demand induced by the growth of construction remained to a large extent limited to the capital-intensive cement sector. This limited the actualisation of a much wider set of potential linkages between construction and manufacturing. Second, while Angolan elite interests transitioned towards capitalist accumulation outside the oil sector, dynamic growth of such accumulation depends on broad demand base for consumer goods and, by extension, a more equal distribution of income and wealth. Yet, a more equal income distribution, despite figuring nominally in the government's diversification programme, is and was not systematically pursued by those who benefitted from the diversification process in the first instance.

This is not to diminish the explanatory power of factors impeding the growth of productivity but serves to highlight the importance of dissecting the political economy of demand growth along-side supply-side dynamics.

1. STYLISED PATTERNS OF MANUFACTURING OUTPUT GROWTH AND GOVERNMENT EFFORTS TO SUPPORT THE MANUFACTURING SECTOR

1.1. EMERGING MANUFACTURING SECTOR ACTIVITIES AFTER THE END OF THE CIVIL WAR

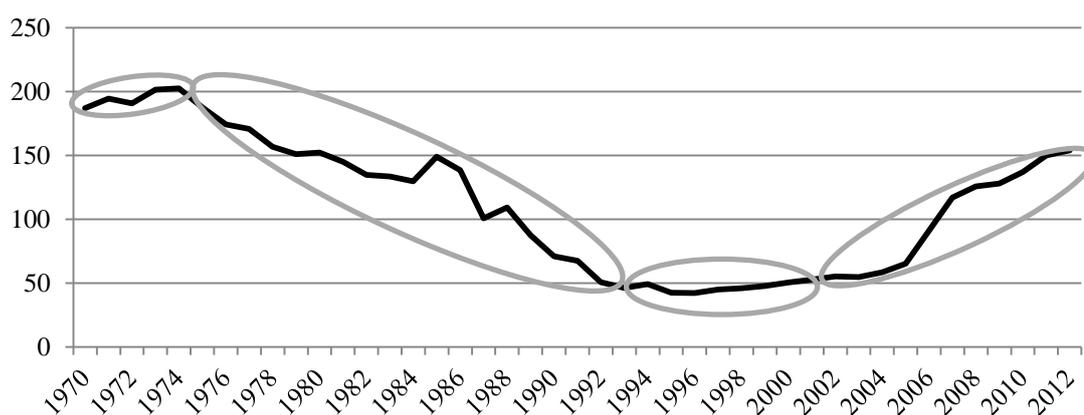
1.1.1 Patterns of manufacturing output growth

Chapter 3 had shown that the Angolan economy realised the fastest rates of manufacturing sector growth in SSA when comparing 2013 manufacturing output levels

per head to their levels at the beginning of the century (measured as average over the period 1996-2000). In absolute terms, Angola ranks 10th out of 48 SSA countries in the sample producing \$151 of manufacturing output per head in 2013. This places Angola above the SSA average (\$78) but nonetheless at considerable distance to the leading SSA countries Mauritius (\$1054) and Seychelles (\$863) or even SSA countries in the third quintile globally like Gabon (\$390) and Botswana (\$460).

Comparing Angolan manufacturing sector development relative to its own past performance (**Graph 33**), we observe that after a period of near total collapse following independence in 1975 and a period of stagnation over the 1990s, manufacturing sector output levels started to recover around the turn of the century and are now on their way to reach pre-independence output levels in per capita terms. Yet, while growing, the manufacturing sector's share of total real output remains small with manufacturing accounting for 5.9% of real GDP in 2013, compared to 3.7% of GDP in 2000 (calculations based on UN COMTRADE).

Graph 33. Manufacturing Value Added Per Capita (2005 constant USD)



Source: UN National Accounts Database

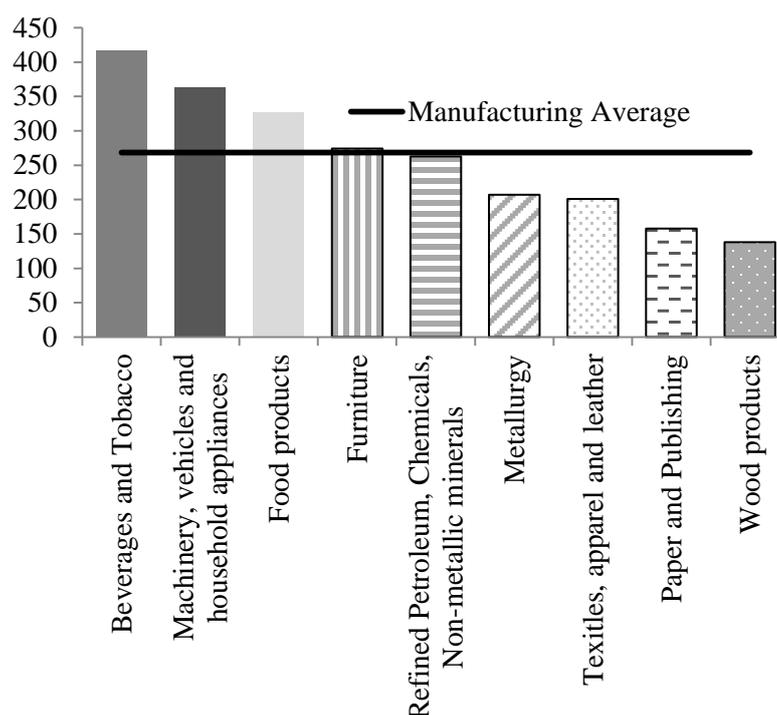
This might not seem much, but needs to be seen in the context of a strong expansion of GDP driven by mining output. In fact, since the end of the civil war in 2002 the manufacturing sector systematically realised higher growth rates than the booming mining sector. Since the end of the civil war, average growth rates of the manufacturing and construction sectors, realising 13.5% and 15.6% average annual growth rates respectively, exceeded those of the mining sector, growing at an average annual rate of 9% between 2002 and 2013 (**Table 16**). Thus, even though changes in the composition of output appear to be slow, this is explained more by the immense size of the mining sector than a lack of dynamism in manufacturing or other real economic production.

Period	Agriculture	Manufacturing	Construction	Non-Oil	Mining	Services	GDP
1970-1975	2.38%	2.35%	2.36%	2.37%	2.44%	2.36%	2.38%
1975-1991	-0.51%	-3.47%	-3.60%	-1.84%	3.31%	0.19%	0.84%
1991-2002	-1.05%	0.98%	3.54%	0.29%	3.39%	-0.64%	1.59%
2002-2013	10.5%	13.5%	15.6%	12.6%	8.7%	10.97%	10.4%

Source: UN National Accounts Main Aggregates Database

Angolan output and investment data provide further insights into the nature of manufacturing production in Angola. Overall, manufacturing output more than doubled when compared to 2002 output levels. Among the fastest growing sectors we find consumer goods industries (beverages & tobacco, food products, vehicles & household appliances as well as furniture) and intermediate goods (chemicals & non-metallic minerals) (*Graph 34*).

Graph 34: Manufacturing Production Index Quarter 4 2013 by Sub-Sector (2002=100)



Source: Instituto Nacional de Estatística - Índice de Produção Industrial

Table 17 and *Table 18* present data on labour productivity and employment by sector derived from UCAN (2014) and UCAN (2016). Note that data on productivity and employment are subject to huge margins of error stemming from the very definition of the concepts. Attaching a monetary value to increases in output per worker or time is difficult when prices can evolve independently of increases in the marginal product (see

Cambridge capital controversies explored in chapter 1, section 1.1.2, pg. 38ff. Unemployment figures are very susceptible to the definition of labour force participation and what counts as employment as such. These issues are further compounded in the developing country context by the limited capacity to survey firms across the entire economy and consistently over various years. The data nonetheless serve to get a sense of proportions and further complement the picture on patterns of manufacturing sector development in Angola.

Table 17 replicates data presented in UCAN (2014) on labour productivity in different sectors of the Angolan economy. According to these figures, labour productivity in manufacturing more than quadrupled since 2005, realising the second highest rate of increase after the agricultural sector whose labour productivity increased by a factor of almost seven. Even in absolute terms, value added per worker in 2012 is second only to the oil sector.

Table 17. Labour productivity (\$/worker)								
	2005	2006	2007	2008	2009	2010	2011	2012
Agricult.	549	1,454	875	2,448	2,382	2,912	3,368	3,729
Manufact	38,141	61,029	78,770	97,089	89,986	103,113	115,759	173,130
Diamonds	22,229	31,873	24,788	21,268	13,748	32,604	37,470	47,262
Construc.	22,639	7,628	13,701	18,211	16,547	20,091	23,470	23,760
Services	29,502	5,630	36,370	45,001	30,164	35,205	38,678	37,419
Others	10,614	9,555	12,245	14,242	12,806	16,796	16,285	18,005
Media	5,723	10,083	9,315	22,016	17,841	20,012	24,188	24,956
Oil	1,384,151	1,736,787	2,581,580	3,699,686	3,035,268	2,561,735	3,127,834	3,253,815
<i>Source:</i> UCAN (2014); based on CEIC ficheiro Estudos sobre Produtividade e Emprego, com base nos Relatórios do MAPTSS.								

In terms of employment dynamics, Angola's formal sector unemployment rate fell from 40.9% in 2000 to 21.6% in 2013 according to data cited in UCAN (2016). According to figures presented in UCAN (2016), employment increased from a total of 4 million in 2002 to 6.3 million in 2015, which corresponds to an increase of 58% (**Table 18**). This is only slightly above the growth of total and working age population. Angola's population has increased from 16.1 million in 2002 to around 25 million in 2015, i.e. an increase of 55%. Working age population aged between 15 and 65 has grown approximately around 50% over that period (calculations based on World Bank WDI).

It should be noted, that construction sector employment has more than doubled since 2002, employing 6.8% of the Angolan workforce by 2015. The growth of Angolan construction activities is closely linked to Chinese overseas contracted projects (see section 3.2.1). Together with the growth in construction sector employment, this supports

the labour absorbing effects of Chinese construction activities discussed in chapter 2. By contrast, while manufacturing employment has nearly doubled, it still constitutes merely 1.6% of total employment in 2015, roughly on par with the employment generated by the oil industry that same year. This suggests that despite growing dynamically in terms of output compared to other SSA countries and in terms of productivity, the Angolan manufacturing sector is not particularly labour absorbing. UCAN (2016) figures suggest that the manufacturing sector was employing 100,810 workers in 2015. To put these figures into perspective, figures presented in Bhagavan (1980) suggest that the manufacturing workforce in 1973 counted 125,370 workers, increasing from 15,650 in 1961. That is to say that manufacturing output growth following the end of the civil war was less labour absorbing than in the late colonial period.

Table 18. Angola, Employment by Sector of Activity 2002-2015					
	2002	2006	2010	2014	2015
Agriculture and Forestry	2,231,434	2,510,897	2,621,107	2,932,763	2,959,269
Fishing	26,868	30,233	33,447	43,234	44,761
Oil and Gas	14,223	15,394	64,559	92,241	92,241
Diamonds and others	10,577	36,157	22,904	41,079	41,983
Manufacturing	56,255	56,017	59,419	80,135	100,810
Electricity	2,389	8,852	11,646	103,737	153,801
Construction	169,722	271,086	320,191	424,197	427,941
Trade	796,139	909,051	949,645	1,170,836	1,218,598
Transport and Storage	68,329	76,886	81,377	157,715	228,174
Post and Telecommunications	2,476	4,339	4,574	n.a.	n.a.
Banks and Insurance	5,072	7,074	14,138	n.a.	n.a.
Public Service	326,709	367,626	420,832	438,137	438,137
Real estate services	334	356	424	0	0
Other services	332,760	410,455	438,841	653,462	693,784
Total	4,043,287	4,704,423	5,043,104	6,137,536	6,399,499
<i>Source:</i> UCAN (2016); based on CEIC ficheiro Estudos sobre Produtividade e Emprego com base nas Contas Nacionais e documentos oficiais diversos					

1.1.2. Patterns of domestic and foreign investment

Data sources, limitations and methodological issues

Data on FDI in Angola can be obtained based on outstocks/ -flows reported by the major investors in Angola and based on the inflows reported by the Angolan central bank (BNA). Discrepancies between the two data sources reflect wider methodological problems in the collection of FDI data (see chapter 2).

In addition to the official (overall) FDI data, this section also explores another data source, which has less complete coverage but provides more detailed information on investments made in Angola: the former national investment authority ANIP (*Agência Nacional do Investimento Privado*)³⁷ provided records on investment projects registered with ANIP by sector and nationality of the investor for the period 2003 to 2013. ANIP data exclude most oil investment, since these are made under the terms of the production sharing agreements and are for the most part not registered with ANIP. For the year 2007 ANIP only recorded investments exceeding \$50 million.

The obvious limitation to the ANIP data is that it does not provide information on FDI as such but on approved domestic and foreign investment projects registered with ANIP to obtain investment incentive payments. However, bearing in mind this limitation, ANIP is the most detailed source of information regarding the sectoral and geographical composition of non-mining sector investment projects. To facilitate the analysis of the ANIP data base, investments have been grouped geographically based on the income level of the investor. For the purposes of this analysis, this has been based on the definitions used by the World Bank, i.e. high income countries (HIC), BRICS, low income and upper middle income countries (LICs and UMIs). In addition, following the definition of Hines and Rice (1994), a category for tax havens was created for all income levels. Sectorally, ANIP data have been grouped following ISIC rev.3 1 digit aggregation (A-Q). For the years 2011 and 2012 ANIP made a four digit disaggregation of investments available. For manufacturing sector investments, these have been regrouped into broad categories by approximation of economic end-use following the methodology used in chapter 2: “Food and Beverages”, “Final Consumption Goods”, “Intermediate Inputs” and “Machinery” (see chapter 2, section 1.2.1, pp. 128ff, *Annex 1*, pg. 328).

Foreign and domestic investment trends

Table 19 shows Angolan FDI stocks derived from outstocks data reported by the partner countries and instocks reported by the Angolan central bank (BNA). What stands out is the huge discrepancy of the totals derived from outstocks reported by the sub-sample of partners and the total instocks derived from the central bank data. Since 2010, the BNA reported huge negative inflows (divestments), which cumulated to negative stocks in 2013. This is inconsistent with outstocks reported by all the major investors, which sum up to \$ 25 billion in 2012. The share of Chinese FDI stocks is therefore practically

³⁷ replaced in 2015 by the Agência para a Promoção do Investimento e Exportações de Angola (APIEX)

impossible to establish given the uncertain denominator. It is difficult to ascertain what drives the discrepancy: outstocks derived from total FDI stocks, though arguably of better quality than instock data, only cover a subsample of foreign investors. By contrast, total stocks reported by the BNA are likely to understate total FDI stocks given the lack of information on reinvested earnings. What we can observe, however, is that Chinese FDI stocks grow more quickly than those reported by the other major investors, reaching \$1.2 billion in 2012, i.e. similar levels reported by the US in 2012. Chinese FDI outstocks in Angola are, however, substantially below outstocks reported by France (\$9 billion), Norway (\$7.3 billion) and Portugal (\$5.2 billion) (*Table 19*).

	2006	2007	2008	2009	2010	2011	2012
Total based on instocks reported by BNA	16,299	15,405	17,084	19,290	16,063	13,039	6,141
Total based on reported outstocks	8,842	11,848	13,691	15,686	21,233	25,102	25,747
France	1,379	5,922	4,686	5,937	7,296	7,961	9,067
Norway	5,091	2,999	2,919	4,145	5,030	6,349	7,306
Portugal	709	977	2,945	2,452	3,461	4,285	5,220
China	37	78	69	196	352	401	1,245
United States	1,540	1,633	2,645	2,540	4,460	5,473	1,245
Brazil	22	73	107	124	67	125	1,175
Other***	63	165	320	293	567	508	489
China % of BNA reported inflows	0.2%	0.5%	0.4%	1.0%	2.2%	3.1%	20.3%
China % of total reported outstocks	0.4%	0.7%	0.5%	1.2%	1.7%	1.6%	4.8%
***Denmark, Netherlands, Belgium, Italy, South Korea, South Africa							
Data Source: UNCTAD bilateral FDI statistics for outstocks; UNCTAD FDI statistics for instocks							

ANIP data illustrate some broad trends in terms of geographical origin of investment projects outside the oil sector. *Firstly*, the volume of reported investment projects has shown an upwards trend. Foreign investment projects increased from \$268 million in 2003 to \$1.5 billion in 2013 (in constant 2005 prices), though with large fluctuations (*Graph 35*) – marked in particular, by the global financial crisis and a single large-scale investment in 2005.³⁸

Secondly, and in line with the information derived from outstock data, investment projects were dominated by investments from high income countries accounting for more than 45% of total foreign investment projects in most years, with the important exception of 2005. In that year, one single investment of more than \$2 billion in the construction

³⁸ In 2005 an investment project was registered from the ‘Luanda Waterfront Corporation’ with headquarters in Georgetown, Cayman Islands. This investment project, approved on August 31st 2005 by the Council of Ministers involved the rehabilitation and cleaning of the Luanda Bay in exchange for publicly owned land to be used for private real estate development.

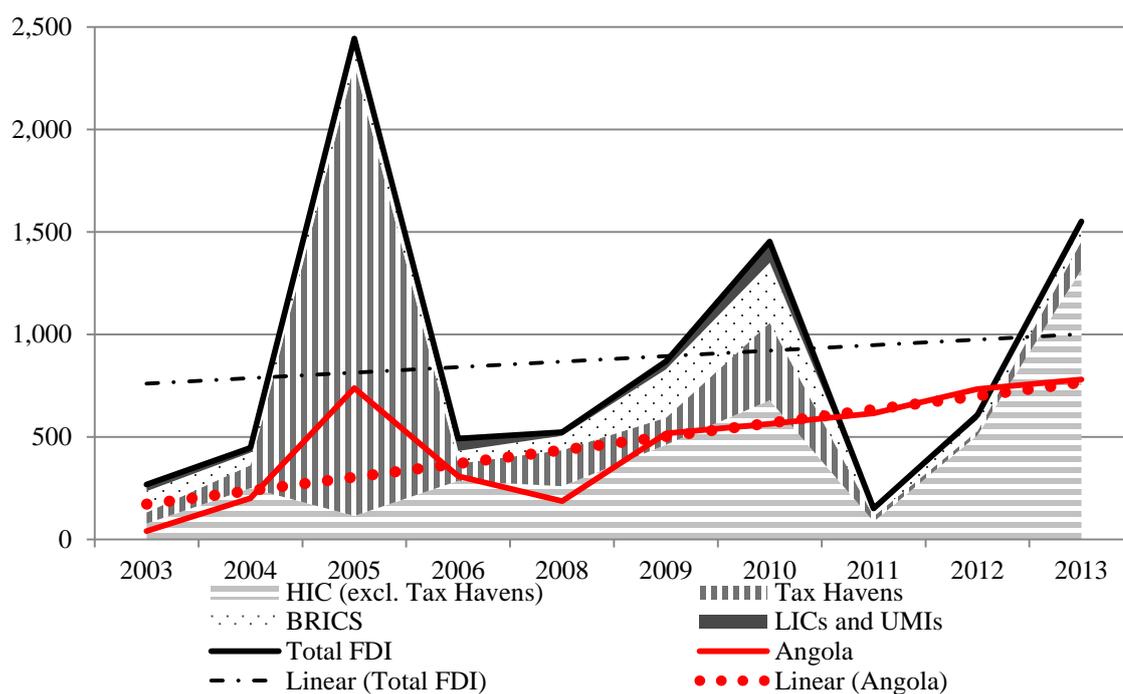
sector, coming from the Cayman Islands a tax haven, made up 87% of the total investment volume.³⁹ Investment from the BRICS countries picked up in the mid-2000s accounting for more than 26% of total reported foreign investment projects in 2006. They then slowed down again in relative terms accounting for only 4% of total foreign investment projects in 2013.

Thirdly, Angolan domestic investment projects increased from \$41 million in 2003 to \$781 million in 2013. On the whole, they appear to be less volatile and – as indicated by the trend lines of domestic and foreign investment projects in **Graph 35** – they also show a much stronger upwards trend than investment projects from foreign sources, even though they remain below foreign investment projects in absolute terms.

Finally, manufacturing sector investment projects are the fastest growing component of approved foreign and domestic investment projects, showing a stronger upwards trend than total foreign and domestic investment projects. Manufacturing sector investment projects increased from merely \$87million in 2003 to \$686 million in 2012, with important slumps occurring only in 2011 (\$216 million) and in 2013 (\$313 million). Adding up to a cumulative \$3.5 billion over the period 2003 to 2013, manufacturing sector investment projects are the second largest sector of investment after construction (\$3.9 billion) in absolute terms.

³⁹ The Luanda Bay rehabilitation carried out by the Luanda Waterfront Corporation (see above).

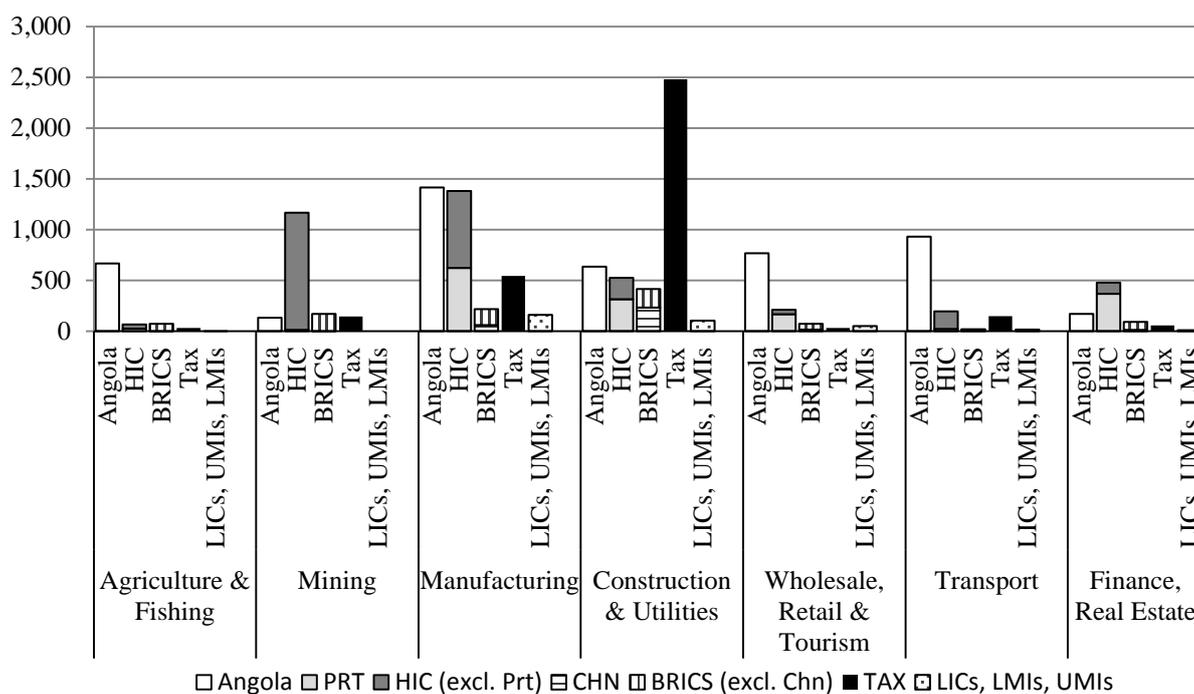
Graph 35. Angola – FDI by country and Domestic Investment 2003 – 2013 (constant 2005 USD)



Source: Agência Nacional para o Investimento Privado

Graph 36 shows that Angolan nationals contributed the largest share of manufacturing investment. This is reflective of the fact that Angolan domestic investment projects are concentrated in the real and service economy, with the highest share of cumulative investment going to the manufacturing sector (30% of total Angolan investment between 2003-2013), followed by transport (20%), wholesale and retail trade (16%) and agriculture and fishing (14%). Extractive industries and real estate and financial activities account for only 3% and 4% of Angolan investment projects respectively. Angolan domestic investment projects also accounts for 38% of total manufacturing sector investment projects in the period 2003-2013.

Graph 36. Angola – Investment by Sector and Country (2003-2013, constant 2005 USD)



Source: Agência Nacional para o Investimento Privado

After Angolan domestic investment, the second largest share of manufacturing sector investment projects comes from high income countries (37% of total manufacturing investment projects, nearly half of them from Portugal alone). Investment projects from high income countries dominate particularly the extractive industries (72% of total investments in that sector)⁴⁰ as well as financial services and real estate activities (59% of total investments in that sector). Investments from tax havens are concentrated in manufacturing and construction, with 15% and 69% respectively – though the large share of the construction sector is mainly driven by the \$2 billion investment in the Luanda Bay rehabilitation undertaken in 2005 by the Luanda Waterfront Corporation with headquarters in the Cayman Islands. Investments from BRICS are comparatively small but more geared towards manufacturing and construction, accounting for 22% and 33% of total BRICS investments respectively (*Graph 36*).

Looking specifically into sectoral composition of Chinese investment projects registered with ANIP (*Table 20*), we see that absolute volumes of investment are very small. Even FDI in the construction sector, which accounts for 81% of total Chinese FDI over the period 2003 to 2013 is smaller in absolute terms than Angolan domestic investment projects in that sector. Chinese manufacturing sector investment projects are the second largest component of Chinese investment projects, but with a cumulative value of

⁴⁰ Note, this only refers to a sub-sample of mining investments, the majority of which are not registered with ANIP.

55million over the period 2003 to 2013, these fade compared to domestic and Portuguese investment volumes. Note that by 2013 the cumulative value of Chinese investment projects registered with ANIP amounts to \$554 million, which is less than half the Chinese reported FDI outstocks standing at \$1.2 billion in 2012. Part of this discrepancy is explained by the deflation applied here to ANIP data, part of this stems from Chinese investments not registered with ANIP, in particular investments by the China International Fund (CIF) ⁴¹ as well as the omission of reinvested earnings from ANIP data.

Table 20. Chinese investments in Angola by sector and year (constant 2005 USD, million)

Sector	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total	
Agriculture and Fish.	0	0	1	0	0	0	0	0	0	5	0	6	1.2%
Mining	0	0	0	0	0	0	0	2	0	0	0	2	0.4%
Manufacturing	9	0	9	2	0	2	8	6	9	1	9	55	9.9%
Construction	9	0	5	8	0	42	221	81	19	28	38	450	81.2%
Wholesale, Retail, Tourism	0	0	0	0	0	0	0	5	4	0	6	16	2.8%
Transport	0	0	5	2	0	0	1	0	0	1	0	9	1.7%
Finance, Real Estate	0	0	0	0	0	1	1	1	3	3	4	13	2.3%
Public Services	0	0	0	0	0	0	0	0	0	0	3	3	0.5%
Total	18	0	20	12	0	45	232	95	35	37	59	554	100%

Agência Nacional para o Investimento Privado

For the years 2011 and 2012, ANIP provides a sub-sectoral breakdown of investment following the ISIC rev. 3 classification at the 4 digit level, which shows that the majority of manufacturing sector investment projects have been registered for the production of intermediate inputs, followed by food and beverage as well as machinery production. The majority of investment projects in the production of intermediate inputs were carried out by Angolan nationals. Investment projects from HICs are concentrated in food and beverage production and make up for the second largest share of total investment registered investment projects, despite the overall depressed levels of Portuguese investments over these two years (*Table 21*).

⁴¹ To the extent that CIF investments appear in ANIP data, they are classified as coming through the British Virgin Island and are thus classified as investments coming from tax havens here.

Table 21. Manufacturing Sector Investments 2011 and 2012 by Broad Category
(constant 2005 USD, thousands)

Broad category	HIC (excl. PRT)					LICs, LMIs, UMIs	Total
	ANG	PRT	CHN	TAX			
Food + Beverages	34,201	157,442	3,230	259	2,573	2,814	200,520
Intermediate Inputs	612,318	897	5,889	551	2,913	9,369	631,937
Machinery	29,481	2,225	173	5,766	0	0	37,644
Final consumption	3,963	144	288	3,270	17,551	0	25,217
Medical equipment	0	2,452	0	0	0	0	2,452
Recycling	0	0	0	0	2,305	2,205	4,509
Total	679,963	163,160	9,580	9,846	25,342	14,387	902,279

Source: Agência Nacional para o Investimento Privado
Note: The shaded areas mark the two largest investors for each manufacturing sub-sector.

Taken together, this indicates that while the Angolan manufacturing sector remains small relative to both Angolan GDP and to a small number of leading SSA economies, its dynamic patterns of increase merit further investigation. Manufacturing attracted an increasing number of investment projects, though not primarily from Chinese sources. Among the most important manufacturing sectors in terms of output growth and registered investment projects, we find food and beverages production as well as intermediate inputs.

1.2. INDUSTRIAL POLICY IN ANGOLA

Ovadia (2016) argues that, following the end of the civil war in 2002, Angolan elites were changing their accumulation strategies, (slowly) transitioning from the simple capture of oil rents towards capitalist accumulation outside of the oil sector. This transition finds its expression in government efforts to promote the manufacturing sector going back to the mid-2000s. The Medium-Term Industrial Restructuring Plan 2009-2013 (MIND 2007) and the National Industrialization Programme 2013-2017 outline the government's broad strategy. Priority sectors include agro-processing, textiles and clothing, footwear, wood-processing, furniture, paper, chemicals and pharmaceuticals, minerals and non-metallic construction materials, basic metals and metal products (MIND 2014a: 5).

Importantly, manufacturing production is meant to serve domestic consumption needs in the first instance. Insufficient exports are seen as a constraint to that because they limit the capacity to import machinery and intermediate inputs necessary to sustain production. Export promoting and import-substituting measures exist side-by-side, the aim being to increase and diversify the export bill in order to allow for further reductions of the import

bill (IFE 2012). The principal growth opportunities for the Angolan manufacturing sector are seen in:

“ (...) the creation of industries capable of meeting the needs of the domestic population and the economy, with the ultimate goal of decreasing imports and increasing exports.” (IFE 2012: 60, translation by the author)

The centrality of demand for output is recognised implicitly and explicitly in the government’s planning and strategy documents in various forms. *Firstly*, MIND (2007) explicitly recognises the link between employment generation, income distribution and the growth of purchasing power necessary to sustain the growth of domestic markets:

“(…) Particular attention should be given to those industrial activities which are labour intensive and make use of natural resources, in view of creating a sustained industrial base, widespread increase of purchasing power, better income distribution and consequent enlargement of the domestic market.” (MIND 2007: 26, translation by the author)

Note that the incumbent MPLA ran the 2012 elections under the slogan “*crescer mais e distribuir melhor*” (Grow more and distribute better).

Secondly, MIND (2007) identifies as priority areas for manufacturing production in Angola those products that have the potential for mass consumption, create processing chains from existing raw materials, increasing returns to scale, and the potential to improve the balance of payments position, that is:

“(…) the group of manufacturing products, which, almost without exception, present cumulatively the following characteristics:

1. Mass- and widespread consumption
2. Existence of national raw materials for their processing;
3. Quality of installed and idle capacity, to make the realisation of economies of scale possible;
4. Strong impact on the country’s balance of payments.” (MIND 2007: 27, translation by the author)

Apart from the quality of installed capacity, all these considerations refer to demand-side conditions relevant for industrial output growth namely referring to final consumer demand base, chains of induced demand and external demand.

Thirdly, in practice, government procurement was used as a tool to ensure market outlets for newly established manufacturing firms. Factories producing in the Viana Special Economic Zone, for instance, initially sold largely to state agencies with a small amount of sales to construction companies and retailers (Ovadia 2017).

With the National Development Plan (*Plano Nacional de Desenvolvimento, PND*) covering the period 2013-2017 (MPDT 2012), the inter-sectorial focus of Angola’s economic diversification strategy finds its expression in development around priority clusters, which transcend the traditional sectorial division of agriculture, industry, mining and services. The PND is focussed on eight cross-sectoral production clusters, three of

which include manufacturing production: the agro-alimentary cluster, the housing cluster and the mining-industry cluster (see IFE 2012). This illustrates that the government understands the demand- and supply-linkages in the real economy holistically and not limited to individual subsectors.

The PND 2013-17 intends 390 public investment projects to facilitate structural transformation of the economy. These are spread across all provinces and executed in industrial development poles (*Pólos de Desenvolvimento Industrial*) and special economic zones (*Zona Económica Especial*) structured around priority clusters and other clusters (see *Figure 4*).

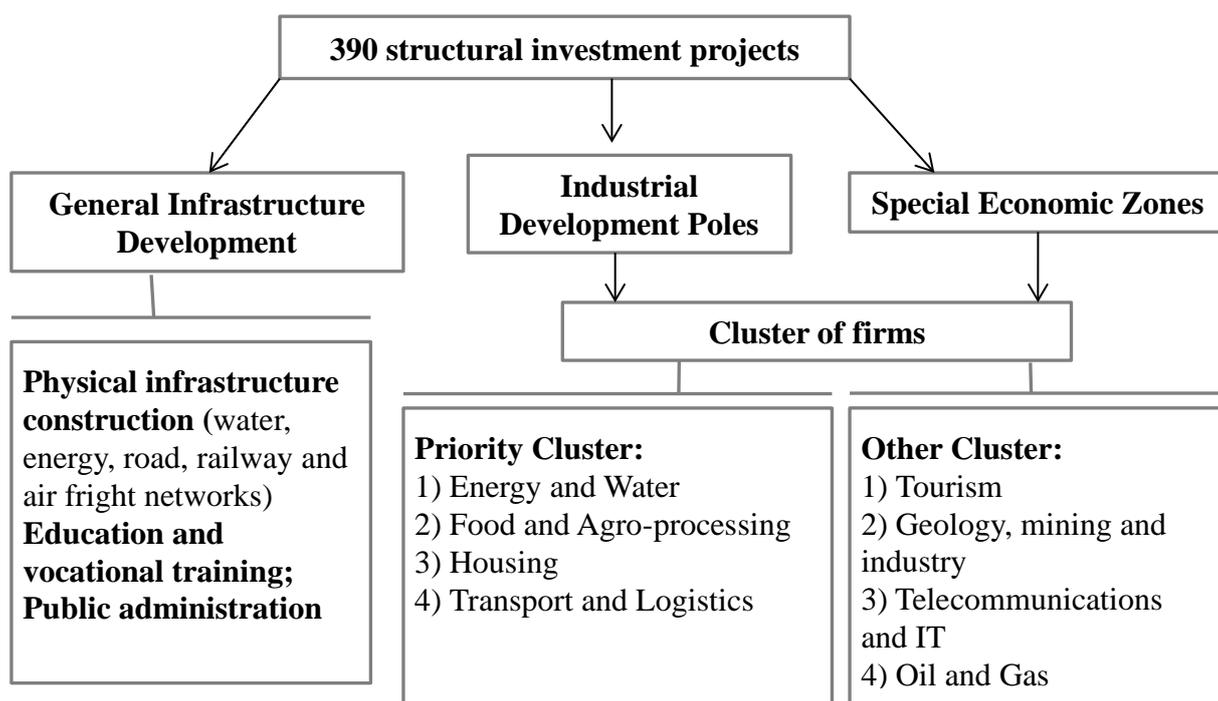


Figure 4. Angola structural diversification framework, based on PND 2013-17

To achieve these goals in practice, the government relies on a mix of general infrastructure development not specific to but necessary for manufacturing production to take place, infrastructure development specifically targeted at manufacturing firms, investment incentives, subsidized access to credit and technical support programmes for enterprise development as well as improvements in human capital resources.

To support infrastructure development specifically supporting manufacturing production, the PND 2013-17 planned the construction of special economic zones and industrial development poles. A total of seven special economic zones is in planning (in Viana, Futila, Soyo, Catumbela, Metala, Cassinga and Pungo e Dongo), of which the Viana SEZ is already operating (IFE 2012: 58). In addition to that, nine industrial development poles

in Soyo,⁴² Negage,⁴³ Viana,⁴⁴ Lucala,⁴⁵ Dondo,⁴⁶ Saurimo,⁴⁷ Catumbela,⁴⁸ Caala,⁴⁹ Kuito Kunje⁵⁰ are in planning and in parts executed (IFE 2012: 183ff). Four of these industrial development poles (Viana, Catumbela, Fútila and Caála) were in operation by 2017. Road and rail connections linking all planned the poles to the rest of the country exists and engineering feasibility studies for the development of internal infrastructure was executed for all but the Saurimo pole. Industrial development poles are reported to be under construction in Capanda and Lucala UCAN (2016) and additional poles are in planning or under discussion. The Viana industrial development pole hosts 500 firms, producing fibro-optical cables, paints, electrical material and metal structures (MIND 2014b). The sectoral focus of the other poles varies, but is generally in line with the priority areas for manufacturing sector development outlined in MIND (2007), prioritizing agro-alimentary production, production of construction materials, metallurgy and iron/ steel production, wood processing and furniture production as well as chemicals (IFE 2012).

Incentives for investment in the priority areas are operationalized through tax incentives and the tariff structure. The new private investment law (Law No. 14/15 of 11 August 2015, replacing law No. 20/11 of 20 May 2011) grants tax benefits on industrial, property transfer and investment income tax of 5-100 percent for a period of one to ten years, depending on the following criteria: location of investment (higher outside of Luanda, the provincial capitals of Benguela, Huíla and the municipality of Lobito), value of investment, Angolan shareholding, local value added, amount of employment created, degree of export activities and type of activity (all economic activities are eligible, but investments in agriculture and agro-processing qualify for additional incentives). The former national investment authority ANIP has been replaced by APIEX. In contrast to ANIP which operated under the president, APIEX is under the ministry of commerce. Decisions regarding incentive schemes for private investment have been transferred to the ministries responsible for the sector in which the investment takes place. Investments

⁴² Province: Zaire, focus: petro-chemicals, iron and steel, construction materials

⁴³ Province: Uige, focus: agro-alimentary industries, wood processing, construction materials

⁴⁴ Province: Luanda; focus: construction materials, plastics, metallurgy, iron and steel, furniture, textiles

⁴⁵ Province: Kwanza-Norte, focus: agro-alimentary industries, construction materials, footwear and textiles, furniture

⁴⁶ Province: Kwanza-Norte, focus: agro-alimentary, wood processing, textiles, plastics, construction materials

⁴⁷ Province: Lunda Sul, focus: in planning

⁴⁸ Province: Benguela, focus: construction materials, plastics, metallurgy, fertilizers, agro-alimentary and beverages

⁴⁹ Province: Huambo, focus: agro-alimentary + beverages, construction materials, furniture, wood processing

⁵⁰ Province: Bié, focus: agro-alimentary, textiles, chemicals, metallurgy

up to \$10 million are approved by the ‘Technical Unit for Private Investment’ of the relevant ministries, investments in excess of that by ‘Technical Unit of the Executive’, operating under the president.

The tariff schedule, updated in 2014, raised import duties on items that Angolan companies already produce (for example, 50 percent import duty on various beverages), while imports of machinery are exempt of import duties (Office of the United States Trade Representative 2014).

There are also measures to direct and improve access to credit through public guarantee funds and subsidised interest rates: for instance through the Angolan Development Bank (*Banco do Desenvolvimento de Angola*) and the Bank for Savings and Credit (*Banco de Poupança e Crédito*), which provides finance for micro, small and medium enterprises (MSMEs) (MIND 2007).

The programme “Angola Invests” (*Angola Investe*) subsidises interest rates, provides credit guarantees and direct support for entrepreneurs such as through the organisation of workshops on accounting and other management activities. Investment projects funded by commercial banks can receive investment guarantees with coverage of up to 70% capital through the Investment Guarantee Fund (*Fundo de Garantia de Crédito*, FGC) linked to the *Angola Investe* programme (IFE 2012).

The government-backed venture capital fund (*Fundo Activo de Capital de Risco Angolano*, FACRA), established in 2012 (presidential decree 108/12), provides venture capital of up to \$8 million for MSME’s who given their high debt-to-equity ratio do not qualify for further loans by commercial banks. 30 to 40% of FACRA funds are earmarked for manufacturing activities, in particular in the building materials, food processing and cosmetics sectors.⁵¹ The real estate and mining sector are excluded from the fund’s investment activities. In line with the government’s overall industrial strategy, encouraging domestic production of domestically consumed goods is part of FACRA’s investment guidelines:

“As per the investment guidelines, FACRA will focus on the production of goods and services in Angola, in particular those companies in sectors where imports can be substituted by local joint ventures with Angolan entrepreneurs for the production of goods and services in Angola.” (FACRA 2017)

A new fund with an estimated public capital of \$ 1.5 billion for large businesses – *Fundo de Investimento para as Grandes Empresas Angolanas (FIGEA)* –is in planning.

⁵¹ <http://www.facra-angola.com/priority-sector/>

Sonangol Industrial Investments (Siind), a subsidiary of Angola's national oil company Sonangol, directly invests in industrial production units supplying components for the oil industry (Ovadia 2017).

Technical support for enterprises operating in the targeted clusters is operationalised through the *Instituto de Fomento Empresarial* (IFE) and the *Instituto Nacional de Apoio a Pequenas e Médias Empresas* (INAPEM) respectively support the development of large enterprises and micro, small and medium enterprises (IFE 2012). The IFE through the "Programme for the integration of large enterprises in priority clusters" (*Programa de Apoio à Inserção de Grandes Empresas em Clusters Prioritarios*, PAIGEC) supports the integration of large enterprises into priority cluster by providing business related services like market studies and strategy planning; permanent technical support for instance in terms of human resource management and support in international networking; financing support such as advice on debt management and capital markets; and by providing permanent training workshops and general information services such as regarding the state of the Angolan economy. INAPEM targets MSMEs and apart from financial support through the *Angola Investe* programme, provides technical support, incentivises the consumption of domestic products, monitors the beneficiaries of fiscal incentives and promotes their integration into industrial poles and SEZs (IFE 2012: 157f).

Finally, to address the shortage of skilled labour, there is a programme for human capital development, which focuses mainly on the construction of vocational training centres at a cost of \$38 million, as well as technical cooperation with Portugal, Brazil, Spain, Israel and South Korea (MIND 2007: 38). The important point to note here is that Chinese credit lines and the construction projects associated to them are integral part of the government's industrialisation programme and do provide finance for concrete components of the plan, namely the expansion of infrastructure in the industrial poles and SEZs and the expansion of human capital formation through the construction of vocational training centres, school etc. Overall financial needs to support the industrial redevelopment programme estimated in MIND (2007) amount to \$10.5 billion, which are to be financed through state, domestic investment and foreign direct investment as well as international credit. In all of this, Chinese credit lines are earmarked to finance around 20% of the manufacturing sector diversification programme (see *Table 22*).

<i>Table 22. Medium Term Manufacturing Sector Development Plan – Sources of Finance</i>	
Medium Term Plan for the period 2009-2013	Amount US\$
A) Domestic Sources	
A.1. State budget	383.200.000,0
A.2. Private resources	1.193.958.856,0
Sub-Total	1.577.158.856,0
B) External Sources	
B.1. Credit line from China	2.042.665.700,0
B.2. Credit line from India	60.200.000,00
B.3. Credit line from South Korea	24.000.000,00
B.4. Credit line from Israel	110.000.000,0
Sub-Total	2.236.865.700,0
C) External sources with state participation	
C.1. Aluminium Project (1 Plant)	4.058.000.000,0
C.2. Methanol, Amoniac, Urea Project	950.000.000,0
C.3. Polymers and Ethylene Project	1.100.000.000,0
C.4. Phosphoric Acid Project	650.000.000,0
Sub-Total	6.758.000.000,0
TOTAL	10.572.024.556,0

Source: (MIND 2007): 45, translation by the author

Figure 5 summarises the main objectives and institutions of Angolan industrial policy in place at the time of writing.

<i>Figure 5. Industrial Policy Measures in Angola</i>
<p>MACRO LEVEL</p> <p>Production Side: aim= serve consumption needs of economy</p> <ul style="list-style-type: none"> • Priority sectors: linkages between different sectors, potential for mass-consumption, IRS, impact on BOP • Export promotion of processed raw materials <p>Implementation:</p> <ul style="list-style-type: none"> • <u>Incentives for investment in priority areas:</u> New Private Investment Law (Law No. 14/15, replacing law No. 20/11) + tariff schedule • <u>Infrastructure development:</u> Cluster development, Special Economic Zones and Industrial Development Poles • <u>Subsidised credit through</u> <ul style="list-style-type: none"> ○ Angola Development Bank (<i>Banco do Desenvolvimento de Angola</i>) ○ <i>Angola Investe</i> programme and Investment Guarantee Fund (<i>Fundo de Garantia de Crédito, FGC</i>) ○ Venture capital fund FACRA (<i>Fundo Activo de Capital de Risco Angolano</i>) ○ Large Enterprise Fund FIGEA (<i>Fundo de Investimento para as Grandes Empresas Angolanas</i>) <p>MICRO LEVEL</p> <p>Addressing constraints to supply capacity at firm level through:</p> <ul style="list-style-type: none"> • <i>Instituto de Fomento Empresarial</i> (IFE) • <i>Instituto Nacional de Apoio a Pequenas e Médias Empresas</i> (INAPEM) • <i>Agência para a Promoção do Investimento e Exportações de Angola</i> (APIEX) • Vocational training centres + schools

The industrial policy setting discussed above describes the government objectives and institutions in place at the time of writing. Of course, the implementation of these objectives and the impact of institutions in place vary in practice. While there are some signs of an emerging manufacturing base in building materials and beverages, production in these sectors faces various challenges. Not least among those is maintaining the growth of demand, an issue that is not systematically addressed by policy in practice despite figuring nominally in the government plans cited above. Demand side issues will be addressed at greater length in section 3, though at this point it is worth pointing out a critical problem in Angolan industrial policy making, namely the slow translation of macro-level objectives into concrete actions.

The industrial policy plan was only elaborated in 2007, i.e. years into the commodity boom and the implementation of the planned institutional set-up as well as infrastructural support was lengthy. For instance, while industrial development poles have been a stated policy objective since MIND (2007) and the legislative framework for their implementation exists since 1998, only four industrial development poles are in operation by 2017. Similarly, only 17% of planned public sector investment in priority clusters and 2% of public sector investment in other clusters was executed by 2017 (UCAN 2016). To understand why the industrial policy setting is patchily implemented requires in the first instance uncovering the main political economy dynamics in Angola, which will be investigated in section 2.

2. RECONFIGURATIONS OF ANGOLA'S SYSTEM OF ACCUMULATION – MANUFACTURING CONSENT?

The fact that the Angolan political elite attempts to promote productive activities beyond the mining sector marks a, comparatively recent, profound change in political economy dynamics away from accumulation of wealth through the mere capture of oil rents towards an indigenous system of capitalist accumulation through other productive activities (Ovadia 2016). For the most part of the post-independence period the Angolan economy was dominated by the mining sector with agricultural and industrial production being practically non-existent. In fact, the literature sees Angola as “successful failed state” (Soares de Oliveira, 2007a: 609), “the world’s richest poor country (...) which redistributes wealth upward and outward” (Power 2012: 1010) and – most importantly – in which the ruling elites have little incentive “to spread growth beyond the capital-

intensive oil sector (...) and to allow a genuine private sector to develop” (Kibble 2006: 540). The ambition of section is to trace this transition towards capitalist accumulation outside the oil sector by exploring critical junctions in Angolan late-colonial and post-independence economic history.

Section 2.1. starts by discerning the main characteristics of the late-colonial Angolan economy arguing that although comparatively diversified, non-subsistence production was dominated by Portuguese settlers which made the economy particularly vulnerable to their departure following independence in 1975 and that colonial legacies structurally engrained inequality. Post-independence, the Angolan economy collapsed due to a combination of factors that include the exodus of Portuguese settlers, unfavourable commodity price movements over the course of the 1980s and the ongoing civil war that lasted from 1975 to 2002 (Bhagavan 1980). Only the oil sector, which had been dominated by non-Portuguese large-scale capital, survived economic collapse and flourished as major foreign produces continued production in Angola (Soares de Oliveira 2007b). Attempts to re-establish domestic capacity in the formerly Portuguese dominated non-oil sector at first failed and were later abandoned altogether (Bhagavan 1985). Quite apart from the direct negative impact of the ongoing civil war on productive capability, the fall in crude oil prices over the course of the 1980s made it then increasingly difficult to revive production through government investment because the remaining oil receipts had to serve an ever growing volume of foreign debt and sustain the defence budget in the context of an ongoing civil war (Kyle 2005). With an increasingly weak production base, distributional conflicts intensified and rents generated by the oil sector primarily became a means to consolidate power around the MPLA presidency. In the context of a dwindling production base structurally engrained inequality intensified and political power was increasingly centralised around the president. Within this setting the ruling elites had little incentive to move beyond rent-seeking as “alternative sources of income cannot compete with oil rents and are in fact largely dependent on them.” (Soares de Oliveira 2007b: 141f).

Section 2.2. argues that two crucial changes occurred since the turn of the century. *Firstly*, the end of the civil war in 2002 put an end to military resistance against the ruling party (MPLA). Consequently, the MPLA attempted to consolidate its rule by making allies and enlarge their basis of support among former opponents. Hegemony still relies on coercion and exclusion, but is also maintained by building consent through material and non-material means. *Secondly*, this change in domestic dynamics coincided with the recovery

of oil prices and China's increased demand for Angolan oil that put an end to the chronic balance of payments problems that made accumulation outside the oil sector unprofitable in the post-independence period. The relationship between export earnings and domestic investment in the manufacturing sector will be explored at greater length in section 3.

2.1. A BRIEF OVERVIEW OF ANGOLAN POST-INDEPENDENCE ECONOMIC HISTORY

2.1.1. 1961-1975: The late-colonial Angolan economy a flourishing manufacturing sector?

Following the abolition of slavery in 1876, colonial economic production (outside the subsistence production) relied primarily on mining and cash-crop agriculture on large plantations, in particular coffee and sisal (Péclard 2001). Against this background, the Angolan economy grew and diversified significantly over the course of a little more than ten years in the late colonial period, starting in 1961. In particular, manufacturing production picked up with nominal growth rates of the manufacturing sector averaging in between 18%⁵² and 22%⁵³ annually depending on the sources (compared to 10% annual growth of GDP). Bhagavan (1980) estimates real annual growth rates to average 11% over the period 1960 to 1973, with manufacturing accounting for 16% of real GDP in 1971.⁵⁴ In 1972, the food and beverage sector accounts for 39.7% of total manufacturing output, followed by textiles (11.4%), Chemicals (11.5%), non-metallic minerals (5%), Tabaco (5.3%) and petroleum derivatives (4.9%) (see figures provided by Torres 1983a: 1104 based on INE data).

This expansion of the Angolan manufacturing sector in the late colonial period can be traced back to a set of interrelated effects stemming from positive supply and demand-side shocks triggered by the influx of Portuguese settlers as well as a shift in the policy regime regulating the colonial economy.

Firstly, the domestic market was expanding rapidly. The influx of Portuguese settlers between 1950 and 1970 constitutes both a substantial influx in capital, knowledge and skills and a substantial increase in demand for consumer goods by white settlers, making manufacturing production in Angola profitable. The settler population in Angola expanded rapidly between 1950s and 1970s being attracted by the high profit margins in coffee production and being pushed by the lack of social mobility in Portugal. What is more, the first war of independence launched by the MPLA in 1961 triggered a

⁵² Figures cited by Valério and Fontoura (1994)

⁵³ Figures cited by Torres (1983)

⁵⁴ 9 % according to UN figures

deployment of soldiers from Portugal. All in all, in 1971, approximately 5.1% of the population were white settlers (Bhagavan 1980).

Secondly, consumer goods produced in Angola were competitive in neighbouring African countries. Due to the lower transportation costs compared to products from Portugal, textiles, beer, sugar were exported to Congo-Brazzaville, then-Zaire, Zambia, Zimbabwe and Gabon. Furthermore, Angolan producers faced less import competition because the European common market allowed Portuguese exporters to find lucrative markets in Western Europe from the mid-1960s onwards (Bhagavan 1980: 12).

Last but not least, changes in the Portuguese policies deployed towards the colonies stimulated manufacturing production. Looking for new ways to justify colonialism, the conservative-authoritarian regime led by Salazar in Portugal drew on the concept of 'Lusotropicalism', proposed by the Brazilian sociologist Freyre, to argue that Portuguese colonialism never followed rationales of conquest or economic exploitation but was built instead on the desire to engage with other peoples and cultures from which a truly multicultural society spanning over four continents should emerge. To stress that the colonies are integral part of Portugal, their status was changed in 1953 to 'overseas provinces'. While this entailed little more than a symbolic value, economic restrictions placed on the colonies effectively preventing any diversification of the economy away from primary commodity production (Valério and Fontoura 1994: 1197), were dismantled progressively in the course of the 1960s (Péclard 2001).

Decree-Law no^o 44 016 from November 8th 1961 dismantled obstacles to trade of goods and services while the decree-law no^o 46 666 from November 1965 relaxed the system of industrial regulation (Valério and Fontoura 1994: 1202). To stimulate manufacturing production in Angola import substitution policies were launched in 1971 with the Decree-Law no. 478/71. Industries traditionally localised in the metropole were encouraged to set up in Angola. These included in particular textiles, sugar processing, starch production and non-metallic minerals (Torres 1983a: 1105). These industries were further protected by quantitative restrictions on imports which favoured the imports of capital goods and equipment (Valério and Fontoura 1994: 1206).

It is important however, to discern the particularities characterising late-colonial economic and manufacturing production. *Firstly*, the expansion of manufacturing production during the late colonial period, though realising very high rates of output growth, reflected the colonial class structures and was in essence a parallel economy with the purchasing power of 95% of the population being insufficient to afford the consumer

goods produced domestically during the 1960s. Bhagavan (1980) estimates that average earnings of 95% of the population amounted to around 20 escudos a day, compared to 400 escudos for the (predominantly white) qualified workers and 1600 escudos for managers. Based on these estimates, he maintains that 37% of manufacturing production in 1973 was in luxury consumption goods, i.e. goods out of reach for the 95% of the population living on 20 escudos. While total employment in the manufacturing rose rapidly, increasing from 15,600 in 1961 to 125,370 in 1973,⁵⁵ black Africans were only employed in unskilled positions.

“Therefore, industrial growth, although more rapid and more diversified up to 1974 than in most African countries, had done very little in transforming African labour both in quality and quantity.” (Bhagavan 1980: 17)

This is an important observation because it shows the extent to which the Angolan economy was vulnerable to the supply shock caused by the settlers’ sudden exodus post-independence – with practically no skilled labour available to fill the gaps left by the settlers.

A similar point is raised by Torres (1983) who highlights that while prompting societal transformations, the process of diversification observed in the late colonial period did benefit primarily the population of European origin. At the same time, the Angolan export structure did not diversify significantly in the late colonial period indicating a persisting situation of dependence. On a whole then, the diversification of the Angolan economy during this period did not change the character of colonial exploitation in any significant way. If anything, economic dependence on white settlers had increased rather than decreased in the late colonial period (Clarence-Smith 1980).

Secondly, one crucial factor that should shape the Angolan economy for the decades to come was the concentration of non-Portuguese foreign capital in the extractive industries sector. In exchange for financial and military support Portugal received from its NATO allies to manage its independence wars, Portugal opened the Angolan market for investments made by American, West German, South African, British and Belgian companies, which moved disproportionately into the extractive industries sectors such as oil, diamonds and iron ore (Bhagavan 1980: 15).⁵⁶ Conversely, very little non-Portuguese capital entered the non-oil economy and in particular the manufacturing sector, given smaller profit margins. These skewed investment structures should have an important

⁵⁵ Of this: 80% unskilled workers, 12% skilled workers, 6% non-managerial administration personnel and 2% managerial personnel.

⁵⁶ Production in extractive industries rose rapidly: oil production went up from a mere 58 000 tons in 1958 to 7.4 million tons in 1973, iron ore from 106 000 tons in 1957 to 7 million tons in 1973, diamonds from about 1 million carats in 1960 to 2.1 million carats in 1973.

consequence for the post-independence Angolan economy, which was suffering from a chronic lack in investment into the non-extractive industries following the departure of the Portuguese settlers.⁵⁷

Thirdly, social and economic policies deployed in the late colonial period structurally engrained inequality in the Angola economy which further intensified after the post-independence economic collapse (De Carvalho, Chianeque, and Delgado 2011). Colonial policies created divisions between rural and urban areas as well as among the rural population. The introduction of commercial agriculture by the colonial administration caused a long process of peasant proletarianisation, pushing former subsistence farmers into temporary or full-time rural wage labour. Since 1961, government regulations and the statutory duty to pay taxes pushed Ovimbundu peasants to grow cash-crops. Many of the previously subsistence Ovimbundu farmers were unable to survive given price fluctuations and the impoverishment of the soils caused by the mono-cultures. Consequently Ovimbundu peasants had to seek employment on the commercial plantations run by the settlers (Péclard 2001). According to estimates cited in Clarence-Smith (1980), in the early 1970s, there were around 530,000 rural wage labourers, who sought employment primarily on the settlers' coffee plantations in the north. At the same time, around 5% of the rural population in the densely populated parts of country engaged in capitalist agriculture (kulaks) accumulating capital through cash-crop production on family plots.

Even more profound changes of social relations occurred in urban areas. The Portuguese policies of integration and development aimed at developing a collaborating, non-white elite through employment in the state sector and private firms. The Portuguese policy of classifying the local non-white population into assimilated (*assimilado*) and non-assimilated (*não-assimilado*) created a two-tier system of citizens' rights and made access to important professions in society such as doctors, teachers, lawyers, civil service, and industrial workers conditional upon the acceptance of European values (De Carvalho, Chianeque, and Delgado 2011). The rising number of black and mixed race (*mestiço*) Angolans in supervisory posts and public service gave rise of a non-white petty bourgeoisie (Clarence-Smith 1980). This minority of *mestiço* and the Black assimilated class was at the time of independence better educated, better established economically, occupying the key jobs in administration and government in the post-independence era,

⁵⁷ See Ferreira (2002b) for a detailed overview of capital ownership structures in the economy in the late colonial period.

when they were able to consolidate their privileged position (De Carvalho, Chianeque, and Delgado 2011).

2.1.2. The Angolan civil war: the shaping of material and non-material conflicts in post-independence Angola

Armed resistance to the Portuguese rule, though relatively low-key between 1961 and 1975, was organised by three major (competing) independence movements, whose constituencies reflected both class and regional interest: MPLA (*Movimento Popular de Libertação de Angola*), FNLA (*Frente Nacional de Libertação de Angola*) and UNITA (*União Nacional para a Independência Total de Angola*). Following the left-wing military coup in metropolitan Portugal in 1974 the Portuguese governor handed over sovereignty to the Angolan people in November 1975 but the country immediately plunged into a civil war that lasted for 27 years until 2002.

The independence movements are usually described purely in ethno-linguistic terms. However, Clarence-Smith (1980) argues that although occasionally making appeal to ethno-linguistical cleavages, the different independence movements reflected, in fact, material conflicts, which had formed in the late colonial period: between centre and periphery, on the one hand; and between emerging elites in the public sector and emerging private capitalists, on the other hand.

The MPLA, founded in 1956 framed their anti-colonial struggle in leftist terms (formally adopting Marxism-Leninism in 1976) and sought support from socialist countries. Cuba, Tanzania, Congo-Brazzaville and the Soviet Union backed the MPLA (Malaquias 2007). The MPLA originally brought together a broad range of socio-economic groups: while the MPLA leadership mainly came from the Luanda-based urban, assimilated elites (concentrated among the middle stratum of public sector employees disillusioned by the persistence of racism in the late colonial period), the MPLA also found supporters among the urban proletariat. After the deployment of Portuguese armed forces, the MPLA actively searched for wider class-alliances, and above all sought to increase peasant membership to support their guerrilla warfare against Portugal. To do so, the MPLA attempted to side with the rivalling FNLA but their unity deal broke down due to manoeuvres of neighbouring African countries in the cold war context and the MPLA's efforts to build its own peasant base failed. By 1974, having virtually no peasant base the MPLA leadership decided to focus on consolidating their urban constituencies. The MPLA's major bases of support are the Mbundu population, accounting for around 25% of the Angolan population in the late colonial period (Malaquias 2007: 53). However, the

relationship with the urban proletariat remained difficult, in particular regarding the autonomy of the independent worker action committees and the right to strike (Clarence-Smith 1980). This led to the emergence of factions within the MPLA. President Neto eventually sided with the urban based assimilated elites within the party.

The FNLA was founded in 1962 out of a merger of regional political organisations of the Bakongo community in Northern Angola, mainly residing in the provinces of Cabinda, Zaire and Uige, with the aim of re-establishing the Kongo kingdom partitioned and destroyed as a consequence of colonialism. Although making an effort reach out to other ethnic groups, the core constituency of the FNLA remained the Bakongo community, which in the late colonial period accounted for around 15% of the Angolan population. This failure to transform into a nationalist movement including all ethnic groups, eventually cost the FNLA its political legitimacy (Malaquias 2007: 62). The FNLA membership comprised Angolan exiles in Belgian-Congo, mostly (former) employees of Portuguese traders and the rural elites in Northern Angola such as kulak coffee growers. Their political orientation was strongly anti-Marxist and the FNLA's political discourse centred around 'black empowerment'. This reflected the divide between rural and urban areas, in particular the fear that material interests of the periphery would continue to be marginalised if the Luanda based mixed-race and assimilated elites were to govern the country after independence.⁵⁸ What is more, the nationalisations proposed by the MPLA created tensions between private-sector and public sector elite interests (Clarence-Smith 1980). Receiving substantial military support from then-Zaire and substantial financial support from the US, the FNLA was initially the strongest independence movement (Clarence-Smith 1980).

In 1966, Jonas Savimbi separated from FNLA to form his own liberation movement, called UNITA with the ambition to provide a progressive but rural based alternative to both MPLA and FNLA. UNITA took a similar stance on 'black-empowerment' and against assimilated urban elites as the FNLA but contrary the FNLA, UNITA support was not built on exile entrepreneurs or kulaks. Instead, UNITA became the strongest political voice among the Ovimbundu population, the largest ethnic group accounting for 35 to 40% of total population at independence (Malaquias 2007: 68). The party favoured communal land-tenure but never adopted Marxism as such and avoided any direct attacks

⁵⁸ The argument advanced was that the elite-led MPLA movement merely sought to replace the domination of the white settlers by a domination of *mestiço* and *assimilados*, who had acquired a privileged socio-economic position during colonialism. Unless the liberation movement would be led by the black African majority, one agent of repression would merely be replaced by new agents of repression.

against kulaks or white farmers, while, at the same time remaining open to private production (Clarence-Smith 1980).

The fight for independence is thus fissured on material conflicts, primarily between the centre and the periphery and emerging private sector and public sector elites, even though these cleavages are translated into discourses of ethno-linguistic solidarity (Clarence-Smith 1980). In addition, the fight for supremacy among these three movements was hijacked by cold war politics, with foreign powers backing different independence movements at different points in time. The Organisation of African Unity (OAU) first recognised UNITA but in 1977 moved to backing MPLA. Most countries followed with the important exceptions of then-Zaire, South Africa and the US who first backed the FNLA and later UNITA (Malaquias 2007). The Soviet-Union, barring a brief period of disengagement from the MPLA between 1972 and 1974, supported the MPLA. Supported by Cuban troops, the MPLA achieved a decisive defeat over the FNLA and invading Zairean and South African troops in April 1976, pushing the FNLA into political oblivion. UNITA, drawing on a solid base in the countryside retreated to the hinterland and the country was captured in a civil war that would last until 2002, when UNITA leader Jonas Savimbi was assassinated. Both parties had stable access to sources of finance that remained out of reach for the other, with MPLA drawing on oil revenues and UNITA sustaining its bid for power from diamond revenue and control over populations in the hinterland. The military and financial stalemate between the two fighting parties was further reinforced by external interference of the major cold war powers, who provided them with military training and equipment (Le Billon 2001).

2.1.3. The post-colonial economy: The collapse of the non-oil economy and the scramble for the remainder

Angola embarked into independence with seething social tensions and an economy which was heavily dependent on white settlers and thus particularly vulnerable to the supply side shock stemming from their departure. It is the combination of these two forces that shapes the Angolan post-independence political economy, both in terms of modes of governance and accumulation strategies. The following section will trace the major changes and evolutions of post-independence economic production and class relations arguing that structurally engrained material inequality amplified as a result of the post-independence economic collapse and that political power was increasingly centralised around the president.

Supply and demand shocks hitting the post-independence economy

The post-independence economy suffered from a combination of three severe negative supply-side and demand-side shocks, which led to the cumulative downward spiral. The *first* links to the disruptive effects that can be attributed to the settlers' departure. Within a year after independence, 300,000 out of 340,000 white Portuguese settlers left the country. As noted earlier, the settlers had monopolised all the higher value added activities in the economy, including skilled jobs in the administration, banking, commercial farming, manufacturing as well as education and health services, while the black African population was, in 1973, to 85% illiterate and to 72% engaged in subsistence farming. A drain on physical capital added to this drain on human capital in the productive sectors of the economy, as the settlers took with them all capital equipment that could be transported such as vehicles, boats, machinery and, at times, even sabotaged what could not be transported. Neto appealed to the settlers to stay and rebuild the economy together, but they left for fear of vengeance (Bhagavan 1985).

The collapse of the economy started in the agricultural sector. In the colonial period, production on the commercial farms run by white settlers relied on the extraction of absolute surplus value through cheap labour, little investments being made in the training of workers or machinery that could achieve advanced methods of production. As laid out above, many subsistence farmers were eventually forced to seek waged employment on the commercial farms. When the farms were abandoned, agricultural production collapsed. There was no one left to run the commercial farms due to the lack of training offered to the indigenous workers. At the same time, the little surplus produced on the subsistence farms could not be transported to the cities anymore, because the Portuguese settlers had also dominated the trading professions (Bhagavan 1985). Rural areas abundant in land and resources fell back into pre-capitalist subsistence farming. The kulaks collapsed because they could neither export their products nor import necessary inputs like fertilisers. The sparsely populated resource scarce rural areas, on the other hand, suffered from serious famines (Clarence-Smith 1980). In other words, the social tensions between rural and urban areas that were tangible in the late colonial period deepened in the post-independence years in consequence of the sharp detraction of the productive base. According to World Bank (1989) estimates more two thirds of the population engaged in subsistence agriculture by 1989.

The result were severe food shortages and a drain on export revenues which shrank due to the collapse of cash-crop production on the commercial farms, while at the same time

more of the export revenues had to be spent on food imports to make up for the no longer self-sufficient food production in the country. By 1981, Angola had to rely on food aid (Bhagavan 1985).

The industrial sector being deprived of crucial inputs, in particular capital goods and food products for its workers, a vicious circle unfolded. In addition to the drain caused by the exodus of most skilled workers,⁵⁹ the manufacturing sector suffered from severe supply shortages of raw materials, intermediate goods and spare parts as well as water and electricity supply due to the breakdown of Portuguese equipment (Bhagavan 1985).

Despite government efforts, foreign investment could not be attracted to the manufacturing sector. The “Law on foreign investment” (Law No. 10/79) from July 1979 aimed at attracting investment by offering attractive terms to foreign investors by providing foreign investors with guarantees against nationalisations, allowing them to transfer up to 25% of profits made plus any transfer abroad necessary to serve loans abroad held by the investing firm, providing them with access to Angolan credit and finally by granting tax exemptions during the first years on capital goods imports and exemptions on custom duties on manufacturing exports. However, only investment in extractive industries was to follow (Bhagavan 1980).

The *second* severe supply side shock can be attributed to the disruptive effects of the civil war itself. The ongoing civil war did divert government resources towards military expenditure, which according to Beudet (1992: 49) accounted for around 50% of total government expenditure in the period 1975 and 1990. Correlations reveal an inverse relationship between the brief phases of manufacturing recovery and patterns of military expenditure as share of total government expenditure (used as a proxy for the intensification of the civil war). Military expenditure decreased until 1981 when manufacturing production picked up slightly, but manufacturing decreased again when military expenditure increased after 1981 (Ferreira 2002a: 258).

The civil war also reinforced rural-urban migration, thereby further deteriorating food production, increasing the need for food imports and government provision of public goods. The major agricultural production centres such as the Huambo and Bié provinces, were predominantly populated by Ovimbundu who formed the main basis of support for UNITA. Many either joined the rebel army or fled to the cities. Luanda’s population, for

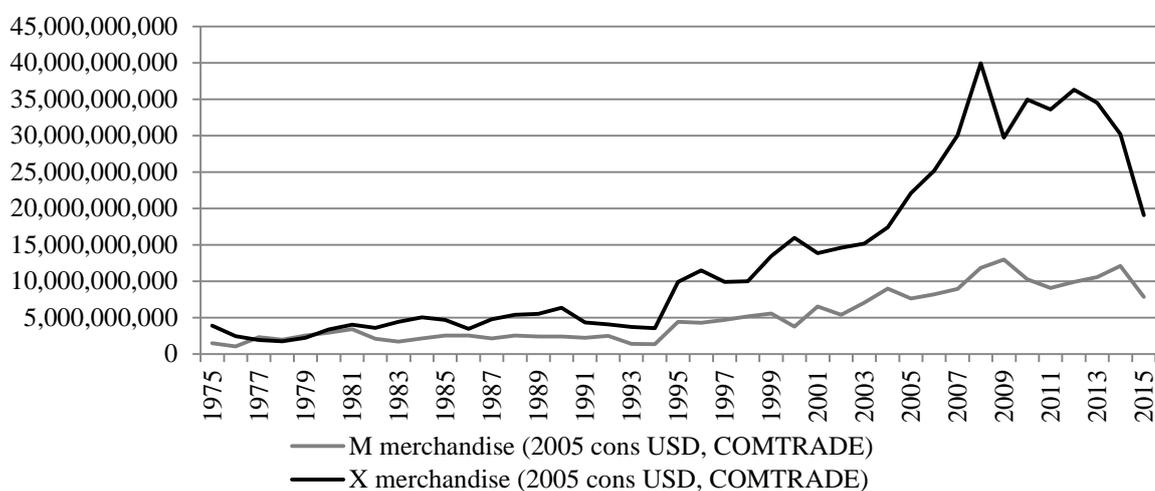
⁵⁹ employees fall from 125,373 in 1973 to 38,351 in 1981

instance, had more than doubled within four years after independence, increasing from 450,000 to 1.2 million (Bhagavan 1985: 24).

The ongoing war also directly destroyed industrial infrastructure, for example as a result of the South African aerial bombing of the industrial area of Lubango in 1979 or sabotage of the important paper and paper-paste factory in Alto Catumbela in 1982 (Ferreira 2002a: 258).

The *third* shock to the independence economy was a demand-side shock through Angola's declining terms of trade, caused by unfavourable moves in commodity prices, in particular oil from the mid-1980s onwards. **Graph 37** traces the evolution of Angolan export revenues over the period 1975 to 2015 in real 2005 terms. Real export earnings plunged from \$3.8 billion in 1975 to a low of \$1.7 billion in 1978, then recovered to \$5 billion in 1984, with a further drop to \$3.6 billion in 1986 as a consequence of the 1986 bust in oil prices. Between 1986 and 1994, real export earnings oscillated between \$3.6 billion and \$6 billion. There was an initial, sharp increase in export earnings over the second half the 1990s, with exports averaging 12.4 billion between 1995 and 2002. Yet, this increase fades in the face of the explosion of export earnings occurring from 2003 onwards.

Graph 37. Angolan merchandise exports and imports 1975-2015 (2005 constant USD)



Source: UN COMTRADE and UN National Accounts (for GDP deflators)

Post-independence class relations: Increasing inequality and the centralisation of power in a crumbling economy

The departure of the white settlers had affected different sectors of the economy unequally, with production collapsing everywhere except for the mining activities

dominated by multi-national companies. The latter become subsequently practically the only source of government revenues.

The oil sector was the only sector of the economy, in which the foreign physical and human capital that was built up in the late colonial period could be kept within the state-run oil company Sonangol. In 1975, the “National Commission for the Restructuring of the Petroleum Sector” assured the return of the American oil companies Gulf Oil Company, Petrofina and Texaco, the major pre-independence producers of oil, despite the socialist orientation of the Angolan state, convincing them of the professional and reliable attitude of their Angolan interlocutors. Similarly, the commission made sure that the Portuguese engineers and skilled workers stayed within the company (Soares de Oliveira 2007a).

In the context of dwindling output levels, new forms of property rights favoured the emergence of a parallel economy, which, in turn, reinforced structurally engrained inequality. Employees in the oil sector and senior personnel in public administration and enterprise management enjoyed numerous benefits such as the right to shop in special stores, which were better stocked than the regular people’s shops (*lojas do povo*), offering luxury consumption goods like Volvo cars (Bhagavan 1985). While facing limits to their monthly expenditure in these shops, those with access to special shops purchased goods that were at sufficient supply in bulk at official prices in order to resell them later on the black market. Similarly, workers in the remaining manufacturing enterprises benefited from the opportunity to buy a certain quantity of output for self-consumption (*auto-consumo*), a large proportion of which was sold either in barter transactions (e.g. with other firms for those enterprises producing intermediate goods such as cement) or on the parallel market (World Bank 1989). When the FNLA crumbled following the rapprochement between Mobutu and Angola in 1978-79, many Bakongo business man started returning from Zaire and began to take over the positions previously held by the Portuguese traders and eventually commanded the parallel economy (Messiant 2008).

Examples of elite accumulation during the socialist period abound. MPLA elites at proximity to the president gained from the simple misappropriation of oil revenues but also from economic policies set-up to foster economic recovery, such as arbitrage within the dual exchange rate system, privileged access to credit from state banks at negative interest rates (Hodges 2001: 36ff). Import licences provided the well-connected (first of all the military commanders) with access to hard currency and credit and became, in an

economy characterised by chronic scarcity of goods, a key source of profits for some and of impoverishment for most (Sogge 2009).

In addition to the emergence of a parallel economy which disproportionately favoured the assimilated elites and workers in the enclave oil sector, the early post-independence period is marked by ideological shifts within the ruling MPLA. In the late colonial period, the MPLA was mainly led by foreign educated elites, though non-assimilated 'prison graduates' – who resisted colonialism from within – also advanced in the ranks of the party. This caused a power struggle within the MPLA between its more idealistic minded members and the power-hungry foreign educated elites around president Neto. The coup to unseat president Neto in 1977 failed when the Cubans decided to back the old guard. Solli (2009) argues that this marks the moment when the MPLA de facto gave up on its aspirations to become a mass-movement and converted to a self-selected elite party (Solli 2009). What is more, the expanding state sector following the nationalisation and confiscation of property left behind by the settlers benefitted primarily the non-white petty bourgeoisie and the skilled workers employed in the oil sector. This bureaucratic petty bourgeoisie who formerly supported the Portuguese formed a strong right-wing current when they joined the MPLA after independence (Clarence-Smith 1980).

The increasing gap between the MPLA's self-proclaimed ideals and actual politics is reflected in the demise of trade unions and emerging forms of working class movements after 1976. Immediately after liberation, the workforce in some production enterprises tried to take control of the day to day running of the factories. The MPLA party and state apparatus felt that this had led to absenteeism among the workers and seriously reduced production. To come to grips with this situation, the plenary of the Central Committee of the MPLA held in October 1976 abolished collective management in enterprises, replacing it by management through a small group of individuals (Bhagavan 1980). The working class was progressively stripped of the autonomy it enjoyed between 1974 and 1976. Strikes became illegal, trade unions integral part of the state apparatus and action committees were dissolved (Clarence-Smith 1980). With the oil sector being the only thriving sector, many workers lost their jobs thereby further weakening their position.

Messiant (2008) argues even though the formal institutional arrangements and the official ideological orientation of the MPLA remained the same, we observe a fundamental qualitative change in the nature of the regime from around the mid-1980s onwards in terms of the mode of accumulation, domination and redistribution. Facing the accelerated economic decline economic of the mid-1980s, the intensification of the military

confrontation with UNITA and the changing global configuration of power at the expense of MPLA's global allies, the regime tried to maintain its legitimacy by prioritising the interests of the *nomenklatura* over those of the masses. In particular, the MPLA leadership decided to relax criminal prosecution of illicit activities on the black market. At the same time, access to the inner circles of power became more permeable: to benefit from favours or to obtain important responsibilities within the state apparatus, it was no longer necessary to formally adhere to Marxism-Leninism or even to the ideals of the party that were still officially proclaimed (Messiant 2008: 319f). At this time, many of the former FNLA leaders were absorbed into the MPLA and state structures despite their persisting ideological differences (Hodges 2001). This alliance between *candongueiros*⁶⁰ and the *nomenklatura* creates a new class, protected against independent competitors and popular discontent at the same time, and a new mode of accumulation, in which corruption is not only endemic but systematic, guaranteeing accumulation of wealth outside the law (Messiant 2008: 318f).

Sonangol became a key structure of power in the 1980s – even a ‘parallel state’ (Soares de Oliveira 2007a: 607) – in a process, in which the MPLA party organs were relatively side-lined to the benefit of the so-called Futungo,⁶¹ that is a group of officials and business men around the president Eduardo dos Santos. Soares de Oliveira (2007a) argues that Sonangol played a key role in harnessing and furthering their agenda and contributed to the marginalisation of formal institutions in Angola (e.g. Bank of Angola, Ministry of Finance). Today, the company invests directly (also outside of its core business) or provides insider with business opportunities in all branches of the economy (Soares de Oliveira 2007a).

In an effort to respond to the accelerated economic decline starting in the early 1980s resulting from the intensifying civil and a further fall in oil prices, the government engaged independently of World Bank and IMF, in a number of reform programmes following the second MPLA Congress in 1985, starting with the “*Programma de Saneamento Económico e Financeiro*” (SEF, Beudet 1992) in 1987. Gorbachev's rise in power in the Soviet Union in 1985 provided the necessary inspiration and ideological justification for this move (Malaquias 2007: 133).

Following the Bicesse peace agreements in 1990-1991, the MPLA explicitly rejected Marxism-Leninism and engaged in a number of reform programmes meant to achieve the

⁶⁰ This term refers to individuals trading on the black market.

⁶¹ Futungo de Belas, the Presidential complex on a seaside hill of Luanda from which the President and other senior personages operate

transition to a market economy in a more or less gradual way depending on the programme (Hodges 2001). A common interpretation maintains that the subsequent failure of the Angolan reform programme illustrates the dangers of a too gradualist approach towards market liberalisation (World Bank 1989: viii; IMF 2000; Aguilar 2001; Hodges 2001: 93f; Ferreira 2002a: 226). Political economy studies, in turn, highlighted that the ruling elites in Angola had literally corrupted a successful transition to the free-market economy and liberal democracy.

These longstanding practices of elite accumulation are merely transplanted and adapted to new realities after the liberalisation, in a process, which Ferreira terms ‘the reconversion of Angolan elites’. The very same elites that had benefitted from the previous socialist-inspired planning practices now corrupted the process of privatisation of state assets and benefit from administrative favouritism in providing business opportunities (e.g. allocation of business permits, partnerships with foreign investors and state contracts) (Ferreira 1995).

« A qui, donc, a bénéficié ce processus de redimensionnement et de privatisation du secteur étatique ? Il ne fait pas de doute que le réseau de clientèle auparavant monté par la nomenclatura en a été le principal bénéficiaire. » (Ferreira 1995: 21)

Similarly, Hodges (2001) emphasises that

“(...) this transition (...) did not lead to a modern form of capitalism with efficient market mechanisms and a regulatory environment to promote fair competition and protect wider social, environmental and other interests. Instead, elite families were able, through their political power and influence, to manipulate residual administrative mechanisms to their private benefit.” (Hodges 2001: 39f, emphasis added)

Interestingly, though, Hodges appears to take for granted that the ‘efficient market mechanisms’ produces fair competition and protects wider social, environmental and other interests, unless, facing a huge imbalance of power, as in Angola.

Patronage networks around the presidency,⁶² ensure the “expanded reproduction of autocratic rule” (Sogge 2009: 16), by means of maintaining policies “based on corruption, deepening the economic model based on natural resources and a strict control of the mechanisms of political and civic participation.” (Ferreira, 2005: 520).

“Economic opportunity is a function of political access and the elites thus fundamentally rely on Dos Santos, as he is the source of this wealth and power. And he relies on them for support to remain in power, rendering *a classic example of the neo-patrimonial state.*” (Corkin 2013: 128, emphasis added)

Messiant (2008) concludes that all forces work to cement the status quo of the Angolan political economy:

⁶² Also referred to as “Futungo” (from Futungo de Belas, the presidential complex in Luanda from which the President and other senior personages operate)

“Such a situation makes (...) it impossible to hope that the MPLA can *motu proprio* change its governance style which is intrinsic to and vital for it.” (Messiant 2008: 347, translation by the author)

Similarly, Soares de Oliveira (2007b) concludes that the ruling elites have little incentive to move beyond rent-seeking around the mining sector, mainly because “alternative sources of income cannot compete with oil rents and are in fact largely dependent on them.” (Soares de Oliveira, 2007b: 141)

Two factors with immediate relevance for demand-side dynamics come out of the discussion Angola’s post-independence economic history. *Firstly*, inequality is structurally engrained and perpetuated over the entire post-independence period irrespective of economic regimes (whether socialist or free market) and geopolitical setting. *Secondly*, power is highly centralised around the president.

2.2. RECONFIGURATIONS OF THE ANGOLAN POLITICAL SETTLEMENT AFTER THE CIVIL WAR IN 2002: MANUFACTURING CONSENT?

Different strategies to establish hegemony since the end of the civil war – towards a new regime of accumulation?

Ovadia (2013a) shows that in the oil services sector we are currently observing a fundamental change in Angola’s political economy, away from accumulation of wealth through the mere capture of resource rents towards wealth accumulation through investment in productive activities, i.e. an indigenous system of capitalist accumulation (Ovadia 2013a: 35 see also Ovadia 2016; Ovadia 2017). This is in line with the observation made in throughout this paper, namely regarding the signs of an emergent manufacturing sector.

Solli and Leysens (2011) argue that to understand the ruling’s elite strategy a useful starting point is Cox’s observation that hegemony is not only maintained through coercion and exclusion but also through building consent among the marginalised – both through material and non-material means. From this perspective, the end of the civil war (and the elimination of UNITA military resistance to MPLA hegemony), might have led the MPLA elite to shift strategies to maintain hegemony away from the sole (or main) use of direct, violent coercion (in this case armed conflict) to also building consent through the civil society and other channels.

This is not to say that the use of coercion has disappeared. For instance, Sogge (2009: 5) notes that “the state’s monopoly of coercive power is today virtually complete, having marginalised putative separatist movements both militarily and politically”, in particular through a well-functioning military and security apparatus and the marginalisation of the

parliament, whose effective influence is curbed by its narrow mandate and minimal resource endowments.

However, we can also observe various attempts to build consent among those outside of the urban elites around the presidency – both through material and non-material means. For instance, more than half of the subsidised credit issued by the National Development Bank (BDA) within its first year of operation were going to the Cabinda province, which claims independence (Sogge 2009: 19). Likewise, in view of the 2008-09 presidential and parliamentary elections, the MPLA government has intensified its efforts to improve basic public services such as access to drinking water, electricity, waste disposal, health and education (Le Billon, Vines, & Malaquias 2008: 121) Furthermore, the government has engaged in territorial reforms/ a decentralisation process, granting some discretionary power to provincial deputies. Following negotiations with UNITA, the MPLA also considers to make the choice of the provincial governor dependent on electoral outcomes (Sogge 2009: 15). In a similar vein, Ruigrok (2010) observes that regional elite associations in the Huíla province, which were formed as a consequence of the growing discontent about social and political exclusion in the periphery, have gained increasing political significance representing local interests both at the national and at the local level. Finally, to build consent horizontally, more than 5000 former UNITA soldiers and generals were integrated into the party, military structures and the police force (Sogge 2009: 21). All of the above examples show that the government does engage in efforts to accommodate discontent and cement their hegemony by showing its ability to deliver positive change for a wider range of agents.

Similarly, the entire state-led housing development programme, advanced at an unprecedented scale, serves the double purpose of building consent for MPLA rule in key constituencies and tying the material success of domestic elites to support for the president (Croese 2017). The housing development programme targets various key constituencies including those tied to the state, such as army veterans, civil servants (Croese 2017), middle-income and low-income urban dwellers, while being concentrated in provinces in which popular dissent to MPLA rule is strongest (Pitcher 2017). It also facilitated wealth accumulation of domestic and foreign capitalists in sectors forwardly and backwardly linked to construction, such as construction companies, real estate agencies, building materials suppliers and banking, but access to the lucrative business opportunities remains heavily tied to support for the president (Croese 2017).

In fact, the same logic applies to the manufacturing sector development programme. The transition towards capitalist forms of accumulation is the result of shifting elite strategies after the end of the civil war, which ultimately aim at consolidating and increasing the wealth and power of the elites themselves. All new business opportunities are tightly controlled by concentric circles of power around the presidency (Ovadia 2016). Approvals of, and incentives for, investments in excess of \$10 million are decided by the ‘Technical Unit for Private Investment’ under the office of the president (Decree 182/15, September 2015). The objective of this tight control is to build a growing circle of allegiance while controlling the distribution of rents resulting from investments (Soares de Oliveira, Verhoeven, and Jones 2013).

These new strategies to establish hegemony, in turn, mean that there is an ever broader elite coalition:

“During the war years, the MPLA leadership ultimately overpowered domestic rivals with both military coercion and material persuasion. It gained allegiance of former rivals by furnishing access to perks, property and privileged means of extracting rents and access to foreign exchange. These measures neutralised more and more opponents, convincing most to ally themselves to the MPLA government in an *ever broader elite coalition*.” (Sogge 2009: 16, emphasis added)

Beyond transparency: investigating the dialectical forces triggered by this process

It remains to be seen what will be the ultimate effect of this new approach. In fact, it is worth keeping in mind that, despite the efforts to build consent, the emergence and expression of dissident view is systematically suppressed by the MPLA government (see Soares de Oliveira 2013: 178 or Soares de Oliveira 2011: 293). At the same time, while there is employment generation, the biggest benefits from the lucrative government incentives still occur to those well connected to the regime (see case studies provided by Ovadia 2013a).

Given this, a number of political economy accounts critical of the Angolan government have emerged: Soares de Oliveira et al (2013) have coined the term “illiberal peace-building”, while Ovadia (2013a) points out that capitalism emerging in Angola is not sustained by freedom and democracy (Ovadia 2013a: 61).

Following on from this, the important question is how and under which condition this situation of “elite stranglehold over the political economy” (Soares de Oliveira 2011: 288) can change. Several political economy studies of Angola have emphasised the need for greater transparency along neo-Weberian lines in this respect (Malaquias 2007: 230 and 234). Similarly, de Oliveira points out:

“Improvements also depend on the ‘vicissitudes of internal transformation’, and whether Angola can go much further with an unreconstructed state apparatus and *insufficiently public-spirited elite*.”(Soares de Oliveira 2011: 306, emphasis added)

“[Angola’s] Jacobin version of state-building (...) also deployed the rhetoric of inclusive nation-building. But this project was about projecting power, and in specific locations, capturing resources, rather than *creating a service-delivery state*.” (Soares de Oliveira 2013: 174, emphasis added)

In this respect, China is seen undermine positive institutional change by way of increasing the Angolan government’s revenues from oil and diversifying the donor portfolio, thereby increasing the Angolan government’s ability to resist the pressure of the World Bank, IMF and Western donors for greater transparency (Hodges 2011: 109; Fernandes 2012: 80; Kibble 2006: 526; Soares de Oliveira, Verhoeven, and Jones 2013: 19).

It should nevertheless be emphasised that freedom and democracy have material foundations which sustain them. While the political sphere has some autonomy, political power stems at least partially from (and cannot be separated from) social power inherent in the relations of production, which determine what is produced, under what conditions and how the surplus is to be distributed. In the Angolan case, these relations currently opposed subsistence activities to rentier activities – with political power-relationships heavily in favour of the rentier class. Against this background, the nascent transformation towards capitalist forms of accumulation described in this chapter is of particular interest and may, indeed, be a source of societal change itself. If sustained, the development of an Angolan manufacturing industry might produce new agents of change, outside of the current subsistence and rentier classes. Indeed, historically, it was only the existence and growing power of the working class, which led to the emergence of the welfare state (see (H.-J. Chang 2011).

Sogge (2009) alludes to this, observing that with the state’s expansion of its reach performance on key tasks, such as collection of taxes, customs revenues and electricity payments is growing stronger (Sogge 2009). This is an important observation because this tax bond, i.e. a material link between the ruling coalition and its domestic constituencies, might serve to empower the ordinary citizens (making it more important for those in power to respond to the claims ‘ordinary citizens’).

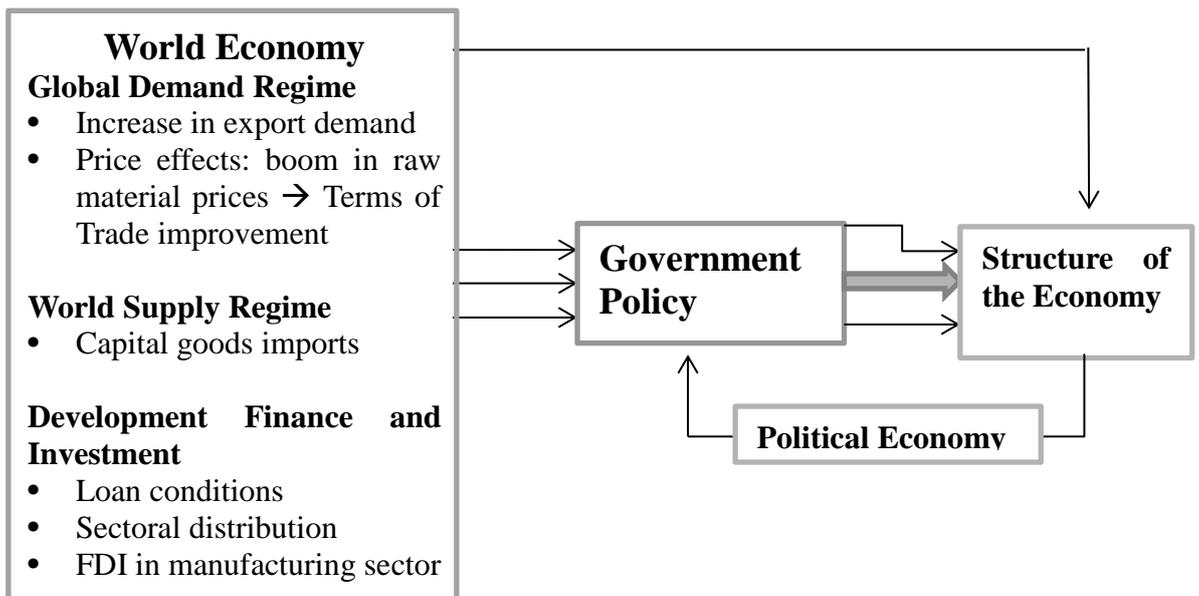
Going forward, therefore, the question is whether and how the new elite accumulation strategy leads to an (inadvertent) promotion and strengthening of the social forces working in favour of a more inclusive society (e.g. by strengthening and supporting labour movements). While there is no doubt Angola’s illiberal peace falls short of the

Weberian ideal, the more interesting question is how the current power relations will be changed by the emergent dynamics of capitalist accumulation.

Intriguingly, one can conjecture policies that foster domestic employment and demand generation might not only support successful industrialisation, in a global economic environment marked by China’s growing importance, but, in doing so, also create more impetus for wider social change. This then sets out the fundamental tension inherent in the new elite accumulation strategy in Angola, which is to use capitalist accumulation and material progress to enhance its legitimacy. To be sustainable, capital accumulation will need to rely on an increase in domestic purchasing power and, implicitly, a strengthening of groups outside of the current elite, which might in turn challenge the elites hold on political power.

3. DOMESTIC MARKET FORMATION IN TIMES OF CHINA: FROM EXPORT EARNINGS TO DOMESTIC INVESTMENT

Figure 6. Angola in the world economy



The previous section argued that, with the end of the civil war in 2002, the ruling elites’ interests transitioned, at least partially and gradually, to capitalist accumulation outside the oil sector. Following on from this the aim of this section is to explore the conjunction of domestic, country-specific dynamics and global systemic dynamics. Specific emphasis will be given to China-related demand-side effects. As illustrated in Figure 6, and set out in chapter 2, this is but one, if under-researched, aspect among a wider set of China-related effects. China-related effects are also likely to act on the supply-side through technology transfer, skills development and cheaper capital goods. Although occasionally

touching on these issues, a systematic discussion of supply-side effects at the firm or economy level exceeds the scope of this research. Similarly, the following discussion also abstracts from other systemic forces in contemporary global capitalism such as financialisation or the transfer of value from developing to developed economies in global value chains.

Bearing in mind these limitations in scope, this section will argue that the exogenous increase in export demand coming from China, alongside changing domestic dynamics, played a critical role in the emergence of the two main manufacturing industries, namely building materials and beverages. Only with rising export earnings and Chinese resource-for-infrastructure finance could the government embark on their programme to (re)build housing and infrastructure as a means to consolidate the post-civil war political settlement. Fiscal spending on infrastructure, in turn, was critical for manufacturing activities by way of inducing demand for building materials. The case of cement production is emblematic for the patterns of linkage formation between the construction and manufacturing sector. Encouraged through industrial policy measures Angola emerged as the fourth largest cement producer in SSA after South Africa, Nigeria and Ethiopia but investments are closely tied to capital close to the president's family and political allies and there are few if any efforts to support building materials manufacturing beyond the large-scale, capital-intensive sectors like cement.

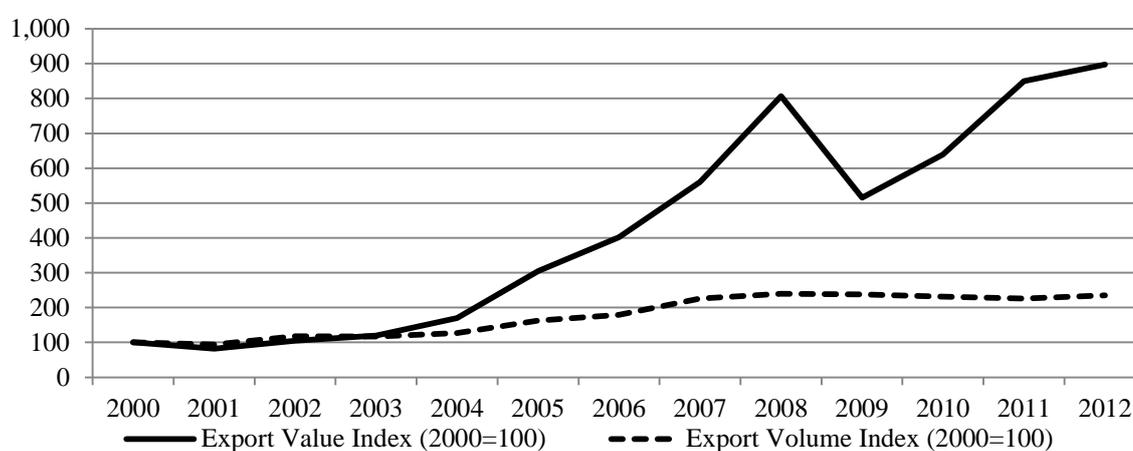
Increased export earnings were equally critical for the emergence of beverage manufacturing because rising per capita incomes – albeit more a statistical artefact than reflecting actual improvements of living standards – spurred expectations of beverage multinationals like Castel and SAP Miller about expanding consumer markets in Angola. Though controlled by foreign multinationals, the sector remains closely tied to Angolan elite capital.

To further explore the inter-relation between external and domestic demand, the following sections will combine an estimation of Angola's Balance of Payment (BoP) consistent growth potential with a qualitative analysis of the relationship between export earnings and domestic investment in Angola's main manufacturing industries to illustrate how markets formed as a consequence of and precondition for growth of exports.

3.1.1. Relaxation of the balance of payments consistent growth rate...

Angola benefitted from substantial increases in export demand starting from around 2004 and lasting until the drop in oil prices in 2015. **Graph 38** shows the increases in value and volume of exports over the period 2000-2012. The value of Angolan exports has increased nearly 9-fold. Partially this is explained by a significant increase in the volume of real exports, which more than doubled by 2012. The remainder is due to a more than four-fold price increase of Angolan exports,⁶³ explained specifically by rising oil prices. Taken together, volume and price effects add up to a significant increase in Angolan import-capacity.

Graph 38. Angolan exports (value and volume increases) 2000-2012



Source: WB WDI

To evaluate the degree to which the rise in exports has increased Angola's scope for importing the capital goods required for productive investments, and, correspondingly, to assess the potential growth rate that would be feasible to achieve under given export- and import-demand structures, the following discussion uses the generalised version of Thirlwall's balance of payments consistent growth rate proposed by Bagnai, Rieber, and Tran (2012). The constraint on potential output growth in the model is defined by a balanced current account. The model allows tracing the impact of changes in relative prices and changing market shares of various trade partners on the balance of payments consistent growth potential.

Within this framework, it becomes possible to estimate Angola's balance of payments consistent growth rate over the periods 1990-2000 and 2000-2012 and decompose the

⁶³ Calculated based on the implicit export price deflator given by the ratio of export value index over export volume index.

in/de-crease over the two periods by trading partner, more specifically the changes that can be attributed to *firstly*, real income growth of the trade partner, which translates into increases in that partners demand for exports from Angola, *secondly*, changes that can be attributed to changes in the relative market shares of imports and exports i.e. each trading partner's demand for products from the other at a given level of income, and changes that can be attributed to changes in relative prices, i.e. increases in export income or import bill due to changes in terms of trade. Bagnai, Rieber, and Tran's (2012) extension of the balance of payments consistent growth model is applied to Angola, dividing Angola's trading partners into China (CHN), OECD countries (OECD) and rest of the world (ROW). Angola's balance of payments consistent growth potential is defined as follows:

$$y_{ang,BOP} = \frac{\sum_{j=1}^n r_{aj} \cdot [\mu_{aj} \cdot (1 - \omega_{aj}) - (v_{ja}\omega_{ja})] + \sum_{j=1}^n v_{ja} \cdot \hat{\pi}_{ja} \cdot y_j}{\sum_{j=1}^n \mu_{aj} \cdot \hat{\pi}_{aj}} \quad (4)$$

Where:

- Subscript a=Angola
- Subscript j= partner (i.e. CHN, OECD, ROW)
- r_{aj} = growth relative prices Angola over prices partner j
- μ_{aj} = market share of partner j in total Angolan imports
- v_{ja} = market share of partner j in total Angolan exports
- ω = price elasticities of demand
 - ω_{aj} = Price elasticity of demand of Angolan imports from partner j
 - ω_{ja} = Price elasticity of demand for Angolan exports to partner j
- π = income elasticities of demand
 - π_{aj} = Income elasticity of demand for imports from partner j
 - π_{ja} = Income elasticity of demand for Angolan exports to partner j
- y_j = GDP growth rate partner j

Data sources

Bilateral trade flows between Angola and the partner areas defined above were constructed based on the UN COMTRADE database (ISIC, rev. 3) using mirror data, i.e. Angolan exports to the respective partners were derived from the imports of that partner from Angola, while Angolan imports from the three partner areas were constructed using the exports of these partners to Angola. The use of mirror data follows standard practice in trade data analysis of developing country given the presumably greater reliability of data obtained from high income economies.

The three Angolan import series were deflated using Angola's aggregate import deflator; Angolan exports were deflated using Angola's aggregate export deflator. Export (import) price deflators were derived from the ratio of export (import) value index over the export (import) volume index provided by the World Bank WDI database.

Bilateral relative prices were constructed as the ratio of the Angolan export deflator over the partner area GDP deflator (for the estimations of export elasticities) or the export deflator of the partner over the Angolan GDP deflator (for the estimations of import elasticities).

The income variables (real GDP of Angola and the partner areas) were derived from the UN National Accounts database.

Estimation and statistical tests

Income and price elasticities were estimated using the following log-log specified model of the bilateral import/ export demand functions:

$$m_j = \omega_{ang,j} \cdot r_{ang,j} + \pi_{ang,j} \cdot y_{ang} \quad (5)$$

$$\ln M_{chn} = \alpha + \beta_1 \cdot RPANGCHN + \beta_2 \cdot \ln GDP_{ang} \quad (6)$$

$$\ln M_{oecd} = \alpha + \beta_1 \cdot RPANGOECD + \beta_2 \cdot \ln GDP_{ang} \quad (7)$$

$$\ln M_{row} = \alpha + \beta_1 \cdot RPANGROW + \beta_2 \cdot \ln GDP_{ang} \quad (8)$$

$$x_{ang} = -\omega_{j,ang} \cdot r_{j,ang} + \pi_{j,ang} \cdot y_j \quad (9)$$

$$\ln X_{chn} = \alpha - \beta_1 \cdot RPCHNANG + \beta_2 \cdot \ln GDP_{chn} \quad (10)$$

$$\ln X_{oecd} = \alpha - \beta_1 \cdot RPOECDANG + \beta_2 \cdot \ln GDP_{oecd} \quad (11)$$

$$\ln X_{row} = \alpha - \beta_1 \cdot RPROWANG + \beta_2 \cdot \ln GDP_{row} \quad (12)$$

Before estimation, the variables were tested for stationarity⁶⁴ using ADF and Phillips-Perron unit root tests. Unit root tests are used to test whether the first difference of a time series is stationary. If it is, the series is said to have a unit root and is of order I(1). No time trend was included in the test regressions, i.e. the null-hypothesis of the time series being a random walk was tested against the alternative hypothesis of them being level stationary. The tests reveal that none of the time series are stationary (see **Table 23**), with all test statistics being bigger than the 5% critical value. We therefore cannot reject the null-hypothesis of a unit root and infer that the time series are of order I(1).

⁶⁴ A time series is defined as stationary when all of the following conditions hold:

(1) $E[x_t] = \mu$ for all $t=1, \dots, T$ (constant mean)

(2) $E[x_t - \mu]^2 = \sigma^2$ for all $t=1, \dots, T$ (constant variance)

(3) $Cov(x_t; x_{t-k}) = E[(x_t - \mu) \cdot (x_t - \mu)] = \gamma_k$ (auto-covariance does not depend on t)

Table 23. Unit Root test Results

Variable	variable name	ADF test stat (5% critical value)	Phillips-Perron (5% critical value)
LNMCN	ln (imports from China)	0.008 (-3.000)	0.02 (-3.000)
LNYANG	ln (GDP Angola)	0.866 (-3.000)	0.471 (-3.000)
LNMOECD	ln (imports from OECD)	-0.718 (-3.000)	-0.569 (-3.000)
LNMRW	ln (imports from ROW)	-0.993 (-3.000)	-1.006 (-3.000)
LNXCHN	ln (exports to China)	-1.322 (-3.000)	-1.311 (-3.000)
LNYCHN	ln (GDP China)	-1.226 (-3.000)	-0.931 (-3.000)
LNWOECD	ln (exports to OECD)	-2.511 (-3.000)	-2.485 (-3.000)
LNWOECD	ln (GDP OECD)	-1.469 (-3.000)	-1.416 (-3.000)
LNYROW	ln (GDP ROW)	2.664 (-3.000)	2.08 (3.000)
RPROWANG	relative prices ROW-Angola: Export deflator ROW/ GDP deflator ANG	-1.557 (-3.000)	-1.631 (-3.000)
RPOECDANG	relative prices OECD-Angola: Export deflator OECD/ GDP deflator ANG	-1.328 (-3.000)	-1.297 (-3.000)
RPCHNANG	relative prices ROW-Angola: Export deflator CHN/ GDP deflator ANG	-1.081 (-3.000)	-1.122 (-3.000)
RPANGROW	relative prices Angola-ROW: Export deflator Angola/ GDP deflator ROW	-0.645 (-3.000)	-0.408 (-3.000)
RPANGOECD	relative prices Angola-OECD: Export deflator Angola/ GDP deflator OECD	-0.098 (-3.000)	0.421 (-3.000)
RPANGCHN	relative prices Angola-ROW: Export deflator Angola/ GDP deflator CHN	-1.031 (-3.000)	-1.122 (-3.000)

This means that for OLS estimators to be BLUE the time series would have to be made stationary using first differences unless they are co-integrated, i.e. the two series follow a long-run equilibrium relationship because their stochastic trends are linked. If the two series are co-integrated, the residuals of the co-integrating regression should resemble a white noise process and be of order $I(0)$. We thus carry out a CRADF unit root test on the residuals of the co-integrating regression, including neither intercept nor a trend. The critical value of the test statistics is always smaller than the 5% critical value, which means that the null-hypothesis of no co-integration can be rejected (*Table 24*)

Table 24. Estimation results import/ export demand functions and co-integration test

Dependent Variable	Description Dependent Variable	Price Elasticity (p-value)	Income Elasticity (p-value)	R ²	F-statistic (p-value)	CRADF Unit Root (5% critical value)
LNMCN	Imports from China	-.153 (0.282)	3.742 (0.00)	0.969	276.52 (0.00)	-5.437 (-1.95)
LNMOECD	Imports from OECD	-.046 (0.666)	1.669 (0.00)	0.926	125.49 (0.00)	-4.461 (-1.95)
LNMRW	Imports from ROW	.288 (0.233)	2.486 (0.00)	0.876	70.57 (0.00)	-3.231 (-1.95)
LNXCHN	Exports to China	1.950 (0.020)	2.703 (0.00)	0.956	194.12 (0.00)	-6.029 (-1.95)
LNWOECD	Exports to OECD	.598 (0.055)	4.714 (0.00)	0.885	76.75 (0.00)	-5.501 (-1.95)
LNXROW	Export to ROW	-.213 (0.812)	7.191 (0.00)	0.926	125.15 (0.00)	-2.479 (-1.95)

Table 25 summarises the estimation results, as well as the relevant import/ export market shares by partner and growth rates of GDP and relative prices. Average market shares were calculated as arithmetic averages over the respective time periods; average growth rates as geometric mean over the time period. While income elasticities of demand for exports from Angola is higher for OECD countries than for China, income growth and the growth of demand for Angolan exports is much higher for China thus exerting a stronger positive effect on Angolan export revenues. China's income elasticity of demand for Angolan exports is lower than OECD countries' income elasticity of demand for Angolan exports (2.7 against 4.7) and Angola's income elasticity of demand for imports from China is higher than for imports from OECD countries (3.74 against 1.67). However, income growth in China is substantially higher than in OECD countries over all time periods and the difference in the trade partners' income growth rates has increased. While GDP growth rates in OECD countries averaged merely 1.6% between 2001 and 2012, China maintained GDP growth rates of around 10% and GDP growth in the rest of the world accelerated from an average of 1.8% over the period 1990-2000 to 4.2% over the period 2001-2012. What is more, China's demand for Angolan exports has grown even faster than China's GDP indicating reconfigurations of China's import demand. From the Angolan perspective, China has become an ever more important destination for exports with exports to China increasing from an average of 6% of all Angolan exports in the period of 1990-2000 to an average of 31% in the period 2001-2012.

Partner	Period	Market shares		Growth rates			Elasticities			
		v_{ja}	μ_{aj}	y_j	x_{ja}	r_{aj}	ω_{aj}	π_{aj}	ω_{ja}	π_{ja}
CHN	1990-2012	0.19	0.05	0.101	0.42	0.03	-0.15	3.74	-1.95	2.70
CHN	1990-2000	0.06	0.01	0.102	0.68	0.01				
CHN	2001-2012	0.31	0.09	0.100	0.27	0.07				
OECD	1990-2012	0.69	0.70	0.020	0.18	0.05	-0.05	1.67	-0.60	4.71
OECD	1990-2000	0.86	0.79	0.024	0.28	0.01				
OECD	2001-2012	0.53	0.62	0.016	0.11	0.10				
ROW	1990-2012	0.12	0.25	0.034	0.26	0.03	0.29	2.49	0.21	7.19
ROW	1990-2000	0.08	0.20	0.018	0.12	0.01				
ROW	2001-2012	0.16	0.29	0.042	0.38	0.07				

Disaggregation of the results

Following the methodology deployed by Bagnai, Rieber, and Tran (2012), the contributions of the different trade partners to the relaxation of the balance of payments consistent growth rate derived above, can be approximated using the following Taylor series expansion. This allows to separate out increases in the balance of payments consistent growth potential that stem from increases in income of trading partners (11), changes that stem from increases in market shares of trade partners (12), changes that stem from changes in price elasticities of demand (13) and changes that stem from changes in income elasticities of demand (14).

$$\Delta y_{ang,BOP} = \sum_{j=A}^n \left[\Delta y_j \cdot \frac{\delta y_{ang,BOP}}{\delta y_j} + \Delta R_{ang,j} \cdot \frac{\delta y_{ang,bop}}{\delta R_{ang,j}} + \Delta v_{j,ang} \cdot \frac{\delta y_{ang,bop}}{\delta v_{j,ang}} + \Delta \mu_{ang,j} \cdot \frac{\delta y_{ang,bop}}{\delta \mu_{ang,j}} \right] + R_1 \quad (13)$$

Where,

$$\frac{\delta y_{ang,BOP}}{\delta y_j} = \frac{v_j \cdot \pi_{ja}}{\sum_{j=1}^n \mu_{aj} \cdot \pi_{aj}} \quad (14)$$

$$\frac{\delta y_{ang,BOP}}{\delta v_j} = \frac{\pi_{ja} \cdot y_j - \omega_{ja} \cdot R_{aj}}{\sum_{j=1}^n \mu_{aj} \cdot \pi_{aj}} = \frac{x_{aj}}{\sum_{j=1}^n \mu_{aj} \cdot \pi_{aj}} \quad (15)$$

$$\frac{\delta y_{ang,BOP}}{\delta R_{aj}} = \frac{\mu_{aj} \cdot (1 - \omega_{aj}) - v_{ja} \cdot \omega_{ja}}{\sum_{j=1}^n \mu_{aj} \cdot \pi_{aj}} \quad (16)$$

$$\frac{\delta y_{ang,BOP}}{\delta \mu_{aj}} = \frac{R_{aj} \cdot (1 - \omega_{aj}) - \pi_{aj} \cdot y_{ang,bop}}{\sum_{j=1}^n \mu_{aj} \cdot \pi_{aj}} \quad (17)$$

Table 26 shows the results of the decomposed rates of increase in the balance of payments consistent growth rate of Angola. China has lower income elasticities of demand for Angolan exports compared to OECD countries and the rest of the world. Combined with a minimal slowing down of Chinese growth between the two periods observed, there is indeed, little effect of Chinese growth as such on Angola's balance of payment consistent growth rate. However, China's demand has reconfigured, moving towards imports of raw materials, and this has resulted in a substantial increase in the volume of exports from Angola and therefore in China's share in Angolan exports. This means that China is a more important destination for Angolan exports: the increase in Chinese export market shares from 6% of total Angolan exports to 31% of total Angolan exports (see **Table 25**) has the biggest positive effect on Angola's balance of payments consistent growth rate. On its own, it would have allowed the balance of payments consistent growth rate to grow by 9.3%.

By contrast, the falling average growth rates in OECD countries and the falling shares of OECD export markets have a negative effect on the BoP-consistent growth rate, reducing

the latter by 1.9% and 4.8% respectively. The re-composition of export market shares towards China has therefore the biggest relaxing effect on Angola's BoP-consistent growth rate. These results underline that exports to China outweigh any loss of export income from OECD countries as well as any import competition by Chinese products.

Table 26. *Decomposition of Angola's generalised balance of payments consistent growth increase between 1990-00 and 2000-2012*

Partner	Partner growth effect	Export market share effect	Relative price growth effect	Import market effect
CHN	-0.02%	9.27%	0.39%	-1.18%
OECD	-1.88%	-4.85%	3.93%	1.07%
ROW	0.77%	0.47%	0.39%	-0.83%

It is, of course, important to remember that the above estimates are merely indications of the growth potential that would be consistent with Angola's export earnings. How and if this can be translated into actual output growth in the productive sectors depends on transmission mechanisms of export earnings into domestic expenditure and the sectorial distribution of spending financed by these export earnings.

Table 27 shows that actual GDP growth rates and the balance of payment consistent growth rates increased at a similar rate over the two periods, average growth rates of actual GDP increasing by 8.9% and potential average growth rates increasing by 8.4%. However, in both periods, actual growth rates were significantly lower than what would be consistent with Angola's balance of payment. This shows that the increase in Chinese export demand was a substantial stimulus to economic activity but actual growth is substantially below potential meaning that there must be other constraints on output growth beyond the growth of export earnings. This highlights the need to further dissect the transmission mechanism between export earnings and domestic autonomous and induced demand as well as the extent to which supply responds to increases in demand.

Table 27. *Angola – Balance of Payments Consistent Growth rates by sub-period*

Period	y_{bop}	y_{actual}
1990-2000	7.44%	1.2%
2000-2012	15.79%	10.0%
1990-2012	11.15%	5.7%
Δy	8.35%	8.87%

3.1.2. ...Increasing the capacity for 'productive' imports

The following section will *firstly* explore the nature of Angolan merchandise imports in general and *secondly* investigate the nature of exchange between Angola and China,

which became Angola's largest trading partner for imports by 2012. The interest of the former is to ascertain whether increased export earnings are actually spent on productive assets like machinery as the realisation of the potential growth rate derived above does not depend on the size of export earnings alone but also on the type of imports. It will be shown that the vast majority of Angolan (merchandise) imports were either inputs for production (intermediate inputs or machinery) or supported basic consumption needs (in particular food and beverages). Regarding Chinese imports, chapter 2 had concluded that Chinese sourced machinery can offer opportunities to realise increasing returns to scale due to the lower cost of Chinese capital goods. At the same time, it can constitute a threat to nascent manufacturing production if Chinese (consumer) products enter in competition with domestic producers.

Neither of these two stories represents the Angolan case adequately. Chinese consumer goods imports, while accounting for relatively high shares of total imports from China and total consumer goods imports do not enter in direct competition with manufacturing production in sectors that are most dynamically expanding in Angola. At the same time, Chinese machinery imports, while accounting for 20% of total imports from China are mostly general purpose and mining machinery which does not directly serve manufacturing production.

Disaggregation of imports by sector

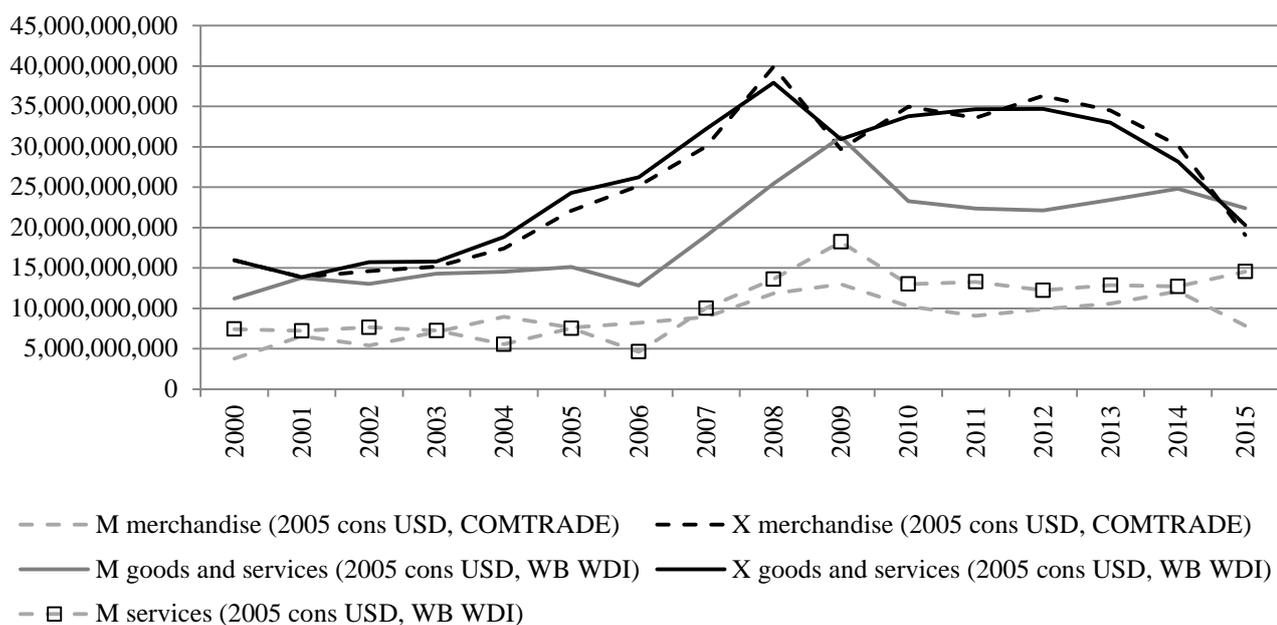
Looking at the evolution of Angolan imports over the period 2000-2015, depicted in **Graph 39**, we notice the high ratio of service imports relative to merchandise imports. Angolan real imports have increased from around \$11 billion in 2000 to \$22.3 billion in 2015,⁶⁵ but service imports account for in between 38% and 66% of total imports over the period 2000 to 2015. Service imports increased from \$7.4 billion in 2000 to \$14.5 billion in 2015 and accounted for nearly two thirds of all imports in 2015.⁶⁶ The

⁶⁵ Note that all data series have been deflated using the Angolan GDP deflator derived from UN National Accounts data base. This approach is different from the deflation used in the balance of payments estimation and the analysis of merchandise imports by detailed category, for which the imports were deflated using the ratio of the import value and import volume index respectively derived from World Bank WDI. This difference in deflation methods is justified by the underlying research interests. In **Graph 39**, the aim is to approximate the value of imports of merchandises and services relative to the value of exports. To do so, all series have to be deflated by the same deflator. For the balance of payments estimation, the interest was to separate out pure volume from pure price effects. For the analysis of merchandise imports by product group, the interest is to trace the volume of imports in their monetary values of 2005.

⁶⁶ Note that the data depicted in **Graph 39** are derived from different data sources, which are not entirely consistent with one another. Merchandise import and export data is derived from UN COMTRADE, while the aggregate Goods and Services and Services import/ export series are based on balance of payments data provided by the World Bank (WDI). Inconsistencies between the two data sets explain, for instance, why

importance of service imports is primarily explained by the rise in construction service imports from China, which, as laid out in chapter 2, not only carry the potential to improve physical supply capacity but can also contribute to domestic market formation through employment and income generation. On aggregate, the sum of service and merchandise imports did not exceed total export earnings until 2014. Only in 2015, as a result of the substantial drop in oil prices and therefore export revenues did net exports become negative.

Graph 39. Angola evolution of merchandise and service imports and exports 2000-2015 (2005 constant USD)



Source: UN COMTRADE, WB WDI and UN National Accounts (for GDP deflators)

For sub-sectoral breakdowns of exports and imports, 4 digit ISIC (rev. 3, harmonised 2002) data have been re-grouped by degree of processing and broad economic use of the goods following the categories developed in chapter 2 (see chapter 2, section 1.2.1, pp. 128f, and *Annex I*, pg. 328).

Disaggregating Angolan merchandise imports (*Table 28*) by broad category in 2002 and 2014 shows that the most important items of on the import bill were imports of intermediate goods, which increased in relative importance, rising from 21% of total imports to 29% of total imports in 2014. Intermediate inputs were the fastest growing group of products sourced from China, 27.5% of all intermediate goods being sourced from China in 2014. Within the group of intermediate inputs, the largest product groups are inputs for the construction sector, i.e. mainly building materials like cement, albeit at

for some years exports of merchandises exceeds total exports of goods and services. Barring these inaccuracies, the two series follow exactly the same pattern.

decreasing rates, as well as iron and steel and structural metal products (*Annex 3, Table 45*, pg. 339).

Final consumer goods imports accounted for about 22.3% of total Angolan imports in 2014. The share of final consumer goods imports stayed approximately constant. China provided 49% of all imported consumer goods in Angola in 2014 (*Annex 3, Table 39*, pg. 335).

Machinery imports were the third most important item on the Angolan import bill. The share of machinery imports in Angola decreased in relative terms, though increasing significantly in absolute terms.

In 2014, 16.8% of Angolan merchandise imports were food & beverages. Partially, these are middle to high income products, with meat and meat products accounting for 4% of total imports in Angola over the period 2002-2014, malt and malt liquors for 1.2%, wines for 0.87% and spirits for 0.54%. Other substantial food imports in Angola included: grain mill products (2.3% of total imports between 2002 and 2014) and dairy products (1.1%) (see *Table 47*, pg. 343). Food and beverage imports decreased relative to total imports. This corresponds to a gradual increase in domestic production of food and especially beverages.

Military equipment was the only product group which had decreased slightly in absolute and relative terms since the end of the war in 2002. Imports of luxury consumption items have increased more than 7 fold but stayed overall insignificant in relative terms, making up for merely 0.1% of all merchandise imports in 2014.

Broad Category	2002	% of Total in 2002	2014	% of Total in 2014
Intermediate Inputs	664,306,776	21.4%	5,673,478,049	29.2%
Final Consumer Products	653,256,716	21.1%	4,331,163,836	22.3%
Machinery	754,602,847	24.3%	3,653,250,008	18.8%
Food & Beverages	773,292,261	24.9%	3,253,669,106	16.8%
Public Transport Equip.	69,005,516	2.2%	1,647,833,540	8.5%
Medical Precision	72,974,369	2.4%	505,031,054	2.6%
Agriculture, Forestry, Fishing	77,583,924	2.5%	184,785,176	1.0%
Services	18,893,368	0.6%	98,824,240	0.5%
Mining	8,719,074	0.3%	41,762,219	0.2%
Luxury	3,093,637	0.1%	22,001,429	0.1%
Military	3,846,184	0.1%	3,752,771	0.0%
Total Trade	3,099,574,673	100%	19,415,551,429	100%

Disaggregation by partner country and sector

Market shares of imports from China have grown from 1.8% of total imports in 2000 to 23% of total imports in 2014, thereby making China Angola's largest individual trading partner for imports, followed by Portugal (16.3%), South Korea (7%), the US (6.3%), and Brazil (4.8%) (see *Annex 3, Table 42 and Table 43* for evolutions of real trade volumes and shares). Angolan income elasticities of demand for imports from China are higher than any of the other partner groups (see *Table 25*, pg. 257). Therefore, establishing the nature of Chinese supply to Angola is crucial in the Angolan case.

Table 29 shows the composition of Angolan imports by major trading partner and broad category for 2012-2014. Overall, imports from China resemble the broad patterns of other trading partner with a few noticeable exceptions. *Firstly*, only a very small fraction of Chinese imports were *food and beverages*, which constituted major shares of imports of all other partners. As explored in section 1, the food and beverages sector was the fastest growing manufacturing sub-sector in Angola and imports are being gradually substituted (see *Table 28*). It appears that import competition for these sectors is less likely to be linked to imports from China than imports from other major trading partners, notably Portugal and Brazil (see *Table 29*, pg. 266). In fact, over the period 2002 to 2014, only 1.2% of all food and beverage imports came from China. By contrast, 22% of all food beverage imports were sourced from Portugal. The most important import in this group, 'meat and meat products', was sourced predominately from Brazil (33%) and Portugal (16%). Of imports of 'malt liquors', the fourth most important import of food

and beverages for which there are domestic production facilities, 67% were sourced from Portugal (*Annex 3, Table 47*, pg. 343).

Secondly, intermediate goods constitute the largest group of imports from China over the period 2002-2014 (38.3% over the period 2002-14 and 37.6% between 2012-14) and import volumes exceeded those of the other four major trading partners. Imports of intermediate goods from China accounted for 19% of total imports in that sub-sector between 2002 and 2014 (see *Annex 3, Table 39* for further details). Intermediate goods imports from China have increased from merely \$ 18 million in 2002 to \$ 1.5 billion in 2014, placing imports of intermediate goods from China on par with imports from Portugal in that product group over the period 2000 to 2014. Within this product group, 19% of imports over the period 2000-2014 were basic iron and steel, of which China provided with 25% by far the largest share. Other important intermediate goods imports from China were cement/ lime/ plaster where China was again the largest provider, structural metal products, plastics and other fabricated metal products (see *Annex 3, Table 45*, pg. 339 for further details). Cement provides an example of intermediate goods imports for the construction sector being gradually replaced by domestic production. Angolan cement imports increased at an average annual rate of 56% between 2002 and 2009 (from \$ 10.5 million in 2002 to \$ 193 million in 2010), then decreased at an average annual rate of -30% between 2010 and 2014 (to \$77 million in 2014). An average of 51.5% of all cement imports between 2002 and 2014 was sourced from China with a peak of 77.6% in 2011. Most intermediate inputs sourced from China are likely to be inputs for the construction sector and therefore closely linked to the Chinese construction activities associated to the Chinese overseas contacted projects in Angola.

Thirdly, final consumer goods from China – although important in the trade shares of all partners – are large with 38.1% (42.7%) of all imports from China being consumer goods in the period 2002 to 2014 (2012-14) and 28% of all consumer goods being sourced from China over the period 2002 to 2014 (see *Annex 3, Table 46*). This is a much higher share than for other partners, e.g. only 21% of imports from Portugal are consumer goods. There is also an upwards trend: by 2014, 49% of all consumer goods were being sourced from China (see *Annex 3/ Table 39*). Yet, interestingly, Angola's consumer goods imports from China have grown relatively less quickly than other product groups (see chapter 2, *Graph 12*, pg. 135). Zooming more closely into the type of consumer goods imported by Angola, we find that the imports from most major trading partners follow the similar tendencies. The majority of all consumer goods imports were motor vehicles

(38% of total consumer goods imports over the period 2002-2014). Interestingly, China was the largest provider of these motor vehicles (providing 16% of all motor vehicles over the period 2000-2014). The same is true for motor cycles where China even provided 65% of all imports. The second largest share in motor vehicles imports is actually held by Brazil, which taken together indicates that motor vehicle and motor cycle imports actually serve the demand of emerging middle classes or the Chinese expatriate community rather than luxury consumption, given that high end cars are more likely to be being produced in OECD countries. Finally, footwear, TVs and luggage are among the most important consumer goods imports from China after motor vehicles and motor cycles (see *Annex 3/ Table 46*, pg. 341 for further details). Comparing this to domestic production patterns suggests that Chinese products serve emerging consumer goods demand in sectors in which there is not much Angolan supply capacity at the current time.

Finally, machinery goods imports from China were important in absolute terms, second only to Portugal.

Table 29. Angola: Imports by broad category and partner/ region as % of total imports from that partner/ region

	Trade partner/ region	CHINA	CHINA	OECD	OECD	intra-SSA	intra-SSA	World	World
Broad Category	Detail	avr.2002-2004	avr.2012-2014	avr.2002-2004	avr.2012-2014	avr.2002-2004	avr.2012-2014	avr.2002-2004	avr.2012-2014
Public goods	Military	1.4%	1.2%	2.5%	3.2%	0.9%	0.7%	2.0%	2.6%
	Medical Precision	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.1%	0.0%
	Public Transport Equip.	0.1%	1.1%	29.7%	7.9%	0.1%	45.6%	18.4%	6.6%
	Public goods total	1.5%	2.3%	32.2%	11.2%	1.3%	46.3%	20.5%	9.2%
Raw Materials	Agriculture, Forestry, Fish	4.6%	0.1%	0.7%	0.9%	2.3%	2.4%	1.9%	1.1%
	Mining	0.0%	0.1%	0.1%	0.1%	0.6%	1.4%	0.2%	0.2%
	Raw Materials Total	4.7%	0.2%	0.8%	1.0%	2.9%	3.8%	2.1%	1.3%
Manufact.	Food & Beverages	0.7%	1.5%	15.8%	15.6%	37.5%	7.3%	20.4%	17.6%
	Final Consumer Products	48.6%	42.7%	16.1%	14.0%	31.0%	19.8%	18.1%	20.7%
	Intermediate Inputs	25.6%	37.6%	17.6%	32.9%	23.3%	14.6%	18.7%	30.7%
	Machinery	18.8%	15.6%	16.8%	24.5%	3.8%	6.6%	19.5%	19.7%
	Manufacturing Total	93.8%	97.4%	66.3%	87.0%	95.6%	48.3%	76.8%	88.8%
Other	Luxury	0.0%	0.0%	0.1%	0.2%	0.1%	0.0%	0.1%	0.1%
	Services	0.1%	0.1%	0.5%	0.6%	0.1%	1.5%	0.5%	0.6%
	Other Total	0.1%	0.1%	0.6%	0.8%	0.2%	1.5%	0.6%	0.8%

Annex 3, Table 40 and *Table 41* give a more detailed overview of the composition of Angola's imports from China by broad category over the years 2000 to 2014. What stands out, in particular, is that the fastest growing groups of products imported from China are intermediate goods (increasing from 26% of total Chinese imports in 2002 to 41% in 2013, though dropping back to 33% in 2014) and machinery (increasing from 7% of total Chinese imports in 2002 to 14% in 2014). Interestingly, final consumer goods, although increasing in absolute terms, decreased in relative importance (from 54% of total Chinese imports in 2002 to 36% of total Chinese imports in 2012, though increasing again to 49% in 2014).

Table 30 and *Table 31* show the composition of machinery imports by major trading partner and type of machinery. As explored in chapter 2, Chinese *capital goods* could benefit manufacturing production in SSA countries due to their lower price (which might constitute substantial pecuniary externalities and therefore contribute to the realisation of increasing returns to scale) and possibly their easier use. Both questions are inherently complicated to answer because patterns of technology acquisition can only be investigated through firm level data collection and potential externalities due to price effects cannot be separated from volume effects without volume and value indices for sub-groups of products. Volume and value indices, however, are only available for aggregate imports. Nonetheless, the available data do allow for a number of more general conclusions.

First, while Chinese machinery imports have increased rapidly over the past decade, total cumulative machinery imports over the period 2000 to 2014 lag behind the other major trading partners, namely Portugal and the US, who remain the major providers of machinery to Angola.

Secondly, Chinese machinery imports resemble the patterns observable for the US and Portugal, with machinery imports being fairly concentrated in special purpose machinery, i.e. machinery used for specific forms of production (such as textiles, metallurgy or mining). However, Chinese special purpose machinery imports are mainly for mining. In fact, Angola imports less non-mining related special purpose machinery from China than from any of the other major trading partners. In other words, the vast majority of machinery used for manufacturing production specifically (such as machinery for textile production, food and beverage production or metallurgy) is *not* sourced from China. These are mainly sourced from Portugal. It is therefore unlikely that Chinese machinery imports explain macro-trends of manufacturing output growth through price and usability

of machinery for specific manufacturing sub-sectors. This does, of course, not exclude the possibility that individual firms have benefitted substantially from Chinese machinery.

Table 30. Machinery imports by economic use and major trading partner (sum 2002-2014), constant 2005 USD million

	chn	prt	kor	usa	bra	other	world
general purpose machinery	966.1	1548.0	104.0	1225.0	407.1	6403.6	10653.9
special purpose machinery	1138.3	1796.8	151.9	4167.6	687.5	5175.1	13117.0
<i>special purpose machinery (excl. Mining)</i>	250.9	919.9	58.0	502.6	386.8	2231.0	4349.3
electrical machinery	1974.5	2062.4	170.8	449.8	343.1	2436.6	7437.2
Instruments	17.8	57.5	2.5	24.9	9.1	275.2	387.0
computing machinery	95.0	434.9	10.7	84.6	13.6	749.2	1388.1
Total Machinery	4191.7	5899.7	440.0	5952.0	1460.3	15039.7	32983.2

Table 31. Composition of Machinery Imports by Major Partner (Σ 2000-12), % of total sub-group, ISIC rev 3

Machinery imports by economic use and major trading partner (sum 2002-2014), % of total machinery imports

	chn	prt	kor	usa	bra	other	world
general purpose machinery	9.1%	14.5%	1.0%	11.5%	3.8%	60.1%	100.0%
special purpose machinery	8.7%	13.7%	1.2%	31.8%	5.2%	39.5%	100.0%
<i>special purpose machinery (excl. Mining)</i>	5.8%	21.2%	1.3%	11.6%	8.9%	51.3%	100.0%
electrical machinery	26.5%	27.7%	2.3%	6.0%	4.6%	32.8%	100.0%
Instruments	4.6%	14.9%	0.6%	6.4%	2.3%	71.1%	100.0%
computing machinery	6.8%	31.3%	0.8%	6.1%	1.0%	54.0%	100.0%
Total Machinery	12.7%	17.9%	1.3%	18.0%	4.4%	45.6%	100.0%

However, Chinese machinery imports do account for a large share of electrical machinery and apparatus, second only to Portugal as well as general purpose machinery coming very close to US and Portuguese trade volumes. *Annex 3/ Table 44* (pg. 338) provides a more detailed overview. Within the groups of electrical and general purpose machinery, China dominated in particular imports of electric motors/ generators and transformers. These also make up for the second largest component of all machinery imports after mining machinery. Other than that, China was a major provider of accumulators/ primary cells as well as lifting and handling equipment.

To summarise, overall final consumer imports from China are not systematically in direct competition with nascent domestic production of final consumer goods, of which motor vehicle production is, for instance, not an integral part. Although in some sectors they may eventually enter in competition with new manufacturing. Chinese intermediate goods imports are primarily linked to the Chinese construction projects and consumer

goods imports from China appear to serve demand from emerging middle classes. In the longer term, the question will be whether or not these imports are gradually substituted domestically as appears to be the case with beverages from Portugal. Interestingly, cement imports from China were gradually reduced. At the same time, the evidence presented in this section does not suggest any macro-effect from Chinese machinery, even if there might be effects on individual firms, where Chinese machinery has enabled fast rates of output growth. Finally, the group of merchandise imports as a whole was not dominated by luxury goods imports, suggesting that Angola's export earnings are being turned into either investment good imports or imports of relatively broad based consumption goods.

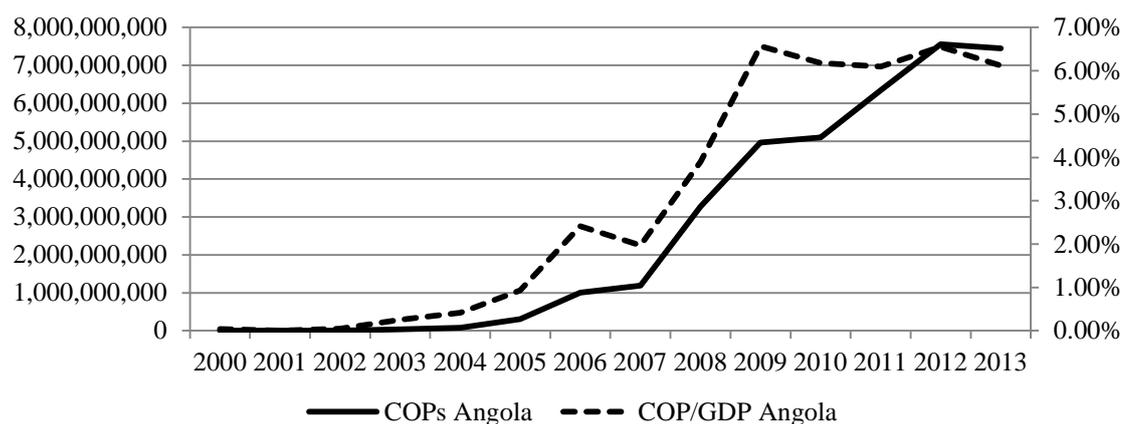
3.2. FROM EXPORT EARNINGS TO DOMESTIC INVESTMENT: DOMESTIC MARKET FORMATION IN ANGOLA

3.2.1. The formation of a market for building materials on the back of Chinese construction projects

In the Angolan case, one transmission mechanism between increasing export demand and domestic manufacturing investment comes from induced demand following increases in government spending. The exogenous increase in export revenues allowed for an increase in government spending on infrastructure, itself an attempt to strengthen the position of the ruling party (MPLA) after the end of the civil war by demonstrating the government's ability to deliver basic infrastructure. This created a range of new profitable business opportunities in the building materials sector.

Angola is, according to Chinese data sources, the country awarding the largest absolute amount of construction contracts to Chinese firms. In 2013, \$4.03 billion of new contracts have been signed spread over 292 construction contracts (CICA 2014: 32). A total of \$7.4 billion of construction contracts has been completed in the year 2013, nearly twice as much as in Nigeria, which is placed second (see chapter 2, *Table 5*, pg. 142). The value of contracts completed in 2013 is equivalent to about 6.1% of Angolan GDP in that year (*Graph 40*), which, by any standard, is a substantial stimulus to economic activity.

Graph 40. COPs in Angola (current USD and % of GDP, 2000-2013)



Source: China Statistical Yearbook (various years) and UN National Accounts

Often termed ‘Angola model’, a large part of these contracts are financed through resource for infrastructure deals with Chinese policy banks. Chinese lending to Africa amounted to a total of \$86.9 billion over the period 2000 to 2014 (in current terms), with 68% of all loans coming from China Exim-Bank, 16% from the China Development Bank and 16% from other sources. Angola is by far the largest recipient of Chinese loans, receiving \$ 21.2 billion (23%), followed by Ethiopia with \$12.3 billion (14%) (Hwang, Brautigam, and Eom 2016).

After the end of the civil war, the Angolan government sought development finance to rebuild the country. As negotiations with the international financial institutions and major DAC-donors stalled over policy conditionality, notably the requirement that Angola stopped all large-scale infrastructure reconstruction before achieving fiscal and macroeconomic stability, the Angolan government turned to alternative sources of financing. In 2002, China Exim Bank together with the China Construction Bank provided their first loan over \$145 million (Corkin 2013: 75f). By 2014, the cumulative value of Chinese loans to Angola amounted to \$21.2 billion, almost all of which were oil-backed loans. About half of all loans were credit lines from China Exim-Bank (\$7.4 billion) or China Development Bank (\$11.3 billion). The remainder were commercial rate loans to Sonangol from the China Development Bank and the Industrial and Commercial Bank of China (ICBC) (Hwang, Brautigam, and Eom 2016).⁶⁷

After the loan agreements with the Exim Bank are signed, revenues from oil sales to China are placed in an escrow account at the Chinese commercial or policy banks (e.g.

⁶⁷ ExIm Bank, China Development Bank and Agricultural Development Bank are policy banks, i.e. their loans are subsidised by the Ministry of Finance. The Commercial and Industrial Bank of China, China Construction Bank and China Agricultural Bank are among the 5 state-controlled banks in China, i.e. they are nominally commercial but the state retains large shares and the governors of the banks are involved in high-level politics.

China Exim-Bank) in the name of the Angolan government. The *Gabinete de Apoio Técnico* of the Ministry of Finance and the Chinese counterpart subsequently agree on the construction projects to be financed and the Chinese banks issue the tender for the Chinese construction companies. Once construction is completed, Chinese construction companies are paid directly by China Exim Bank out of the Angolan escrow account (Corkin 2013: 77f).

The Angolan construction market is, in line with the African market in general, dominated by Chinese construction companies (see chapter 2, *Table 6* and *Table 7*, pg. 144). In 2014, there were 43 main international contractors operating in Angola according to data provided by the Engineering News Record, 21 of them (i.e. 49%) were Chinese contractors. 33% of contractors were European, specially Spanish, French and Italian (*Table 32*).

Country/ Region	No. of firms	% of total firms
BRICS	24	56%
Chinese	21	49%
Brazilian	3	7%
European	14	33%
Austrian	1	2%
Spanish	4	9%
French	4	9%
German	1	2%
Italian	3	7%
Portuguese	1	2%
MENA	2	5%
Israeli	1	2%
Turkish	1	2%
N. American	3	7%
USA	2	5%
Canadian	1	2%
Total	43	100%
<i>Source: Engineering News Record</i>		

Three different data sources provide information about the sectoral composition of Chinese construction projects:

- The Angolan Ministry of Finance provided a detailed breakdown of the use of the 2004 and 2007 ExIm credit lines (total of \$4.5 billion) (MINFIN 2008a; MINFIN 2008b; MINFIN 2008c)
- The China International Contractors Association (CICA)

- The press-releases of the major Chinese contractors, notably CITIC and Guangxi Hydroelectric Construction Bureau Angola Company (GHCB)

Covering the period 2004 to 2014, a total of \$12.5 billion of contracted projects (cons. 2005 USD, deflated by the Angolan GDP deflator provided by UN National Accounts) could be traced through the 3 data sources (\$2.9 billion through MINFIN data, \$6.9 billion through CICA data and \$2.5 billion through press releases). Chinese construction services in Angola focused primarily on redressing physical infrastructure (public works and water/ energy projects) and housing. \$4 billion (32%) were housing construction projects, \$3.53 billion (28%) were public works (notably road infrastructure construction) and \$3.1 billion (25%) were energy and water construction projects including for instance the construction of (hydro) power stations or the rehabilitation of water supply networks. The remainder included education projects (e.g. construction of schools and vocational training centres), health projects (e.g. construction of hospitals), manufacturing projects (e.g. construction of plants), agricultural projects (e.g. construction of irrigation systems), telecommunications and social projects (construction of national TV production centre). According to CICA (2014: 32), the largest contracts obtained by Chinese firms in 2013 were a social housing project (\$470 million) signed by CITIC Construction Co. Ltd and a power transformation project (\$985m) in Soyo signed by China Machinery Engineering Corporation, for which the Industrial and Commercial Bank of China committed to lend \$837 million (ICBC 2015). For more details see *Annex 4*.

Table 33. Angola: Chinese contracted projects by sector 2004-2015

Sector	constant USD 2005	% of total
Housing	4,039,082,253	32.1%
Public works	3,535,955,209	28.1%
Energy and water	3,206,838,094	25.5%
Education	496,468,874	3.9%
Health	344,620,028	2.7%
Manufacturing	312,299,298	2.5%
ICT	302,816,490	2.4%
Agriculture	293,807,940	2.3%
Social	66,905,200	0.5%
	12,598,793,386	100%

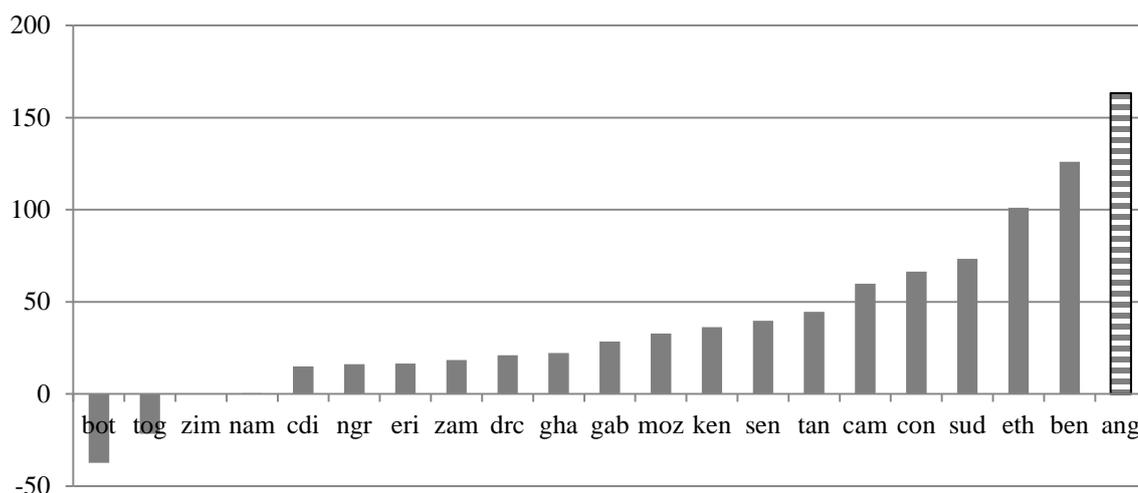
Compiled based on: MINFIN, CICA and contractors' websites

Through the 2004 and 2007 credit lines a total number of 51 schools,⁶⁸ 10 hospitals and 9 health centres, around 800 km of highways⁶⁹ have been constructed. The electricity network in 7 cities, the water supply system in 9 cities and the telecommunications network in 13 provinces has been restored and expanded. This fills important gaps, especially when taking into account the pressing lack of infrastructure after the civil war and the relatively low commitment of other donor in this area. Supply-side effects are not easily quantifiable given lack of data, but the fact that Angola realised the highest growth rates of electricity production in sub-Saharan African countries, for which data are available is indicative of positive outcomes (*Graph 41*).

⁶⁸ Of which 16 high schools, 18 vocational schools, 6 agricultural schools, and 11 centres of administration and management

⁶⁹ The Caxito-N'zeto highway (around 216km, completed in June 2014), the Quifangondo-Caxito-Uige-Negage highway (around 355 km) and the Nzeto-Tomboco-Mbanza highway (around 222km)

Graph 41. Electricity (production of kwh) - % increase period 2000-04 to 2007-2010



Source: World Bank - African Development Indicators

As illustrated above, currently the largest amount of Chinese contracts is in housing, which has no direct link to costs of production. Beyond the positive impact of Chinese constructed infrastructure on the supply side, the construction boom also has implications on the demand-side: the boom in demand for a wide range of building materials, ranging from cement over roofing to pipes glass and door frames, creates new profit-making opportunities for companies. In fact, the 4 digit disaggregation of investments in the production of intermediate goods, reveals that, in the years 2011 and 2012, the largest volume of investments goes to the production of cement, lime and plaster, followed by iron and steel as well as plastic products (*Table 34*).

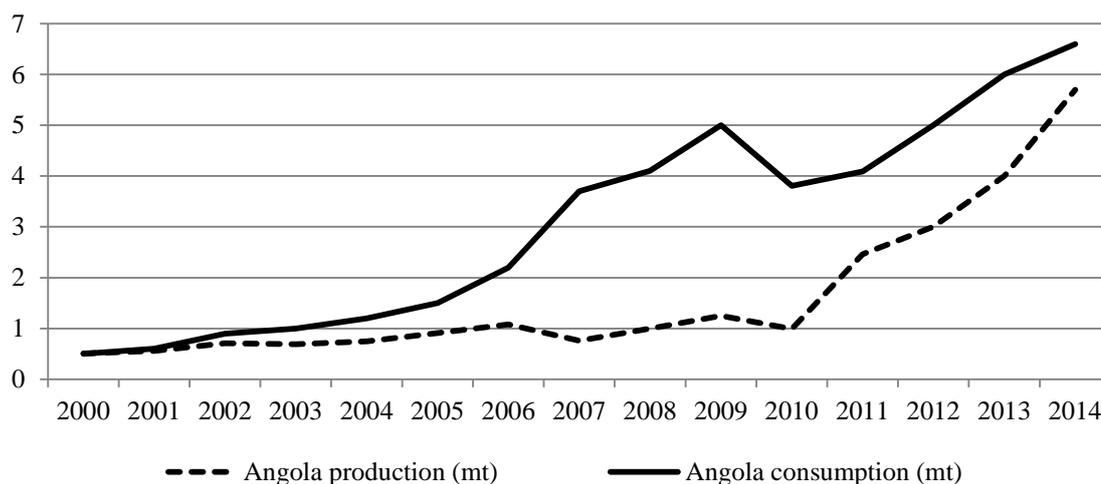
Table 34. Manufacturing Sector Investments – Intermediate Goods, 2011 and 2012
(constant 2005 USD, thousands)

Code	Description	Angolan	Foreign	Total
2520	Plastics products	102,699	10,813	113,512
2691	Non-structural non-refractory ceramic ware	5,555	0	5,555
2694	Cement, lime and plaster	255,190	0	255,190
2811	Structural metal products	1,102	4,221	5,323
2692	Refractory ceramic products	24,692	2,434	27,125
2695	Articles of concrete, cement and plaster	3,063	0	3,063
2710	Basic iron and steel	218,029	0	218,029
3210	Electronic valves and tubes and other electronic components	1,988	600	2,588
21	Pulp, paper and paperboard	0	735	735
2422	Paints, varnishes and similar coatings, printing ink and mastics	0	326	326
2610	Glass and glass products	0	288	288
2693	Structural non-refractory clay and ceramic products	0	202	202
		612,318	19,619	631,937

Source: Agência Nacional para o Investimento Privado

The case of cement production is illustrative for the pattern of demand-driven linkage formation from the construction sector. Cement consumption in Angola accelerated in the mid-2000s outstripping domestic production by large. This caused cement imports to increase dramatically (see above) but the gap between domestic supply and demand peaking in 2009 was gradually reduced by an increase in domestic production, reaching 5.7 million tons in 2014 (against 6.6 million tons consumption) (*Graph 42*). In terms of installed capacity, Angola is self-sufficient by 2014 with installed capacity surpassing 8.5mta spread across five producers. Prices of cement in Angola declined following the expansion of domestic production from 2010 onwards. Ex-works prices fall from \$240/t to \$150/t. Illegal imports of bagged cement have pushed prices further down to \$120/t but government measures to control illegal imports and regulate the amount of imports stabilised prices at around \$140/t. Retail prices depend on transportation costs and exceed the ex-works price by \$10-100/t (Armstrong et al. 2015).

Graph 42. Cement consumption and production (Mt) Angola 2000-2014



Source: Global Cement report 11th edition

As pointed out in chapter 2 (*Table 10*, pg. 170), increasing cement production is an Africa-wide trend and the production base in SSA is dominated by European multinationals, the Nigerian Dangote group and the South African Pretoria Cement Corporation. Angola is one of the few exceptions to these ownership structures (alongside Senegal and Ethiopia). In Angola, the largest producer is CIF Luanda, a joint venture between Angolan capital and the Hong-Kong based China International Fund operates with an installed capacity of 3.6Mta at Bom Jesus. The remaining plants are by now all in local hands and include Nova Cimangola (formerly owned by Heidelberg Cement), Fabrica de Cimento do Kwanza Sul, Cimenfort Industrial Lda and Secil Lobito (*Table 35*). The construction and equipment of the latter was contracted from the Chinese Sinoma company (Armstrong et al. 2015).

Table 35. Angolan Cement production base in 2014

Company	Capacity (Mta)	No. of Plants
CIF Luanda	3.60	1
Nova Cimangola	1.80	1
Fabrica de Cimento do Kwanza Sul	1.46	1
Cimenfort industrial Lda (Genea Angola)	1.40	1
Secil Lobito	0.35	1

Source: Global Cement Report 11th edition

The emergence of building materials industries like cement was supported by industrial policy measures. While linkage formation between the manufacturing and the construction sector is a stated policy objective, support for the building materials sector is operated on an ad-hoc basis. In terms of financing and tariff protection, the establishment of the Angolan cement plants has been supported by subsidies and subsidised credit. For

instance, FCKS received subsidised loans from Sonangol and the Angolan Investment Bank (Marques De Morais 2015) and in 2014 the Angolan government granted Nova Cimangola \$116 million to raise the plant's capacity (Armstrong et al. 2015). The government also increased tariffs on building materials. Up until 2009 all construction materials could be imported duty free but tariffs gradually increased and in early 2015 the government has banned the import of cement barring exceptions operated through a quota system to protect domestic production (WTO 2015).

The prime driver of the building materials/ cement sectors in Angola is government spending on large-scale housing and infrastructure development, which boosts demand for construction inputs. The National Development Plan 2013-17 aimed at the construction of 450,000 units of housing (MPDT 2012). Given the low-value/ high-volume nature and the global abundance of necessary raw materials, cement is effectively a non-traded good with less than 10% of global output being traded. This explains why domestic production is set up comparatively quickly in face of a construction boom. At the same time, the large-scale nature of the cement industry acts as a major barrier to entry and exit. Stable growth of market demand is therefore key for the emergence and expansion of production. This explains the importance of government procurement in total consumption, making government spending on construction key for output and productivity growth (Oqubay 2015).

Going forward, the question is whether high levels of government spending can be kept up in light of dwindling government revenues, especially considering that the Angolan economy suffered from a recession after the drop in oil prices in 2015. More of Angola's crude oil sales are tied up to pay for pre-financed loans leaving fewer revenues for the government to finance other ongoing expenditure (civil service salaries, fuel subsidies etc.). But ongoing projects and the repayment of existing debt remain not affected. According to estimates by Reuter prior to the drop in oil prices about half of Angola's 50-60 monthly cargoes were sold on the free market, a number which has dropped to about 10 (George 2016). While current infrastructure projects are not at risk, tightened budgets might imply reductions in government spending on infrastructure. Countervailing factors include the recent deal between China's state-owned oil company, Sinochem, and Sonangol to buy crude oil from Angola for the next ten year, effectively guaranteeing Angolan market shares in China (George and Chen 2015).

Investments in the cement sector illustrate the underlying political economy dynamics, in particular the elite capture of the most profitable business opportunities with investments

being controlled by circles close to the president's family (Africa Confidential 2009) and political allies (Marques De Morais 2015). In Angola, this has had implications for the patterns of linkage formation to the manufacturing sector, which are dominated by the capital intensive cement sector. While cement production is associated to forward linkages such as to the production of concrete bricks and concrete structures (MIND 2014a), and other building materials industries also developed, including plaster,⁷⁰ metallurgy⁷¹ and tiles production,⁷² the most important one was the capital-intensive cement sector.

3.2.2. The beverages sector: Investments triggered by expectations about rising consumer demand

Other than through inter-sectoral demand stimuli going from government spending over the construction sector to building materials, domestic market formation in Angola is supported by a growing consumer demand base or, rather, the anticipation thereof, which attracted foreign and domestic investment, most importantly into beverages production. The beverages sector is one of the few sectors, in which Angola is close to developing export-potential. The boom of beverage production is explained by expectations about a growing consumer demand base in relation to the exogenous increase in export demand. Expectation of a rise in purchasing power as a result of increased oil revenues attracted European and South African multinationals, which now dominate the Angolan market alongside some domestic producers, such as the Angolan market leader in soft-drinks Refriango (Jover, Lopes Pintos, and Marchand 2012).

Disaggregation of investments in food and beverage production (*Table 36*) shows that, in 2011 and 2012, investments came mainly from high income countries, and a the majority of these was for the production of alcoholic beverages (beer and spirits). The largest beer manufacturing plants in Angola are owned by BGI (the beer branch of the French Castel group), with production lines in seven factories and 4,000 employees as of 2012 (Jover, Lopes Pintos, and Marchand 2012). There are also substantial Chinese investments in this sector. For instance, the China International Fund financed Lowenda Brewery produces one million hectolitres of beer (about ten percent of total domestic production) in 2013 and employs 250 Angolan and 170 expatriate workers as of 2014 (MIND 2014b). At the height of the commodity price boom, more multinationals entered the market or

⁷⁰ For instance "Super Gesso" in Kwanza Sul

⁷¹ The ADA steel mill, for instance, started production in late 2015 (Winsor 2016)

⁷² The processing of natural stone (tiles etc.) is one of the few manufacturing sectors in Angola, which has developed an export capacity (MIND 2014a).

expanded their production lines, including SAB Miller and the Portuguese Unicer (Allix 2013; Ferreira and Gonçalves 2009).

Table 36. Manufacturing Sector Investments - Food and Beverages, 2011 and 2012 (constant 2005 USD, thousands)

Code	Description	Angola	Foreign	Total
1554	Soft drinks; production of mineral waters	10,143	3,622	13,764
1553	Malt liquors and malt	23,482	0	23,482
1541	Bakery products	577	0	577
1520	Dairy products	0	547	547
1513	Processing and preserving of fruit and vegetables	0	1,102	1,102
1551	Spirits; ethyl alcohol production from fermented materials	0	157,154	157,154
1544	Macaroni, noodles, couscous and similar farinaceous products	0	3,230	3,230
1511	Meat and meat products	0	663	663
		34,201	165,656	199,857

Source: Agência Nacional para o Investimento Privado

Note: The shaded areas highlight the three largest sub-sectors of investment projects recorded in food and beverages

In response to the rising demand for inputs like bottles and tins, backwardly linked production lines expanded production or set up plants in Angola. The South African tin can producer Nampak Bevcan has set up production in Angola (Allix 2013). Vidrul, an Angolan glass bottle maker which had been nationalised after independence in 1975 and is now controlled by the French Castel Group, rapidly expanded output when beverage companies from China, Lebanon and South Africa started local factories to avoid customs tariffs and is now exporting to other (mainly West-) African countries (McClelland 2014).

Firm level accounts suggest that the investments undertaken in the consumer goods sectors were attracted by the growing consumer demand in the Angolan market. Two examples from the alcoholic beverages industry illustrate this point. Distell, a South African producer of spirits, wines and ciders, who had invested \$3.05 million in Angola in 2008 (according to ANIP data, constant 2005 USD) has acquired land for factories in Angola in 2014 and started production of canned drinks in Angola in 2017. According to Distell's CEO the sharp rise in import tariffs on food and beverages imposed by the Angolan government in 2014 made exports to Angolan market less profitable relative to setting up production in Angola.

“An import model – paying excise and transport costs – can never be as effective or efficient from a pricing standpoint than a locally-owned production and route-to-market business,” (R. Rushton, CEO of Distell, cited in Maritz 2014)

Diageo, a British producer of alcoholic beverages (producing brands like Guinness, Johnnie Walker and Baileys), who had invested \$1.1 million (in 2005 constant terms) in 2012 in its Angolan wholesale activities, aimed to set up production facilities in Angola. The firm intern report on African regional markets considered Angola a key new market for the company's products. Angolan beer consumption per head being at two thirds of UK levels, makes it the largest African market for beer and the third largest market for alcohol in general (Diageo 2013: 7).⁷³

Refriango, the Angolan market leader for soft drinks has even engaged in product innovation to break into Angola's domestic consumer market:

“Through our studies, we found out that there was a strong drive to consume homemade baobab juices. (...) We spent three years developing the best formula. We took a consumer panel along to our research and development labs in Europe to test the juice formula and ensure that it was made to the taste of the original homemade recipe. Tutti Múcua became a successful case study and had a tremendous impact on the market. In three years, this new flavour has sold around 25 million litres.” (Sampaio 2014, CEO Refriango)

Ownership structures in the beverage industry closely follow the dynamics of elite ownership observed for the cement sector and the economy as a whole. For example, the French Castel group, for instance, maintains close ties with the political elites through the MPLA's financial investment company GEFI,⁷⁴ who is a minority shareholder in the Cuca Brewery (Marques de Morais 2012). The former prime minister Lopo do Nascimento still holds 35% stakes in the Castel controlled glass bottle maker Vidrul (Eaglestone Securities 2014).

3.2.3. The political economy of income distribution and wage growth

These examples illustrate that investments in Angola followed the formation of a domestic market for beverages and were realised in expectation of a growing consumer market. To sustain domestic demand growth, however, a more equal income distribution will be crucial, precisely because investments are realised in expectation of growing low and middle income consumer markets.

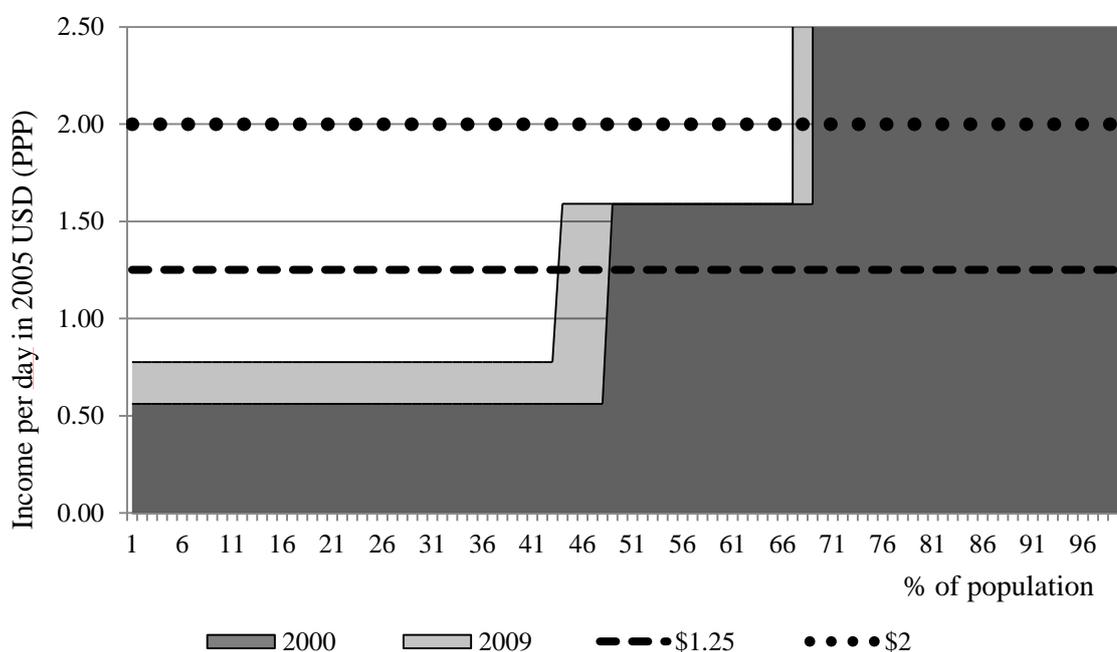
However, so far, progress towards a more equal income distribution has been limited. Available data from the World Bank shows that the share of national income held by the upper 20 percent of the population has decreased from 62 percent in 2000 to 49 percent

⁷³ See also: <http://www.angola.doingbusinessguide.co.uk/market-experts/diageo-angola-limitada/>

⁷⁴ In 1992 the MPLA formally established a business conglomerate GEFI (Sociedade de Gestão e Participações Financeiras: Business Management and Participation Company) which has shareholdings in 64 private companies in all sectors of the economy (Marques de Morais 2012).

in 2009 (calculations based on WB WDI indicators). However it is worth noting that data of this kind is unlikely to accurately capture the share of income held by a small number of individuals at the top of the income distribution. In addition, poverty data reveal that in 2009 around two thirds of the population was still living on less than \$2 a day, only a marginal reduction since 2000. What is more 43 percent of the population still live on less than \$1.25 a day and those who do, have, on average an income of 60 cents a day (*Graph 43*). Given these numbers, it is not surprising that anecdotal evidence suggests that the revised tariff schedule of 2014 which aims to protect domestic production of various processed foods and beverages, puts these products out of reach for those on low incomes, i.e. the majority of the population (Laxmidas 2014).

Graph 43. Prevalence and depth of poverty in Angola 2000 vs. 2009



Calculations based on: World Bank - World Development Indicators

There are some government efforts to support the maintenance and growth of purchasing power. *First*, though there is no value-added tax (VAT) in Angola, however, a consumption tax exists, which is levied on the production and import of goods as well as on the provision of services. The tax rates vary between 2% (basic products) to 30% (luxury products) for the products (PKF Tax Guide 2017). The consumption tax of merely 2% on basic products supports the purchasing power of the lowest income brackets.

Second, in response to decreases in government revenues following the fall in oil prices, the Angolan government has successively eliminated all fuel subsidies except for LPG

and oil for energy production were eliminated by December 2015. Subsidies for electricity and water tariffs were also reduced. Other taxes were raised to move towards a more balanced budget, including a new tax that applies to international payments for foreign services, increased consumption tax on fuels (which was 0% before) and several other goods (such as cars). In addition, in 2016, a banking transaction tax was introduced, charging 0.1 percent of all banking transactions. While the net effect of the subsidy reforms on domestic purchasing power was likely negative, the reforms might indicate a somewhat stronger commitment towards income redistribution, giving up on a fuel subsidy system from which the wealthiest 40% of families benefitted most. To counter negative effects of the fuel subsidy reform for the poor, the government has expanded the Kikuia Card launched in 2013. This programme provides a non-monetary transfer for the purchase of food products, agricultural inputs and other basic goods, allowing each card holder to purchase essential goods worth AKz 10,000 per year. As the main social protection program of the Government, it has been gradually widened, covering nine out of 18 provinces by 2016 and increasing the number of beneficiaries from 51,000 in 2014 to 90,000 in 2016. While the original design aimed at annual payments of AKz 120,000 per year, the budget forecast is consistent only with an annual payment of Akz 10,000. This is equivalent to \$0.24 (in 2011 PPP) per day per household. For a family of three, this amount provides only 2 percent of the consumption needed to reach the poverty line of \$ 1.90 PPP. In addition, the benefit amount has not been adjusted for inflation since 2014, despite a high inflation of 40 percent from January 2014 to April 2016. In 2016, the government actually reduced the amount to Akz 5,000 per year (Pape et al. 2016). All in all, the fact that consumption support was only introduced almost a decade into the commodity boom and soon faced issues in terms of extending coverage and even meeting its original targets, indicates a lack of commitment towards income redistribution that could support the growth in purchasing power over the largest part of the boom period.

Third, the Angolan government pursues a minimum wage policy, the minimum wage being regularly adapted to changes in the price level. The presidential decree 144/4 of June 9th 2013 set the minimum wage to the following values per month: AKz 22,504.50 in extractive industries and trade, AKz 18,754 in transport services and manufacturing and AKz 15,003 in the agricultural sector. The agricultural sector minimum wage has increased from AKz 3,757 in 2003. As of May 2017, the government is discussing increases to the minimum wage with trade unions and entrepreneurs in an effort to maintain purchasing power in the economy in the face of high inflation after the drop in

commodity prices, but has not reached an agreement at the time of writing (Dinheiro Vivo 2017).

Finally, as of March 2016, Angola's social security system covered 1.4 million insured workers. This stands against a workforce of 6.4 million (Dinheiro Vivo 2016). There is no unemployment benefit and even though the government aims at extending social security coverage to 2.2 million by the end of 2017, this would still leave the majority of the workforce without cover.

Research findings from UCAN (2014) indicate that the growth of wages in Angola was above the African average, the Angolan wage index (average over all sectors) increasing by 76% relative to its base in 2002, while the wage index for Africa as a whole increased by merely 17%. However, wage progression is highly uneven across sectors. **Table 37** shows average monthly salaries by sector over the period 2003 to 2010. The national average monthly salary in 2010 was merely 5% of average wages in the oil industry. Wage progression in the manufacturing sector was below the national and oil sector average. In the telecommunications sector and the financial industry, average monthly wages actually decreased since 2007.

A study carried out by the Angolan ministry for public administration, work and social security (MAPTSS) in 2013 surveying 304 public and private firms covering a sample of 38,040 workers points to similar problems of highly uneven wage levels within sectors. Average manufacturing wages in the sampled firms was Akz 91,918.81 suggesting further increases relative to 2010 but they were spread between AKz 10,765 and Akz 1,221,620. With the exception of the telecommunications sector, the lowest wages in all sectors covered by the study were in between Akz 10,000 and Akz 11,000 (UCAN 2014). This was below the minimum wage set by the government.

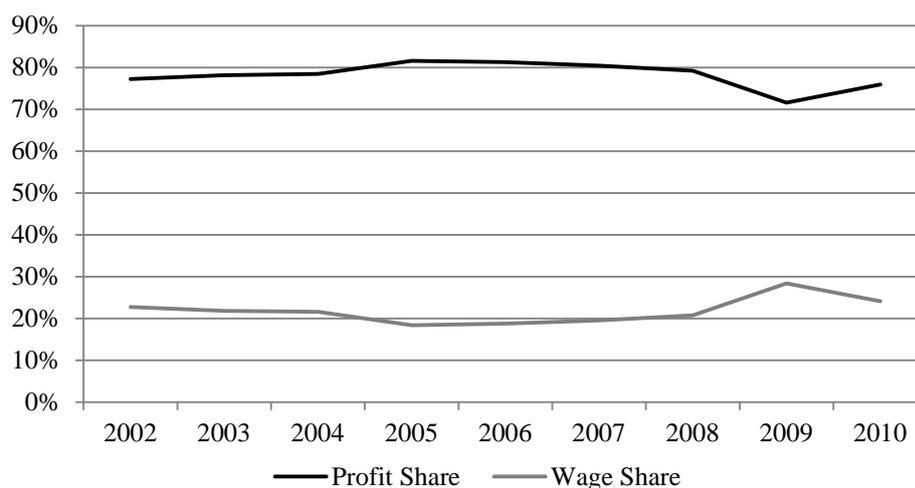
Table 37. Average Monthly Salaries by Sector (in Kwanza)

	National average	Manufacturing	Financial Industry	Telecommunic.	Oil
2003	5,603	9,974	171,469	51,747	144,024
2004	7,526	14,615	211,370	98,849	170,415
2005	10,110	19,106	208,833	118,098	196,931
2006	12,878	24,000	316,750	107,026	271,989
2007	15,592	28,988	340,207	127,169	319,077
2008	20,759	35,874	229,730	107,161	357,645
2009	23,806	38,334	253,706	91,189	432,248
2010	26,117	40,971	270,208	79,787	543,371

Source: UCAN (2014) based on CEIC ficheiro Estudo dos Salários e Remunerações em Angola, com base nas Contas Nacionais 2002-2010.

Labour market outcomes in Angola are subject to a similar process of centralisation of power than the one that occurred in the economy as a whole in the post-independence period and is effectively at the discretion of the ruling party. Trade unions are weak, lacking bargaining power. During the late colonial period, the working class movement never really gained momentum, employment in the productive sectors of the economy having been dominated by white settlers (Bhagavan 1980, see section 2.1.1). Early on the in post-independence period, the power of trade unions was broken, when the MPLA abolished collective management in enterprises and integrated unions within the party structures (Clarence-Smith 1980; see section 2.1.3). As of today, Angola’s main union, the National Union of Angolan Workers (*União Nacional de Trabalhadores Angolanos*, UNTA) is associated to the ruling MPLA party and operates more like an approbation body of government wage policies than a centre of working class action. Independent unions have few members and their political weight is weak. For instance, the independent teachers’ union (*Federação Sindical de Trabalhadores da Educação, Cultura, Desporto e Comunicação Social*, SINPROF) representing just 97 members was labelled ‘unpatriotic’ by UNTA and pushed to call-off their strike in early April 2017 (Africa 21 2017). It is clear that this kind of stance limits the opportunities for improvements to domestic purchasing power within the current political economy setting. Most importantly, despite noticeable wage progression, some efforts to maintain purchasing power and extend the coverage of social security, national accounts data cited in UCAN (2014) suggest that there was no significant increase in the wage share between 2002 and 2010. Although the year 2009 registered a wage share of 28%, this remained an outlier, the wage share oscillating around 22% between 2002 and 2010 (UCAN 2014; **Graph 44**).

Graph 44. Evolution of wage and profit shares in Angola, 2002-2010



Source: UCAN (2014) based on Angolan National Accounts

To understand stagnating wage shares, despite rising wages, it is worth pointing out in the first instance that ownership structures both in the building materials and beverages sector are closely tied to the political centre of power. What is more, government efforts to improve income and wealth distribution are pursued through minimum wage policies, extensions of the rudimentary welfare provision (e.g. through social housing, non-monetary transfers) or a progressive VAT that penalises luxury goods imports, but they do not extend to an active transfer of wealth and income accumulated by the ruling economic and political elite.

Nominally, corporate tax rates in Angola set at 30% are relatively high compared to SSA or even OECD standards. Capital gains by resident companies are included in their taxable income and also taxed at 30%. Capital gains on shares or instruments not subject to industrial tax are taxed at a rate of 10% (PKF Tax Guide 2017). To put these figures into perspective, as of 2016, corporate tax rates in SSA range between 15% in Mauritius and 35% in Chad, Congo-Brazzaville, Equatorial Guinea, Gabon, Guinea and Zambia. The EU average corporate tax rate is 22.5% and the UK rate is 19%.⁷⁵

In practice, however, money laundering and tax evasion is endemic being actively practiced by the Angolan political leadership rather than fought. The recent example of BESA, the Angolan subsidiary of the Portuguese *Banco de Espirito Santo* (BES) illustrates this point. In 2009 BESA sold 24% holdings to the Portmill company, nominally owned by Leonardo Lidinikeni acting as a strawman for the so-called triumvirate of president dos Santos' closest allies, namely vice president Vicente, Gen.

⁷⁵ <https://www.tradingeconomics.com/country-list/corporate-tax-rate?continent=africa>

Helder Vieira Dias Júnior and General Fragoso do Nascimento. Portmill was granted a loan over \$400 million from the Angolan Investment Bank (BAI) to purchase the BESA holding. Auditors found that BESA made loans of \$5 billion or more to ‘unknowns’ including Panamanian-registered companies. These, in turn, are clients of the Geneva based asset management company Akoya. Through Akoya drawing on a complex web of shareholdings and transfers, BAI and BESA funds went back to members of the Angolan government (Quaresma dos Santos 2017).

Quite apart from aggressive money laundering, the Angolan income tax regime is among the least progressive in SSA. Personal income tax is payable on a scale sliding from 0% to 17%, the upper bound being applied for incomes above AKz 230,000 (PKF Tax Guide 2017). This upper bound on income taxes is only lower in Mauritius, the Seychelles and Sudan.

Herein then lies the basic paradox of Angola’s path towards economic diversification. While Angolan elite interests transition from pure rentierism towards capitalist modes of accumulation, the sustainability of this accumulation process depends itself on there being a broad demand base and more equal income distribution in Angola, especially given the role of domestic demand in the current global economic environment. Yet, a more equal distribution of income and wealth, despite figuring nominally in the government’s diversification programme, is not be the prime concern of those who benefit from the diversification process in the first instance.

3.2.4. Agricultural purchasing power and investment

What is more, success in stimulating agricultural investment and sustaining rural purchasing power is so far mixed. According to the 2014 general census, 37.4% of the Angolan population was registered in rural areas against 85% in 1970. The rural exodus has not decelerated after the end of the civil war and reflects an absence of basic services and jobs in rural areas. According to research findings of the centre for scientific investigation at Angola’s catholic university, in 2014, 56% of agricultural households did not benefit from any government support (UCAN 2016).

Only around 16-17% of total arable land in Angola is cultivated. Some basic food staples are produced domestically and some such as manioc satisfy domestic consumption needs. However, 92% of production is carried out in family farms, and therefore to a large extent relies on rudimentary machinery and correspondingly low productivity. This has

ramifications for processing plants. For instance, a rice processing plant in Sanza Pombo (Uige province) built with Chinese technical and financial assistance in 2015 operated at around 8% installed capacity due to insufficient rice production (UCAN 2016). Similarly, the start of production of a newly built tomato concentrate factory in Giraul de Baixo (Namibe) in 2017 has been postponed due to a shortage of tomatoes causing price increases and jeopardising the plant's viability (Macauhub 2016). To take examples from beverage production chain, the glass bottle maker Vidrul uses domestic sand and calcium but imports 45% of its total raw materials, including soda ash from Europe and South Africa (McClelland 2014). The CIF Lowenda brewery imports raw materials like malt from the Czech Republic and Australia (VerAngola 2015).

These indicate situations of excess demand from the point of view of the processing industries caused by insufficient investment in agricultural production that could sustain productivity increases. The lack of or constraints to investment demand from agricultural producers is not entirely surprising when considering that 92% of agricultural producers are small family farms with few resources for investment or access to credit. This illustrates some factors that explain why supply responds to increases in demand within limits.

Creating chains of induced investment demand is one of the objectives of Angolan industrial policy. To incentivise domestic agricultural output growth and the use of domestically produced inputs in food processing, the government has set high tariffs for agricultural and food products, except for the most basic food items like sugar, rice, powdered milk and edible oil. The average rate of 23.3% applied to agricultural products is more than twice the 2005 level; it is also more than twice the 2015 average rate on non-agricultural and non-oil products (9.1%) (WTO 2015). Through this the government aims in particular to promote the domestic production of processed fruit (jams etc.), meat, cereals, coffee, sugar, fish and beverages.

Yet, government efforts to redress and support investment demand in agricultural production have only been partially successful. For instance, the PND 2013-17 aimed at increasing domestic poultry production to a self-sufficient level of 3.5 million tons but production in 2015 had only reached 1.8 million. Angolan life stock production is negatively affected by a lack of vaccines and medication (UCAN 2016). The government engaged in 18 agro-processing projects of large to medium scale, most of them financed with Chinese and Israeli credit lines. Many of these, like the rice processing plant in Sanza Pombo have come under critique for being over scaled and out of touch with the

actual hindrances to agricultural production and the problems of small-scale landholders (UCAN 2016).

A successful example following the broader logic of substituting domestic consumption needs with localised production while building on inter-sectorial linkages include the biofuel company Biocom. While Angola is among the world's top oil producers, refined petroleum products account for more than 5% of total imports in 2012, absolute volumes having increased 37-fold since 2002 (calculations based on UN COMTRADE). Part of the government's efforts to reduce Angola's dependence on fossil fuels is to foster biofuel production out of sugarcane ethanol. A joint venture of the Brazilian construction company Norberto Odebrecht, the Angolan private group Cochan and Sonangol, set up Biocom, a production plant for sugar, sugarcane ethanol and bio-electricity in Angola's Malange province. Initially budgeted for \$200 million, investments by 2015 exceed \$1 billion according to (UCAN 2016). By 2015 the plant operated at merely 10% capacity and the first harvest of sugar in 2015 fell 30% short of projections (UCAN 2016). However, 2017 press releases indicate sugar cane harvests sufficient to reach 30% installed capacity (Macauhub 2017b).

3.2.5. End of the commodity price boom and its implications for manufacturing in Angola

The extent to which the emergence of the manufacturing activities in Angola was favoured by the rise in mainly Chinese export demand becomes clear in light of the recent drop in oil prices, which leads to reductions in government spending on infrastructure and strains domestic purchasing power given reductions in fuel subsidies and inflationary pressures due to the weak Kwanza. The average price for Angolan crude oil fell from \$108 per barrel in 2013 to \$97 in 2014 and \$50 in 2015. Total revenues from oil and gas fell from a height of \$69.7 billion in 2013 to \$57 billion in 2014 further reducing to \$31.9 billion in 2015. This had important negative follow on effects on the exchange rate, consumer and producer price inflation, and government spending (IMF 2016).

The Angolan exchange rate devalued from 91.9 Angolan Kwanza per US Dollar in 2010 to 119.7 in 2015. The rising costs of imports translated into higher rising consumer and producer price inflation. Consumer price inflation increased from 7.3% in 2014 to a projected 33% in 2016 and disproportionately strained the purchasing power of poor households. Producer prices increased at a rate of 6% in 2014 and 11.3% over 2015 (IMF 2016).

Although the economy started to diversify and non-oil tax revenues increased between 2010 and 2014 (IMF 2015), this was not enough to compensate for the reduction in oil revenues. Oil exports accounted for 98% of total Angolan exports and 67% of government revenues in 2014. Total government expenditure as % of GDP dropped from 41.9% in 2014 to 30.6% of GDP in 2015. The level of government spending fell by 30.5% between 2013 and 2015 reducing from Akz 4,849 billion to Akz 3,367 billion. The fall in government revenues slowed down the execution of key infrastructure projects (IMF 2016).

Against this context of contracting consumption and government spending coupled with rising input costs, firms in the beverages and building materials sector reacted with reductions in capacity utilisation and laying off workers. A Lebanese construction materials producer, for instance, said to branch out of building materials into juice production given the shrinking demand for building materials (McClelland 2014).

“We are in the construction materials business but we see it decreasing every year and taxes have gone up.” (Ali Tarraf, president of Lebanon-based TAHS Industria Lda. Cited in McClelland 2014)

In 2016 sales forecasts of the Angolan Cement Association were 35% lower than sales figures in 2014 (International Cement Review 2016). Similarly, the Secil Lobito plant has reported a year-on-year drop in sales volumes of cement of 25% in 2016, attributed mainly to difficulties in obtaining foreign currencies to import raw material (clinker) and rising fuel and electricity costs (Global Cement News 2016).

Beverage producers are also reducing production and lay off workers in light of shrinking consumer demand. The Castel Group, for instance, laid off 700 workers early in 2016 and is operating at 3 instead of 5 production lines while Distell had postponed planned expansions of production (Business France 2016a; Business France 2016b) though resuming investments and production in 2017 (Macauhub 2017a).

Sonangol Industrial Investments (SIIND), created to manage projects begun by the *Gabinete de Reconstrução Nacional*, supported investments for the manufacturing of components for the Angolan oil and gas industry, examples including Angoflex Ltd, a joint venture between Sonangol and France’s Technip manufacturing deepwater steel-tube umbilicals; Cariongo an Angolan supplier of oil and gas components such as gaskets, fittings and valves as well as various investments in the Luanda-Bengo special economic zone. While achieving some noticeable developmental outcomes including the creation of about 3,600 new jobs, this did not gain as much momentum as expected given that,

projections aimed at the creation of 14,000 jobs and what is more, the SIIND programme was deprioritised after the oil price shock (Ovadia 2017).

CONCLUSIONS

This chapter has investigated the extent to which the export demand stimulus coming from China has facilitated manufacturing output growth in Angola through the demand side. The starting point for the chapter was a parametric estimation of Angola's balance of payments consistent growth rate, which provides a useful empirical tool to estimate the *potential* growth rate consistent with a given set of exports and imports and to trace the effects of changing trade partners or changing compositions of exports on this potential growth rate. Using a multi-country specification, this was done to quantify the extent to which increases in the levels of demand from China has relaxed Angola's balance of payments constraint.

In the Angolan case, export demand spilled over into domestic manufacturing investment through increases in government spending and entrepreneurial expectations. So, China contributed to the formation of a domestic market for manufacturing goods in two significant ways. *Firstly*, up until the drop in oil prices in 2015, growing Chinese demand for Angolan oil increased per capita income, which, in turn, spurred expectations about rising levels of consumer demand. This can, for instance, be observed in the Angola's beverage industry where multinational companies expanded installed capacity as a result of the economic boom triggered by rising oil prices. Industries backwardly linked to agro-processing activities like can and glass bottle producers even started to export to other SSA countries. *Secondly*, rising export earnings sustained high levels in government spending on infrastructure. Mainly carried out by Chinese contractors, infrastructure development, in turn, created a profitable market for building materials. The case of cement illustrates this pattern of linkage formation between the construction and the manufacturing sector Angola emerging as SSA's third largest cement producer after Nigeria, and Ethiopia.

While the two sectors studied in this chapter emerge in response to an external demand stimulus, estimations of Angola's balance of payments consistent growth also reveal that actual growth remained below potential. The cases of the building materials and beverages sector revealed a number of obstacles to the growth demand located at the political economy and policy level. Demand-side policies have been critical for the emergence of some manufacturing activities while practically absent in others.

Fiscal policy in the form of housing and infrastructure development was, in particular, critical for the emergence of building materials manufacturing. These patterns of government spending need to be seen against the critical junction of the end of the 27 year long Angolan civil war. With the elimination of UNITA (*União Nacional para a Independência Total de Angola*) military resistance to the hegemony of the ruling party MPLA (*Movimento Popular de Libertação de Angola*) ended and the ruling elites around president dos Santos were looking for new ways to consolidate their political and economic domination, including through large-scale infrastructure reconstruction demonstrating the government's ability to deliver basic services. While this creates a profitable market for building materials, investments in the cement sector are controlled by circles close to the president's family and political allies. More generally, Angolan capital being highly concentrated in the hand of few, linkage formation between the construction and the manufacturing sector remained to a large extent limited to the capital-intensive cement sector.

More generally, within the Angolan post-Civil war political economy setting, all new business opportunities are tightly controlled by concentric circles around the presidency. This even applies to sectors dominated by foreign multinationals like the beverage industries, where political elites maintain minority shares or foreign multinationals maintain close ties with the political elites through the MPLA's financial investment company GEFI. This makes any venture's material success entirely dependent on support for the ruling party but also serves to increase the wealth and power of the ruling elites. Within this post-Civil war political economy setting we can also explain the relative absence of demand-side support relevant in particular for the emerging consumer goods sectors. With the increase in profitable markets for foods and beverages and building materials, Angolan elite interests transition from pure rentierism towards capitalist modes of accumulation. However, the sustainability of this accumulation process depends itself on there being a broad demand base for consumer goods and, by extension, a more equal income distribution in Angola. Yet, redistributive policies, despite figuring nominally in the government's diversification programme, were not consistently pursued by the government and fell short of what was intended and required. What is more, Angola's agro-processing sector suffers from input constraints due to low agricultural productivity and output. But government policy was neither successful in raising agricultural purchasing power nor in facilitating investment in agricultural production.

GENERAL CONCLUSIONS

This thesis has investigated how economic ties with China have affected patterns of manufacturing sector development in sub-Saharan Africa with specific focus on demand-side dynamics and the case of Angola between 2000 and 2014. Specifically, the thesis addressed two key research questions. *Firstly*, through which channels do Sino-African economic ties affect the demand-side dynamics of industrial development in SSA? *Secondly*, did domestic policy mediate China-related demand-side stimuli in a way that facilitated domestic market formation and, if so, how and why?

Chapter 1 has laid out the reasons for looking at demand as a potential constraint to industrial output growth and why, specifically, China's growing ties with SSA economies and its presence on world markets might have significant bearing on demand-side dynamics in SSA economies, in particular at a time when systematic deflationary pressures in rich countries, linked to the increasing financialisation of their economies, create tighter export markets for SSA producers looking to integrate the world market. Overall, there has been little discussion of such systemic pressures in research on industrial development and policy in the context of sub-Saharan Africa as such research often starts from the premise of unlimited export markets. Correspondingly, discussion of macroeconomic policy in support of industrial development is generally confined to questions of exchange rate management and inflation targeting.

To contribute to filling these gaps in research, chapter 1 has proposed a framework of demand-side constraints relevant for industrial development, which starts from Hirschman's distinction between autonomous and induced investment demand and distinguish between a Keynesian and a Kaldorian demand constraint on industrial output growth. The Keynesian-type constrained is concerned with entrepreneurial expectations about the level of aggregate demand, which drive investment decisions and hence output growth. The Kaldorian demand constraint, on the other hand, refers to induced investment demand along backwardly linked production chains, i.e. the phenomenon whereby expansion in one sector triggers demand for investments in other sectors, which supply inputs for it. These backward linkages constitute an in-built investment multiplier process that does not require anticipation of demand in the Keynesian sense. However, backwardly-linked industries can still face demand constraints to the extent that there are differences in growth rates along the demand chain.

Export demand is of special importance for developing economies in that it links the Keynesian and Kaldorian type of demand problems. As a component of aggregate demand, export demand affects entrepreneurial expectations in the Keynesian sense, while export earnings determine a country's ability to pay for the (capital good) imports necessary to maintain and expand domestic production. What requires explanation is not just the level of export demand and earnings, but how exogenous increases in export demand spill over into domestic consumer and investment demand.

Indeed, in terms of macroeconomic policy in support of industrial development, chapter 1 has argued that policy has to support the growth of autonomous demand. Particularly important in this respect are measures favouring a more equal functional and personal distribution of income such as progressive income and corporation tax regimes, measures increasing the disposable income of households such as consumption subsidies or social housing development, measures encouraging investment in labour absorbing activities as well as government spending itself whether in the form of direct procurement of manufacturing output or investment into productive facilities. Chains of induced investment demand could be supported by government spending in sectors backwardly or forwardly linked to manufacturing such as agriculture and construction.

Conceiving exports through two linked but distinct demand constraints on manufacturing output, helps narrowing down the implications of the changing global demand context, which SSA economies have faced since the early 2000s as a result of China's systemic weight on global demand and supply as well as the broader deflationary tendencies linked to financialisation. Chapter 2 argued that China shapes the global demand context for SSA economies in a specific way. On the one hand, between the turn of the century and the drop in commodity prices in 2015, manufacturing sector growth in many SSA countries was not actually constrained by the volume of export earnings. On aggregate, SSA's real export earnings expressed in 2005 dollars have increased from \$76 billion in 2000 to \$190 billion in 2014, and actually exceeded real imports over the entire period. At the same time, export markets served less and less as outlets for manufacturing products due to the conjunction of systemically deficient demand at the global level (itself linked to financialisation) and growing supply capacity across the developing world, not least in China. In real terms (constant 2005 USD), total SSA consumer goods exports fell from \$3.6 billion in 2002 to \$2.2 billion in 2014. This was mainly due to a reduction in SSA exporters' market shares in OECD markets for apparel and knitted

fabrics. Econometric and case study evidence suggests that SSA manufacturing exports in this and other sectors have been displaced by Chinese exports in particular.

Chapter 2 has argued that, against this background, the mobilisation of domestic sources of demand for manufacturing outlets is a key challenge of late-industrialisation in SSA. China's specific mode of engagement with SSA economies has the potential to support domestic market formation because of its focus on construction activities which are labour absorbing and can induce investment demand in the real economy. In that sense, China's engagement with SSA can constitute a counterweight to the consequences of financialisation. However, the question remains to what extent this has been supported by SSA countries' domestic macroeconomic policy measures along the lines outlined above.

In addition, chapter 2 has investigated a number of channels through which economic engagement with China can support productivity growth in African manufacturing activities, including the long-term oriented and market seeking nature of Chinese investments which have been shown to be productivity enhancing in various contexts, the price of Chinese capital goods and Chinese infrastructure development. Chapter 2 has further concluded that these China effects cannot be analysed in isolation from domestic policy mediation and the size and composition of these effects varies considerably across different countries.

To investigate these dynamics empirically, this thesis relied on a case study of Angola to trace the conjunction of global forces and domestic dynamics. In addition, it proposed cluster analysis to bridge some of the limitations associated to case study research in particular with respect to the generalisability of findings. The cluster was constructed to find groups of SSA countries with distinct China-related demand-side patterns. The results of the cluster analysis were used to inform the choice of case study and to situate the case with respect to other cases so as to enhance the generalisability of the conclusions drawn from the case.

Based on the cluster analysis, Angola was identified as a critical case: it falls into the group of cases in which China related demand side effects on structural change are most likely to occur and, within that group, it has realised the highest rate of manufacturing output growth. In fact, between 1996-2000 and 2013 manufacturing output per capita in Angola has more than trebled. At the same time, manufacturing output growth in Angola does not appear to constitute profound structural transformation. While growing, the manufacturing sector's share of total real output remains small with manufacturing accounting for 5.9% of real GDP in 2013, compared to 3.7% of GDP in 2000. In terms of

real manufacturing output per capita, the Angolan manufacturing sector still lags significantly behind SSA leaders, such as Mauritius, Seychelles, Swaziland, Namibia and Botswana. What is more, while manufacturing employment has nearly doubled between 2002 and 2015, it still constitutes only 1.6% of total employment in 2015, roughly on par with the employment generated by the oil industry that same year. This suggests that the Angolan manufacturing sector is not particularly labour absorbing and that, despite growing at rates above SSA average, it faces many bottlenecks.

Given these characteristics, the Angolan case was chosen to uncover the extent to which manufacturing output growth was supported by spill-over effects from Chinese export demand, what role policy played in promoting such spill-overs and which factors slow down investment spill-overs.

Findings from the Angolan case

Even though the Angolan manufacturing sector remains in the shadow of the country's vast mining sector, high rates of manufacturing output growth indicate some progress towards structural change. Interestingly, the two main industries, building materials and beverages production, both emerged in response to an increase in domestic demand. As such, the Angolan case illustrates well what drives domestic market formation, China's potential impact on it and the fragility of the process as it faces both the vicissitudes of global economic cycles and domestic political economy dynamics.

In relation to the first research question – through which channels do Sino-African economic ties affect the demand-side dynamics of industrial development in SSA – the Angolan case reveals a number of important implications of Chinese export demand and Chinese-financed infrastructure development on domestic demand-side dynamics.

Firstly, economic ties with China provided Angola with an important export demand stimulus. Chapter 4 measured the extent of this stimulus by estimating Angola's balance of payments consistent growth rate over the period 1990-2000 and 2001-2012. The results suggest an increase in the growth rate consistent with a balanced current account from 7.4% in the period 1990-2000 to 15.8% in the period 2001-2012. The increasingly important role China plays as a destination for Angolan exports – with 31% of exports in 2001-2012 going to China, compared to 6% in 1990-2000 – had the biggest positive effect on Angola's balance of payments consistent growth potential. On its own, this would have allowed the balance of payments consistent growth rate to increase by 9.3%.

Secondly, the export demand stimulus experienced by Angola favoured the formation of (some) domestic markets. In the beverages industry, rising per capita incomes (though remaining to a large extent a statistical artefact) fuelled expectations of growing consumer demand and, in combination with tariff policies, incentivised multinational companies to set up production in Angola. Firm level accounts suggest that investments by multinational beverage producers in Angola were driven by the anticipation of dynamic growth of the Angolan market. Some chains of induced investment did form from there, notably in glass bottle and tin production. In the building materials sector, on the other hand, chains of induced investment formed as a result of government spending on infrastructure which was financed by increased export earnings, especially those tied-into Chinese Contracted Overseas Projects.

Thirdly, both sectors remained vulnerable to the drop in oil prices in 2015. As much as booming prices of raw materials were an important catalyst for the development of Angola's manufacturing sector, their collapse constituted a major source of fragility to the diversification process. The devaluation of the Kwanza from 91.9 Kwanza per US Dollar in 2010 to 119.7 in 2015 made imports more expensive and resulted in substantial consumer and producer price inflation. This, in turn, led to further contractions of aggregate demand while also increasing production costs. Consumer price inflation increased from 7.3% in 2014 to a projected 33% in 2016 and disproportionately strained the purchasing power of poor households. Similarly, the fall in government revenues slowed down the execution of key infrastructure projects and building materials producers have consequently reported sluggish demand growth. Although the economy started to diversify and non-oil tax revenues increased between 2010 and 2014, this was not enough to compensate for the reduction in oil revenues starting from mid-2014. Total government revenues fell by 30% between 2013 and 2015 and total government expenditure was reduced from 40.5% of GDP in 2013 to 30.6% of GDP in 2015. These contractions in aggregate demand were compounded by increases in production costs due to more expensive inputs: producer prices increased at a rate of 6% in 2014 and 11.3% in 2015. Both building materials and beverage producers have reduced capacity utilisation, postponed planned investments and laid off workers due to this combination of rising production costs coupled with decreasing consumer and government demand.

In relation to the second research question – did domestic policy mediate China-related demand-side stimuli in a way that facilitated domestic market formation and, if so, how and why – the findings from chapter 4 suggest that Angola's actual growth rates have

remained below the potential consistent with a balanced current account. Manufacturing activities face many problems, not least in terms of maintaining a growing consumer and intersectoral demand base. Domestic policy has facilitated the emergence of Angola's manufacturing industries and macroeconomic policy has acted in support of the building materials sector but less so in support of the beverages sector.

Firstly, economic diversification became the focus of Angolan policy in the mid-2000s, and manufacturing sector investment has been supported by various policy measures, including investment incentives for strategic key sectors, direct subsidies for manufacturing firms, industrial infrastructure development, credit guarantees and support for skills development through technical and vocational training centres. Angolan industrial policy, as stated in a number of policy documents and strategies through the years, aims at satisfying domestic consumption needs and reducing the country's export dependence on oil. It recognises that increases in purchasing power and well-functioning intersectoral linkages are essential factors in the creation of a sustained industrial base. However, one of its critical problems is the slow translation of macro-level objectives and plans into concrete actions.

Secondly, fiscal policy in the form of housing and infrastructure development was critical for the emergence of building materials manufacturing. The level and type of government spending occurring in Angola and its strong focus on infrastructure development need to be understood in domestic political context after the civil war, when the ruling party tried to consolidate its power by demonstrating its ability to deliver basic services and post-war reconstruction. Facing the oil price drop since mid-2014 as well as dwindling government revenues, one of the key questions for the Angolan building materials sector is how the government can mobilise alternative sources of finance (e.g. development finance, Angola's own Sovereign Wealth Fund) to maintain government spending and avoid a deflationary spiral.

The post-independence power structures also had implications for the type of investment promoted. As Angolan capital is highly concentrated in the hands of few, domestic manufacturing sector investment, especially in the building materials sector, was predominately capital-intensive, large-scale and overall not very labour absorbing.

Thirdly, the Angolan government pursued some policy efforts in support of consumer demand, including a progressive consumption tax, a minimum wage policy and consumption support through the Kikuia Card programme which allows holders to purchase basic goods worth up to Akz 10,000 annually. However, neither the personal

nor the functional distribution of income has improved substantially since the end of the civil war. Poverty data reveal that, in 2009, around two thirds of the population still lived on less than \$2 a day, only a marginal reduction since 2000. What is more, 43% of the population still live on less than \$1.25 a day and those who do have, on average, an income of 60 cents a day. Furthermore, there was no significant increase in the wage share between 2002 and 2010 with the wage share oscillating around 22%.

To understand why this is the case requires disentangling the wider political economy dynamics in Angola. After independence in 1975, the Angolan economy collapsed due to a combination of factors that include the exodus of Portuguese settlers, unfavourable commodity price movements and the ongoing civil war that lasted from 1975 to 2002. The collapse of production and subsequent emergence of a parallel economy disproportionately favoured the assimilated elites and workers in the oil sector thereby substantially amplifying inequality which had been structurally engrained in the late colonial period. What is more, political power was increasingly centralised around the president and economic and political power conflated in the hands of the elites.

Against this background, redistributive efforts have not been pursued consistently. For instance, the Kikuia Card programme was only launched in 2013 replacing a much more regressive system of fuel subsidies, of which richer households were the main beneficiaries. In other words, consumption support was only introduced a decade into the commodity price boom and the programme soon faced challenges in extending coverage because of falling oil prices and government revenues. What is more, the Angolan income tax regime is among the least progressive in SSA, with an upper bound fixed at 17%. Also, while the corporate tax rate is set at 30%, money laundering and capital flight are not systematically prosecuted and, in fact, actively pursued by the incumbent political leadership. The case of the activities of BESA, the Angolan subsidiary of the Portuguese Banco Espírito Santo provides one among other examples for this.

What is more, Angola's agro-processing sector suffers from input constraints due to low agricultural productivity and government policy was neither successful in raising agricultural purchasing power nor in facilitating investment in agricultural production. Despite government efforts to promote production, only 16% of arable land is cultivated and 92% of agricultural production is carried out on small family farms with outdated technology.

Thus, overall, the case study of Angola shows that, in this case of a resource rich SSA country, Chinese demand for raw material imports has opened up a window of

opportunity for manufacturing sector development, and that, indeed, there has been growth in manufacturing, especially in the production of construction materials and beverages. Investments in these sectors have been induced through increases in government funded construction activity, in particular through Chinese-financed Contracted Overseas Projects, and an expectation of rising consumer demand respectively. However, despite active policies in support of manufacturing sector development, the case study has also revealed the limitations and underlying fragility of the nascent manufacturing sector development in Angola. Falls in oil prices have led to a reduction in government expenditure in construction projects and government policy is not well suited to sustain a broad based demand for domestically produced consumer goods. In particular, redistributive policies are among the least progressive in SSA, while investments in the building materials sector are driven by a narrow capital-rich elite around the President, resulting in a focus on capital-heavy and only poorly labour absorbing investments such as in cement production, which further limits the degree to which Angola can turn export income into sustainable structural change.

Main contributions

This thesis has made a number of contributions to the academic debate on industrial development in SSA as well as the impact of China's economic development on other developing countries.

Firstly, the thesis contributes to the ongoing debate through which channels China's systemic impact on the world economy and growing presence in SSA countries affects the prospects of structural change in SSA countries. The discussion on Angola in this thesis illustrates that these influences act not just on the supply side but also on the demand side by supporting domestic market formation. Chinese export demand for raw materials and Chinese-induced demand chains are important factors explaining output growth in Angola's two main manufacturing industries, beverages and building materials.

On the theoretical level, investment patterns in Angolan manufacturing activities show that demand matters for the emergence of manufacturing activities. Exogenous increases in export demand partially explain the emergence of the country's two main manufacturing industries. However, the relationship to domestic investment is neither a direct nor a uniform one. Taken together, this suggests that different types of demand-side problems need to be understood in relation to one another, specifically contractions or expansions of external and domestic demand, those linked to changing entrepreneurial expectations and those linked to chains of induced investment demand. Supply, in turn,

relies on targeted support in the form of subsidies and tariff protection to respond to demand-side stimuli. The Angolan cement sector, for instance, received both government subsidies and tariff protection.

The relationship between export demand and domestic investment in manufacturing uncovered in this thesis is, of course, specific to the Angolan case and could play out differently elsewhere. In other cases, the relationship could run from endogenous growth in export capacity to growth in exports. Yet, the patterns of exogenous increases in export demand and cycles of booms and bust observed in Angola are nonetheless emblematic for many resource-rich developing economies. Within this context, chains of induced investment demand are both a source of dynamic manufacturing output growth and a source of vulnerability given the difficulty to build supply capacity along the whole demand chain and therefore the susceptibility of manufacturing output growth to exogenous shocks and to import capacity. This does, nevertheless, suggest that, in resource rich countries, there can be more or less prolonged windows of opportunity to pursue efforts to diversify the economy to the extent that the political economy setting allows for it.

Secondly, the thesis contributes to the discussion about priorities for industrial policy within the new global economic setting. On the one hand, the case of Angola illustrates the problematic nature of the policy recommendations linked to the flying geese paradigm along the lines of labour market deregulations and wage moderation because these are likely to undercut vital sources of domestic purchasing power. On the other hand, and in extension to the resource based diversification paradigm, the growth of demand can be influenced through government policy. Importantly, government demand-side stimuli are not limited to manipulations of the real exchange rate. Increased cement production in Angola, for instance, can be explained by demand induced from government spending on housing and infrastructure.

At the same time, whether there is sufficient political support for a strategy of growing demand through this kind of policy is in no way self-evident and varies across sectors. Patterns of fiscal spending, labour market and redistributive policies are all tightly linked to the distribution of income and, by extension, distributional conflicts. In particular, in the Angolan case, demand was an important driver of investment decisions of non-Chinese sources of investment in beverage production. Nevertheless, the growth of demand for these products was not supported by coherent redistributive policies. In the absence of such support, the demand base remained vulnerable to external shocks such as

the 2015 collapse in oil prices and resulting increases in domestic inflation. Taken together, this suggests that the extent to which and the reasons why demand growth is supported or not by domestic policy are important explanatory elements for understanding patterns of expansion and stagnation of manufacturing production in developing economies.

Thirdly, this thesis contributes to research on the Angolan economy and in particular its manufacturing sector, the last academic investigation of which covers the period 1975 to 1999.

Fourthly, on the methodological level, the dynamics uncovered in the Angolan case are one of many stories and likely to play out differently depending on the size/ composition of China-related effects, mediation by domestic policy making and other external influences shaping economic activity. To account for this, this thesis has used cluster analysis to situate different groups of cases and provide a starting point for comparison of country specific factors.

Angola is a case in point for an early stage industrialisation process driven by a combination of an external, in this case resource-driven, income boost and domestic market formation. As documented in chapter 2, expanding building materials and basic consumer goods production is by no means a phenomenon limited to the Angolan economy. In the Angolan case, the China-related demand-side effects which supported domestic market formation were among the strongest across sub-Saharan Africa. Only Congo-Brazzaville and Mauritania show similar patterns in terms of export demand and Chinese contracted projects relative to GDP. Within this group, Angola is the largest country in terms of population and hence in terms of potential market size. At the same time, Angola is also among the most unequal economies in terms of income and wealth. Angola never underwent structural adjustment programmes but nonetheless suffers from high levels of inequality ultimately explained by the specific colonial history and post-colonial dynamics in the wider context of the cold war. High levels of inequality, in turn, have affected purchasing power and also the types of investment conducted.

Main limitations and future research needs

While this thesis has made a number of contributions, as outlined above, it has also revealed a number of unknowns. In particular, this research was greatly restricted by the availability of macro-level and sector level data on output, investment, employment and wages. Data cited in this work are subject to considerable margins of error and generally

serve to illustrate broad trends only. Nonetheless the macro-level and sector-level evidence presented here lays the foundations and opens up questions for consideration in further fieldwork-based research. Such research can further substantiate the role of demand as a driver of long-run output growth in the context of sub-Saharan Africa along several lines. *Firstly*, qualitative research of key firms in the building materials and beverages sector could explore how firm-level processes both cause and respond to aggregate or sector-level demand growth. *Secondly*, further research is needed to uncover societal dynamics in greater detail, in particular distributional conflicts occurring in the growth process and the extent to which these affect the spending behaviour of different social classes and the state. *Thirdly*, further research gaps remain regarding the determinants of government policy and in particular government spending and the extent to which these are shaped by external actors and domestic constituencies.

The second major limitation of this thesis is that it only investigates one case. Chapter 3 has argued that induction from case studies depends, among other things, on the investigation of a large number of cases in which the explanatory factor is present to check whether and under which conditions it has the predicted effect. This was beyond the scope of this research but suggests that to further substantiate the extent to which demand acts as a driver of long-run output growth in the developing country context would require not just a more intensive investigation of the Angolan case but also more extensive research on other cases.

BIBLIOGRAPHY

- Abebe, Girum, and Florian Schaefer. 2015. 'Review of Industrial Policies in Ethiopia: A Perspective from the Leather and Cut Flower Industries'. In *Industrial Policy and Economic Transformation in Africa*, edited by Akbar Noman and Joseph E. Stiglitz, 123–61. Columbia University Press. <http://www.jstor.org/stable/10.7312/noma17518.9>.
- Adolph, Christopher, Vanessa Quince, and Aseem Prakash. 2017. 'The Shanghai Effect: Do Exports to China Affect Labor Practices in Africa?' *World Development* 89 (January): 1–18. doi:10.1016/j.worlddev.2016.05.009.
- Africa 21. 2017. 'Governo Angolano E Central Sindical Do MPLA Pressionam Para Evitar Greve de Professores'. *Africa 21 Digital*, January 4. <https://africa21digital.com/2017/04/01/governo-angolano-e-central-sindical-do-mpla-pressionam-para-evitar-greve-de-professores/>.
- Africa Confidential. 2009. 'The Cement Boom'. *Africa Confidential*, May 29, Volume 50 No. 11 edition, sec. Economy.
- Agénor, Pierre-Richard. 2010. 'A Theory of Infrastructure-Led Development'. *Journal of Economic Dynamics and Control* 34 (5): 932–50. doi:10.1016/j.jedc.2010.01.009.
- Aguilar, Renato. 2001. 'Angola's Incomplete Transition'. Discussion Paper No. 2001/47. Gothenburg University: UNU-WIDER.
- Agyei-Holmes, Andrew. 2016. 'Tilling the Soil in Tanzania: What Do Emerging Economies Have to Offer?' *The European Journal of Development Research* 28 (3): 379–96. doi:10.1057/ejdr.2016.14.
- Akamatsu, Kaname. 1962. 'A Historical Pattern of Economic Growth in Developing Countries'. *The Developing Economies* 1: 3–25.
- Akorsu, Angela Dziedzom, and Fang Lee Cooke. 2011. 'Labour Standards Application among Chinese and Indian Firms in Ghana: Typical or Atypical?' *The International Journal of Human Resource Management* 22 (13): 2730–48. doi:10.1080/09585192.2011.599941.
- Akyüz, Yilmaz. 2009. 'Industrial Tariffs, International Trade, and Development'. In *Industrial Policy and Development: The Political Economy of Capabilities Accumulation*, by Mario Cimoli, Giovanni Dosi, and Joseph E. Stiglitz, 144–74. New York and Oxford: Oxford University Press.
- Alencar, Douglas Alcantara, and Eduardo Strachman. 2014. 'Balance-of-Payments-Constrained Growth in Brazil: 1951-2008'. *Journal of Post Keynesian Economics* 36 (4): 673–97.
- Alesina, Alberto, and Sylvia Ardagna. 2010. 'Large Changes in Fiscal Policy: Taxes versus Spending'. In *Tax Policy and the Economy*, edited by Jeffrey R. Brown, 35–68. Chicago: Chicago University Press. <http://www.nber.org/books/brow09-1>.
- Allix, Mark. 2013. 'The Good Times and Tough Times of Doing Business in Angola'. *BDLive*, July 31, sec. African Business. <http://www.bdlive.co.za/africa/africanbusiness/2013/07/31/the-good-times-and-tough-times-of-doing-business-in-angola>.
- Alonso, José Antonio. 1999. 'Growth and the External Constraint: Lessons from the Spanish Case.' *Applied Economics* 31 (2): 245–53.
- Amighini, Alessia, and Marco Sanfilippo. 2014. 'Impact of South–South FDI and Trade on the Export Upgrading of African Economies'. *World Development* 64: 1–17. doi:10.1016/j.worlddev.2014.05.021.
- Amnesty International. 2016. 'This Is What We Die for: Human Rights Abuses in the Democratic Republic of the Congo Power the Global Trade in Cobalt'. London: Amnesty International.

https://www.amnestyusa.org/sites/default/files/this_what_we_die_for_-_report.pdf.

- Amoako, K. Y. 2011. 'Growth Identification and Facilitation: The Role of the State in the Dynamics of Structural Change: Comment'. *Development Policy Review* 29 (3): 295–97.
- Amsden, Alice H. 1989. *Asia's next Giant: South Korea and Late Industrialization*. Oxford and New York: Oxford University Press.
- . 1990. 'Third World Industrialization: "Global Fordism" or a New Model?' *New Left Review* 182 (July-August): 5–31.
- . 2001. *The Rise of the 'Rest' - Challenges to the West from Late-Industrializing Economies*. New York and Oxford: Oxford University Press.
- . 2011. 'Growth Identification and Facilitation: The Role of the State in the Dynamics of Structural Change: Comment'. *Development Policy Review* 29 (3): 292–94.
- Ansari, M., N. Hashemzadeh, and Y. Xi. 2000. 'The Chronicle of Economic Growth in Southeast Asian Countries: Does Thirlwall's Law Provide An Adequate Explanation?' *Journal of Post Keynesian Economics* 22 (4): 573–88.
- Ansu, Yaw, and Jee-Peng Tan. 2012. 'Skills Development for Economic Growth in Sub-Saharan Africa: A Pragmatic Perspective'. In *Good Growth and Governance in Africa: Rethinking Development Strategies*, 462–95. Oxford: Oxford University Press.
- Araújo, Eliane, Miguel Bruno, and Débora Pimentel. 2012. 'Financialization against Industrialization: A Regulationist Approach of the Brazilian Paradox'. *Revue de La Régulation Capitalisme, Institutions, Pouvoirs* 11 (1er semestre).
- Araujo, Ricardo Azevedo, and Gilberto Tadeu Lima. 2007. 'A Structural Economic Dynamics Approach to Balance-of-Payments-Constrained Growth'. *Cambridge Journal of Economics* 31 (5): 755–74.
- Argyrous, George. 2002. 'Endogenous Demand in the Theory of Transformational Growth'. In *The Economics of Demand-Led Growth: Challenging the Supply-Side Vision of the Long Run*, edited by Mark Setterfield, 237–50. Cheltenham (U.K.) and Northampton (Mass.): Edward Elgar.
- Armstrong, Thomas, Muriel Bal, Peter Bell, Jolyne Fernandes, and Suzanne Starbuck, eds. 2015. *The Global Cement Report*. 11th ed. Dorking: Tradeship Publications Ltd.
- Arrighi, Giovanni. 2002. 'The African Crisis - World Systemic and Regional Aspects'. *New Left Review* 15 (May-June): 5–36.
- Aryeetey, Ernest, and Nelipher Moyo. 2012. 'Industrialisation for Structural Transformation in Africa: Appropriate Roles for the State'. *Journal of African Economies* 21: ii55–85.
- Astorga, Rodrigo, Mario Cimoli, and Gabriel Porcile. 2014. 'The Role of Industrial and Exchange Rate Policies in Promoting Structural Change, Productivity and Employment'. In *Transforming Economies*, edited by José Manuel Salazar-Xirinachs, Irmgard Nübler, and Richard Kozul-Wright, 79–111. Geneva: International Labour Office.
- Atta-Ankomah, Richmond. 2016. 'Chinese Technologies and Pro-Poor Industrialisation in Sub-Saharan Africa: The Case of Furniture Manufacturing in Kenya'. *The European Journal of Development Research* 28 (3): 397–413. doi:10.1057/ejdr.2016.15.
- Baah, Anthony Yaw, and Herbert Jauch. 2009. 'Chinese Investments in Africa: A Labour Perspective'. In . Accra and Windhoek: African Labour Research Network.
- Bagnai, Alberto, Arsène Rieber, and Thi Anh-Dao Tran. 2012. 'Generalized Balance of Payments Constrained Growth and South-South Trade in Sub-Saharan Africa'. In

- Models of Balance of Payments Constrained Growth - History, Theory and Empirical Evidence*, edited by Elisav Soukiazis and Pedro André Cerqueira, 113–43. New York: Palgrave Macmillan.
- . 2016. ‘Sub-Saharan Africa’s Growth, South–South Trade and the Generalised Balance-of-Payments Constraint’. *Cambridge Journal of Economics* 40 (3): 797–820. doi:10.1093/cje/bev020.
- Balassa, Bela A. 1989. *New Directions In The World Economy*. New York: New York University Press.
- Balioune-Lutz, Mina. 2011. ‘Growth by Destination (Where You Export Matters): Trade with China and Growth in African Countries.’ *African Development Review* 23 (2): 202–18. doi:Article.
- Baltagi, Badi Hani. 2005. *Econometric Analysis of Panel Data*. 3rd ed. Chichester: John Wiley & Sons Ltd.
- Bashir, Sajitha. 2015. ‘The Imperative of Skills Development for the Structural Transformation of Sub-Saharan Africa’. Working Paper. World Bank, Washington, DC. <https://openknowledge.worldbank.org/handle/10986/22380>.
- Bateman, Milford. 2015. ‘The Power of a Dollar’. *The Jacobin* Fall: 9–19.
- Beaudet, Pierre. 1992. ‘Crise économique, Crise de Société’. In *Angola - Bilan D’un Socialisme de Guerre*, edited by Pierre Beaudet, 49–90. Paris: Harmattan.
- Bhaduri, Amit. 2006. ‘Structural Change and Economic Development: On the Relative Roles of Effective Demand and the Price Mechanism in a “Dual Economy”’. In *Rethinking Development Economics*, by Ha-Joon Chang, 219–33. London: Anthem Press.
- Bhaduri, Amit, and Stephen Marglin. 1990. ‘Unemployment and the Real Wage: The Economic Basis for Contesting Political Ideologies’. *Cambridge Journal of Economics* 14 (4): 375–93.
- Bhagavan, M.R. 1980. ‘Angola’s Propects for Socialist Industrialisation’. Uppsala, Sweden: Scandinavian Institute of African Studies.
- . 1985. ‘Angola’s Political Economy 1975-1985’. Research Report No. 75. Uppsala, Sweden: Scandinavian Institute of African Studies.
- Bienefeld, Manfred. 1982. ‘The International Context for National Development Strategies - Constraints and Opportunities in a Changing World’. In *The Struggle for Development: National Strategies in an International Context*, edited by Manfred Bienefeld and Martin Godfrey, 25–64. Chichester, New York, Brisbane, Toronto, Singapore: Wiley.
- Bigsten, Arne, Paul Collier, Stefan Dercon, Marcel Fafchamps, Bernard Gauthier, Jan Willem Gunning, Abena Odoro, et al. 2004. ‘Do African Manufacturing Firms Learn from Exporting?’ *Journal of Development Studies* 40 (3): 115–41. doi:10.1080/0022038042000213229.
- Bigsten, Arne, and Måns Söderbom. 2011. ‘Industrial Strategies for Economic Recovery and Long-Term Growth in Africa’. *African Development Review* 23 (2): 161–71.
- Bjorvatn, Kjetil, and Nicola Daniele Coniglio. 2012. ‘Big Push or Big Failure? On the Effectiveness of Industrialization Policies for Economic Development’. *Journal of the Japanese and International Economies* 26 (1): 129–41.
- Blackley, Paul R. 2014. ‘New Estimates of Direct Crowding out (or In) of Investment and of a Peace Dividend for the U.S. Economy’. *Journal of Post Keynesian Economics* 37 (1): 67–90. doi:10.2753/PKE0160-3477370106.
- Blanchard, Olivier, Giovanni Dell’Ariccia, and Paolo Mauro. 2010. ‘Rethinking Macroeconomic Policy’. SPN/10/03. IMF Staff Position Note. Washington, D.C.: International Monetary Fund.
- Bleaney, Michael. 1976. *Underconsumption Theories: History and Critical Analysis*. New York: International Publishers.

- Blecker, Robert A. 2002. 'The Balance of Payments constrained Growth Model and the Limits to Export-Led Growth'. In *A Post Keynesian Perspective on Twenty-First Century Economic Problems*, edited by Paul Davidson, 69–89. Cheltenham (U.K.) and Northampton (Mass.): Edward Elgar Publishing.
- . 2009. 'Long-Run Growth in Open Economies: Export-Led Cumulative Causation or a Balance-of-Payments Constraint?' Paper prepared for presentation at the 2nd Summer School on 'Keynesian Macroeconomics and European Economic Policies'. Berlin.
- Blitch, Charles P. 1983. 'Allyn Young on Increasing Returns'. *Journal of Post Keynesian Economics* 5 (3): 359–72.
- BoE. 2012. 'The Distributional Effects of Asset Purchases'. *Quarterly Bulletin* Q3.
- . 2013. 'Monetary Policy Trade-Offs and Forward Guidance'. London: Bank of England.
- Bonizzi, Bruno. 2013. 'Financialization in Developing and Emerging Countries: A Survey'. *International Journal of Political Economy* 42 (4): 83–107. doi:10.2753/IJP0891-1916420405.
- Boughton, James M. 2004. 'The IMF and the Force of History: Ten Events and Ten Ideas That Have Shaped the Institution'. WP/04/75. IMF Working Paper. Washington, D.C.: International Monetary Fund.
- Boyer, Robert. 2000. 'Is a Finance-Led Growth Regime a Viable Alternative to Fordism? A Preliminary Analysis'. *Economy and Society* 29 (1): 111–45. doi:10.1080/030851400360587.
- Brautigam, Deborah. 1995. 'The State as Agent: Industrial Development in Taiwan, 1952-1972'. In *Asian Industrialization and Africa: Studies in Policy Alternatives to Structural Adjustment*, edited by Howard Stein, 145–81. International Political Economy Series. New York: St Martins Press.
- . 2008. "'Flying Geese" or "Hidden Dragon"? Chinese Business and African Industrial Development'. In *China Returns to Africa - A Rising Power and a Continent Embrace*, edited by Chris Alden, Daniel Large, and Ricardo Soares de Oliveira, 51–68. London: Hurst and Co Publishers.
- . 2009. *The Dragon's Gift: The Real Story of China in Africa*. Oxford University Press.
- . 2010a. 'China, Africa and the International Aid Architecture'. Working Paper No. 107. Tunis: African Development Bank.
- . 2010b. 'Chinese Finance of Overseas Infrastructure'. Background Paper prepared for OECD-IPRCC China-DAC study group. Paris: Organisation for Economic Cooperation and Development.
- . 2011. 'Aid "with Chinese Characteristics": Chinese Foreign Aid and Development Finance Meet the OECD-DAC Aid Regime'. *Journal of International Development* 23 (5): 752–64.
- Brautigam, Deborah, and Xiaoyang Tang. 2014. "'Going Global in Groups": Structural Transformation and China's Special Economic Zones Overseas'. *World Development* 63 (November): 78–91.
- Business France. 2016a. 'Angola : Castel Angola Réduit de Moitié Ses Effectifs'. *Business France*, January 19. <http://export.businessfrance.fr/angola/001B1600428A+angola-castel-angola-reduit-de-moitie-ses-effectifs.html>.
- . 2016b. 'Angola : Le Sud-Africain Distell Réduit Ses Investissements En Angola En Raison de La Crise économique'. *Business France*, February 26. <http://export.businessfrance.fr/angola/001B1601519A+angola-le-sud-africain-distell-reduit-ses-investissements-en-angola-en-raison.html>.

- Canning, David. 1988. 'Increasing Returns and the Role of Agriculture in Growth'. *Oxford Economic Papers* 40 (3): 463–76.
- Castaldi, Carolina, Mario Cimoli, Nelson Correa, and Giovanni Dosi. 2009. 'Technological Learning, Policy Regimes and Growth: The Long-Term Patterns and Some Specificities of a "Globalized" Economy'. In *Industrial Policy and Development: The Political Economy of Capabilities Accumulation*, by Mario Cimoli, Giovanni Dosi, and Joseph E. Stiglitz, 39–75. New York and Oxford: Oxford University Press.
- Ceglowski, Janet, Stephen S. Golub, and Ahmadou Aly Mbaye. 2015. 'Can Africa Compete with China in Manufacturing? The Role of Relative Unit Labour Costs'. DPRU Working Paper 201504. University of Cape Town and World Bank Group.
- Center for China Studies. 2011. 'Bridges over Troubled Water: Chinese Infrastructure Projects and African Standards'. The China Monitor No. 62. Stellenbosch University.
- Chandra, Vandana. 2013. 'How Ethiopia Can Foster a Light Manufacturing Sector'. In *The Industrial Policy Revolution II - Africa in the 21st Century*, edited by Joseph E. Stiglitz, Justin Yifu Lin, and Ebrahim Patel, 541–68. Houndmills: Palgrave Macmillan.
- Chang, Dae-oup. 2013. 'Labour and the "Developmental State": A Critique of the Developmental State Theory of Labour'. In *Beyond the Developmental State - Industrial Policy into the Twenty-First Century*, edited by Ben Fine, Jyoti Saraswati, and Daniela Travasci, 85–109. London: Pluto Press.
- Chang, Ha-Joon. 2002. *Kicking Away the Ladder: Development Strategy in Historical Perspective*. London: Anthem Press.
- . 2011. 'Institutions and Economic Development: Theory, Policy and History'. *Journal of Institutional Economics* 7 (4): 473–98.
- Chang, Ha-Joon, and Ali Cheema. 2002. 'Conditions for Successful Technology Policy in Developing Countries--Learning Rents, State Structures, and Institutions'. *Economics of Innovation and New Technology* 11 (4-5): 369–98.
- Chen, Chuan, Andrea Goldstein, and Ryan J. Orr. 2009. 'Local Operations of Chinese Construction Firms in Africa: An Empirical Survey'. *International Journal of Construction Management* 9 (2): 75–89. doi:10.1080/15623599.2009.10773131.
- Chen, Chuan, and Ryan J. Orr. 2009. 'Chinese Contractors in Africa: Home Government Support, Coordination Mechanisms, and Market Entry Strategies.' *Journal of Construction Engineering & Management* 135 (11): 1201–10.
- Chenery, Hollis Burnley, and Moises Syrquin. 1975. *Patterns of Development, 1950-1970*. Oxford: Oxford University Press.
- Chenery, Hollis, Sherman Robinson, and Moshe. Syrquin. 1986. *Industrialization and Growth: A Comparative Study*. London and New York: Oxford University Press.
- Cheng, Sam-Kee, Carlos Oya, and Christina Wolf. forthcoming. 'Chinese Investments and Labour Issues in Sub-Saharan Africa - a Literature Review'. Working Paper. London: School of Oriental and African Studies, Department of Development Studies.
- Chen, Wenjie, David Dollar, and Heiwai Tang. 2015. 'Why Is China Investing in Africa? Evidence from the Firm Level'. Working Paper. Washington, D.C.: Brookings. <http://www.brookings.edu/~media/research/files/papers/2015/08/why-china-is-investing-in-africa/why-is-china-investing-in-africa.pdf>.
- Chen, Yunnan, Deborah Brautigam, Xiaoyang Tang, Irene Yuan Sun, and Rex Uzonna Ukaejiofo. 2016. 'Learning from China? Manufacturing, Investment, and Technology Transfer in Nigeria'. Working Paper 2 January. SAIS China Africa Working Paper Series. Washington, D.C.: Johns Hopkins School of Advanced International Studies.

- Chima, Obinna. 2013. 'Nigeria: Sanusi - China Is Major Contributor to Africa's De-Industrialisation'. *All Africa*, March 13. <http://allafrica.com/stories/201303130168.html>.
- China State Council. 2015. *Guidance on Promoting International Capacity and Equipment Manufacturing Cooperation 国务院关于推进国际产能和装备制造合作的指导意见*. Vol. 30. <http://fec.mofcom.gov.cn/article/tjgjcnhz/zcwj/201511/20151101193011.shtml>.
- Christensen, Benedicte Vibe. 2010. 'China in Africa A Macroeconomic Perspective'. No. 230. Working Paper. Washington, DC: Center for Global Development.
- Chwieroth, Jeffrey M. 2007. 'Testing and Measuring the Role of Ideas: The Case of Neoliberalism in the International Monetary Fund'. *International Studies Quarterly* 51 (1): 5–30. doi:10.1111/j.1468-2478.2007.00437.x.
- . 2010. *Capital Ideas: The IMF and the Rise of Financial Liberalization*. Princeton, New Jersey: Princeton University Press.
- CICA. 2014. 'Annual Report on China International Project Contracting (General Report) 2013-2014 中国对外承包工程发展报告（综述篇） 2013-2014'. China International Contractors Association 中国对外承包工程商会.
- Cimoli, Mario, Giovanni Dosi, and Joseph E. Stiglitz. 2009. *Industrial Policy and Development: The Political Economy of Capabilities Accumulation*. Oxford University Press, USA.
- Cimoli, Mario, and Gabriel Porcile. 2013. 'Accumulations of Capabilities, Structural Change, and Macro Prices: An Evolutionary and Structuralist Roadmap'. In *The Industrial Policy Revolution II - Africa in the 21st Century*, edited by Joseph E. Stiglitz, Justin Yifu Lin, and Ebrahim Patel, 73–113. Basingstoke: Palgrave Macmillan.
- Clarence-Smith, W. G. 1980. 'Review Article: Class Structure and Class Struggles in Angola in the 1970s'. *Journal of Southern African Studies* 7 (1): 109–26. doi:10.2307/2636788.
- Clark, Simon, Michael Smith, and Franz Wild. 2008. 'China Lets Child Workers Die Digging in Congo Mines for Copper'. *Bloomberg*, August 22. <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aW8xVLQ4Xhr8>.
- Clift, Ben, and Jim Tomlinson. 2012. 'When Rules Started to Rule: The IMF, Neo-Liberal Economic Ideas and Economic Policy Change in Britain'. *Review of International Political Economy* 19 (3): 477–500. doi:10.1080/09692290.2011.561124.
- Cohen, Avi J., and G. C. Harcourt. 2003. 'Whatever Happened to the Cambridge Capital Theory Controversies?' *Journal of Economic Perspectives* 17 (1): 199–214.
- Cooke, Fang Lee. 2012. 'The Globalization of Chinese Telecom Corporations: Strategy, Challenges and HR Implications for the MNCs and Host Countries'. *The International Journal of Human Resource Management* 23 (9): 1832–52. doi:10.1080/09585192.2011.579920.
- Cooke, Fang Lee, Jue Wang, Xing Yao, Li Xiong, Jiaying Zhang, and Alice Shuaishuai Li. 2015. 'Mining with a High-End Strategy: A Study of Chinese Mining Firms in Africa and Human Resources Implications'. *The International Journal of Human Resource Management* 26 (21): 2744–62. doi:10.1080/09585192.2015.1071863.
- Corkin, Lucy. 2011. 'Chinese Construction Companies in Angola: A Local Linkages Perspective'. MMCP Discussion Paper No. 2. University of Cape Town and Open University.
- . 2013. *Uncovering African Agency - Angola's Management of China's Credit Lines*. Farnham: Ashgate.

- Croese, Sylvia. 2017. 'State-Led Housing Delivery as an Instrument of Developmental Patrimonialism: The Case of Post-War Angola'. *African Affairs* 116 (462): 80–100. doi:10.1093/afraf/adw070.
- Cullmann, Astrid. 2012. 'Benchmarking and Firm Heterogeneity: A Latent Class Analysis for German Electricity Distribution Companies'. *Empirical Economics* 42 (1): 147–69. doi:10.1007/s00181-010-0413-4.
- Dahman-Saidi, Myriam, and Christina Wolf. 2011. 'Recalibrating Development Co-Operation: How Can African Countries Benefit from Emerging Partners?' OECD Publishing, OECD Development Centre Working Papers No. 302. Paris: OECD Development Center.
- Dasgupta, Sukti, and Ajit Singh. 2006. 'Manufacturing, Services and Premature De-Industrialisation in Developing Countries: A Kaldorian Empirical Analysis'. Research Paper No. 2006/49. UNU-WIDER.
- De Carvalho, Kamia Victor, Luciano Chianeque, and Albertina Delgado. 2011. 'Inequality in Angola'. In *Tearing Us Apart: Inequalities in Southern Africa*, edited by Herbert Jauch and Deprose Muchena, 39–120. Open Society Initiative for Southern Africa.
- Demir, Firat. 2007. 'The Rise of Rentier Capitalism and the Financialization of Real Sectors in Developing Countries'. *Review of Radical Political Economics* 39 (3): 351–59. doi:10.1177/0486613407305283.
- . 2009. 'Financialization and Manufacturing Firm Profitability under Uncertainty and Macroeconomic Volatility: Evidence from an Emerging Market'. *Review of Development Economics* 13 (4): 592–609. doi:10.1111/j.1467-9361.2009.00522.x.
- Deraniyagala, Sonali. 2001. 'From Washington Consensus to Post-Washington Consensus: Does It Matter for Industrial Policy'. In *Development Policy in the Twenty First Century: Beyond the Post-Washington*, edited by Ben Fine, Costas Lapavistas, and Jonathan Pincus, 80–98. Milton Park: Routledge.
- . 2005. 'Neoliberalism in International Trade: Sound Economics or a Question of Faith?' In *Neoliberalism - A Critical Reader*, edited by Deborah Johnston and Alfredo Saad-Filho, 99–105. London; Ann Arbor, MI: Pluto Press.
- Diageo. 2013. 'Diageo Africa Conference - Africa Regional Markets'. <http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=2&cad=rja&uact=8&ved=0CCYQFjAB&url=http%3A%2F%2Fwww.diageo.com%2FLists%2FResources%2FAttachments%2F1553%2FAfrica%2520conference%2520-%2520Africa%2520Regional%2520Markets.pdf&ei=3E5HVb-HL8jkaIzogLgJ&usg=AFQjCNFhSOTa3oj2vAT60sYx00G-rXdUmg>.
- Dimakou, Ourania, and Ben Fine. 2016. *Macroeconomics - A Critical Companion*. London: Pluto Press.
- Dinheiro Vivo. 2016. 'Angola Prevê Duplicar Trabalhadores Na Segurança Social Para 2,2 Milhões'. *Dinheiro Vivo*, March 23. <https://www.dinheirovivo.pt/angola/angola-preve-duplicar-trabalhadores-na-seguranca-social-22-milhoes/>.
- . 2017. 'Sindicatos Esperam Aumento No Salário Mínimo Em Angola Até Abril'. *Dinheiro Vivo*, October 1. <https://www.dinheirovivo.pt/angola/sindicatos-esperam-aumento-no-salario-minimo-angola-ate-abril/>.
- Dinh, Hinh T., Vincent Palmade, Vandana Chandra, and Frances Cossar. 2012. *Light Manufacturing in Africa: Targeted Policies to Enhance Private Investment and Create Jobs*. Africa Development Forum Series.
- Dutt, Amitava Krishna. 1984. 'Stagnation, Income Distribution and Monopoly Power'. *Cambridge Journal of Economics* 8 (1): 25–40.
- . 1990. 'Sectoral Balance in Development: A Survey'. *World Development* 18 (6): 915–30.

- . 1992. 'A Kaldorian Model of Growth and Development Revisited: A Comment on Thirlwall'. *Oxford Economic Papers* 44 (1): 156–68.
- Eaglestone Securities. 2014. 'Inside Africa'. Eaglestone Securities. http://www.eaglestone.eu/xms/files/Inside_Africa_Eaglestone_Advisory_31_March_2014.pdf.
- Eckstein, Harry. 2000. 'Case Study and Theory in Political Sciences'. In *Case Study Method*, edited by Roger Gomm, Martyn Hammersley, and Peter Foster, 119–64. London.
- Elu, Juliet U., and Gregory N. Price. 2010. 'Does China Transfer Productivity Enhancing Technology to Sub-Saharan Africa? Evidence from Manufacturing Firms'. *African Development Review/Revue Africaine de Développement* 22: 587–98.
- Evans, Peter. 1995. *Embedded Autonomy: States and Industrial Transformation*. Princeton, New Jersey: Princeton University Press.
- Evans, Peter, and James E. Rauch. 1999. 'Bureaucracy and Growth: A Cross-National Analysis of the Effects of "Weberian" State Structures on Economic Growth'. *American Sociological Review* 64 (5): 748–65. doi:10.2307/2657374.
- Evans, Peter, Dietrich Rueschemeyer, and Theda Skocpol. 1985. *Bringing the State Back In*. Cambridge, UK: Cambridge University Press.
- Everitt, Brian S., Sabine Landau, Morven Leese, and Daniel Stahl. 2011. *Cluster Analysis*. 5th ed. Chichester: John Wiley & Sons, Ltd.
- FACRA. 2017. 'Investment Criteria'. Fundo Activo de Capital de Risco Angolano. Accessed May 22. <http://www.facra-angola.com/investment-criteria/>.
- Farrell, Jamie. 2016. 'How Do Chinese Contractors Perform in Africa? Evidence from World Bank Projects'. Working Paper 3. SAIS China Africa Working Paper Series. Washington, D.C.: Johns Hopkins School of Advanced International Studies.
- Fernandes, Sofia. 2012. 'China and Angola: A Strategic Partnership?' In *China & Angola - A Marriage of Convenience*, edited by Marcus Power and Ana Cristina Alves, 68–84. Stockholm: Nordiska Afrikainstitutet.
- Ferreira, Manuel Ennes. 1995. 'La Reconversion économique de La Nomenclatura Pétrolière'. *Politique Africaine* 57: 11–26.
- . 2002a. 'Angola: Civil War and the Manufacturing Industry, 1975-1999'. In *The Economics of Military Expenditures, Arms Production, and Trade in Developing Countries*, edited by Jürgen Brauer and Paul J. Dunne, 251–74. Houndmills: Palgrave.
- . 2002b. 'Nacionalização E Confisco Do Capital Português Na Indústria Transformadora de Angola (1975-1990)'. *Análise Social XXXVII* (162): 47–90.
- . 2005. 'Development and the Peace Dividend Insecurity Paradox in Angola.' *European Journal of Development Research* 17 (3): 509–24.
- Ferreira, Manuel Ennes, and Francisco Rocha Gonçalves. 2009. 'Diplomacia Económica E Empresas de Bandeira Os Casos Da Galp E Da Unicer Em Angola'. *Relações Internacionais* 24: 115–33.
- Fine, Ben. 2003. 'New Growth Theory'. In *Rethinking Development Economics*, edited by Ha-Joon Chang, 201–217. London: Anthem Press.
- . 2004. 'Examining the Ideas of Globalisation and Development Critically: What Role for Political Economy?' *New Political Economy* 9 (2): 213–31.
- . 2006. 'Financial Programming and the IMF'. In *The New Development Economics - After the Washington Consensus*, edited by Kwame Sundaram Jomo and Ben Fine, 87–100. London and New York: Zed Books.
- . 2013a. 'Beyond the Developmental State: An Introduction'. In *Beyond the Developmental State - Industrial Policy into the Twenty-First Century*, edited by Ben Fine, Daniela Travasci, and Jyoti Saraswati, 1–32. London: Pluto Press.

- . 2013b. 'Financialization from a Marxist Perspective'. *International Journal of Political Economy* 42 (4): 47–66. doi:10.2753/IJP0891-1916420403.
- Fine, Ben, and Zavareh Rustomjee. 1996. *The Political Economy of South Africa: From Minerals-Energy Complex to Industrialisation*. London: C. Hurst & Co. Publishers.
- Fine, Ben, and Elisa Van Waeyenberge. 2013. 'A Paradigm Shift That Never Was: Justin Lin's New Structural Economics'. *Competition & Change* 17 (4): 355–71.
- Flyvbjerg, Bent. 2006. 'Five Misunderstandings About Case-Study Research'. *Qualitative Inquiry* 12 (2): 219–45. doi:10.1177/1077800405284363.
- Foster, Vivien, William Butterfield, Chuan Chen, and Nataliya Pushak. 2009. *Building Bridges: China's Growing Role as Infrastructure Financier for Sub-Saharan Africa*. World Bank.
- Frobel, Folker, Jurgen Heinrichs, and Otto Kreye. 1976. 'Tendency towards a New International Division of Labour: Worldwide Utilisation of Labour Force for World Market Oriented Manufacturing'. *Economic and Political Weekly* 11 (5/7): 159–70.
- Games, Dianna. 2015. 'The Fast-Moving Consumer Goods and Retail Sectors'. In *Africans Investing in Africa - Understanding Business and Trade, Sector by Sector*, edited by Terence McNamee, Mark Pearson, and Wiebe Boer, 147–76. Houndmills: Palgrave Macmillan.
- Gebre-Egziabher, Tegegne. 2009. 'The Developmental Impact of Asian Drivers on Ethiopia with Emphasis on Small-Scale Footwear Producers'. *World Economy* 32 (11): 1613–37.
- Geda, Alemayehu, and Atnafu G. Meskel. 2008. 'China and India's Growth Surge: Is It a Curse or Blessing for Africa? The Case of Manufactured Exports'. *African Development Review* 20 (2): 247–72.
- . 2010. 'China and India's Growth Surge: The Implications for African Manufactured Exports'. In *The Rise of China and India in Africa: Challenges, Opportunities and Critical Interventions*, edited by Fantu Cheru and Cyril Obi, 97–106. London and New York: Zed Books.
- Geiger, Michael, and Chorching Goh. 2012. 'Chinese FDI in Ethiopia: A World Bank Survey'. Working Paper 74384. Washington, D.C.: World Bank. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/12/14/000386194_20121214024800/Rendered/PDF/NonAsciiFileName0.pdf.
- George, Libby. 2016. 'Growing Chinese Debt Leaves Angola with Little Spare Oil'. *Reuters*, March 14. <http://uk.reuters.com/article/angola-oil-finance-idUKL5N16H3EV>.
- George, Libby, and Aizhu Chen. 2015. 'Angola Signs Oil Deal with Sinochem in Bid for Chinese Buyers'. *Reuters*, December 16. <http://www.reuters.com/article/us-sinochem-sonangol-idUSKBN0TZ1EP20151216>.
- Giese, Karsten. 2013. 'Same-Same But Different: Chinese Traders' Perspectives on African Labor'. *The China Journal*, no. 69: 134–53. doi:10.1086/668841.
- Giovannetti, Giorgia, and Marco Sanfilippo. 2009. 'Do Chinese Exports Crowd-out African Goods? An Econometric Analysis by Country and Sector'. *European Journal of Development Research* 21 (4): 506–30. doi:10.1057/ejdr.2009.20.
- Global Cement News. 2016. 'Secil Lobito Struggling to Import Raw Materials'. *Global Cement News*, August 5, sec. News. <http://www.globalcement.com/news/item/5162-secil-lobito-struggling-to-import-raw-materials>.
- Goldstein, Andrea, Helmut Reisen, Nicolas Pinaud, and Xiaobao Chen. 2006. *The Rise of China and India: What's in It for Africa*. Development Centre Studies. Paris: OECD Development Centre.

- Gomm, Roger, Martyn Hammersley, and Peter Foster. 2000a. 'Case Study and Generalization'. In *Case Study Method*, edited by Roger Gomm, Martyn Hammersley, and Peter Foster, 98–115. London: Sage.
- . 2000b. 'Case Study and Theory'. In *Case Study Method*, edited by Roger Gomm, Martyn Hammersley, and Peter Foster, 234–58. London: Sage.
- Gouvea, Raphael Rocha, and Gilberto Tadeu Lima. 2010. 'Structural Change, Balance-of-Payments Constraint, and Economic Growth: Evidence from the Multisectoral Thirlwall's Law'. *Journal of Post Keynesian Economics* 33 (1): 169–204.
- Gray, Hazel. 2015. 'The Political Economy of Grand Corruption in Tanzania'. *African Affairs* 114 (456): 382–403. doi:10.1093/afraf/adv017.
- Greene, William. 2005. 'Reconsidering Heterogeneity in Panel Data Estimators of the Stochastic Frontier Model'. *Current Developments in Productivity and Efficiency Measurement* 126 (2): 269–303. doi:10.1016/j.jeconom.2004.05.003.
- Greenwald, Bruce, and Joseph E. Stiglitz. 2013. 'Learning and Industrial Policy: Implications for Africa'. In *The Industrial Policy Revolution II - Africa in the 21st Century*, edited by Joseph E. Stiglitz, Justin Yifu Lin, and Ebrahim Patel, 25–49. Basingstoke: Palgrave Macmillan.
- Griffith-Jones, Stephany, and Ewa Karwowski. 2015. 'Can the Financial Sector Deliver Both Growth and Financial Stability in Sub-Saharan Africa?' In *Industrial Policy and Economic Transformation in Africa*, edited by Akbar Noman and Joseph E. Stiglitz, 197–229. Columbia University Press. <http://www.jstor.org/stable/10.7312/noma17518.11>.
- Guajardo, Jaime, Daniel Leigh, and Andrea Pescatori. 2014. 'Expansionary Austerity? International Evidence'. *Journal of the European Economic Association* 12 (4): 949–68. doi:10.1111/jeea.12083.
- Gu, Jing. 2011. 'The Last Golden Land? Chinese Private Companies Go to Africa'. IDS Working Paper No. 365. Brighton: Institute of Development Studies at the University of Sussex.
- Gu, Jing, and Anthony Carty. 2014. 'China and African Development: Partnership Not Mentoring'. *IDS Bulletin* 45 (4): 57–69.
- Halevi, Joseph, and Réduane Taouil. 2002. 'The Exogeneity of Investment: From Systemic Laws of Accumulation and Growth to Effective Demand Conditions'. In *The Economics of Demand-Led Growth: Challenging the Supply-Side Vision of the Long Run*, edited by Mark Setterfield, 41–54. Cheltenham (U.K.) and Northampton (Mass.): Edward Elgar.
- Hanlin, Rebecca, and Raphael Kaplinsky. 2016. 'South–South Trade in Capital Goods – The Market-Driven Diffusion of Appropriate Technology'. *The European Journal of Development Research* 28 (3): 361–78. doi:10.1057/ejdr.2016.18.
- Haraguchi, Nobuya, and Gorazd Rezonja. 2011. 'Emerging Patterns of Manufacturing Structural Change'. Working Paper No. 2011/43. UNU-WIDER.
- . 2012. 'Pro-Employment Manufacturing Development in Large Countries'. Working Paper 04/2012. Vienna: United Nations Industrial Development Organization.
- Hartigan, John A. 1975. *Clustering Algorithms*. New York: John Wiley & Sons, Ltd.
- Hart-Landsberg, Martin, and Paul Burkett. 1998. 'Contradictions of Capitalist Industrialization in East Asia: A Critique of "Flying Geese" Theories of Development'. *Economic Geography* 74 (2): 87–110.
- Hausmann, Ricardo, and Dani Rodrik. 2003. 'Economic Development as Self-Discovery'. *Journal of Development Economics* 72 (2): 603–33.
- Heintz, James. 2013. 'How Macro-Economic Policy Can Support Economic Development in Sub-Saharan African Countries'. In *The Industrial Policy*

- Revolution II - Africa in the 21st Century*, edited by Joseph E. Stiglitz, Justin Yifu Lin, and Ebrahim Patel, 201–15. Houndmills: Palgrave Macmillan.
- Henn, Markus. 2013. 'Tax Havens and the Taxation of Transnational Corporations'. *International Policy Analysis*. Berlin: Friedrich Ebert Stiftung.
- Hines, Jr. James R., and Eric M. Rice. 1994. 'Fiscal Paradise: Foreign Tax Havens and American Business.' *Quarterly Journal of Economics* 109 (1): 149–82.
- Hirschman, Albert O. 1958. *The Strategy of Economic Development*. Reprinted by Norton 1978. New Haven: Yale University Press.
- . 1981. *Essays in Trespassing: Economics to Politics and Beyond*. New York: Cambridge University Press.
- Hitchens, Peter. 2008. 'How China Has Created a New Slave Empire in Africa'. *Daily Mail*, September 28. <http://www.dailymail.co.uk/news/article-1063198/PETER-HITCHENS-How-China-created-new-slave-empire-Africa.html>.
- Hodges, Tony. 2001. *Angola from Afro-Stalinism to Petro-Diamond Capitalism*. Oxford: Bloomington.
- . 2011. 'Fundamentos Económicos Do Estado Patrimonial'. In *Economia Política E Desenvolvimento Em Angola*, edited by Nuno Vidal and Justino Pinto de Andrade, 87–112. Luanda: Associação cultural e recreativa Cha de Caxinde.
- Huang, Meibo, and Pei qi ang Ren. 2013. 'A Study on the Employment Effect of Chinese Investment in South Africa'. Discussion Paper No. 4/2013. Centre for Chinese Studies. http://www.ccs.org.za/wp-content/uploads/2014/05/DP_4_2013_Chinese_Employment_South_Africa_Huang_Ren_ONLINE.pdf.
- Human Rights Watch. 2011. "'You'll Be Fired If You Refuse" Labor Abuses in Zambia's Chinese State-Owned Copper Mines'. Human Rights Watch.
- Hummels, David. 2007. 'Transportation Costs and International Trade over Time'. *Journal of Economic Perspectives* 21 (3): 131–54.
- Hwang, Jyhjong, Deborah Brautigam, and Janet Eom. 2016. 'How Chinese Money Is Transforming Africa: It's Not What You Think'. Policy Brief No. 11/ 2016. Baltimore, Maryland: China Africa Research Initiative, School of Advanced International Studies, Johns Hopkins.
- Hwang, Jyhjong, Deborah Brautigam, and Nancy Wang. 2015. 'Chinese Engagement in Hydropwer Infrastructure in Sub-Saharan Africa'. Working Paper 1 December. SAIS China Africa Working Paper Series. Washington, D.C.: Johns Hopkins School of Advanced International Studies.
- ICBC. 2015. 'ICBC Signs Soyo Power Plant Financing Agreement with the Ministry of Finance of Angola'. July 9. <http://www.icbc.com.cn/icbc/newsupdates/icbc%20news/ICBC%20Signs%20Soyo%20Power%20Plant%20Financing%20Agreement%20with%20the%20Ministry%20of%20Finance%20of%20Angola.htm>.
- ICR Newsroom. 2016a. 'Dangote Cement Full-Year Boosted by New African Plants'. *International Cement Review*, March 2. <http://www.cemnet.com/News/story/158683/dangote-cement-full-year-boosted-by-new-african-plants.html?source=62441870629c74f8a4e16ff1410010b9>.
- . 2016b. 'Dangote Asian Expansion?' *International Cement Review*, October 18. <http://www.cemnet.com/News/story/160329/dangote-asian-expansion.html?source=b3efe8984a522baf9004706a13907f79>.
- IFE. 2012. 'Empreender, Diversificar E Competir'. Luanda: Instituto de Fomento Empresarial, Observatório Económico.
- Ikpe, Eka. 2013. 'Lessons for Nigeria from Developmental States: The Role of Agriculture in Structural Transformation'. In *Beyond the Developmental State -*

- Industrial Policy into the Twenty-First Century*, edited by Ben Fine, Jyoti Saraswati, and Daniela Tavasci, 187–215. London: Pluto Press.
- IMF. 1993. 'Balance of Payments Manual - 5th Edition'. Washington, D.C.: International Monetary Fund.
- . 2000. 'Angola - Recent Economic Developments'. IMF Staff Country Report No. 00/111. Washington, D.C.: International Monetary Fund.
- . 2015. 'Angola Selected Issues'. IMF Country Report No. 15/302. Washington, D.C.: International Monetary Fund.
- . 2016. 'Angola Staff Report for the 2016 Article IV Consultation'. Washington, D.C.: International Monetary Fund.
- InfoMine. 2008. 'DRC Unveils Minerals-for-Jobs Deal with China'. *InfoMine*, May 14. <http://www.mining.com/drc-unveils-minerals-for-jobs-deal-with-china/>.
- International Cement Review. 2016. 'Angola - Market Contracts 35% YoY'. *International Cement Review*, June, sec. World News.
- Jenkins, Rhys, and Chris Edwards. 2006. 'The Asian Drivers and Sub-Saharan Africa'. *IDS Bulletin* 37 (1): 23–32.
- Jerven, Morten. 2013. *Poor Numbers: How We Are Misled by African Development Statistics and What to Do about It*. Ithaca and London: Cornell University Press.
- Johnston, Lauren A., Stephen L. Morgan, and Yuesheng Wang. 2013. 'The Gravity of China's African Export Promise'. Working Paper No. 12. University of Nottingham.
- Jourdan, Paul. 2013. 'Toward a Resource-Based African Industrialization Strategy'. In *The Industrial Policy Revolution II - Africa in the 21st Century*, edited by Joseph E. Stiglitz, Justin Yifu Lin, and Ebrahim Patel, 364–85. Houndmills: Palgrave Macmillan.
- Jover, Estefanía, Anthony Lopes Pintos, and Alexandra Marchand. 2012. 'Angola - Private Sector Country Profile'. African Development Bank.
- Kaldor, Nicholas. 1975. 'What Is Wrong With Economic Theory'. *The Quarterly Journal of Economics* 89 (3): 347–57.
- . 2007. *Causes of Growth and Stagnation in the World Economy*. 1st published 1996, digitally printed version 2007. Cambridge, UK: Cambridge University Press.
- Kaltenbrunner, Annina, and Juan Pablo Paineira. 2015. 'Developing Countries' Changing Nature of Financial Integration and New Forms of External Vulnerability: The Brazilian Experience'. *Cambridge Journal of Economics* 39 (5): 1281–1306. doi:10.1093/cje/beu038.
- Kamau, Paul. 2013. 'Chinese Ascendancy in the Global Clothing Industry Implications for Sub-Saharan Africa'. Think Pieces: Making Sense of the China-Africa Relationship. <http://china-africa.ssrc.org/wp-content/uploads/2014/10/Kamau-Final.pdf>.
- Kamau, Paul, Dorothy McCormick, and Nicolas Pinaud. 2009. 'The Developmental Impact of Asian Drivers on Kenya with Emphasis on Textiles and Clothing Manufacturing'. *World Economy* 32 (11): 1586–1612.
- Kamoche, Ken, and Lisa Qixun Siebers. 2015. 'Chinese Management Practices in Kenya: Toward a Post-Colonial Critique'. *The International Journal of Human Resource Management* 26 (21): 2718–43. doi:10.1080/09585192.2014.968185.
- Kaplinsky, Raphael. 2008. 'What Does the Rise of China Do for Industrialisation in Sub-Saharan Africa?' *Review of African Political Economy* 35 (115): 7–22.
- . 2013. 'Walking (Stumbling?) on Two Legs: Meeting SSAs Industrialization Challenge'. In *The Industrial Policy Revolution II - Africa in the 21st Century*, edited by Joseph E. Stiglitz, Justin Yifu Lin, and Ebrahim Patel, 173–97. Basingstoke: Palgrave Macmillan.

- Kaplinsky, Raphael, and Masuma Farooki. 2012. *The Impact of China on Global Commodity Prices: The Disruption of the World's Resource Sector*. London: Routledge.
- Kaplinsky, Raphael, Dorothy McCormick, and Mike Morris. 2007. 'The Impact of China on Sub-Saharan Africa'. IDS WORKING PAPER 291. Brighton: Institute of Development Studies at the University of Sussex.
- Kaplinsky, Raphael, and Mike Morris. 2008. 'Do the Asian Drivers Undermine Export-Oriented Industrialization in SSA?' *World Development* 36 (2): 254–73.
- . 2009. 'The Asian Drivers and SSA: Is There a Future for Export-Oriented African Industrialisation?' *World Economy* 32 (11): 1638–55.
- Kaufman, I., and P. J. Rousseeuw. 1990. *Finding Groups in Data: An Introduction to Cluster Analysis*. New York: Wiley.
- Kay, Cristóbal. 2002. 'Why East Asia Overtook Latin America: Agrarian Reform, Industrialisation and Development.' *Third World Quarterly* 23 (6): 1073–1102.
- Khan, Mushtaq Hussain. 2013a. 'Political Settlements and the Design of Technology Policy'. In *The Industrial Policy Revolution II - Africa in the 21st Century*, edited by Joseph E. Stiglitz, Justin Yifu Lin, and Ebrahim Patel, 243–80. Basingstoke: Palgrave Macmillan.
- . 2013b. 'Technology Policies and Learning with Imperfect Governance'. In *The Industrial Policy Revolution I. The Role of Government Beyond Ideology*, edited by Justin Yifu Lin and Joseph E. Stiglitz, 79–115. London: Palgrave Macmillan.
- Khan, Mushtaq Hussain, and Stephanie Blankenburg. 2009. 'The Political Economy of Industrial Policy in Asia and Latin America'. In *Industrial Policy and Development: The Political Economy of Capabilities Accumulation*, by Giovanni Dosi, Mario Cimoli, and Joseph E. Stiglitz, 336–77. Oxford: Oxford University Press.
- Khan, Mushtaq Hussain, and Kwame Sundaram Jomo. 2000. *Rents, Rent-Seeking and Economic Development: Theory and Evidence in Asia*. Cambridge, UK: Cambridge University Press.
- Kibble, Steve. 2006. 'Angola: Can the Politics of Disorder Become the Politics of Democratisation and Development?' *Review of African Political Economy* 33 (109): 525–42.
- Kjær, Anne Mette. 2015. 'Political Settlements and Productive Sector Policies: Understanding Sector Differences in Uganda'. *World Development* 68 (April): 230–41. doi:10.1016/j.worlddev.2014.12.004.
- Krueger, Anne O. 1998. 'Why Trade Liberalisation Is Good for Growth'. *Economic Journal* 108 (450): 1513–22.
- . 2003. 'IMF Stabilization Programs'. In *Economic and Financial Crises in Emerging Market Economies*, edited by Martin Feldstein, 279–346. Chicago: University of Chicago Press.
- . 2011. 'Comments on "New Structural Economics" by Justin Yifu Lin.' *World Bank Research Observer* 26 (2): 222–26.
- Kyle, Steven. 2005. 'The Political Economy of Angolan Growth: Social & Regional Structure'. *Review of African Political Economy* 32 (104-105): 269–93.
- Lakner, Christoph, and Branko Milanovic. 2016. 'Global Income Distribution: From the Fall of the Berlin Wall to the Great Recession'. *The World Bank Economic Review* 30 (2): 203–32. doi:10.1093/wber/lhv039.
- Lall, Sanjaya. 1992. 'Technological Capabilities and Industrialization'. *World Development* 20 (2): 165–86.
- . 1999. *The Technological Response to Import Liberalization in Sub-Saharan Africa*. Houndmills: Macmillan.

- . 2000. 'The Technological Structure and Performance of Developing Country Manufactured Exports, 1985-98'. *Oxford Development Studies* 28 (3): 337–69.
- . 2004. 'Selective Industrial and Trade Policies in Developing Countries – Theoretical and Empirical Issues'. In *Trade and Industrial Policy in Africa*, by Charles Chukwuma Soludo, Michael Osita Ogbu, and Ha-Joon Chang, 75–109. Africa World Press.
- Lall, Sanjaya, and Samuel Wangwe. 1998. 'Industrial Policy and Industrialisation in Sub-Saharan Africa'. *Journal of African Economies* 7: 70–107.
- Lange, Matthew. 2005. 'The Rule of Law and Development: A Weberian Framework of States and State-Society Relations'. In *States and Development: Historical Antecedents of Stagnation and Advance*, edited by Matthew Lange and Dietrich Rueschemeyer, 48–65. New York: Palgrave Macmillan.
- Lapavistas, Costas. 2011. 'Theorizing Financialization'. *Work, Employment and Society* 25 (4): 611–26. doi:10.1177/0950017011419708.
- Latsch, Wolfram. 2008. 'The Possibility of Industrial Policy'. *Oxford Development Studies* 36 (1): 23–37.
- Lautier, Marc, and Francois Moreaub. 2012. 'Domestic Investment and FDI in Developing Countries: The Missing Link'. *Journal of Economic Development* 37 (3): 1–23.
- Lavoie, Marc, and Engelbert Stockhammer. 2012. 'Wage-Led Growth: Concept, Theories and Policies'. Working Paper. Geneva: International Labour Organization.
- Laxmidas, Shrikesh. 2014. 'Angola's New Import Tariffs Putting the Squeeze on the Poorest Residents in One of the World's Most Expensive Cities'. *The Independent*, April 23. <http://www.independent.co.uk/news/world/africa/angolas-new-import-tariffs-putting-the-squeeze-on-the-poorest-residents-in-one-of-the-worlds-most-expensive-cities-9278530.html>.
- Le Billon, P. 2001. 'Angola's Political Economy of War – the Role of Oil and Diamonds 1975 – 2000'. *African Affairs* 100 (398): 55–80.
- Le Billon, P., Alex Vines, and Assis Malaquias. 2008. 'Au-Delà Du Pétro-Militarisme - La Stratégie Extérieure Angolaise D'après Guerre'. *Politique Africaine* 110: 102–21.
- Lee, Ching Kwan. 2009. 'Raw Encounters: Chinese Managers, African Workers and the Politics of Casualization in Africa's Chinese Enclaves'. *The China Quarterly* 199 (September): 647. doi:10.1017/S0305741009990142.
- . 2014. 'The Spectre of Global China - China on the Copperbelt'. *New Left Review* 89 (September-October): 29–65.
- Leipzigiger, Danny, and Shahid Yusuf. 2015. 'Growth Strategies for Africa in a Changing Global Environment': In *Industrial Policy and Economic Transformation in Africa*, edited by Akbar Noman and Joseph E. Stiglitz, 230–67. Columbia University Press. <http://www.jstor.org/stable/10.7312/noma17518.12>.
- Lewis, W. A. 1954. 'Economic Development with Unlimited Supplies of Labour'. *Manchester School of Economic and Social Studies* 22: 139–91.
- Liao, Shuping, and Yongsheng Zhang. 2013. 'A New Context for Managing Overseas Direct Investment by Chinese State-Owned Enterprises'. Working Paper 83. Canberra: Australian National University, East Asian Bureau of Economic Research.
- Lincoln, Yvonna S., and Egon G. Guba. 2000. 'The Only Generalization Is: There Is No Generalization'. In *Case Study Method*, edited by Roger Gomm, Martyn Hammersley, and Peter Foster, 27–44. London: Sage.

- Lin, Justin Yifu. 2012a. 'From Flying Geese To Leading Dragons New Opportunities and Strategies for Structural Transformation in Developing Countries1'. *Global Policy* 3 (4): 397–409.
- . 2012b. *New Structural Economics: A Framework for Rethinking Development and Policy*. World Bank.
- Lin, Justin Yifu, and Ha-Joon Chang. 2009. 'DPR Debate: Should Industrial Policy in Developing Countries Conform to Comparative Advantage or Defy It? A Debate between Justin Lin and Ha-Joon Chang'. *Development Policy Review* 27 (5): 483–502.
- Lin, Justin Yifu, and Celestin Monga. 2011a. 'Growth Identification and Facilitation: The Role of the State in the Dynamics of Structural Change'. *Development Policy Review* 29 (3): 264–90.
- . 2011b. 'Growth Identification and Facilitation: The Role of the State in the Dynamics of Structural Change: Rejoinder'. *Development Policy Review* 29 (3): 304–10.
- Lipietz, Alain. 1982. 'Towards Global Fordism?' *New Left Review* 132 (March-April): 33–47.
- Lo, Dic. 2011. *Alternatives to Neoliberal Globalization: Studies in the Political Economy of Institutions and Late Development*. London: Palgrave Macmillan.
- . 2016a. 'China Confronts the Great Recession: Rebalancing' Neoliberalism, or Else?' In *Emerging Economies During and After the Great Recession*, edited by Phillip Arestis and Malcolm Sawyer, 232–69. Basingstoke: Palgrave Macmillan.
- . 2016b. 'Developing or Under-Developing? Implications of China's "Going Out" for Late Development'. 198. SOAS Department of Economics Working Paper. London: SOAS, University of London.
- Lo, Dic, and Guicai Li. 2011. 'China's Economic Growth, 1978-2007: Structural-Institutional Changes and Efficiency Attributes'. *Journal of Post Keynesian Economics* 34 (1): 59–83.
- Lo, Dic, Zhao Wenzhe, and Dong Lixia. 2011. 'South-South Economic Relations, Technological Development and Late Industrialization'. Background Paper for Technology and Innovation Report 2012. Geneva: United Nations Conference on Trade and Development.
- Lo, Dic, and Mei Wu. 2013. 'The State and Industrial Policy in Chinese Economic Development'. Background paper for ILO-UNCTAD project on 'After the Money's Gone: Why Industrial Policy Matters for Inclusive Growth and Job Creation'.
- Lo, Dic, and Yu Zhang. 2011. 'Making Sense of China's Economic Transformation'. *Review of Radical Political Economics* 43 (1): 33–55.
- Lundgren, Charlotte J., Alun H. Thomas, and Robert C. York. 2013. 'Boom, Bust, or Prosperity? Managing Sub-Saharan Africa's Natural Resource Wealth'. Washington, D.C.: International Monetary Fund.
- Macauhub. 2016. 'Namibe Tomato Concentrate Factory in Angola Postpones Launch'. *Macauhub*, April 22. <https://macauhub.com.mo/2016/04/22/namibe-tomato-concentrate-factory-in-angola-postpones-launch/>.
- . 2017a. 'South African Group Distell Starts Beverage Production in Angola'. *Macauhub*, February 24. <http://www.macauhub.com.mo/en/2017/02/24/south-african-group-distell-starts-beverage-production-in-angola/>.
- . 2017b. 'Angola's Biocom Start Selling Electricity'. *Macauhub*, May 22. <https://macauhub.com.mo/2017/05/22/pt-companhia-de-bioenergia-de-angola-inicia-venda-de-energia-electrica/>.
- Maizels, Alfred. 1992. *The Commodity Crisis of the 1980s and the Political Economy of International Commodity Policies*. Oxford: Oxford University Press.

- Makels, Anna. 2012. 'Stata Tip 110: How to Get the Optimal K-Means Cluster Solution'. *The Stata Journal* 12 (2): 347–51.
- Malaquias, Assis. 2007. *Rebels and Robbers Violence in Post-Colonial Angola*. Stockholm: Nordiska Afrikainstitutet.
- Maritz, Jaco. 2014. 'Liquor Giant Replacing Imports with Local Manufacturing in Key African Markets'. *How We Make It in Africa*, August 29. <http://www.howwemadeitinafrica.com/liquor-giant-replacing-imports-with-local-manufacturing-in-key-african-markets/42946/>.
- Marques de Morais, Rafael. 2012. 'MPLA Ltd.' Maka Angola. <http://www.makaangola.org/wp-content/uploads/2012/04/MPLALimited.pdf>.
- Marques De Morais, Rafael. 2015. 'Angola: Oil and Cement Don't Mix With Corruption in Angola'. *All Africa*. <http://allafrica.com/stories/201509251223.html>.
- Marysse, Stefaan, and Sara Geenen. 2009. 'Win-Win or Unequal Exchange? The Case of the Sino-Congolese Cooperation Agreements'. *The Journal of Modern African Studies* 47 (03): 371. doi:10.1017/S0022278X09003978.
- Mazzucato, Marianna. 2015. 'The Innovative State – Governments Should Make Markets, Not Just Fix Them'. *Foreign Affairs* January/ February: 61–68.
- McAfee, Andrew. 2012. 'The Great Decoupling of the US Economy'. *Andrew McAfee*. December. <http://andrewmcafee.org/2012/12/the-great-decoupling-of-the-us-economy/>.
- McClelland, Colin. 2014. 'Castel's Angola Glass Blower Expands to Meet Demand'. *Bloomberg*, March 16. <http://www.bloomberg.com/news/articles/2014-03-14/castel-s-angola-glass-blower-expands-as-brewers-avoid-customs>.
- McCombie, J. S. L. 1989. "'Thirlwall's Law' and Balance of Payments Constrained Growth--a Comment on the Debate.' *Applied Economics* 21 (5): 611.
- McCombie, J. S. L., and Mark Roberts. 2008. 'Effective-Demand-Constrained Growth in a Two-Sector Kaldorian Model.' *Journal of Post Keynesian Economics* 31 (1): 57–78.
- McLeay, Michael, Amar Radia, and Ryland Thomas. 2014. 'Money Creation in the Modern Economy'. *Quarterly Bulletin* Q1: 1–14.
- Mehrling, Perry. 2002. 'Don Patinkin and the Origins of Postwar Monetary Orthodoxy'. *The European Journal of the History of Economic Thought* 9 (2): 161–85. doi:10.1080/09672560210129668.
- Meier, Gerald M., and William F. Steel. 1989. *Industrial Adjustment in Sub-Saharan Africa*. Oxford: Oxford University Press.
- Messiant, Christine. 2008. *L'Angola Postcolonial: Sociologie Politique D'une Oléocratie*. Vol. 2. 2 vols. Paris: Karthala.
- Metcalf, J. Stan, and John Foster. 2010. 'Evolutionary Growth Theory'. In *Handbook of Alternative Theories of Economic Growth*, by Mark Setterfield, 64–94. Cheltenham (U.K.) and Northampton (Mass.): Edward Elgar.
- Metcalf, J. Stan, and Ian Steedman. 1979. 'Heterogeneous Capital and the Heckscher-Ohlin-Samuelson Theory of Trade'. In *Fundamental Issues in Trade Theory*, edited by Ian Steedman, 64–76. London and Basingstoke: Macmillan.
- MIND. 2007. 'Plano de Médio Prazo Para O Período 2009-2013'. Luanda: República de Angola - Ministério da Indústria. <http://www.tralac.org/files/2012/12/Medium-Term-Plan-2009-2013-Portuguese.pdf>.
- . 2014a. 'Indústria'. No. 1. Revista Ministério Da Indústria. Luanda: Ministério da Indústria.
- . 2014b. 'Indústria'. No. 2. Revista Ministério Da Indústria. Luanda: Ministério da Indústria.
- MINFIN. 2008a. 'Linha de Crédito Com O Eximbank Da China Relatório Das Actividades Desenvolvidas II Trimestre de 2008'. Luanda: Ministério das

- Finanças (Gabinete de Apoio Técnico), República de Angola. http://www.minfin.gv.ao/fsys/China-Relatorio_do_II_trim_2008SiteMINFIN2.pdf.
- . 2008b. ‘Ponto de Situação Financeira Das Acções Complementares (referido à 30/06/2008)’. Annex 2. Luanda: Ministério das Finanças (Gabinete de Apoio Técnico), República de Angola. http://www.minfin.gv.ao/fsys/China-Anexos_relatorio_II_trim_2008SiteMINFIN.pdf.
- . 2008c. ‘Projectors Enquadrados No Segundo Pacote de Financiamento Com O Eximbank Da China’. Annex 9. Luanda: Ministério das Finanças (Gabinete de Apoio Técnico), República de Angola. http://www.minfin.gv.ao/fsys/III_08fase.pdf.
- Mkandawire, Thandika. 2001. ‘Thinking about Developmental States in Africa’. *Cambridge Journal of Economics* 25 (3): 289–314. doi:10.1093/cje/25.3.289.
- MOFCOM. 2015. ‘2014 Statistical Bulletin of China’s Outward Direct Investment Statistical Report (2014 年度中国对外直接投资统计公报)’. September 17. <http://fec.mofcom.gov.cn/article/tjsj/tjgb/201512/20151201223579.shtml>.
- Mohan, Giles, and Ben Lampert. 2013. ‘Negotiating China: Reinserting African Agency into China–Africa Relations’. *African Affairs* 112 (446): 92–110. doi:10.1093/afraf/ads065.
- Monga, Celestin. 2013. ‘Winning the Jackpot: Jobs Dividends in a Multipolar World’. In *The Industrial Policy Revolution II - Africa in the 21st Century*, edited by Joseph E. Stiglitz, Justin Yifu Lin, and Ebrahim Patel, 135–72. Houndmills: Palgrave Macmillan.
- Moreno-Brid, Juan Carlos. 1998. ‘On Capital Flows and the Balance-of-Payments-Constrained Growth Model’. *Journal of Post Keynesian Economics* 21 (2): 283–98.
- Moreno, Rosina, Enrique López-Bazo, and Manuel Artís. 2002. ‘Public Infrastructure and the Performance of Manufacturing Industries: Short- and Long-Run Effects’. *Regional Science and Urban Economics* 32 (1): 97–121. doi:10.1016/S0166-0462(00)00058-2.
- Morris, Mike. 2006. ‘Globalization, China and Industrialization Strategies in Sub-Saharan Africa’. In *The Future of the Textile and Clothing Industry in Sub-Saharan Africa*, by Herbert Jauch and Merz Rudolph, 36–52. Bonn: Friedrich Ebert Stiftung.
- Morris, Mike, Raphael Kaplinsky, and David Kaplan. 2011a. ‘Commodities and Linkages: Industrialisation in Sub Saharan Africa’. MMCP Discussion Paper No. 13. University of Cape Town and Open University.
- . 2011b. ‘“One Thing Leads to Another” – Commodities, Linkages and Industrial Development: A Conceptual Overview’. MMCP Discussion Paper No. 12. University of Cape Town and Open University.
- Moyo, Dambisa. 2009. *Dead Aid: Why Aid Is Not Working and How There Is a Better Way for Africa*. New York: Farrar, Straus and Giroux.
- MPDT. 2012. ‘Plano Nacional de Desenvolvimento 2013-2017’. Luanda: República de Angola - Ministério do Planeamento e do Desenvolvimento Territorial. <http://www.minfin.gv.ao/fsys/PND.pdf>.
- Mulenga, Friday.E. 2011. ‘Crisis and Success of the Labour Movement in Zambia: A Historical Perspective’. In *The Labour Movement in Zambia*, edited by Friedrich Ebert Stiftung, 3–18. Lusaka: Friedrich Ebert Stiftung.
- Munemo, Jonathan. 2013. ‘Examining Imports of Capital Goods From China as a Channel for Technology Transfer and Growth in Sub-Saharan Africa’. *Journal of African Business* 14 (2): 106–16. doi:10.1080/15228916.2013.804370.

- Mussa, Michael, and Miguel Savastano. 2000. 'The IMF Approach to Economic Stabilization'. In *NBER Macroeconomics Annual 1999*, edited by Ben S. Bernanke and Julio J. Rotemberg, 14:79–128. National Bureau of Economic Research.
- National Bureau of Statistics of China. 2009. 'Foreign Trade and Economic Cooperation, Explanatory Notes on Main Statistical Indicators'. In *China Statistical Yearbook*. Beijing: China Statistical Press.
- NDRC, and CHEXIM. 2004. 发改委与进出口银行关于对国家鼓励的境外投资重点项目给予信贷支持政策的通知_百度文库. <http://123.125.114.20/view/b2b5463631126edb6f1a10c4.html?re=view>.
- Nef. 2013. 'Strategic Quantitative Easing: Stimulating Investment to Rebalance the Economy'. London: New Economics Foundation.
- Nell, Edward J. 2002. 'Notes on the Transformational Growth of Demand'. In *The Economics of Demand-Led Growth: Challenging the Supply-Side Vision of the Long Run*, edited by Mark Setterfield, 251–72. Cheltenham (U.K.) and Northampton (Mass.): Edward Elgar.
- Nell, Kevin S. 2003. 'A "Generalised" Version of the Balance-of-Payments Growth Model: An Application to Neighbouring Regions.' *International Review of Applied Economics* 17 (3): 249.
- . 2013. 'An Alternative Explanation of India's Growth Transition: A Demand-Side Hypothesis'. *Cambridge Journal of Economics* 37 (1): 113–41. doi:10.1093/cje/bes051.
- Nelson, Richard R. 2008. 'Economic Development from the Perspective of Evolutionary Economic Theory'. *Oxford Development Studies* 36 (1): 9–21. doi:10.1080/13600810701848037.
- Nelson, Richard R., and Sidney G. Winter. 1982. *An Evolutionary Theory of Economic Change*. The Belknap Press of Harvard University Press.
- . 2002. 'Evolutionary Theorizing in Economics'. *The Journal of Economic Perspectives* 16 (2): 23–46.
- Nijnikeu, Dominique, Julie Lohi, and Calvin Z. Djiofack. 2013. 'Trade Facilitation and African Industrialization in the New Global Order: An Agenda for the Textile and Apparel Industry'. In *The Industrial Policy Revolution II - Africa in the 21st Century*, edited by Joseph E. Stiglitz, Justin Yifu Lin, and Ebrahim Patel, 412–54. Houndmills: Palgrave Macmillan.
- Noland, Marcus, and Howard Pack. 2003. *Industrial Policy in an Era of Globalization: Lessons from Asia*. Washington, D.C.: Institute for International Economics.
- Noman, Akbar, and Joseph E. Stiglitz. 2015. 'Introduction and Overview: Economic Transformation and Learning, Industrial and Technology Policies in Developing Countries'. In *Industrial Policy and Economic Transformation in Africa*, edited by Akbar Noman and Joseph E. Stiglitz, 1–29. New York: Columbia University Press.
- Ocampo, Jose Antonio, and Lance Taylor. 1998. 'Trade Liberalisation in Developing Economies: Modest Benefits but Problems with Productivity Growth, Macro Prices, and Income Distribution'. *Economic Journal* 108 (450): 1523–46.
- OECD. 2008. 'OECD Benchmark Definition of Foreign Direct Investment - 4th Edition'. Paris: Organisation for Economic Cooperation and Development.
- Office of the United States Trade Representative. 2014. 'National Trade Estimate Report on Foreign Trade Barriers - Angola'. Washington, D.C.: Office of the United States Trade Representative - Executive Office of the President. <https://www.ustr.gov/sites/default/files/2014%20NTE%20Report%20on%20FTB%20Angola.pdf>.

- Ohno, Izumi, and Kenichi Ohno. 2012. 'Dynamic Capacity Development: What Africa Can Learn from Industrial Policy Formulation in East Asia'. In *Good Growth and Governance in Africa: Rethinking Development Strategies*, edited by Akbar Noman, Joseph E. Stiglitz, Howard Stein, and Kwesi Botchway, 221. Oxford: Oxford University Press.
- Öniş, Ziya. 1991. 'The Logic of the Developmental State'. *Comparative Politics* 24 (1): 109–26.
- Oqubay, Arkebe. 2015. *Made in Africa: Industrial Policy in Ethiopia*. OUP Oxford.
- Orea, Luis, and Subal C. Kumbhakar. 2004. 'Efficiency Measurement Using a Latent Class Stochastic Frontier Model'. *Empirical Economics* 29 (1): 169–83. doi:10.1007/s00181-003-0184-2.
- Orr, Ryan J., and Jeremy R. Kennedy. 2008. 'Highlights of Recent Trends in Global Infrastructure: New Players and Revised Game Rules'. *Transnational Corporations* 17 (1): 99–133.
- Ovadia, Jesse Salah. 2013a. 'The Reinvention of Elite Accumulation in the Angolan Oil Sector: Emergent Capitalism in a Rentier Economy'. *Cadernos de Estudos Africanos* 25: 33–63.
- . 2013b. 'Accumulation with or without Dispossession? A “both/and” Approach to China in Africa with Reference to Angola'. *Review of African Political Economy* 40 (136): 233–50. doi:10.1080/03056244.2013.794724.
- . 2016. *The Petro-Developmental State in Africa - Making Oil Work in Angola, Nigeria and the Gulf of Guinea*. London: Hurst and Co Publishers.
- . 2017. 'State-Led Industrial Development, Structural Transformation and Elite-Led Plunder: Angola (2002-2013) as a Developmental State'. *Development Policy Review*, February. doi:10.1111/dpr.12249.
- Ozawa, Terutomo. 2015. 'Next Great Industrial Transmigration: Relocating China's Factories to Sub-Saharan Africa, Flying-Geese Style?' Discussion Paper Series APEC Study Center. New York: Columbia University.
- Ozawa, Terutomo, and Christian Bellak. 2011. 'Will the World Bank's Vision Materialize? Relocating China's Factories to Sub-Saharan Africa, Flying-Geese Style'. *Global Economy Journal* 11 (3).
- Pacheco-Lopez, Penelope. 2005. 'The Effect of Trade Liberalization on Exports, Imports, the Balance of Trade, and Growth: The Case of Mexico'. *Journal of Post Keynesian Economics* 27 (4): 595–619.
- Pack, Howard, and Kamal Saggi. 2006. 'Is There a Case for Industrial Policy? A Critical Survey'. *World Bank Research Observer* 21 (2): 267–97.
- Pack, Howard, and Larry E. Westphal. 1986. 'Industrial Strategy and Technological Change'. *Journal of Development Economics* 22 (1): 87–128.
- Page, John. 2012. 'Can Africa Industrialise?' *Journal of African Economies* 21: ii86–125.
- Pairault, Thierry. 2014. 'Chinese Direct Investment in Africa: A State Strategy?' *Region et Développement*, no. 37: 259–84.
- Palley, Thomas. 2004. 'The Economic Case for International Labour Standards'. *Cambridge Journal of Economics* 28 (1): 21–36.
- . 2006. 'Great Controversies: Developing the Domestic Market'. *Challenge* 49 (6): 20–34. doi:10.2753/0577-5132490602.
- Pape, Utz Johann, Melo Da Silva, Ana Paula, and Joelson Oliveira Sampaio. 2016. 'Angola - Pobreza E Análise de Impacto Social: Reforma de Subsídio E Extensão Do Programa de Protecção Social'. Washington, D.C.: World Bank.
- Pearson, Mark. 2015. 'Transport Infrastructure'. In *Africans Investing in Africa - Understanding Business and Trade, Sector by Sector*, edited by Terence McNamee, Mark Pearson, and Wiebe Boer, 63–78. Houndmills: Palgrave Macmillan.

- Péclard, Didier. 2001. 'Savoir Colonial, Missions Chrétiennes et Nationalisme En Angola'. *Genèses* 45 (4): 114–33.
- Perraton, Jonathan. 2004. 'Balance of Payments Constrained Growth and Developing Countries: An Examination of Thirlwall's Hypothesis'. In *Essays on Balance of Payments Constrained Growth: Theory and Evidence*, edited by J. S. L. McCombie and Anthony P. Thirlwall, 203–19. London: Routledge.
- Pheng, Low Sui, Hongbin Jiang, and Christopher H.Y. Leong. 2004. 'A Comparative Study of Top British and Chinese International Contractors in the Global Market'. *Construction Management and Economics* 22 (7): 717–31. doi:10.1080/0144619042000202780.
- Pitcher, M. Anne. 2017. 'Varieties of Residential Capitalism in Africa: Urban Housing Provision in Luanda and Nairobi'. *African Affairs*, March, 1–26. doi:10.1093/afraf/adx009.
- PKF Tax Guide. 2017. 'Angola Tax Guide 2016/17'. London: PKF International Ltd. <http://www.pkf.com/media/10028474/angola-tax-guide-2016-17.pdf>.
- Poon, Daniel. 2014. 'China's Development Trajectory: A Strategic Opening for Industrial Policy in the South'. In . UNCTAD/OSG/DP/2014/4. United Nations. http://unctad.org/en/PublicationsLibrary/osgdp20144_en.pdf.
- Power, Marcus. 2012. 'Angola 2025: The Future of the "World's Richest Poor Country" as Seen through a Chinese Rear-View Mirror.' *Antipode* 44 (3): 993–1014.
- Prebisch, Raúl. 1950. 'The Economic Development of Latin America and Its Principal Problems'. New York: Economic Commission for Latin America.
- Quaresma dos Santos, D. 2017. 'Portuguese Corruption Trial Snares Angola's Vice President'. *Maka Angola*. February 24. <https://www.makaangola.org/2017/02/portuguese-corruption-trial-snares-angolas-vice-president/>.
- Razmi, Arslan. 2015. 'Correctly Analysing the Balance-of-Payments Constraint on Growth'. *Cambridge Journal of Economics*, November. doi:10.1093/cje/bev069.
- Razmi, Arslan, and Robert A. Blecker. 2008. 'Developing Country Exports of Manufactures: Moving Up the Ladder to Escape the Fallacy of Composition?' *Journal of Development Studies* 44 (1): 21–48.
- Reed, Howard, and Jacob Mohun-Himmelweit. 2012. 'Where Have All The Wages Gone? Lost Pay and Profi Ts Outside Financial Services'. Touch Stone Extras. Trade Union Congress.
- Reina, Peter, and Gary J. Tulacz. 2015. 'International Contractors - Uncertainty Clouds Markets'. *Engineering News Record*.
- Řezanková, Hana. 2014. 'Cluster Analysis of Economic Data'. *Statistika* 94 (1): 73–86.
- Rodrik, Dani. 1996. 'Coordination Failures and Government Policy: A Model with Applications to East Asia and Eastern Europe'. *Journal of International Economics* 40 (1-2): 1–22.
- . 2007. *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth*. Princeton University Press.
- . 2009. 'Industrial Policy: Don't Ask Why, Ask How'. *Middle East Development Journal* 01 (01): 1–29.
- Rosenstein-Rodan, P. N. 1943. 'Problems of Industrialisation of Eastern and South-Eastern Europe'. *The Economic Journal* 53 (210/211): 202–11.
- Ruigrok, Inge. 2010. 'Facing Up to the Centre: The Emergence of Regional Elite Associations in Angola's Political Transition Process'. *Development and Change* 41 (4): 637–58.
- Salidjanova, Nargiza. 2011. 'Going Out: An Overview of China's Outward Foreign Direct Investment'. USCC Staff Research Report. Us-China Economic &

- Security Review Commission.
<http://www.uscc.gov/sites/default/files/Research/GoingOut.pdf>.
- Sampaio, João. 2014. Double digit growth in Africa – the Refriango company in profile. <http://www.foodbev.com/news/double-digit-growth-in-africa-the-refriango-company-in-profile/>.
- Sandrey, Ron, and Hannah Edinger. 2011. ‘China’s Manufacturing and Industrialization in Africa’. African Development Bank Working Paper Series No. 128. Tunis: African Development Bank.
- Sarkar, Prabirjit, and H.W. Singer. 1991. ‘Manufactured Exports of Developing Countries and Their Terms of Trade since 1965’. *World Development* 19 (4): 333–40. doi:10.1016/0305-750X(91)90180-P.
- Sasaki, Hiroaki. 2012. ‘Is the Long-Run Equilibrium Wage-Led or Profit-Led? A Kaleckian Approach’. *Structural Change and Economic Dynamics* 23 (3): 231–44.
- Sautman, Barry, and Hairong Yan. 2011. ‘Gilded Outside, Shoddy Within: The Human Rights Watch Report on Chinese Copper Mining in Zambia 表面は金ぴか、内実は粗悪—ザンビアにおける中国の銅山についてのHRW報告’, December. <http://www.japanfocus.org/-Yan-Hairong/3668/article.html>.
- . 2012. ‘Debate: The Wrong Answers to the Wrong Question A Response to HRW’. *Pambazuka News*, 568 edition. <http://www.pambazuka.net/en/category.php/features/79602/print>.
- Sawyer, Malcolm. 2011. ‘Path Dependency and the Interdependences of Demand and Supply in Macroeconomics’. *Intervention* 8 (2): 281–97.
- . 2013. ‘What Is Financialization?’ *International Journal of Political Economy* 42 (4): 5–18. doi:10.2753/IJP0891-1916420401.
- Schiere, Richard. 2010. ‘Building Complementarities in Africa between Different Development Cooperation Modalities of Traditional Development Partners and China’. *African Development Review* 22 (S1): 615–28.
- Scitovsky, Tibor. 1954. ‘Two Concepts of External Economies’. *Journal of Political Economy* 62 (2): 143–51.
- Seyoum, Mebratu, Renshui Wu, and Li Yang. 2015. ‘Technology Spillovers from Chinese Outward Direct Investment: The Case of Ethiopia’. *China Economic Review* 33 (April): 35–49. doi:10.1016/j.chieco.2015.01.005.
- Shafaeddin, Mehdi. 2012. ‘Industrial Policy Relevant in the 21st Century?’ *Journal of Development and Economic Policies* 14 (1): 5–55.
- Shen, Xiaofang. 2015. ‘Private Chinese Investment in Africa: Myths and Realities.’ *Development Policy Review* 33 (1): 83–106.
- Shimada, Go. 2015. ‘The Economic Implications of a Comprehensive Approach to Learning on Industrial Policy’. In *Industrial Policy and Economic Transformation in Africa*, edited by Akbar Noman and Joseph E. Stiglitz, 102–21. New York: Columbia University Press.
- Sindzingre, Nicole Alice, and Lee Robinson. 2012. ‘China’s Ambiguous Impacts on Commodity-Dependent Countries: The Example of Sub-Saharan Africa (with a Focus on Zambia)’. Working Paper 2012-39. Paris: Université Paris X Ouest Nanterre La Défense.
- Singer, H. W. 1950. ‘The Distribution of Gains between Investing and Borrowing Countries’. *American Economic Review* 40: 473–85.
- Singh, Ajit. 2011. ‘Comparative Advantage, Industrial Policy and the World Bank: Back to First Principles’. *Policy Studies* 32 (4): 447–60.
- Skott, Peter. 1999. ‘Growth and Stagnation in a Two-Sector Model: Kaldor’s Mattioli Lectures: Review Article’. *Cambridge Journal of Economics* 23 (3): 353–70.

- Snowdon, Brian, and Howard R. Vane. 2005. *Modern Macroeconomics - Its Origins, Development and Current State*. Cheltenham (U.K.) and Northampton (Mass.): Edward Elgar.
- Soares de Oliveira, Ricardo. 2007a. 'Business Success, Angola-Style: Postcolonial Politics and the Rise and Rise of Sonangol'. *The Journal of Modern African Studies* 45 (04): 595–619.
- . 2007b. *Oil and Politics in the Gulf of Guinea*. London: Hurst and Co Publishers.
- . 2011. 'Illiberal Peacebuilding in Angola'. *Journal of Modern African Studies* 49 (2): 287–314.
- . 2013. 'O Governo Está Aqui': Postwar State-Making in the Angolan Periphery'. *Politique Africaine* 130: 165–87.
- Soares de Oliveira, Ricardo, Harry Verhoeven, and Will Jones. 2013. 'Africa's Illiberal State-Builders'. Refugee Study Centre Working Paper Series No. 89. Oxford: Oxford Department of International Development, University of Oxford.
- Söderbom, Måns, and Francis Teal. 2001. 'Can African Manufacturing Firms Become Successful Exporters?' No. 4. Working Paper. Centre for the Study of African Economies and United Nations Industrial Development Organization.
- . 2003. 'Are Manufacturing Exports the Key to Economic Success in Africa?' *Journal of African Economies* 12 (1): 1–29.
- Sogge, David. 2009. 'Angola "Failed" yet "Successful"'. Working Paper No. 81. Madrid: Fundación para las Relaciones Internacionales y el Diálogo Exterior.
- Solli, Audun. 2009. 'Theorising African States: The Case of Angola from a Critical Theory Perspective'. NUPI Report. Oslo: Norwegian Institute of International Affairs.
- Solli, Audun, and Anthony Leysens. 2011. '(Re)Conceptualizing the Political Economy of the African State Form: The Strong/Weak State Contradiction in Angola.' *Politikon: South African Journal of Political Studies* 38 (2): 295–313.
- Soludo, Charles Chukwuma, and Michael Osita Ogbu. 2004. 'A Synthesis of Major Themes in the Political Economy of Trade and Industrialization in Africa'. In *The Politics of Trade and Industrial Policy in Africa*, by Charles Chukwuma Soludo, Michael Osita Ogbu, and Ha-Joon Chang, 1–41. Asmara: Africa World Press.
- Sonobe, Tetsushi, John E. Akoten, and Keijiro Otsuka. 2009. 'An Exploration into the Successful Development of the Leather-Shoe Industry in Ethiopia'. *Review of Development Economics* 13 (4): 719–36. doi:10.1111/j.1467-9361.2009.00526.x.
- Stake, Robert E. 2000. 'The Case Study Method in Social Inquiry'. In *Case Study Method*, edited by Roger Gomm, Martyn Hammersley, and Peter Foster. London: Sage.
- State Council. 2004. 'Decision of the State Council on Reforming the Investment System'. July 16. <http://www.lawinfochina.com/Display.aspx?lib=law&Cgid=54165>.
- Steel, William F., and Jonathan W. Evans. 1984. 'Industrialization in Sub-Saharan Africa: Strategies and Performance'. 25. World Bank Technical Paper. Washington, D.C.: World Bank.
- Stein, Howard. 1992. 'Deindustrialization, Adjustment, the World Bank and the IMF in Africa'. *World Development* 20 (1): 83–95. doi:10.1016/0305-750X(92)90138-L.
- . 2012. 'Africa, Industrial Policy and Export Processing Zones: Lessons from Asia'. In *Good Growth and Governance in Africa: Rethinking Development Strategies*, edited by Akbar Noman, Joseph E. Stiglitz, Howard Stein, and Kwesi Botchway, 322–44. Oxford: Oxford University Press.
- Stein, Howard, and Machiko Nissanke. 1999. 'Structural Adjustment and the African Crisis: A Theoretical Appraisal'. *Eastern Economic Journal* 25 (4): 399–420.

- Stevens, Christopher, and Jane Kennan. 2006. 'How to Identify the Trade Impact of China on Small Countries'. *IDS Bulletin* 37 (1): 33–42.
- Stockhammer, Engelbert. 2004. 'Financialisation and the Slowdown of Accumulation'. *Cambridge Journal of Economics* 28 (5): 719–41. doi:10.1093/cje/beh032.
- . 2012. 'Financialization, Income Distribution and the Crisis'. *Investigación Económica* 71 (279): 39–70.
- Subramanian, Uma, and Matthias Matthijs. 2007. 'Can Sub-Saharan Africa Leap into Global Network Trade?' World Bank Policy Research Working Paper 4112. Washington, D.C.: World Bank.
- Szirmai, Adam. 2012. 'Industrialisation as an Engine of Growth in Developing Countries, 1950–2005'. *Structural Change and Economic Dynamics* 23 (4): 406–20.
- Szyborska, Hanna K. 2016. 'Financial Sector Transformation and Income Inequality— an Empirical Analysis'. *E-Finanse* 12 (2): 36–48.
- Tang, Wenxia, and Miria A. Pigato. 2015. 'China and Africa : Expanding Economic Ties in an Evolving Global Context'. 95161. The World Bank. <http://documents.worldbank.org/curated/en/2015/03/24177102/china-africa-expanding-economic-ties-evolving-global-context>.
- Tang, Xiaoyang. 2010. 'Bulldozer or Locomotive? The Impact of Chinese Enterprises on the Local Employment in Angola and the DRC'. *Journal of Asian and African Studies* 45 (3): 350–68.
- . 2014. 'The Impact of Asian Investment on Africa's Textile Industries'. Beijing: Carnegie-Tsinghua Center for Global Policy.
- Tan-Mullins, May, Giles Mohan, and Marcus Power. 2010. 'Redefining "Aid" in the China-Africa Context'. *Development and Change* 41 (5): 857–81.
- The Economist. 2011. 'Trying to Pull Together'. *The Economist*, April 23. <http://www.economist.com/node/18586448>.
- Thirlwall, Anthony P. 1979. 'The Balance of Payments Constraint as an Explanation of International Growth Rate Differences'. *BNL Quarterly Review*, no. 128: 45.
- . 1983. 'A Plain Man's Guide to Kaldor's Growth Laws.' *Journal of Post Keynesian Economics* 5 (3): 345.
- . 1986. 'A General Model of Growth and Development on Kaldorian Lines'. *Oxford Economic Papers* 38 (2): 199–219.
- . 1992. 'A Kaldorian Model of Growth and Development Revisited: A Rejoinder to Dutt'. *Oxford Economic Papers*, New Series, 44 (1): 169–72.
- . 1997. 'Reflections on the Concept of Balance-of-Payments-Constrained Growth.' *Journal of Post Keynesian Economics* 19 (3): 377–85.
- . 2013. *Economic Growth in an Open Developing Economy - The Role of Structure and Demand*. Cheltenham (U.K.) and Northampton (Mass.): Edward Elgar.
- Thirlwall, Anthony P., and M. Nureldin Hussain. 1982. 'The Balance of Payments Constraint, Capital Flows and Growth Rate Differences between Developing Countries'. *Oxford Economic Papers* 34 (3): 498–510.
- Timmer, Marcel P., and Adam Szirmai. 2000. 'Productivity Growth in Asian Manufacturing: The Structural Bonus Hypothesis Examined'. *Structural Change and Economic Dynamics* 11 (4): 371–92.
- Toner, Phillip. 1999. *Main Currents in Cumulative Causation: The Dynamics of Growth and Development*. New York: Palgrave Macmillan.
- Torres, Adelino. 1983. 'Pacto Colonial E Industrialização de Angola (anos 60-70)'. *Análise Social* XIX (77-78-79): 1101–19.
- Toye, John. 2006. 'Changing Perspectives in Development Economics'. In *Rethinking Development Economics*, edited by Ha-Joon Chang, 3rd ed., 21–40. London: Anthem Press.

- Trichet, Jean-Claude. 2010. Interview with Jean-Claude Trichet, President of the ECB, and La Repubblica. <http://www.ecb.europa.eu/press/key/date/2010/html/sp100624.en.html>.
- Turner, Adair. 2016. *Between Debt and the Devil: Money, Credit, and Fixing Global Finance*. Princeton and Oxford: Princeton University Press.
- UCAN. 2014. 'Relatório Económico de Angola 2013'. Luanda: Centro de Estudos e Investigação Científica, Universidade Católica de Angola.
- . 2016. 'Relatório Económico de Angola 2015'. Luanda: Universidade Católica de Angola, Centro de Estudos Científicos.
- UNCTAD. 2008. *Economic Development in Africa 2008: Export Performance Following Trade Liberalization: Some Patterns and Policy Perspectives*. New York and Geneva: United Nations Publications.
- . 2015. 'World Investment Report - Reforming International Investment Governance'. Geneva: United Nations Conference on Trade and Development.
- UNCTAD, and UNIDO. 2011. 'The Economic Development in Africa Report 2011 - Fostering Industrial Development in Africa in the New Global Environment'. United Nations Conference on Trade and Development.
- UNDP, SASAC, and MOFCOM. 2015. 'Report on the Sustainable Development of Chinese Enterprises Overseas'. Chinese Academy of International Trade and Economic Cooperation Ministry of Commerce, Research Center of the State-owned Assets Supervision and Administration Commission of the State Council, United Nations Development Programme China.
- UNECA. 2000. 'Transforming Africa's Economies: Economic Report on Africa 2000'. Economic Report on Africa. Addis Ababa, Ethiopia: United Nations Economic Commission for Africa.
- . 2004. 'Unlocking Africa's Trade Potential'. Economic Report on Africa. Addis Ababa, Ethiopia: United Nations Economic Commission for Africa.
- . 2013. 'Making the Most of Africa's Commodities: Industrializing for Growth, Jobs and Economic Transformation'. Addis Ababa, Ethiopia: United Nations Economic Commission for Africa.
- . 2015. 'Economic Report on Africa 2015: Industrializing through Trade'. Addis Ababa, Ethiopia: United Nations Economic Commission for Africa.
- UNIDO. 2012. 'Promoting Industrial Diversification in Resource Intensive Economies: The Experiences of Sub-Saharan Africa and Central Asia Regions'. Vienna: United Nations Industrial Development Organization.
- Valério, Nuno, and Maria Paula Fontoura. 1994. 'A Evolução Económica de Angola Durante O Segundo Período Colonial - Uma Tentativa de Síntese'. *Análise Social* XXIX (129): 1193–1208.
- Van Biesebroeck, Johannes. 2005. 'Exporting Raises Productivity in Sub-Saharan African Manufacturing Firms'. *Journal of International Economics* 67 (2): 373–91. doi:10.1016/j.jinteco.2004.12.002.
- VerAngola. 2015. 'Bela: Cerveja Produzida Por Chineses Em Luanda Já Está à Venda'. *VerAngola*, June 5. <http://www.verangola.net/va/pt/052015/ComercioIndustria/1033/>.
- Villoria, Nelson. 2009a. 'China's Growth and the Agricultural Exports of Sub-Saharan Southern Africa'. *European Journal of Development Research* 21 (4): 531–50. doi:10.1057/ejdr.2009.27.
- . 2009b. 'China and the Manufacturing Terms-of-Trade of African Exporters'. *Journal of African Economies* 18 (5): 781–823. doi:10.1093/jae/ejp004.
- Wade, Robert. 1990. *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization*. Second Paperback Edition 2004. Princeton: Princeton University Press.

- . 2006. ‘Chocking the South’. *New Left Review* 38: 115–27.
- . 2012. ‘How Can Low-Income Countries Accelerate Their Catch-Up with High-Income Countries? The Case for Open-Economy Industrial Policy’. In *Good Growth and Governance in Africa: Rethinking Development Strategies*, edited by Akbar Noman, Kwesi Botchwey, Howard Stein, and Joseph E. Stiglitz, 246–72. Oxford: Oxford University Press.
- Wallis, William. 2013. ‘Aliko Dangote – Africa’s Richest Man’. *Financial Times*, October 11.
- Warmerdam, Ward, and Meine Pieter van Dijk. 2013. ‘Chinese State-Owned Enterprise Investments in Uganda: Findings from a Recent Survey of Chinese Firms in Kampala’. *Journal of Chinese Political Science* 18 (3): 281–301. doi:10.1007/s11366-013-9250-6.
- Weiss, John. 2011. ‘Industrial Policy in the Twenty-First Century’. Working Paper No. 2011/55. UNU-WIDER.
- Wells, Heather, and Anthony P. Thirlwall. 2003. ‘Testing Kaldor’s Growth Laws across the Countries of Africa.’ *African Development Review* 15 (2/3): 89–105.
- White, Lyal. 2015. ‘The Case of Cement’. In *Africans Investing in Africa - Understanding Business and Trade, Sector by Sector*, edited by Terence McNamee, Mark Pearson, and Wiebe Boer, 124–46. Houndmills: Palgrave Macmillan.
- Whitfield, Lindsay, Ole Therkildsen, Lars Buur, and Anne Mette Kjær. 2015. *The Politics of African Industrial Policy: A Comparative Perspective*. Cambridge, UK: Cambridge University Press.
- Winsor, Morgan. 2016. ‘Can Angola’s New Steel Mill Save Its Economy? As Oil Prices Plunge, Luanda Looks To Diversify’. *International Business Times*, January 29, sec. World. <http://www.ibtimes.com/can-angolas-new-steel-mill-save-its-economy-oil-prices-plunge-luanda-looks-diversify-2283990>.
- Wood, Ellen Meiksins. 2002. *The Origin of Capitalism: A Longer View*. Verso.
- World Bank. 1981a. ‘Accelerated Development in Sub-Saharan Africa - An Agenda for Action’. Washington, D.C.: World Bank.
- . 1981b. ‘Accelerated Development in Sub-Saharan Africa: An Agenda for Action’. In . Washington, D.C.: World Bank.
- . 1989. *Angola - An Introductory Economic Review, Main Report*. Vol. 1. 2 vols. Washington, D.C.: World Bank.
- . 1993. *The East Asian Miracle: Economic Growth and Public Policy*. World Bank Policy Research Report. Oxford University Press for the World Bank.
- WTO. 2015. ‘Trade Policy Review - Angola’. WT/TPR/S/321. World Trade Organisation.
- Young, Allyn A. 1928. ‘Increasing Returns and Economic Progress’. *The Economic Journal* 38 (152): 527–42.
- Zhao, Zhen Yu, and Li Yin Shen. 2008. ‘Are Chinese Contractors Competitive in International Markets?’ *Construction Management and Economics* 26 (3): 225–36. doi:10.1080/01446190801905380.
- Zoellick, R. B. 2010. ‘The End of the Third World? Modernizing Multilateralism for a Multipolar World’. Speech at the World Bank– International Monetary Fund Spring Meetings, April 14. Washington, DC.
- Zwan, Natascha van der. 2014. ‘Making Sense of Financialization’. *Socio-Economic Review* 12 (1): 99–129. doi:10.1093/ser/mwt020.

ANNEX 1. PRODUCT GROUP CLASSIFICATION FOR TRADE DATA ANALYSIS

Annex 1. Product group classification for trade data analysis based on ISIC rev. 3

Raw Materials

0111	Growing of cereals and other crops n.e.c.
0112	Growing of vegetables, horticultural specialties and nursery products
0113	Growing of fruit, nuts, beverage and spice crops
0121	Farming of cattle, sheep, goats, horses, asses, mules and hinnies; dairy farming
0122	Other animal farming; production of animal products n.e.c.
0130	Growing of crops combined with farming of animals (mixed farming)
0140	Agricultural and animal husbandry service activities, except veterinary activities
0150	Hunting, trapping and game propagation including related service activities
0200	Forestry, logging and related service activities
0500	Fishing, operation of fish hatcheries and fish farms
1010	Mining and agglomeration of hard coal
1020	Mining and agglomeration of lignite
1030	Extraction and agglomeration of peat
1110	Extraction of crude petroleum and natural gas
1120	Service activities incidental to oil and gas extraction excluding surveying
1200	Mining of uranium and thorium ores
1310	Mining of iron ores
1320	Mining of non-ferrous metal ores, except uranium and thorium ores
1410	Quarrying of stone, sand and clay
1421	Mining of chemical and fertilizer minerals
1422	Extraction of salt
1429	Other mining and quarrying n.e.c.

Manufacturing products

Food and Beverages

1511	Production, processing and preserving of meat and meat products
1512	Processing and preserving of fish and fish products
1513	Processing and preserving of fruit and vegetables
1514	Manufacture of vegetable and animal oils and fats
1520	Manufacture of dairy products
1531	Manufacture of grain mill products
1532	Manufacture of starches and starch products
1541	Manufacture of bakery products
1542	Manufacture of sugar
1543	Manufacture of cocoa, chocolate and sugar confectionery
1544	Manufacture of macaroni, noodles, couscous and similar farinaceous products
1549	Manufacture of other food products n.e.c.
1551	Distilling, rectifying and blending of spirits; ethyl alcohol production from fermented materials

1552	Manufacture of wines
1553	Manufacture of malt liquors and malt
1554	Manufacture of soft drinks; production of mineral waters
1600	Manufacture of tobacco products

Final Consumption Goods

1712	Finishing of textiles
1721	Manufacture of made-up textile articles, except apparel
1722	Manufacture of carpets and rugs
1723	Manufacture of cordage, rope, twine and netting
1729	Manufacture of other textiles n.e.c.
1730	Manufacture of knitted and crocheted fabrics and articles
1810	Manufacture of wearing apparel, except fur apparel
1912	Manufacture of luggage, handbags and the like, saddlery and harness
1920	Manufacture of footwear
2211	Publishing of books, brochures, musical books and other publications
2212	Publishing of newspapers, journals and periodicals
2213	Publishing of recorded media
2219	Other publishing
2221	Printing
2222	Service activities related to printing
2230	Reproduction of recorded media
3220	Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy
3230	Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods
3410	Manufacture of motor vehicles
3591	Manufacture of motorcycles
3592	Manufacture of bicycles and invalid carriages
3610	Manufacture of furniture
3692	Manufacture of musical instruments
3693	Manufacture of sports goods
3694	Manufacture of games and toys
3699	Other manufacturing n.e.c.
3330	Manufacture of watches and clocks
2893	Manufacture of cutlery, hand tools and general hardware
2930	Manufacture of domestic appliances n.e.c.
3150	Manufacture of electric lamps and lighting equipment

Intermediate Inputs

1533	Manufacture of prepared animal feeds
1711	Preparation and spinning of textile fibres; weaving of textiles
1911	Tanning and dressing of leather
2010	Sawmilling and planing of wood
2021	Manufacture of veneer sheets; manufacture of plywood, laminboard, particle board and other panels and boards
2022	Manufacture of builders' carpentry and joinery

2023	Manufacture of wooden containers
2029	Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials
2101	Manufacture of pulp, paper and paperboard
2102	Manufacture of corrugated paper and paperboard and of containers of paper and paperboard
2109	Manufacture of other articles of paper and paperboard
2310	Manufacture of coke oven products
2320	Manufacture of refined petroleum products
2330	Processing of nuclear fuel
2411	Manufacture of basic chemicals, except fertilizers and nitrogen compounds
2412	Manufacture of fertilizers and nitrogen compounds
2413	Manufacture of plastics in primary forms and of synthetic rubber
2421	Manufacture of pesticides and other agro-chemical products
2422	Manufacture of paints, varnishes and similar coatings, printing ink and mastics
2424	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
2429	Manufacture of other chemical products n.e.c.
2430	Manufacture of man-made fibres
2511	Manufacture of rubber tyres and tubes; retreading and rebuilding of rubber tyres
2519	Manufacture of other rubber products
2520	Manufacture of plastics products
2610	Manufacture of glass and glass products
2691	Manufacture of non-structural non-refractory ceramic ware
2692	Manufacture of refractory ceramic products
2693	Manufacture of structural non-refractory clay and ceramic products
2694	Manufacture of cement, lime and plaster
2695	Manufacture of articles of concrete, cement and plaster
2696	Cutting, shaping and finishing of stone
2699	Manufacture of other non-metallic mineral products n.e.c.
2710	Manufacture of basic iron and steel
2720	Manufacture of basic precious and non-ferrous metals
2731	Casting of iron and steel
2732	Casting of non-ferrous metals
2811	Manufacture of structural metal products
2812	Manufacture of tanks, reservoirs and containers of metal
2891	Forging, pressing, stamping and roll-forming of metal; powder metallurgy
2892	Treatment and coating of metals; general mechanical engineering on a fee or contract basis
2899	Manufacture of other fabricated metal products n.e.c.
3130	Manufacture of insulated wire and cable
3210	Manufacture of electronic valves and tubes and other electronic components
3420	Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers
3430	Manufacture of parts and accessories for motor vehicles and their engines

Machinery

2911	Manufacture of engines and turbines, except aircraft, vehicle and cycle engines
2912	Manufacture of pumps, compressors, taps and valves
2913	Manufacture of bearings, gears, gearing and driving elements
2914	Manufacture of ovens, furnaces and furnace burners
2915	Manufacture of lifting and handling equipment
2919	Manufacture of other general purpose machinery
2921	Manufacture of agricultural and forestry machinery
2922	Manufacture of machine-tools
2923	Manufacture of machinery for metallurgy
2924	Manufacture of machinery for mining, quarrying and construction
2925	Manufacture of machinery for food, beverage and tobacco processing
2926	Manufacture of machinery for textile, apparel and leather production
2929	Manufacture of other special purpose machinery
3000	Manufacture of office, accounting and computing machinery
3110	Manufacture of electric motors, generators and transformers
3120	Manufacture of electricity distribution and control apparatus
3140	Manufacture of accumulators, primary cells and primary batteries
3190	Manufacture of other electrical equipment n.e.c.
3313	Manufacture of industrial process control equipment
3320	Manufacture of optical instruments and photographic equipment
2813	Manufacture of steam generators, except central heating hot water boilers

Public goods”

Medical Equipment

2423	Manufacture of pharmaceuticals, medicinal chemicals and botanical products
3311	Manufacture of medical and surgical equipment and orthopaedic appliances
3312	Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment

Public transport equipment

3530	Manufacture of aircraft and spacecraft
3520	Manufacture of railway and tramway locomotives and rolling stock
3511	Building and repairing of ships
3599	Manufacture of other transport equipment n.e.c.

Military goods

2927	Manufacture of weapons and ammunition
------	---------------------------------------

Luxury goods

3512	Building and repairing of pleasure and sporting boats
3691	Manufacture of jewellery and related articles
1820	Dressing and dyeing of fur; manufacture of articles of fur

ANNEX 2. ETHIOPIA INVESTMENT BREAKDOWN

Annex 2. Ethiopia investment breakdown

Table 38 Ethiopia: Chinese manufacturing sector investments 2000-2015 by ISIC 4 digit

ISIC 4digit	Description	No. Investment projects	Empl. generated	% of total empl.
2520	Plastics products	65	10,750	9%
1721	Made-up textile articles, except apparel	49	5,147	4%
1810	Wearing apparel, except fur apparel	42	15,213	12%
3610	Furniture	40	1,931	2%
1920	Footwear	28	12,062	10%
2695	Articles of concrete, cement and plaster	26	2,128	2%
2694	Cement, lime and plaster	25	10,716	9%
3220	Television + radio, telephones	23	1,963	2%
1912	Luggage, handbags and the like, saddlery and harness	21	14,852	12%
2710	Basic iron and steel	19	2,163	2%
1511	Processing of meat and meat products	17	1,760	1%
1711	Spinning of textile fibres; weaving of textiles	17	9,206	7%
2021	Veneer sheets; plywood, laminboard and other panels	15	2,160	2%
2693	Structural non-refractory clay and ceramic products	15	1,489	1%
2811	Structural metal products	15	2,609	2%
3430	Parts and accessories for motor vehicles	12	808	1%
3699	Other manufacturing n.e.c.	11	1,305	1%
2109	Other articles of paper and paperboard	11	1,418	1%
1554	Soft drinks; production of mineral waters	10	1,121	1%
1911	Tanning and dressing of leather	10	5,156	4%
2610	Glass and glass products	10	1,706	1%
1514	Vegetable and animal oils and fats	9	529	0%
2422	Paints, varnishes, printing ink and mastics	9	238	0%
2519	Other rubber products	9	645	1%
2924	Machinery for mining, quarrying and construction	9	330	0%
1730	Knitted and crocheted fabrics and articles	8	1,355	1%
2424	Soap and detergents, perfumes and toilet preparations	8	331	0%
3410	Motor vehicles	8	1,015	1%
3592	Bicycles and invalid carriages	8	209	0%
2899	Other fabricated metal products n.e.c.	8	792	1%
2696	Cutting, shaping and finishing of stone	7	842	1%
2930	Domestic appliances n.e.c.	6	478	0%
3150	Electric lamps and lighting equipment	6	425	0%
3591	Motorcycles	6	601	0%
2731	Casting of iron and steel	6	2,260	2%
3130	Insulated wire and cable	6	1,797	1%
2921	Agricultural and forestry machinery	6	298	0%
3190	Other electrical equipment n.e.c.	6	140	0%

Table 38 Ethiopia: Chinese manufacturing sector investments 2000-2015 by ISIC 4 digit

ISIC 4digit	Description	No. Investment projects	Empl. generated	% of total empl.
1544	Macaroni, noodles, couscous + similar farinaceous products	5	418	0%
2101	Pulp, paper and paperboard	5	223	0%
2429	Other chemical products n.e.c.	5	200	0%
2915	Lifting and handling equipment	5	256	0%
2411	Basic chemicals, except fertilizers + nitrogen compounds	4	167	0%
3140	Accumulators, primary cells and primary batteries	4	980	1%
1712	Finishing of textiles	3	432	0%
1729	Other textiles n.e.c.	3	85	0%
2893	Cutlery, hand tools and general hardware	3	179	0%
1549	Other food products n.e.c.	3	91	0%
2320	Refined petroleum products	3	598	0%
2720	Basic precious and non-ferrous metals	3	421	0%
3230	Television + radio receivers, sound or video recording	2	80	0%
1531	Grain mill products	2	65	0%
1532	Starches and starch products	2	350	0%
1541	Bakery products	2	200	0%
1542	Sugar	2	65	0%
2010	Sawmilling and planing of wood	2	225	0%
2102	Corrugated paper and paperboard	2	420	0%
2511	Rubber tyres and tubes	2	92	0%
3210	Electronic valves and tubes + other electronic components	2	95	0%
3420	Bodies (coachwork) for motor vehicles	2	140	0%
3110	Electric motors, generators and transformers	2	56	0%
1722	Carpets and rugs	1	1,000	1%
1723	Cordage, rope, twine and netting	1	120	0%
1513	Preserving of fruit and vegetables	1	12	0%
1520	Dairy products	1	20	0%
1543	Cocoa, chocolate and sugar confectionery	1	35	0%
2029	Other products of wood; cork, straw + plaiting materials	1	70	0%
2412	Fertilizers and nitrogen compounds	1	100	0%
2421	Pesticides and other agro-chemical products	1	30	0%
2430	Man-made fibres	1	11	0%
2691	Non-structural non-refractory ceramic ware	1	50	0%
2692	Refractory ceramic products	1	22	0%
2699	Other non-metallic mineral products n.e.c.	1	90	0%
2812	Tanks, reservoirs and containers of metal	1	60	0%
2919	Other general purpose machinery	1	80	0%
2925	Machinery for food, beverage and tobacco processing	1	10	0%
3313	Industrial process control equipment	1	183	0%
3320	Optical instruments and photographic equipment	1	13	0%

Table 38 Ethiopia: Chinese manufacturing sector investments 2000-2015 by ISIC 4 digit

ISIC 4digit	Description	No. Investment projects	Empl. generated	% of total empl.
	Total	691	125,692	100%

Calculations based on EIC

ANNEX 3. ANGOLA TRADE DETAILS

Annex 3. Angola: Evolution of Import patterns by partner and Sector

Table 39. Angola: Imports by Partner as % of Total Imports in that Product Group, 2014							
	China	Portugal	Korea	USA	Brazil	Other	World
Agriculture, Forestry, Fishing	2.4%	15.4%	0.0%	4.4%	5.5%	0.0%	100.0%
Food & Beverages	1.9%	22.4%	0.0%	6.6%	17.6%	0.0%	100.0%
Intermediate Inputs	27.5%	17.5%	3.1%	4.7%	2.3%	0.0%	100.0%
Medical Precision	10.0%	29.9%	0.3%	9.9%	1.4%	0.0%	100.0%
Final Consumer Products	48.8%	13.2%	2.4%	2.2%	3.6%	0.0%	100.0%
Machinery	17.2%	19.0%	0.9%	15.6%	1.5%	0.0%	100.0%
Public Transport Equipment	0.8%	0.2%	62.7%	0.1%	0.2%	0.0%	100.0%
Mining	7.7%	11.7%	0.0%	3.8%	2.5%	0.0%	100.0%
Services	8.6%	2.3%	7.9%	15.7%	9.0%	0.0%	100.0%
Luxury	0.6%	34.3%	0.3%	17.0%	0.4%	0.0%	100.0%
Military	1.1%	2.3%	0.0%	0.5%	0.0%	0.0%	100.0%

Table 40. Angola: Composition of Chinese imports by broad category, % of total imports from China

Broad Category	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Agriculture, Forestry, Fishing	11%	4%	3%	2%	1%	0%	0%	0%	1%	0%	0%	0%	0%
Food & Beverages	0%	0%	1%	3%	2%	2%	1%	1%	1%	2%	2%	2%	1%
Intermediate Inputs	26%	23%	28%	26%	31%	32%	40%	42%	42%	46%	41%	41%	33%
Medical Precision	1%	1%	2%	2%	2%	3%	2%	1%	1%	1%	1%	1%	1%
Final Consumer Products	54%	54%	42%	39%	35%	38%	32%	30%	35%	31%	36%	40%	49%
Machinery	7%	18%	23%	23%	28%	20%	22%	19%	17%	17%	18%	16%	14%
Public Transport Equipment	0%	0%	0%	5%	1%	5%	3%	6%	3%	3%	3%	0%	0%
Mining	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Services	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Luxury	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Military	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total Trade	100%												

Table 41. Angola: Composition of Chinese imports by broad category, USD constant 2005 millions

Broad Category	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Agriculture, Forestry, Fishing	7.5	5.5	6.6	8.0	5.5	4.6	10.1	3.4	9.0	9.6	6.6	3.7	4.4
Food & Beverages	0.2	0.3	2.6	10.0	20.0	20.6	21.9	20.0	23.3	35.8	48.5	49.5	63.0
Intermediate Inputs	17.9	35.6	54.6	95.8	265.8	351.5	947.0	860.3	687.6	941.8	1,215.0	1,219.4	1,501.7
Medical Precision	0.7	1.7	3.5	8.9	16.6	27.6	39.3	23.6	20.8	26.3	33.7	39.0	50.6
Final Consumer Products	37.3	84.7	82.8	146.3	296.7	418.2	773.5	607.9	575.1	638.1	1,071.1	1,184.1	2,222.7
Machinery	5.1	28.4	45.8	86.8	237.9	218.8	535.9	396.3	289.5	347.8	530.6	469.3	631.1
Public Transport Equipment	0.1	0.1	0.2	16.9	11.6	52.6	60.9	127.0	48.8	53.9	85.7	14.7	12.8
Mining	0.0	0.0	0.0	0.0	0.4	0.6	1.3	1.3	0.4	3.3	2.6	2.9	3.2
Services	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.4	1.0	1.4	8.5
Luxury	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8	0.2	0.0	0.1	0.1	0.1
Military	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Trade	69.0	156.4	196.3	372.8	854.6	1,094.5	2,390.2	2,040.9	1,655.2	2,057.0	2,995.0	2,984.2	4,498.3

Table 42. Angola: Total Imports by Major trading partner, constant 2005 USD millions

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
China	69	156	196	373	855	1,095	2,390	2,041	1,655	2,057	2,995	2,984	4,498
Portugal	603	789	840	986	1,446	2,032	2,689	2,672	2,082	2,398	2,850	3,111	3,175
Korea	21	27	1,842	1,517	992	154	1,029	278	131	161	308	935	1,355
USA	408	505	586	907	1,461	1,104	1,680	1,115	967	781	1,021	1,001	1,228
Brazil	225	252	363	521	800	1,058	1,603	1,140	780	793	847	956	948
World constant	3,100	4,543	6,598	7,504	9,835	10,825	16,059	14,657	12,785	12,849	15,028	17,289	19,431
World current	2,752	4,231	6,497	7,504	10,287	12,210	19,770	17,135	15,477	17,376	20,268	22,966	25,811

Table 43. Angola: Imports by major trading partner as % of total imports

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
China	2.2%	3.4%	3.0%	5.0%	8.7%	10.1%	14.9%	13.9%	12.9%	16.0%	19.9%	17.3%	23.2%
Portugal	19.4%	17.4%	12.7%	13.1%	14.7%	18.8%	16.7%	18.2%	16.3%	18.7%	19.0%	18.0%	16.3%
Korea	0.7%	0.6%	27.9%	20.2%	10.1%	1.4%	6.4%	1.9%	1.0%	1.3%	2.0%	5.4%	7.0%
USA	13.2%	11.1%	8.9%	12.1%	14.9%	10.2%	10.5%	7.6%	7.6%	6.1%	6.8%	5.8%	6.3%
Brazil	7.2%	5.6%	5.5%	6.9%	8.1%	9.8%	10.0%	7.8%	6.1%	6.2%	5.6%	5.5%	4.9%
world	100.0%												

Table 44. Composition of Machinery imports by major trading partner (sum 2002-2014), constant 2005 USD millions

ISIC3	detail	China	Portugal	Korea	USA	Brazil	Other	World	China/ World
2924	Machinery for mining, quar. + constr.	887	877	94	3665	301	2944	8768	10%
2912	Pumps, compressors, taps and valves	191	382	30	485	102	2929	4118	5%
2919	Other general purpose machinery	369	708	45	272	116	1780	3290	11%
3110	Electric motors, generators + transformers	889	611	126	216	142	1209	3194	28%
2929	Other special purpose machinery	81	355	40	447	84	1298	2305	4%
2915	Lifting and handling equipment	295	347	28	268	75	707	1719	17%
3120	Electricity distrib. and control apparatus	267	767	14	63	104	498	1712	16%
3000	Office, accounting + computing machinery	95	435	11	85	14	749	1388	7%
2911	Engines + turbines, exc. aircraft, vehicle etc.	62	22	0	163	21	754	1022	6%
2922	Machine-tools	67	291	9	38	53	276	734	9%
2921	Agricultural and forestry machinery	51	133	5	13	171	217	590	9%
3140	Accumulators, primary cells + prim.batteries	349	72	13	18	5	94	551	63%
2925	Machinery for food, bev. + tobacco proces.	32	116	0	2	73	292	515	6%
3190	Other electrical equipment n.e.c.	101	157	4	30	22	192	506	20%
3313	Industrial process control equipment	6	16	2	20	6	234	285	2%
2913	Bearings, gears, gearing + driving elements	25	34	0	25	16	141	242	11%
2926	Machinery for textile, apparel + leather prod.	13	24	4	1	5	128	174	7%
2914	Ovens, furnaces and furnace burners	16	35	0	11	53	47	162	10%
3320	Optical instruments + photographic equip.	12	41	0	5	3	41	102	11%
2813	Steam generators, except central heating	8	20	1	2	24	45	100	8%
2923	Machinery for metallurgy	7	2	0	0	1	21	31	22%
	Total Machinery	3823	5445	425	5829	1391	14597	31510	

Table 45. Composition of Intermediate inputs imports by major trading partner (sum 2002-2014), constant 2005 USD million

ISIC3	detail	China	Port.	Korea	USA	Brazil	Other	World	% of Total	China/ World
2710	Basic iron and steel	2,055	649	131	648	398	4,347	8,227	19%	25%
2320	Refined petroleum products	21	246	468	75	196	4,428	5,434	13%	0%
2899	Other fabricated metal products n.e.c.	550	700	26	215	154	2,591	4,235	10%	13%
2811	Structural metal products	697	1,081	67	238	385	1,060	3,530	8%	20%
2520	Plastics products	719	755	18	51	136	1,012	2,691	6%	27%
2429	Other chemical products n.e.c.	83	295	10	261	33	861	1,542	4%	5%
3430	Parts and accessories for motor vehicles and their engines	203	416	60	76	75	673	1,503	4%	13%
3130	Insulated wire and cable	368	455	15	123	69	444	1,475	3%	25%
2720	Basic precious and non-ferrous metals	146	288	9	13	16	889	1,361	3%	11%
2694	Cement, lime and plaster	733	156	90	3	4	245	1,232	3%	60%
2411	Basic chemicals, except fertilizers and nitrogen compounds	43	177	10	185	15	504	935	2%	5%
3420	Coachwork for motor vehicles; manufacture of trailers and semi-trailers	205	199	1	23	240	227	896	2%	23%
2413	Plastics in primary forms and of synthetic rubber	47	135	157	55	37	457	889	2%	5%
2693	Structural non-refractory clay and ceramic products	351	285	0	0	72	166	874	2%	40%
2511	Rubber tyres and tubes; retreading and rebuilding of rubber tyres	332	108	33	11	22	274	780	2%	43%
2610	Glass and glass products	278	179	4	32	38	135	667	2%	42%
2109	Other articles of paper and paperboard	251	166	1	5	8	196	627	1%	40%
2422	Paints, varnishes and similar coatings, printing ink and mastics	88	174	3	16	31	194	506	1%	17%
2519	Other rubber products	60	74	4	40	23	302	504	1%	12%
2812	Tanks, reservoirs and containers of metal	22	169	29	54	18	166	458	1%	5%
1711	Spinning of textile fibres; weaving of textiles	217	39	0	1	5	175	438	1%	50%
2101	Pulp, paper and paperboard	19	158	4	22	14	167	384	1%	5%
2691	Non-structural non-refractory ceramic ware	142	142	0	3	13	44	344	1%	41%
2102	Corrugated paper and paperboard and of containers of paper and paperboard	16	222	1	1	8	91	339	1%	5%
2695	Concrete, cement and plaster	82	80	3	4	29	111	311	1%	26%

Table 45. Composition of Intermediate inputs imports by major trading partner (sum 2002-2014), constant 2005 USD million

ISIC3	detail	China	Port.	Korea	USA	Brazil	Other	World	% of Total	China/ World
2022	Builders' carpentry and joinery	74	112	4	1	52	50	292	1%	25%
2421	Pesticides and other agro-chemical products	36	29	0	23	12	178	278	1%	13%
2412	Fertilizers and nitrogen compounds	14	55	0	3	18	183	273	1%	5%
2021	Veneer sheets; plywood, laminboard and other panels	178	63	1	1	8	18	270	1%	66%
2699	Non-metallic mineral products n.e.c.	33	67	0	42	11	50	203	0%	16%
2696	Cutting, shaping and finishing of stone	59	93	0	1	15	18	187	0%	32%
3210	Electronic valves and tubes and other electronic components	16	23	0	16	2	73	132	0%	12%
2029	Other products of wood; cork, straw and plaiting materials	10	55	0	1	9	18	94	0%	11%
2430	Man-made fibres	15	2	23	0	0	38	78	0%	19%
2692	Refractory ceramic products	14	11	0	1	10	24	59	0%	23%
1533	prepared animal feeds	0	22	0	0	12	21	55	0%	0%
2010	Sawmilling and planing of wood	12	15	1	1	8	13	51	0%	23%
2023	Wooden containers	1	15	0	1	3	11	31	0%	3%
1911	Tanning and dressing of leather	3	0	0	0	0	6	10	0%	28%
2330	Nuclear fuel	0	1	0	5	0	3	9	0%	0%
2310	Coke oven products	0	0	0	0	0	0	1	0%	0%
	Total intermediate inputs	8,194	7,912	1,177	2,251	2,201	20,463	42,199	100%	19%

Table 46. Composition of Final Consumer goods imports by major trading partner (sum 2002-2014), million 2005 USD

ISIC3	detail	chn	prt	kor	usa	bra	other	world	% of total	china/ world
3410	Motor vehicles	1692	912	682	593	900	5598	10376	35.5%	16%
3610	Furniture	888	1087	9	26	383	721	3113	10.6%	29%
3220	TV and radio transmitters and apparatus for line telephony	620	287	39	92	141	846	2025	6.9%	31%
2424	Soap and detergents, cleaning and polishing preparations	132	383	15	50	95	1138	1813	6.2%	7%
3230	TV and radio receivers, sound or video recording or reproducing apparatus	254	185	58	46	7	924	1473	5.0%	17%
1810	Wearing apparel, except fur apparel	605	322	3	21	86	322	1359	4.6%	44%
2930	Domestic appliances n.e.c.	520	299	7	6	118	333	1283	4.4%	41%
1920	Footwear	692	180	3	38	174	97	1184	4.0%	58%
3591	Motorcycles	705	20	1	5	4	360	1095	3.7%	64%
2893	Cutlery, hand tools and general hardware	217	280	7	100	40	284	927	3.2%	23%
1721	Made-up textile articles, except apparel	357	206	3	13	24	253	856	2.9%	42%
3699	Other manufacturing n.e.c.	411	135	1	5	20	176	747	2.6%	55%
3150	Electric lamps and lighting equipment	264	264	3	7	28	101	668	2.3%	39%
1912	Luggage, handbags and the like, saddlery and harness	240	58	0	4	5	24	331	1.1%	72%
1730	Knitted and crocheted fabrics and articles	157	103	0	1	5	43	309	1.1%	51%
2211	Books, brochures, musical books and other publications	3	198	2	3	18	74	297	1.0%	1%
2221	Printing	73	72	0	2	8	53	207	0.7%	35%
2219	Other publishing	10	22	1	3	3	141	179	0.6%	5%
1729	Other textiles n.e.c.	99	37	0	5	5	30	176	0.6%	56%
2213	Recorded media	12	43	1	19	6	93	173	0.6%	7%
3330	Watches and clocks	19	82	0	2	1	33	137	0.5%	14%
3694	Games and toys	34	53	0	3	6	33	129	0.4%	26%
3693	Sports goods	27	39	0	4	3	25	99	0.3%	28%
1722	Carpets and rugs	23	42	0	0	4	28	98	0.3%	24%
1723	Cordage, rope, twine and netting	40	17	1	2	2	32	94	0.3%	43%
3592	Bicycles and invalid carriages	37	17	0	1	2	24	81	0.3%	46%

Table 46. Composition of Final Consumer goods imports by major trading partner (sum 2002-2014), million 2005 USD

ISIC3	detail	chn	prt	kor	usa	bra	other	world	% of total	china/ world
2212	Newspapers, journals and periodicals	0	10	0	0	2	8	20	0.1%	0%
3692	Musical instruments	5	3	0	0	0	7	17	0.1%	31%
2222	Service activities related to printing	0	1	0	0	0	1	2	0.0%	4%
	Total consumer goods	8,139	5,355	836	1,050	2,086	11,801	29,268	100.0%	28%

Table 47. Composition of food and beverages imports by major trading partner (sum 2002-2014), constant 2005 USD million

ISIC3	detail	China	Portugal	Korea	USA	Brazil	Other	World	% of Total	China/ World
1511	Meat and meat products	19	949	0	1,275	2,029	1,786	6,058	24%	0.3%
1531	grain mill products	13	89	0	11	324	3,120	3,557	14%	0.4%
1514	vegetable and animal oils and fats	1	564	0	28	73	1,754	2,420	10%	0.1%
1553	Malt liquors and malt	1	1,219	0	0	6	587	1,813	7%	0.0%
1520	dairy products	13	319	0	2	143	1,127	1,605	6%	0.8%
1552	Wines	0	780	0	1	5	526	1,312	5%	0.0%
1542	Sugar	0	19	0	0	1,023	234	1,275	5%	0.0%
1549	Other food products n.e.c.	27	232	0	45	103	865	1,272	5%	2.1%
1512	Fish and fish products	86	262	7	1	22	859	1,236	5%	6.9%
1513	Fruit and vegetables	97	297	1	3	59	557	1,015	4%	9.6%
1554	Soft drinks; production of mineral waters	1	433	0	2	26	549	1,011	4%	0.1%
1551	Distilling, rectifying and blending of spirits	2	107	0	4	70	632	815	3%	0.2%
1541	bakery products	3	118	0	0	179	361	662	3%	0.4%
1543	Cocoa, chocolate and sugar confectionery	49	103	0	0	100	348	600	2%	8.2%
1544	Macaroni, noodles and similar farinaceous products	1	25	1	1	10	469	508	2%	0.3%
1600	Tobacco products	3	10	0	0	1	193	207	1%	1.3%
1532	starches and starch products	0	3	0	1	1	5	11	0%	1.4%
Total Food and Beverages		316	5,530	10	1,374	4,175	13,972	25,377	100%	1.2%

ANNEX 4. ANGOLA CHINESE CONSTRUCTION PROJECTS DETAILS

Annex 4. Angola: Chinese Contracted Projects, Details

source	sector	description	contractor	\$ current	\$ constant 2005	year
CICA	agriculture	Uige Agricultural Project	CITIC	270,000,000	251,417,927.27	2011
MINFIN	agriculture	Irrigation systems in Luena, Caixto, Gandjelas and Waco-Kungo (phase 2)	Sinohydro	54,006,958	50,290,064.59	2007
MINFIN	agriculture	Irrigation systems in Luena, Caixto, Gandjelas and Waco-Kungo	Sinohydro	95,306,000	75,579,770.58	2005
MINFIN	education	complementary action agricultural school Kwanza-Norte, Kwanza-Sul and vocational school Sumbe	CAMCO	37,310,416	20,341,714.98	2009
MINFIN	education	complementary action agricultural school Kessua (Malange)	CMEC	11,964,000	6,522,797.31	2009
MINFIN	education	complementary action agricultural schools Huambo and Bie	Sinohydro	29,500,000	21,829,887.75	2009
MINFIN	education	complementary action 2 secondary schools Malange, secondary and vocational school Huila	Sinohydro	14,775,000	10,933,443.78	2009
MINFIN	education	complementary action vocational school Cabinda	Sinohydro	14,216,999	10,520,525.16	2009
MINFIN	education	complementary action vocational schools Cacuaco, Sambizanga, Viana, Cazenga, Benguela, Lobito	Sinomach	29,515,500	29,515,500.00	2009
MINFIN	education	complementary action secondary schools Cacuaco, Nova Vida, sapu, Benguela	Sinomach	10,027,500	10,027,500.00	2009
MINFIN	education	construction and equipment of 4 secondary schools (2 Huambo, 2 Huila), 3 vocational schools (Huambo, Huila, Bie), 4 centres of administration and management (Huambo, Bie, Cunene, Cuando, Cubango)	Sinohydro	69,096,736	64,341,326.10	2007
MINFIN	education	construction and equipment of 3 vocational schools (1 Lunda-Sul, 1 Lunda-Norte, 1 Uige), 1 agricultural institute (Uige), 2 administration and management centres (Uige, Moxico), 1 secondary school (Uige)	Sinohydro	67,313,138	62,680,479.94	2007
MINFIN	education	construction and equipment 4 vocational schools (Luanda, Bengo, Cabinda, Namibe), 5 centres of administration and management (2 in Luanda, 1 Benguela, 1 Zaire, 1 Namibe), 6 secondary schools (2 Luanda, 2 Benguela, 2 Namibe)	Sinomach	93,232,441	53,754,795.40	2007
MINFIN	education	construction vocational school and secondary school in Huila	Sinohydro	14,313,082	13,328,019.69	2006
MINFIN	education	construction secondary school in Malange	Sinohydro	7,978,279	7,429,194.15	2006
MINFIN	education	construction vocational school in Luanda (4) and Benguela (2)	CMEC	58,938,709	41,280,173.71	2006

source	sector	description	contractor	\$ current	\$ constant 2005	year
MINFIN	education	construction agricultural school Malange	CMEC	16,950,351	9,343,466.18	2006
MINFIN	education	construction schools in Luanda (3) and Benguela (1)	CMEC	17,959,602	9,899,790.94	2006
MINFIN	education	construction agricultural school Kwanza-Sul and Kwanza-Norte	CAMCO	45,825,307	33,910,552.60	2006
MINFIN	education	construction vocational school Sumbe	CAMCO	9,630,701	6,242,148.69	2006
MINFIN	education	construction agricultural schools Huambo and Bie	Sinohydro	45,562,658	36,132,197.84	2005
CICA	energy + water	Caculo Cabaça Hydropower Project: Construction of diversion tunnel and civil works of main work, supply, and installation, commissioning + testing of Hydro-mechanical and Electromechanical Works	CGGC	4,532,000,000	2,613,003,914.95	2015
Contractor	energy + water	Kunje Hydropower station: signed with CONSTRUÇÕES, MANUTENÇÃO ELECTROMECHANICA	GHCB	n.a.	n.a.	2013
Contractor	energy + water	water supply system restoration and extension works for Sumbe	GHCB	14,220,000	10,522,745.89	2013
Contractor	energy + water	Luanda water supply network and household connection work: Water Supply Network Construction	GHCB	152,840,000	121,205,507.89	2013
MINFIN	energy + water	expansion of tab and water system in Catete and Caxito, rehabilitation of water treatment system for Uige	CEIEC	6,517,147	3,553,161.86	2009
MINFIN	energy + water	expansion of tab and water system in Huambo	CMEC	9,779,511	5,331,809.44	2009
MINFIN	energy + water	construction of water treatment station (Quifangondo), construction of distribution centre in Cacucaco and extension of Luanda water system	CMEC	28,798,375	21,310,688.18	2009
MINFIN	energy + water	rehabilitation and extension of Luanda electrical network (phase 2)	CMIC	10,659,860	7,888,255.84	2009
MINFIN	energy + water	MT, BT and IP network Caixto city and rehabilitation of Quifangondo-Cazenga line	CMIC	22,903,510	16,948,510.25	2009
MINFIN	energy + water	rehabilitation and expansion MT and BT networks Luanda	unspecified	143,865,890	143,865,890.00	2009
MINFIN	energy + water	reinforcement water improvement and supply Luanda	unspecified	83,278,800	83,278,800.00	2009
MINFIN	energy + water	rehabilitation and expansion MT and BT networks Benguela, Huambo, Bie	unspecified	49,902,081	49,902,081.00	2009
MINFIN	energy + water	rehabilitation and expansion MT and BT networks Lubango	unspecified	22,500,000	22,500,000.00	2009
MINFIN	energy + water	rehabilitation water supply system in Caxito, Catete and Uige	CEIEC	21,539,269	15,938,977.10	2005
MINFIN	energy + water	construction of LT 220 Kv for Cambambe, Luanda	CMEC	14,594,172	14,594,171.56	2005
MINFIN	energy + water	construction of substation and LT 220 Kv in Cazenga, Luanda	CMEC	29,516,582	40,641,752.51	2005
MINFIN	energy + water	rehabilitation water supply system in Huambo	CMEC	22,374,027	14,501,748.48	2005
MINFIN	energy + water	construction of LT 220 Kv in Capanda, Lucala and Ndalatando	CMEC	28,248,625	28,248,625.00	2005
MINFIN	energy + water	rehabilitation water supply system in Luanda	CMEC	44,695,419	25,769,926.04	2005

source	sector	description	contractor	\$ current	\$ constant 2005	year
MINFIN	energy + water	rehabilitation and expansion of Luanda MT/BT networks	unspecified	28,486,325	22,590,287.53	2005
MINFIN	energy + water	rehabilitation and expansion of Malange MT/BT networks	unspecified	29,851,345	23,672,778.42	2005
MINFIN	energy + water	rehabilitation and expansion of Luanda-Sul, Luanda-Norte, Dundo, Saurimo MT/BT networks	unspecified	50,851,345	32,959,351.39	2005
MINFIN	energy + water	rehabilitation + expansion of Luanda-Sul, Luanda-Norte, Dundo, Saurimo water system	unspecified	35,769,967	23,184,340.93	2005
MINFIN	energy + water	reconstruction of LT 60 Kv and substation at Quifangondo, Mabubas	CMIC	14,594,172	14,594,171.56	2005
MINFIN	energy + water	rehabilitation and expansion of Luanda electrical grid	CMIC	44,509,315	44,509,315.02	2005
MINFIN	health	complementary action regional hospitals (Huambo, Malange, Benguela, Huila)	Sinohydro	75,917,724	56,178,827.15	2009
MINFIN	health	complementary action 7 municipal hospitals and 9 health centres	Sinohydro	72,620,548	53,738,929.19	2009
MINFIN	health	additional expenditure Calculama hospital	Sinohydro	10,875,000	8,047,458.62	2009
MINFIN	health	construction + equipment of 3 hospitals (Huambo, Huila, Benguela) + 2 health centres (Huila)	Sinohydro	43,805,500	40,790,696.34	2007
MINFIN	health	construction + equipment of regional hospital in Lubango	Sinohydro	48,060,432	27,710,083.43	2006
MINFIN	health	rehabilitation + equipment of Huambo central hospital + 86 ambulances	Sinohydro	36,520,309	21,056,423.29	2006
MINFIN	health	rehabilitation + equipment of Malange hospital	Sinohydro	29,185,499	15,911,993.86	2006
MINFIN	health	rehabilitation + equipment of Benguela regional hospital	Sinohydro	40,521,731	22,092,530.77	2006
MINFIN	health	construction + equipment of 3 Malange health centres	Sinohydro	12,010,431	6,548,111.59	2006
MINFIN	health	construction + equipment of Namibe regional hospital	Sinohydro	9,263,864	5,050,677.63	2006
MINFIN	health	construction + equipment of central health centre in Huambo	Sinohydro	4,003,477	2,962,557.75	2006
MINFIN	health	construction + equipment hospitals of 2 hospitals in Kwanza-Norte and Kwanza-Sul	CAMCO	18,527,728	14,692,898.99	2006
MINFIN	health	construction and equipping of 2 health centres in Kwanza-Norte	CAMCO	8,006,954	4,365,407.73	2006
CICA	housing	Rehabilitation of Sambizanga: Infrastructure Construction + real estate development	CGGC	99,040,000	92,223,820.43	2011
CICA	housing	Zango Real Estate Development (RED) Project: Housing Construction	CITIC Huaxi Group	1,470,000,000	1,368,830,937.37	2010
CICA	housing	First-stage construction of the Camama housing project: Housing construction	Group	174,000,000	174,000,000.00	2009
CICA	housing	Kilamba Kiaxi satellite city project	CITIC	3,500,000,000	3,259,121,279.45	2008
CICA	housing	Housing Construction Contract (10,000 units)	CTCE	700,000,000	490,274,082.82	2007
Contractor	manufacturing	Factory reconstruction: Luanda repair factory project	GHCB	n.a.	n.a.	2013

source	sector	description	contractor	\$ current	\$ constant 2005	year
CICA	manufacturing	Malanje Agricultural Project: reclamation of 8,000 hectares of corn and soya bean fields + construction of a 22,400-tonne corn powder processing plant	CITIC	118,000,000	87,319,551.00	2012
Contractor	manufacturing	Civil Work + Hydropower Work of the Angola SEQUETE Beverage Factory	GHCB	121,500,000	96,352,193.20	2012
CICA	manufacturing	Angola Lobito 5000t/d Project: Cement Production	Sinoma	257,400,000	257,400,000.00	2010
CICA	mining	Angola Geological Survey Project	CITIC	n.a.	n.a.	2012
MINFIN	ICT	418,750 new telecom lines	unspecified	65,000,000	60,526,538.05	2010
MINFIN	ICT	New generation network (NGN) for Bie, Huambo, Huila, Luanda	CMEC	75,275,357	70,094,719.38	2006
MINFIN	ICT	NGN Bie, Huambo, Huila, Luanda	CMEC	58,745,791	54,702,759.29	2006
MINFIN	ICT	NGN for Bengo, Bie, Kwanza-Norte, Kwanza-Sul, Luanda, Malange, Moxico	CMEC	74,331,285	40,973,301.67	2006
MINFIN	ICT	NGN for Benguela, Kwanza-Norte, Cunene, Huambo, Uige, Zaire	CMEC	67,954,756	47,594,936.67	2006
Contractor	public works	Road 2.1km	GHCB	n.a.	n.a.	2013
Contractor	public works	Fire station construction	GHCB	n.a.	n.a.	2013
Contractor	public works	Malanje rescue station project	GHCB	n.a.	n.a.	2013
Contractor	public works	restoration work of QUIFICA Cemetery Road in Benfica District (3.2km)	GHCB	n.a.	n.a.	2013
CICA	public works	NR Project	CRBC	105,520,000	98,257,850.69	2011
CICA	public works	Angola Cabinda University Construction	CRBC	n.a.	n.a.	2011
MINFIN	public works	rehabilitation Caxito/ Nzeto highway	unspecified	477,456,579	477,456,579.00	2009
MINFIN	public works	rehabilitation Nzeto/ Tomboco/Mbanza Congo highway	unspecified	160,000,000	160,000,000.00	2009
MINFIN	public works	integrated infrastructure for Cabinda (phase 1)	unspecified	113,151,577	113,151,577.00	2009
MINFIN	public works	integrated infrastructure for Malange (phase 1)	unspecified	84,095,000	84,095,000.00	2009
MINFIN	public works	rehabilitation of roads (Caxito 20km, Uige 22km, Negage 10km)	CRBC	56,336,500	44,676,093.27	2008
MINFIN	public works	completion university campus	China Jiangsu Int.	48,420,000	48,420,000.00	2005
MINFIN	public works	completion Justice Palace	China Jiangsu Int.	41,070,000	41,070,000.00	2005
MINFIN	public works	highway rehabilitation in Quifangondo, Caixto, Uige and Negage	CRBC	211,684,101	122,050,172.93	2005
Contractor	public works	Benguela rail project	CRBC	1,830,000,000	2,519,749,986.28	2004
MINFIN	social	construction and equipment of TPA production centre (national TV) in Camama	CEIEC	66,905,200	43,364,673.81	2005

