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The Political Economy of Chinese FDI and Spillover Effects in Africa

Edited by Dominik Kopiński · Pádraig Carmody · Ian Taylor

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Dominik Kopiński · Pádraig Carmody · Ian Taylor
Editors

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ISSN 2662-2483 ISSN 2662-2491 (electronic)
International Political Economy Series
ISBN 978-3-031-38714-2 ISBN 978-3-031-38715-9 (eBook)
https://doi.org/10.1007/978-3-031-38715-9

This research was funded by the National Science Centre, Poland, under grant number UMO-2017/26/M/HS4/00150.

This Palgrave Macmillan imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

The original version of the book has been revised. Funding information is now added in the copyright page. A correction to this book can be found at https://doi.org/10.1007/978-3-031-38715-9_11

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CHAPTER 1

Introduction and Overview

Dominik Kopiński and Pádraig Carmody

With capital scarcity and urgency to kick-start development, foreign direct investment (FDI) has been considered a holy grail in many African capitols in recent decades, and particularly since the advent of structural adjustment programs (SAPs) from the late 1970s onwards, sponsored by the World Bank and International Monetary Fund (IMF). Understood as cross-border investment geared toward purchasing domestic assets or creating greenfield ones, but involving a long-term relationship, rather than one-off financial transactions, FDI offers plenty of potential benefits to host countries. FDIs may not only bring jobs, foreign exchange, tax

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D. Kopiński et al. (eds.), *The Political Economy of Chinese FDI and Spillover Effects in Africa*, International Political Economy Series,
https://doi.org/10.1007/978-3-031-38715-9_1

revenues, and help to boost the country's exports, but also enable local firms to access knowledge generated overseas that otherwise would not be readily available. They are often also considered instrumental in spurring industrialization and structural transformation, which in most places on the continent still remains elusive.

No wonder FDI enjoys special treatment in African countries that have adopted a range of often expensive measures to attract foreign investors and "roll out the red carpet" for them, often in race-to-the-bottom fashion. This raises a question of the efficiency of scarce public funds used for the purpose of encouraging foreign firms to invest in Africa. In actuality, it turns out that FDI may be easier to attract than benefit from. Many FDIs have failed to bring about the positive effects policy-makers and perhaps African societies alike hoped for, and some have destroyed jobs, crowed out indigenous firms, damaged the environment, and abused fragile tax systems. Probably nowhere is this double-edge nature of FDI more pronounced than in Africa, where historic skepticism toward FDI, and its association with colonialism is compounded by the historically thorny relationship with global capitalism more generally. FDI has been often seen as a form of neo-colonialism, particularly when it is viewed using the dependency theories lens.

Against this backdrop, FDI-induced knowledge transfer and how it can play a role in the structural transformation of the continent is something this book seeks to unpack. More specifically, it asks whether Chinese FDI contributes to the structural transformation of African economies, as suggested by some observers. Productive knowledge should be understood more broadly here than is common and encompasses foreign technology, skills, managerial techniques, product qualities, and other ideas that might potentially bring about changes in productivity.

The seeming obsession with raising productivity might certainly seem odd. Productivity is of course not everything, however, to cite Nobel laureate Paul Krugman, in the long term it is almost everything, as it allows the "pie to grow", allowing for further reinvestment, innovation, and social distribution of surplus in a positive sum way. Understandably, Africa, which is lagging behind the rest of the world in productivity measures, is eager to catch up by tapping into the existing productive knowledge, although there have been concerns expressed in recent years that the structure of global value chains allows most productivity gains to be captured by lead firms in global value chains, generally headquartered in more advanced economies (Selwyn and Leyden 2022).

Seen as "mastering ways of doing things" economic or productive knowledge can be accessed via various channels, among which FDI is considered a valuable contribution (Farole and Winkler 2014). In a sense, foreign companies with their superior technology entering the host market can be likened to contagious diseases in the way in which they may spread impacts, in a manner similar to public goods, i.e., once knowledge is made available—or "leaked"—it can be enjoyed by many actors in a non-rivalrous and non-excludible way. In turn, once this leaked knowledge is tapped into by local firms and used to increase productivity, it then amounts to an effect called spillover, if these companies have the requisite capacities and technology to engage in learning and absorption and are not more disadvantaged by the greater competitiveness of foreign investors. And if these microeconomic effects snowball and ignite deeper, structural changes in the entire economy, it can become a powerful driver of industrialization. Some Asian "miracles" provides robust evidence of how this may actually materialize (Rasiah 1995; Cheyng and Lin 2004; Liu 2008).

Importantly, bringing knowledge from abroad is not sufficient to bring structural change, as this book succinctly and determinatively demonstrates. First, local firms need to exist and to be able to appreciate and absorb foreign knowledge, and more importantly—put it into productive use. This requires certain skills, technological literacy, sometimes prior knowledge, research and development (R&D) investment, etc. According to one scholarly camp, drawing their inspiration, among others, from the work of Findlay (1978) and more generally from the Veblen-Gerschenkron effect (Gerschenkron 1952; Peri and Urban 2006), the larger the knowledge gap between FDI home and host countries and firms, the more effective knowledge assimilation will be. Other scholars assume that being too technologically distant may actually hinder rather than helps to adapt foreign knowledge because the gap in capabilities is too big to be bridged (Glass and Saggi 1998). Nonetheless, some kind of technological gap is needed for knowledge to be effectively absorbed and utilized, as otherwise, local firms are already operating at, or close to, the technological frontier. Although it is also important to qualify this as not all FDI is created equal. Not all foreign firms bring new productive knowledge—some multinational companies set up their presence with low-technology goods, that offer few learning opportunities to local firms. Others use entry modes that supposedly limit spillovers, such as greenfield projects (as opposed to, for instance, acquisitions), or

operate in manufacturing enclaves with little interaction with domestic industries. Secondly, some sectors are by their very nature less spillover spawning—for instance, it has been long suspected that mining, due to its high capital and import intensity, involves less learning opportunities than (Singer 1950), even though commodity-driven industrialization has not been ruled out (Kaplinsky 2011). Thirdly, some host countries are institutionally more conducive to knowledge transfer than others. They may not offer macroeconomic stability, give few incentives or encouragement to investors or protect them from coercive or rent-seeking bureaucrats or politicians. Here particularly local content policy, which this book looks at in a number of chapters, is vital. Finally, drawing on the works of Albert Hirschman, who is rightly considered a founding father of development economics, linkages are something to focus on, before one tackles spillovers. Without sufficient linkages, i.e., industrial interactions between firms, knowledge transfer will be crippled, and with it productivity improvements in the local economy.

Is Chinese FDI Different?

As noted above Western FDI has often been seen to be extractive on the continent. It has historically been heavily concentrated in mining and other extractives, which have produced a perceived association with the "resource curse". While much Chinese FDI has also flowed into extractives its patterns are sometimes thought to be more diverse, with many new greenfield projects in manufacturing for example.[1] Indeed, some go so far as to suggest that Chinese manufacturing FDI is making Africa into "the next factory of the world" (Sun 2017), although this seems overblown given the general and continuing trend toward deindustrialization on the continent (Carmody et al. 2020). However, the continent has also been the site of multifarious contracted overseas projects (COPs) in infrastructure in particular, such as railways, roads, and power stations. While this is not FDI as such, these "investments" have potentially important implications for Africa's industrialization (Calabrese 2022) such as through creating a more connected local economic ecosystem, for example.

[1] Although Calabrese (2022) notes that while the UK invests very little in manufacturing in Africa the pattern for France, the USA, and China in this regard is very similar.

There are a variety of reasons why Chinese FDI might be different from Western-originating flows. These include: (1) potentially different sectoral composition, with different linkage, spillover, and other effects, (2) the fact that large state-owned enterprises (SOEs) take a leading role in Chinese investment and are subject to political oversight and motivation, and the fact that many of them want to offshore excess capacity away from China, (3) that Chinese firms may operate at more appropriate technological levels that can be more easily absorbed by local firms. Wegenast et al. (2019) demonstrate that Chinese-controlled companies are generate fewer local jobs compared with non-Chinese foreign firms as a result of their "inwardness". Chinese multinational companies (MNCs) are also often less concerned with compliance with local sourcing policies and thus function differently at managerial and operational levels (Rui et al. 2017).

Lee (2017) notes that some Chinese SOEs engage in what she calls "encompassing accumulation" in Africa: that is that they also respond to their home government incentives around ensuring access to supplies of critical natural resources for the Chinese economy for example. They are able to accommodate these imperatives because they are not driven by quarterly stock market returns in the way that Western-originating corporations are. They also, indirectly, have access to other resources that Western corporates do not, such as the world's largest foreign currency reserves of over three trillion dollars in China. This meant, for example, that whereas many Western or other originating corporates cut back their investments in the copper industry in Zambia in the wake of the North Atlantic Financial Crisis, some Chinese SOEs saw it as a buying opportunity, earning them plaudit for "staying power" or loyalty in the process (Carmody and Hampwaye 2010). Nonetheless, Chinese FDI also has similarities, including drawbacks, with Western-originating investment, and consequently, its transformative potential should not be overdrawn.

The answer to the question of whether or not Chinese FDI is different then is a qualified yes, depending on the type of capital involved: state-backed or "flexible" (Camba 2020). Flexible capital is similar to Western capital which is profit focused in orientation, but the Chinese state still has significant oversight over notional capital through instruments, such as subsidies, Communist Party cells, and the National Intelligence Act of 2017, which forces companies to hand over data to the Chinese state if requested (Zufle 2023). This gives Chinese FDI a politicized character

that many others do not have and this is compounded by the fact that for example according to Shi and Li (2019 quoted in Large 2021: 162),

> In Zambia, a 'pyramid of power' exists within Chinese associations from the Chinese embassy at the top, to associations and individual Chinese and companies; some associations 'may even take orders directly from homeland governments (provincial and municipal) and promote subnational and party policies within the Chinese community in Zambia.

This means that Chinese FDI is embedded in what can be called the "webpower" of the Chinese state. While this is packaged in the rhetoric of win–win globalization and South-South cooperation, the primary objective of this structure of power is to promote economic growth and development in China and thereby secure the continued rule of the Chinese Communist Party (CCP). This suggests that there is no particular political incentive to promote linkages and/or spillovers in external FDI host countries, although this varies depending on things like local sourcing and content agreements, for example. However, in some cases, Chinese firms have breached agreements on local content, in the building of Kenya's Standard Guage Railway, for example, arguing that local suppliers are insufficiently reliable to source from.

This is not so much the question of Chinese firms, but African economies in general, but also ongoing structural changes in China, and global capitalism (?).

This book broadly addresses these questions.

In Chapter 2, Dominik Kopiński and Pádraig Carmody elaborate on the general context of the political economy of FDI and spillovers on the African continent. They depart from the concept of FDI, noting that it has enjoyed special treatment across Africa, despite the continent's historically thorny relationship with global capitalism. They point out that the development pay-off of FDI is not automatic, and foreign capital is often much easier to attract than benefit from. They further proceed to discuss the central concept of the book, which is spillover effects, and the, often neglected in the debate, Hirschmanian linkages, which are instrumental in technology transfer. This setting of the stage is followed by a discussion on Chinese investment and its potential role in Africa's transformation and duplicating the trajectories of industrialization in other parts of the world. In this, they discuss some celebratory

accounts arguing that China is not just assisting Africa with industrialization but in fact, turning it into "the next factory of the world", but also more sobering views regarding the role of China, highlighting the detrimental role of African elites, certain features of Chinese-style capitalism and the fact that with China's economic clout having grown on the continent, African countries have been experiencing deindustrialization rather than the industrial upgrading.

Chapter 3 by Dominik Kopiński examines in more detail the macroeconomic and microeconomic effects of FDI. It offers a comprehensive overview of the FDI literature spanning several decades and analyzing more than a hundred FDI-related publications. It seeks to provide a nuanced perspective on the effects FDI has on economic growth, the balance of payments, trade, wages, or employment in the host countries. As the literature is very diverse and far from conclusive on what FDI actually does to the host country's economy, particularly in the long term, and particularly in low-income countries, there is no shortcut in explaining forces at work and various aspects that might affect the final verdict on whether FDI contribution to development is positive or not. As bitterly pointed out by Lipsey and Sjöholm that "on almost every aspect of this question there is a wide range of empirical results in academic literature with little sign of convergence" (Lipsey and Sjöholm 2005: 23). This chapter is particularly concerned with the so-called spillover effects that happen to be the central theme of the book, the multiple channels through which spillovers can materialize, and the factors that determine them. By doing this, the chapter paves the way for the empirical investigation in Angola and Zambia, which heavily borrows from the wealth of the literature on the topic and is structured according to its findings.

Chapter 4 by Pádraig Carmody and Dominik Kopiński aims to provide a critical overview of the existing China-Africa spillovers. They note that given the Chinese economic presence on the continent since the launching the going out strategy at the turn of the millennium has now spanned more than two decades, with billions of dollars invested across the continent, and across diverse sectors. It is conspicuous that the effects of these investments remain under-researched. They also noted despite relatively few rigorous studies, scholars' general views on the contribution of Chinese firms to Africa's development somehow appear to have tilted toward a somewhat positive perspective. They point out that one of the reasons may be a diverse landscape of Chinese economic presence that blur the picture—from building infrastructure to trade and

mounting debt. In fact, if the focus is narrowed down to linkages and spillover effects, the empirical evidence demonstrating their occurrence, particularly in an economy-wide fashion, is modest. In this chapter, they also point out various methodological pitfalls the China-Africa academic community needs to consider in order to properly examine the Chinese footprint, such as confusing knowledge transfers with knowledge spillovers or over-generalizing based on sectoral studies. The chapter concludes with a preliminary explanation of the absence of spillover effects, which is a springboard section to explore the relationship more deeply further in the volume.

Chapter 5 by Jarosław Jura and Dominik Kopiński addresses conceptual and methodological challenges that the authors have encountered while investigating linkages and spillovers in Angola and Zambia. These challenges are couched in a wider problem termed "Eurocentrism", a term originally coined by Samir Amin, which has been inspirational for legions of scholars, and consequently "conceptual Eurocentrism", popularized by Gareth Austin who points out that using concepts derived from Western science to analyze "Africa's past", particularly its economic history, is ill-advised, as many terms assumed to be universal by Western economists cannot be usefully applied when investigating the development trajectories of African economies. In this spirit, Jura and Kopiński critically look at the scholarly attempts to scrutinize Chinese FDI and its effects, particularly spillover effects. They begin their discussion with the terms FDI and MNCs which have been axiomatic pillars of the spillover literature, yet as the fieldwork that the authors conducted in Angola and Zambia showed, their practical suitability may be questionable. Three types of conceptual biases are diagnosed in the chapter. Firstly, most FDI and investment-like activity in Africa is carried out by small and medium Chinese firms, which either have no headquarters back in China or are registered in Africa with no traceable cross-border capital transactions. Secondly, although many Chinese business activities in Africa are not FDI, they may potentially still contribute to linkage formation and technology transfers. Thirdly, while Chinese MNCs may in theory conform to the Western definition, beyond the formal facade many are MNCs in little more than name. This chapter is concluded with a discussion on the advantages and disadvantages of different methodologies scholars utilize to undertake spillover studies and a postulate that "multimethodology" research technique should be considered more widely.

Chapter 6 opens the empirical part of the book, where fieldwork

findings are discussed in various dimensions. In this chapter, Jarosław Jura and Paulo de Caravalho shift the spotlight to the institutional and cultural obstacles hindering the emergence of Chinese spillover effects in Angola. Their findings are derived mostly from 61 in-depth interviews conducted in Angola in 2019 and 2022 with foreign diplomats, local journalists, academics, officials, politicians, and Chinese entrepreneurs. In terms of institutional constraints, they point to the strong presence of the state in both Angola and China and the Angola post-war realities that necessitated large-scale infrastructure projects which were mostly underpinned by bilateral contracts. The top-down approach and state-driven policy made it more difficult to adjust those projects to local needs, which in turn has not yielded the expected developmental outcomes. They also make the general case for a more detailed analysis of cultural constraints, and of how things such as informal network-based business relations compounded by deep-running mutual mistrust or attitudes toward corruption and exchanging favors affect the transfer of knowledge and FDI spillovers in Angola.

In Chapter 7, Andrzej Polus explores the political and institutional context behind the (lack of) spillover effects arising from Chinese private investments in Zambia. He argues that dysfunctional institutions in Zambia are to be primarily blamed for a lack of spillovers, which he likens to mythical unicorns—whose appearance and behavior are well described, despite the fact they do not actually exist. This disappointing lack of spillovers is partly down to the fact that the political elite has not changed, and the class of professional civil servants needed has not been created. Polus uses the concept of "habitus" developed by Pierre Bourdieu and finds no arguments rebutting the claim that the institutional habitus developed during the Second Republic had changed/disappeared after 1991. In this he underscores the role of corruption, yet observes that this phenomenon is the effect of the durable dispositions rooted in Zambian institutions—dispositions that allow ineffectiveness and the seizure of state funds and where control over an institution is regarded as providing informal permission to derive personal benefits by politicians and office holders. Polus concludes that these are crippled and underperforming institutions that should be seen as a force working against the spillover effects.

Chapter 8 by Hangwei Li unpacks profiles, motives, and features of Chinese investors in Zambia and Angola. She draws on two rounds of

fieldwork conducted in 2019, when the project team visited and interviewed 50 Chinese companies in Lusaka, Zambia and Luanda, Angola (25 in each country). Li observes that despite some similarities, Chinese firms operating in Africa are very heterogeneous, which looms particularly large when seen through the lens of "varieties of capital" (Lee 2017). She also points out that contrary to some folk wisdom circulated in the West, which assumes that Chinese investors are closely connected to the Chinese government or even act as sleeper cells, Beijing does not interfere with their daily operations. Interestingly, some private investors expressed frustration at the lack of support available from the Chinese government, policy banks, or the Bank of China in their business dealings on the continent. Li then proceeds to examine different motivations driving Chinese ventures in Angola and Zambia, observing that these are not only pull factors that explain the investors' ventures into the continent (big markets, growth potential, etc.), but increasingly more push factors, such as intense domestic competition, ongoing structural changes in the Chinese economy and excess capacity. She also debunks several misconceptions regarding labor localization, quoting one manager who notes that Chinese owners want to "fire as many Chinese workers as possible and replace them with locals", as they are becoming too expensive to retain versus available labor force.

In Chapter 9, Wojciech Tycholiz focuses on the absorptive capacity of the industrial sector in Zambia, departing from the premise that in order for linkages and spillovers to occur, a country requires relatively robust and well-functioning local industries. He draws on the case of the manufacturing sector in Greater Lusaka Areas and fieldwork conducted among domestic manufacturing firms. There are many interesting insights from this research regarding both Chinese investors and the state of the Zambian economy. Firstly, Chinese investors and Zambian companies rarely intersect and/or cooperate, thus linkages are rare, let alone spillover effects. Not only do Chinese firms tend to operate in manufacturing enclaves or bubbles, but also local, non-indigenous firms, which are, perhaps surprisingly, often entities run by Zambians of Indian ancestry. The dualism of the local manufacturing sector represents one of our study's major findings. Tycholiz proceeds to explain this seeming enclave character of Chinese manufacturing, pointing to three general problems: structural disarticulation of the local economy, its small size, and specific endogenous characteristics of the Chinese investors. In conclusion, he quotes Gallagher and Zarsky (2007: 101) who bitterly pointed

out that "expecting FDI to automatically stimulate economic growth and transform industry – and designing policies accordingly – is more likely to generate enclaves than spillovers". Sadly, the empirical evidence he presents in the chapter supports this view.

In the concluding Chapter 10, in their quest to shed light on scant linkages and spillovers associated with Chinese FDI Jarosław Jura and Kaja Kałużyńska tackle two inter-related questions: First, how are Chinese investments in Africa truly perceived in the region? And, second, has this followed the same downward trend seen in the overall image and perception of China and the Chinese in Africa. The authors have studied African media's image of China and the Chinese for almost a decade, and they still come across discrepancies between what is written in the media and what is said by local people. Here they utilize data harvesting to screen African media images of Chinese investments, with what they consider the most important Chinese "image generator"—the official gazette of the Central Committee of the Chinese Communist Party. Jura and Kałużyńska point out that there is a great disconnect between declarative effects peddled by pro-government African media, which resemble China's *People's Daily*, and the realities on the ground, which are strikingly less impressive. They explain this approach by a number of factors, such as scant funding for journalistic investigations, lack of transparency, and the general opacity compounded by the African side. They, however, also observe an emerging shift as Chinese loans beginning are increasingly perceived more as a burden for both countries than a means of supporting development. They offer a conclusion that reveals a rather sorry picture of China's involvement. Heralded as the dawn of a significant developmental push for Africa, there is little to support the enthusiasm.

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CHAPTER 2

The Political Economy of FDI and Spillovers in Africa: Can China Deliver on Hirschman's Ideas

Dominik Kopiński and Pádraig Carmody

Introduction

Foreign direct investment (FDI)—crudely speaking, an infusion of foreign capital into a local economy—has long been considered a critical component of development strategies by international financial institutions and mainstream economists. Such thinking became particularly prevalent in

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D. Kopiński et al. (eds.), *The Political Economy of Chinese FDI and Spillover Effects in Africa*, International Political Economy Series,
https://doi.org/10.1007/978-3-031-38715-9_2

the 1990s amid accelerating globalisation. Predictably, Africa got on the FDI bandwagon, at a time when the region was emerging from its so-called lost decade of the 1980s (UNECA 1990). During the new era of 'permanent crisis' (Van de Walle 2001)—marked by structural adjustment, political turmoil and macroeconomic malaise—many African countries bet their growth hopes on foreign capital, envisaging that this would not only create jobs and supplement scarce domestic capital, but help with their balance of payments. FDI was also increasingly expected to close the technological gap between Africa and the rest of the world, with the diffusion of knowledge brought by multinational companies (MNCs) instrumental in this project. Given Africa's endowments and structural constraints, however, policies encouraging FDI were required.

Special treatment of FDI is justified by various forms of market failure (Hanson 2001; Caves 2007); the most common being 'leakages' of the superior knowledge possessed by multinationals. FDI flows, so the thinking goes, can generate productivity spillovers for the host economy—something this book seeks to unpack. FDI may, though, be deterred by asymmetries of information: namely, domestic investors generally know more about investment opportunities than foreign ones. Thus, in order to harness such opportunities, FDI needs to be encouraged (subsidised) to enter the host economy (Javorcik 2008, 140). Importantly, special treatment of FDI should be also seen in the wider context of time-inconsistency, related to the concept of the 'obsolescing bargain' (Vernon 1973), which holds that foreign investors hold greater bargaining power over potential host governments prior to an investment, which in turn necessitates extra efforts and incentives to attract FDI. These calculations change once the investment has been made, as investors often face considerable economic losses if they try to move assets, meaning it is the government that holds (most of) the cards.

To this end, developing countries have adopted a range of measures when it comes to 'rolling out of the red carpet' for foreign investors (Harding and Javorcik 2011). These are reflective of the policy mood of the 'Post-Washington Consensus' (Stiglitz 2008) era and the continued reign of market-friendly orthodoxy, and encompass lifting restrictions on foreign capital; offering multiple incentives, including tax breaks; and more complex measures such as the creation of special economic zones (SEZs). This milieu has led to an explosion in the number of investment promotion agencies tasked with attracting FDI, ideally to

designated sectors (Harding and Javorcik 2011). In developing countries, the number of such agencies grew from 11 in 1990 to 63 in 2005 (Javorcik 2008, 140). In Zambia, the Zambia Development Agency was established under the ZDA Act No. 11 of 2006 to promote and facilitate investment, while in Angola, the government set up the *Agência para a Promoção de Investimento de Exportações de Angola* (AIPEX) with a similar mandate, which was replaced in 2018 by the Agency for Private Investment and Promotion of Exports.

This 'regulatory chill' or roll-back of regulations, often analysed in the spirit of what is conventionally known as the race-to-the-bottom hypothesis (Oates 1972; Wilson and Wildasin 2004), is the subject of long-standing debate. As noted by Moran, developing countries face tasks much more difficult than 'just saying "yes" to foreign investors' (Moran 2011a, 8). Consequently, two fundamental issues arise. Firstly, there is a question about the price taxpayers should be prepared to pay to attract foreign investors. In other words, does promoting FDI make economic sense? Secondly, even if some FDI makes sense, this does necessarily mean all of it is worth the price given negative environmental and social externalities. If it is true—as famously pointed out by Rodrik—that there is nothing really special about FDI as regards domestic investment and that 'one dollar of FDI is worth no more (and no less) than a dollar of any kind of investment' (quoted by Moran 2005), than developing country governments should not be in the business of simply attracting FDI at all costs. If anything, they should focus only on 'quality FDI'—namely, that which maximises benefits for the host economy (Moran et al. 2017; Godart et al. 2020).

Such doubts are not easily surmounted, as FDI benefits are not automatic. Years of research have revealed that FDI is easier to attract than benefit from (Nunnenkamp 2004). While inflows of FDI can bring about a plethora of positive effects, they can also destroy jobs by crowding out domestic firms—perhaps even creating monopoly power in the host market—drain a country's thin tax base, adversely affect the balance of payments and reinforce dualistic economic structures through creating enclave economies (Ajayi 2012, 325). FDI may also outcompete local businesses in terms of bank loans and other production factors. Moreover, it can generate negative environmental externalities, compound inequalities and fuel conflict and violence—a familiar situation in parts of Africa, with the Niger Delta perhaps the most pertinent case in point (Eweje 2006; Obi 2014). FDI's environmental footprint has become even more

troubling in the light of humanity's attempts to grapple with the effects of climate change.

In addition, the ultimate impacts of FDI depend on a multitude of contextual factors and domestic conditions, as well as the host country's general level of development (Alfaro 2017a). Existing studies show, for instance, that the outcome of FDI inflows is determined by the level of: human capital (Borensztein et al. 1998), institutional development (Meyer and Sinani 2009), trade regime (Haddad and Harrison 1993) and development of financial markets (Alfaro and Chauvin 2020). In this regard, African countries have lacked some of the critical preconditions required to reap the potential benefits of FDI.

Policy-makers have also realised that attracting FDI to the sectors and areas where employment creation and multiplier effects are the greatest is not particularly easy, in part because there is usually significant variation in the determinants of FDI across different sectors (Hecock and Jepsen 2013). For instance, the natural resource sectors that have dominated Africa's investment landscape for decades (Morisset 2000) are capital-intensive, offer notoriously little pay-off in terms of new employment and skills and, in general—to use Albert Hirschman (1958) lexis (see below)—create few backward or forward linkages. As a result of generous tax concessions and investment allowances to FDI, even the fiscal benefits have fallen short of what many governments hoped for. Furthermore, foreign investors, particularly in the extractive industries, are shrewd when it comes to pursuing tax evasion (illegal) and avoidance (legal) practices (Yontcheva et al. 2021).

In Africa, scepticism towards FDI has been compounded by the continent's historically thorny relationship with global capitalism (Moss et al. 2011), with FDI frequently regarded as a new type of colonialism (or rather 'neo-colonialism'). This has been reinforced by the relative popularity of dependency theories in circles across the region, which trace underdevelopment to how global capitalism works, and have long warned that the global peripheries risk being exploited at the hands of foreign capital. The ideological upbringing of African leaders, many of whom were trained as socialists or Marxists, has only compounded such fears. On top of this, economic nationalism—which became the norm in the majority of newly liberalised African countries—stirred anti-foreign sentiment, portraying foreign capital as at best a necessary evil.

From the 1990s onward such scepticism was re-articulated in response to the infamous structural adjustment programmes adopted across the

region under the auspices of the Bretton Woods institutions (Rakner 2003). These programmes, aimed at addressing mounting debt and macroeconomic crisis, were construed around deregulation, liberalisation and privatisation. As such, governments offered foreign investors generous incentives—to the extent that it sometimes appeared to be the sole focus of FDI governance. Foreign investors came into many African economies, often acquiring state-owned assets on terms that are now deemed either 'competitive' or 'outrageous', depending on the perspective adopted.

FDI and Development

Long viewed as symbols of colonialism and ruthless exploitation, MNCs now tend to be considered a potent vehicle for economic growth and development, with the *Economist* remarking as far back as 1993 that 'governments all around the world, especially in developing countries, are queuing up to attract multinationals' (Economist, March 27, 1993). As noted above, many African countries have made FDI a central plank of their outward-oriented development strategies. This has involved putting in place measures to attract foreign investors in the hope that they will not only bring jobs, provide much-needed capital and help with balance of payments, but—most importantly—spur industrialisation and structural transformation. Structural transformation involves a gradual change in the relative importance of different sectors and can be defined as reallocating economic activity away from less productive sectors of the economy to more productive ones (Lopes and Kararach 2019). Despite various efforts, a productive structural transformation of Africa remains elusive (de Vries et al. 2015; Geda et al. 2018)—instead, the continent in undergoing a process of low productivity informalisation.

FDI is defined as a cross-border investment that results in a foreign firm acquiring a controlling stake—formally labelled a 'significant degree of influence'—in a local company. In a broader sense, beyond the movement of investments from a region of capital abundance to a region of capital scarcity, FDI may represent 'a strategic effort to maintain or extend the parent's ability to extract oligopoly rents by controlling operations across borders' (Moran 2011a). According to international norms spearheaded by the International Monetary Fund and the Organisation for Economic Cooperation and Development, the 'controlling' threshold is set at 10 per cent or more of voting power. This figure is arbitrary and

subject to some criticism, but has nevertheless become an international standard of sorts.

Another defining characteristic of FDI is the objective of establishing a lasting interest in the host economy. This implicitly points to a long-term relationship between the investor and its affiliate, and thus more stability compared to, say, portfolio investments or other kinds of capital flow, which are vulnerable to exogenous shocks and may come and go in a split second. Despite some evidence pointing to the contrary (Blanchard et al. 2016), the conventional wisdom about the difference between FDI (desirable) and portfolio investment (less desirable and potentially destabilising) seems to hold (Eichengreen et al. 2017). Thus, the stability of FDI arguably makes it more development-friendly than other international capital flows. Attached to a specific firm, each FDI flow 'brings something different to a country' (Lipsey et al. 1999a, 309).

Despite FDI now being regarded as integral to international capital flows, it was not until the 1990s that its role began to be seen as key. In 1994, FDI inflows to developing countries surpassed $100 billion for the first time, and average annual FDI flows soared eight-fold between 1982–1987 and 1994–1999 (Nunnenkamp 2001). Prior to this, international capital flows were dominated by portfolio investments, as well as other investments, such as trade credit and loans (Lipsey et al. 1999b; te Velde 2006), with a more ambiguous link to development. While Africa has witnessed increased flows of FDI, however, these have not kept pace in absolute terms compared to other regions (Basu and Fisher 2002). In fact, one can argue that before the 1990s Africa by and large failed to attract significant flows of FDI, with most FDI projects in the region materialising not due to any particular policies, but simply because some countries were endowed with rich natural resources or sizeable domestic markets (Morisset 2000). As such, countries such as South Africa, Nigeria, Ivory Coast and Angola were, predictably, the main recipients of FDI. The continent's share of global FDI declined from 5 per cent in the early 1970s to 1–2 per cent by the early 1980s and to just 0.5 per cent in 2000. It has since rebounded from this level but remains small by global standards. Importantly though, FDI has become more prominent in African economies relative to other regions, with an average annual inflow equivalent to 5.1 per cent of GDP in 2018 (EY 2018). According to the EY Africa Attractiveness report, in 2018 alone foreign firms created 170,000 jobs in the region and brought in $75.5 billion in capital (EY 2019).

As noted earlier, the relationship between FDI and economic development is anything but simple. Even so, FDI inflows are ritually credited with a set of macroeconomic effects in the host economy, including income growth, domestic investment stimulus and additional tax revenues. Despite FDI generally being considered a driving factor in economic growth, however, fears of negative externalities abound. Moreover, over the years the debate has shifted towards less obvious effects, sometimes called 'indirect'. Whereas under neoclassical models (Solow 1956) FDI is generally regarded as an exogenous factor contributing to growth via increases in investment, the more conventional view is now that it constitutes not only a pure transfer of capital, but 'the transfer of a "package" in which capital, management, and new technology are all combined' (Findlay 1978, 6). Thus, FDI can potentially affect host economies beyond what has become known as 'a saving gap' (Chenery and Strout 1966) (i.e. providing much-needed capital to release domestic saving constraints).

In this regard, the technology component of the FDI 'package' and its resultant spillover effects has come to assume particular importance. As a great many studies have demonstrated, FDI can play a critical role in improving the productivity of local firms, as well as, conditionally, contributing to industrial upgrading in host countries. This can occur via various channels. MNCs often possess superior technology compared to other (local) firms, which can observe, imitate and adopt productive purposes, hire workers trained by MNCs, act as suppliers or benefit from other linkages. Moreover, MNCs entering the host economy disturb the market equilibrium, forcing indigenous companies to upgrade and/or absorb knowledge enabling them to enter world markets (Kokko and Blomstrom 1998). On a more general level, productivity growth via spillover effects is attractive because it rests on the notion that it is easier (and probably cheaper) to achieve than productivity growth through more traditional means, such as local investment in education (Romer 1993).

As such, spillover effects have become a holy grail of sorts among policy-makers and academics alike, who predictably view them as 'the most valuable input to long-run growth and development' (Farole and Winkler 2014). Given their relative distance from the technological frontier, African countries are particularly interested in reaping the gains of technology diffusion. Once a multinational has set up a subsidiary in the host country, some of its asset-specific advantages may not be completely

internalised, thereby spilling over to domestic firms and creating social benefits that exceed the private benefits to the MNC (Meyer 2004, 259). To quote Javorcik, spillovers from FDI occur 'when the entry or presence of multinational corporations increases the productivity of domestic firms in a host country and the multinationals do not fully internalise the value of these benefits' (Beata Smarzynska Javorcik 2004, 607).

The problem with spillovers is that despite their apparent advantages; the evidence that FDI generates positive spillovers is, at best, mixed (Lipsey 2004; Moran 2011b). Some of this ambiguity may be due to the methodologies employed by scholars, particularly in the so-called first generation of spillover studies (Moran 2011a). One such aspect concerns potential endogeneity—that is, rather than increasing the productivity of local firms, MNCs are attracted to countries characterised by higher productivity. The second general problem relates to the use of aggregate FDI data in econometric analyses of FDI impacts on the host economy, which ignores sectoral differences in FDI flows and their diverse impacts (Moran 2011b). Third, productivity increases among firms may disguise the different forces at work, lumping together various types of spillovers, such as labour mobility, competition, imitation or vertical spillovers. Another 'disentanglement' problem is that FDI may be causing market reallocation, which, in turn, can contribute to the contraction of domestic industries (i.e. the least productive firms exit the market) (Alfaro and Chen 2018). Nevertheless, spillover effects have captured the imagination of many African leaders, who rightly sense that the technology brought by MNCs can be leveraged for industrial upgrading and structural transformation.

Against this backdrop, as much as the study detailed in this volume seeks to unpack the problem of spillover effects, it is couched within a bigger empirical puzzle: namely, do Chinese FDI contributes to the structural transformation of African economies, and, in general, do spillover effects constitute an effective way of promoting industrial upgrading and development (Narula and Dunning 2010)? This question harks back to the ideas of Albert Hirschman and backward linkages.

Enter Hirschman and Backward Linkages

It is now received wisdom that if FDI does indeed play a role in boosting economic growth; knowledge-enhancing spillovers are likely a critical ingredient (Alfaro 2017b, S13). Before the question of spillovers

is addressed more fully in Chapter 3, it is important to discuss one of the preconditions for their occurrence, namely 'linkages'.

The term 'linkages' is credited to Albert Hirschman; a development economist and originator of the 'unbalanced growth theory' laid out in his acclaimed book *The Strategy of Economic Development* (1958). Crudely speaking, linkages denote a relationship between various industries, reflecting what one might call 'industrial interdependence'. In Hirschman's words, linkage effects are 'investment-generating forces that are set in motion, through input–output relations, when productive facilities that supply inputs to that line or utilise its outputs are inadequate or nonexistent' (Hirschman 2013, 160). Students of Hirschman are well aware that linkages are no mere technicalities—rather, their incremental formation within an economy is indicative of the development process materialising. As Rodríguez-Clare (1996, 853) puts it, 'by increasing the demand for inputs, a final-good firm helps bring forth a greater variety of specialised inputs, thus generating a positive externality to other final-good producers'. After all, as Hirschman reminds us, 'development is essentially the record of how one thing leads to another' (Hirschman 2013, 169). Taking this to be the case, backward linkages are not only a lynchpin of development, but, when generated by MNCs, may serve as justification for industrial policy and special treatment of FDI. As Hirschman notes, 'some interference, through tariffs, excise taxes, and subsidies, with the developing consumption of a country may be justified if it can be demonstrated that a certain growth pattern of consumption would exert far more powerful backward linkages than the pattern that is likely to develop in the absence of such interference' (Hirschman 1958, 115).

In his later work, Hirschman (1981, 2013) elaborated his general theory of linkages, naming three types: fiscal linkages, consumption linkages and production linkages. Fiscal linkages provide income in the form of fiscal revenues (e.g. taxes, tariffs, royalties) and are discussed particularly in the context of resource-rich countries. As multiple examples document, however, unless combined with the government's ability to use public funds in a productive manner, fiscal linkages are 'hardly a sufficient condition for vigorous economic growth' (Hirschman 2013, 163). Furthermore, they are usually associated with 'the lack of physical and consumption linkages and vice versa'. Consumption linkages are also related to new income generated by productive activities, but refer to the ability of economic actors to spend on imported or domestically produced

inputs—such linkages have the potential to be 'outright negative rather than merely weak or nonexistent' (Hirschman 2013, 161).

The third type—productive linkages—is considered the most powerful and can be further divided into: (1) backward linkages and (2) forward linkages. Backward linkages are an input-provision (or derived demand) type, denoting a situation where one industry provides inputs for other industries, stimulating their growth. Forward linkages refer to a situation where the output of one industry is utilised (hence output-utilisation) as the input for other industries. Of the two, Hirschman seems to value backward linkages more and also suggests they are easier to play with analytically, describing them as being 'much neater than forward linkages' (Hirschman 1958, 116).

It is important to acknowledge that in order for forward linkages to materialise, backward linkages must already be in place, as they result from the 'pressure of demand'. In that sense, backward linkages can be seen as a special push factor behind industrialisation, while forward linkages act as 'an important and powerful reinforcement to backward linkages' (Hirschman 1958, 117). Having assumed this hierarchical relationship and its importance to the development process, we will, therefore, focus exclusively on backward linkages in this book.

Against this backdrop, our study seeks to answer two main research questions. Firstly, do linkages exist in the first place and if so where? And, secondly, assuming they do exist, do they lead to spillover effects of a vertical-backwards type (that is, inter-industry spillovers with upstream suppliers, rather than horizontal, intra-industry, spillovers)? In practical terms, the book will look at whether and how these effects can be attributed to interactions between foreign firms (in our study, Chinese) and their domestic suppliers (African, specifically Zambian and Angolan).

It may be asked why economists are so drawn to backward linkages. Having spent several years hunting for spillover effects in a horizontal setting (within the same industry), many scholars posited that vertical backward linkages were in fact 'the right place' to be looking (Smarzynska Javorcik 2004). Importantly for our research, backward linkages are likely to represent the most promising spillover channel in the African context, particularly in terms of industrial upgrading. As Markusen and Venables point out, FDI can act as a catalyst for the development of local industry (Markusen and Venables 1999). Over time, this may boost industrialisation, as evidenced in the case of Malaysia (Rasiah 1995). By contrast, the worker mobility channel—explored by a number of studies (Görg

and Strobl 2005; Auffray and Fu 2015)—offers little hope for spillovers in sub-Saharan Africa, mainly due to the pay gap between foreign and local firms (Morrissey 2012) and limited worker mobility (Calabrese and Tang 2020). Given their relative distance from the technological frontier, African countries are understandably interested in benefiting from such effects.

Beyond the general condition of increases in demand (Hirschman 1958), linkages do not occur 'automatically', nor are they easy to forge. This is particularly so for developing countries. Here, the literature offers some guidance. In his seminal paper, Rodríguez-Clare (1996) notes that in terms of linkages materialising, three (formal) conditions should be considered. Firstly, a wider variety of specialised inputs enhances production efficiency. Secondly, many of these inputs require supplier and user to be in proximity—as Morris et al. put it, 'the logic is wherever possible to have these suppliers locate production and service delivery close to the doorstep' (Morris et al. 2012, 409). This factor is particularly desirable in Africa due to the 'difficult' physical geography, transport and logistical problems and/or poor infrastructure often seen across the continent. Thirdly, the size of the market limits the available variety of specialised inputs (Rodríguez-Clare 1996, 853). The importance of market size is also stressed by Hirschman (1968) and has been raised at various stages of our project. Rodriguez-Clare reaches a pessimistic, if not fatalistic, conclusion: poor countries are doomed to fail in attracting MNCs with high linkage potential, as the foreign firms that move to such counties are precisely those that do not depend on a wide variety of local inputs. Thus, Chinese investors in Zambia or Angola are not generally carmakers (unless they are building totally knock-down kits, as is the case with CSG Automovel-Angola, funded by the notorious China International Fund), but furniture- or ceramic tile-makers. As a result, highly productive linkages are difficult to be generated.

Furthermore, while some industries (and firms) within a country have high linkage potential, others by their very design yield few linkages. If industries are correctly and promptly identified, and their linkages measured (Yotopoulos and Nugent 1973; Jones 1976), then state intervention aimed at enhancing growth may be merited. Under the import substitution industrialisation strategies of the 1960s and later (Hirschman 1968), however, key growth-enhancing sectors were often ill-designated and so not targeted for state support.

Another reason linkages are important is that FDI that does not lead to linkage formation may be problematic. Firstly, such FDI can lead to entrenched enclaves—spatial units with few links to the wider economy (of which Africa has plenty of examples). As Hirschman (1958, 110) puts it, this can be seen as the 'ability of primary products from mines, wells, and plantations to slip out of a country without leaving much of a trace in the rest of the economy'. Secondly, FDI with few linkages can generate a host of negative externalities. The case of Angola offers an extreme example of both these issues. As historian David Birmingham reminds us, in the 1970s 'Gulf Oil, renamed Chevron, serviced its Cabinda wells with American crews who came and went via French oil ports in Gabon, thus avoiding the effects of Angolan violence but leaving little positive mark on society other than the monthly payments to the governments' (Birmingham 2015, 100). The same oil effectively fuelled Angola's civil war until 2002.

Here, the general confusion that has arisen between spillover effects and linkages should be addressed. As much as Hirschman's work propagated linkages as a development mechanism, he was mostly concerned with productive interdependence rather than the role played by linkages in technology transfers among firms, which is essentially what spillovers are about. There are two problems posed by the (lack of) distinction between spillover effects and linkages: one linguistic and the other empirical (Morrissey 2012).

In terms of the former issue, many studies fail to clearly demarcate between linkages, which have a long tradition in economics extending back to the post-Second World War period, and spillovers, which as a term is of relatively recent vintage. Instead, the two are treated virtually as synonyms (Morrissey 2012). This is a serious conceptual blunder. As noted earlier, linkages can be formed without any learning taking place, therefore in documenting interactions between firms/industries it is possible no spillover effects will be encountered whatsoever.

In terms of the latter issue, many studies seem to overlook or ignore the question of linkages in their empirical analysis. The implicit assumption is that linkages are of secondary importance and that FDI flows will at some point naturally bring about linkage formation in the host economy, especially when operations become more embedded locally. While such an assumption may be legitimate in more advanced economies, in low-income countries it represents a major oversimplification and prevents

the unpacking of spillover effects. On top of this, the spillover literature, paradoxically, rarely documents the actual occurrence of spillover effects. This is because they mostly focus on the relationship between domestic firm performance and foreign investor presence using aggregate data and elaborate economic techniques (Moran 2011b), or, more recently, firm-level survey data. As such, studies often end up uncovering only linkages, not spillovers (Morrissey 2012). Informed by our fieldwork in Zambia and Angola, we follow Morrisey (2012a) in asserting that the quest to find spillovers in sub-Saharan Africa is especially 'elusive' and posit that linkages rather than spillover effects should be central to any analysis. Linkages are not only easier to identify but capture many of the effects of MNCs, particularly in terms of 'driving demand' for inputs, which is beneficial in its own right. More importantly, reflecting Hirschmanian 'industrial interdependence', they may indeed hold the keys to structural transformation.

Since Hirschman's *Strategy of Economic Development* was published, the structure and dynamics of the global economy have changed considerably. Thus, the key question to be asked is which of his original claims about the relevance of backward linkages in low-income countries still hold, and which should be problematised or augmented. One fundamental shift that makes today's linkages debate more complex is the emergence of global production networks (GPN) (Coe and Yeung 2015). Compared to the 1960s and 1970s, when Hirschman's ideas gained traction, value chains have become infinitely more fragmented. They now span multiple countries, making it cheaper and easier to source inputs from different localities, foreign suppliers that follow lead MNCs wherever they start production (Pavlínek and Žížalová 2016) or global suppliers. In some countries, combined with the liberalisation that propelled globalisation, this has resulted in a dramatic shift towards 'substituting imports' (import substitution *au rebour*)—that is, MNCs increasingly turning to foreign-owned or -controlled suppliers rather than their locally-owned counterparts (Barnes and Kaplinsky 2000; Pavlínek and Žížalová 2016). As a result of these GPN dynamics, domestic suppliers may be excluded from linkage and spillover benefits. This mechanism, whereby domestic firms are ill-positioned to enter global value chains (GVC), has been termed 'spillover interception' (Hatani 2009). Amid this context of GVC profusion, backward linkages have stopped being a largely domestic phenomenon and instead gone global.

While global production-sharing and GPN have made it much harder to promote industrialisation via backward linkages, at the low-technology 'frontier' these changes seem to be less impactful. Chinese investment in Africa is rarely part of GPN, and GVC engagement of Africa more generally is rather shallow (Van Biesebroeck and Mensah 2019). Paradoxically, this situation renders the discussion on the potentiality of backward linkages and spillover all the more relevant.

Chinese Investment and Africa's Transformation

China's growing presence in Africa has been rightly characterised as one of the most dramatic and important transformations in the continent's external relations since the Cold War (Clapham 2008). China is now 'all over Africa' (Large 2008), with Chinese investment an increasingly critical part of this 'developing connection' (Kopiński et al. 2012). According to the recent FDI Intelligence Report, China was the top investor capital-wise into Africa between 2014 and 2018, investing double the capital of France and the USA combined (FDI intelligence 2019). This is despite Africa's relatively miniscule position in Chinese global investment stocks (and flows)—FDI flows to the continent amount to less than 4 per cent of the total, roughly equivalent to Chinese FDI in Germany. Predictably, this phenomenon has yielded a substantial and still burgeoning body of scholarly work (Brautigam 2011; Kopiński et al. 2012; Carmody et al. 2020) (Fig. 2.1).

While in practical terms such research seeks to investigate linkages and spillover effects, it is motivated by a need to assess the impact of Chinese FDI on Africa's development, as well as the degree to which it has contributed to the continent's structural transformation and, ultimately, changes in the international division of labour. There are political, theoretical and empirical reasons to pursue such goals.

The first reason involves China's role in 'sponsoring' industrialisation in Africa. As Large reminds us (Large 2021), the notion of China championing Africa's structural transformation became more explicit in 2015, when details were fleshed out during the Forum on China–Africa Cooperation (FOCAC) in Johannesburg—prior to this, the idea had largely been absent from discussions of Chinese involvement on the continent. In this regard, various institutional add-ons have been established to support industrial growth, including the China–Africa Fund of Industrial Cooperation (CAFIC) (Alden and Jiang 2019), which had $10 billion of initial

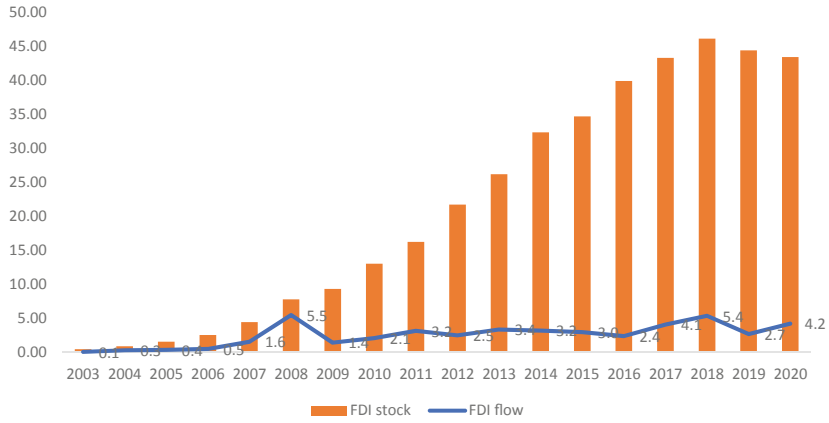

Fig. 2.1 Chinese FDI flows to (and stock in) African countries between 2003 and 2020 (US$ billion) (*Source* CARI)

capital to promote industrialisation across the region, and dozens of SEZs (Bräutigam and Tang 2014).

For China, embracing industrial development in Africa represented a response to growing concerns by African nations that Sino–African relations had been too one-sided, overly centred on natural resources, and did not promote structural change. It can also, however, be interpreted through the lens of 'co-transformation' (Large 2021). In other words, along with enabling the pursuit of development strategies by African partners, the strategy is aimed at realising China's self-interested goals concerning industrial upgrading, domestic consumption and off-shoring selected industries due to rising production costs. Lin and Wang put it thus (Lin and Wang 2014, 23):

> China, being a bit ahead in transformation, can provide ideas, experiences, tacit knowledge, opportunities, as well as finances in Africa's transformation. We also present preliminary evidence on whether, and to what extent, Chinese infrastructural projects have matched Africa's bottlenecks; and whether China's experience in SEZs can be useful to Africa's transformation. We argue that in a sense, China and African countries are teammates climbing the same mountain of structural transformation, hand in hand, and helping each other in every step of the way. They are each utilizing their own comparative advantages, exchanging tools from time to time, and

> complementing each other, while each facing own constraints. Working together, they can learn and progress faster.

This (rhetorical) commitment to structural transformation has not gone away and indeed has more recently been reinforced by numerous pledges and endorsements for industrialisation schemes by China's top leadership (Large 2021). During the 2018 FOCAC summit, for instance, industrialisation was announced as one of eight initiatives geared towards fast-tracking Africa's economic transformation. Even so, such declarations need to be put to the test of whether commitments are actually being delivered on.

The urge to cast hopeful glances in China's direction is not without reason (Lin 2018). The country's industrial upgrading and status as 'the factory of the world' came about largely due to massive inflows of foreign FDI in the 1990s. China has accomplished an astonishing structural transformation in less than four decades, which is 'both impressive and puzzling' (Yueh 2019, 20). This feat benefited hugely from the superior technology brought by FDI and its successful absorption by domestic firms (Cheung and Lin 2004; Liu 2008), something that has been greatly facilitated by a range of industrial policies (Du et al. 2014). 'As much by luck as by design', it was FDI that helped the Chinese economy become the global economic powerhouse it is today (Zhang 2006). The question remains, however, as to whether this path could work for Africa, and if so whether Chinese firms can play a catalytic role.

The second reason for pursuing research into the impact of Chinese FDI on Africa's development is that while manufacturing is conventionally seen as the most suitable avenue for industrial upgrading—compared to other sectors it is characterised by higher productivity and more rapid technological change—manufacturing in Africa has never attracted much interest from foreign investors. Instead, they flock to mines, oil rigs or, less often, farmlands. In that respect, China is starkly different, with firms from the country pouring into Africa to set up factories, assembly lines and production sites. Even so, many observers argue that the possibilities for undertaking industrialisation in a way that will duplicate the trajectories of the Western world (i.e. via low-cost, traditional manufacturing) appear limited (Qobo and le Pere 2017). Thus, they argue that other sectors of African economies should instead be considered when it comes to technology transfer and related gains, particularly in countries such as

Zambia or Angola, which rely heavily on extractive industries and possess massive, untapped agricultural potential.

Contrary to this viewpoint, however, the notion that primary commodities drive industrialisation—a concept known as resource-based development—has lately gained traction in academia (Morris et al. 2011; Morris and Fessehaie 2014; Fessehaie et al. 2017). Angola and Zambia may hold such potential, and a number of studies have explored such possibilities (Kragelund 2020). Agriculture too has been held up as not only a pillar of but the driving force behind structural transformation on the continent (Lopes 2015), or as others note 'structural transformation in agriculture should happen concurrently with structural transformation of the rest of the economy' (Senbet and Simbanegavi 2017, i6). There is thin but growing evidence that China could be playing an important role in this respect—regarding spillover effects; there is, for instance, preliminary evidence of transformative impacts and technology transfers, with Tang (2021) study of a Chinese cotton firm operating in Zambia a case in point. Given the lessons China has learnt from its own domestic agricultural reforms, such projects may be better suited to African economic realities (Large 2021, 105). They is consistent with the economic complexity literature (Hidalgo and Hausmann 2009; Hidalgo et al. 2007), which dictates that 'product space' should determine areas of specialisations, rather than preconceived ideas or historical patterns observed in other parts of the world.

The third reason relates to the fact that China's continued ascendance in Africa has—rightly or not—raised expectations that Chinese FDI may be instrumental in industrial upgrading, with spillovers part and parcel of this project. The notion that China might help spur industrialisation in Africa is not entirely new. As far back as 2003, Bräutigam suggested that Chinese networks might serve as catalysts for industrial development in the continent, stimulating industrialisation or manufacturing spin-offs in a similar fashion to Japan's much-touted 'flying geese' model in East Asia (Bräutigam 2003). Such sentiments are echoed by Justin Yifu Lin who, nonetheless, posits that China will be a 'leading dragon' rather than a 'leading goose', providing vast opportunities for lower-income countries to fill the vacuum left by China's industrial graduation, provided governments create an enabling environment for such processes to take root (Lin 2012, 2018). A pertinent-related question is whether China will simply 'provide a model for low-tech industrial development' (Bräutigam 2008, 52) or make this 'leading dragon' model work in Africa.

While some observers merely acknowledge the transformative potential Chinese investment might hold for the future, others see it as largely a *fait accompli*. Friedman, for instance, goes as far as arguing that 'China is already in the process of transforming Africa' and can 'bring industry to Africa much as Japan brought it to Southeast Asia in the 1960s and 1970s' (Friedman 2009). In a similar vein, Alden and Jiang (2019) claim that 'The quiet surge of Chinese investment in manufacturing and assembly plants in Africa is transforming local economies in ways that, should the trend continue, are on course to fundamentally alter the continent's position within the international political economy' (Alden and Jiang 2019, 641).

More recently, there has been an outpouring of celebratory accounts arguing that China is not just assisting Africa with industrialisation but in fact turning it into 'the next factory of the world'. Such accounts are typically supported by anecdotal evidence and the assertion that the mere presence of Chinese industrialists attests to transformative change. Irene Yan Sun offers a sample of such 'fanfare':

> Chinese factories in Africa: This is the future that will create broad-based prosperity for Africans and usher in the next phase of global growth for a large swath of the Chinese economy. This is what will make Africa rich and achieve a dramatic and lasting change in living standard … These people are sparking an industrial revolution in Africa, one that will allow Africa to take over from China as the Factory of the World. (Sun 2017, 6)

Certainly, there are cases where Chinese investments have appeared more promising than previous efforts, and their potentially transformative effects are better documented. Ethiopia, for instance, is often seen as emblematic of the flying geese-type model of relocating labour-intensive industries from China to Africa (see Bräutigam et al. 2018; Wolf and Cheng 2018). The Ethiopian case may, however, be the exception that proves the rule, as there is very little rigorous evidence that Chinese investments have indeed led to any significant resurgence in African industry (Rodrik 2016, 28).

Another gap in the literature is that, while the Chinese perspective has been more comprehensively covered and is better grounded empirically, the African private sector's views on and perceived role in promoting structural transformation is relatively under-researched. As Wethal observes, 'local African factors are often downplayed in accounts

of encounters between Chinese businesses and African localisations' (Wethal 2018, 326). In this light, scholarly work that presents African perspectives and local constraints (Wethal 2018) stands out from the bulk of the work largely focused on Chinese investors. A number of possible reasons underly this bias towards studying Chinese investors, including assumptions that African countries have limited agency in their dealings with China; the fact that the recent surge in studies exploring China–Africa spillover effects appears dominated by non-African (often Chinese) scholars; and the belief that Chinese 'specificity' or distinctiveness drives China–Africa encounters.

All of which brings us to the grand question of international political economy today, namely 'whether the nature and scale of Asian investment is potentially economically transformative or merely represents a reworking of a colonial-style economy' (Carmody and Hampwaye 2016, 196). Many experts have cautioned against excess enthusiasm for China's transformative role, with acclaimed Africanist scholar Christopher Clapham noting the country's arrival in Africa may be in fact undermining African attempts to 'break out of the historic dependence on primary production' (Clapham 2008, 367). Moreover, he asserts that 'China is likely to adapt to and modify the African experience, but is highly unlikely to change it fundamentally' (Clapham 2008, 369), and that 'far from providing any new model for Africa's involvement in the global economy and political system, China's role has been precisely to reinforce the old one' (Clapham 2008, 364).

Such views are echoed by other scholars, who observe that rather than industrialising, Africa is undergoing relative deindustrialisation (Kragelund and Carmody 2016). Although there is vast heterogeneity across the region, the process of deindustrialisation—expressed as falling manufacturing shares in employment and real value-added—has been empirically confirmed. In fact, Africa may have undergone what Rodrik calls 'premature' deindustrialisation (Rodrik 2016). This suggests that relative to advanced economies the shrinking of manufacturing has occurred in Africa sooner, and at a lower point, on the development trajectory. Taylor bitterly observes that Africa's industrialisation agenda has been discarded and the continent may actually be 'pushed further and further into underdevelopment and dependency' (Taylor 2016, 8). This trend is clearly related to the rise of the BRICS in Africa, which are not proposing an 'alternative economic paradigm' (Taylor 2014). Instead, Taylor notes that rather than providing a much-awaited structural

shift; the BRICS countries are reinforcing historical patterns of dependence and driving Africa further to the resource margins. In addition, although 'sponsoring' African industrialisation is important, other potentially harmful forces may be working against this, undermining the effects of Chinese imports on industrial dynamism (Kaplinsky 2008).

Perhaps this is not so surprising given the fierce debates on the nature of Chinese capitalism and its insertion into the global economy. Many experts have focused on the distinctive features of Chinese capitalism, including informal business networks held together by *guanxi* (trust or personal ties) and the role of the state in guiding capital accumulation, which amounts to a new variety of capitalism: 'Sino-capitalism' (McNally 2012). Others have taken a slightly different approach, asserting that 'capitalism is a global system and so it is unhelpful to view capitalist processes as nationally-bounded and endlessly varied' (Mohan 2013, 1259). Put differently, while institutional distinctions or nationally-centred organisations should not be overlooked, Chinese capitalism is at its core simply capitalism. As such, Chinese corporate and private actors are driven by the accumulation imperative. The question that follows, therefore, is whether China's forays into Africa can be said to represent anything novel or whether they are simply part of global capitalism.

Indeed, scholars have long suspected that China's engagement in Africa, along with its impact on the continent's place in the global economy, is not fundamentally different from that of other capitalist states (Tull 2006, 471), even if its modes of operations are. Given this, the rise of China should perhaps be situated within wider processes of capitalist restructuring, or what Ayers calls the 'spatial reorganization of global capitalism' (Ayers 2013). Building on this, key to understanding China's entry into Africa is China's own development trajectory (Mohan 2013). If the thesis that China is just a part of global capitalism is upheld, there is little reason to hope—in the light of the prior history of global capitalism in Africa—that the country's ascendance will organically lead to industrialisation and the subsequent recalibration of Africa's place in the international division of labour.

Such a view, however, often reduces Africa's fate to what external forces and global capitalism have in store for it, with the continent regarded as a passive space rather than an active actor (or set of actors) capable of shaping its development trajectory. What this arguably misses is African agency (Brown and Harman 2013; Mohan and Lampert 2013) and how

it might explain the limited progress made towards structural transformation. This in turn should be contextualised amid the wider problem of African statehood dynamics (Hagmann and Péclard 2011; Doornbos 2010; Young 2004; Herbst 2000) and its effect on China's forays in the region vis-à-vis structural transformation. Sino–Angolan ties point to the underlying complexities of this debate. As documented by various scholars, Luanda has continuously sought to balance China's potential leverage over the Angolan economy with the hope that Chinese credit lines will serve as catalysts to attract finance from other countries (Corkin 2011). Moreover, the fact Chinese firms' access to oil fields has been restricted or outright denied offers clear evidence that Angolan elites are not mere 'terms-takers' and cannot be bullied into a framework that might pose an existential threat to regime longevity. Instead, they have skilfully managed relations with China on their own terms, using a plethora of 'institutional fixes', such as the *Gabinete de Reconstrução Nacional* (Mohan and Lampert 2013). The real question, though, is whether these developments confirm the vitality of Angolan agency or simply expose the problem Kragelund and Carmody (2016) call 'agency at the margins'. According to this reasoning, 'African elites have been confined to bargaining rather than structural change' (Kragelund and Carmody 2016, 5).

The role played by African elites and their potentiality in driving structural change in African economies is another important facet of China's entry into the region. Here, sluggish transformation in Africa can be analysed through the lens of a 'strategy of extraversion'. The term, originally coined and popularised by Jean-François Bayart (1989, 2006), refers to the notion that rather than being passive victims of external powers; African elites actively contribute to and sustain Africa's marginal position in the global system, as it pays off for them to do so. Bayart notes how Africans are 'always ready to turn external constraints into some new creation' (Bayart 2000, 240–241), while Alves and Chichava are more blunt in describing such activity as 'milking and keeping external powers in check' (Alves and Chichava 2019, 244). This analytical lens has been successfully applied to the behaviour of African elites, with Angola providing a useful example in this regard (Soares De Oliveira 2007; Corkin 2011; Campos and Vines 2007; Power and Alves 2012) due to its vast 'extraversion portfolio' (Peiffer and Englebert 2012), which at different times has included oil (access to oil revenues), geostrategic importance (e.g. military equipment) and underdevelopment (e.g. foreign

aid). Political elites have captured and benefited from oil rents in order to consolidate their internal power and ramp up their authority, with the behaviour of external powers and the state of external dependency instrumental in carrying out this project (Alves and Chichava 2019).

The Grand Question

China in Africa has generated heated debate in both academic and political circles. Although the discussion has grown more nuanced of late, with new empirical studies presenting shades of grey rather than the black-and-white picture that dominated early encounters, it remains surprisingly 'prone to attracting grand statements' (Large 2021, 16). Crucially, there is a tendency to overstate the impact of China in Africa. As Large puts it: 'From the days of Maoist revolution to the 2020 COVID-19 pandemic, commentary has tended to overstate China's impact and underplay the formative influences of African protagonists' (Large 2021, 17). Here, the discussion on China transforming Africa is no exception.

Thus, the grand question of whether China is contributing to Africa's development or the China–Africa case merely represents 'diversifying dependency' remains open. It is to this issue we now turn.

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CHAPTER 3

Spillovers and the Effects of FDI: The Overview

Dominik Kopiński

There is an emerging consensus among scholars that, when it comes to what foreign direct investment (FDI) actually does to a host country's economy, no consensus exists. In fact, the myriad empirical studies and replications of these studies reveal that 'on almost every aspect of this question there is a wide range of empirical results in academic literature with little sign of convergence' (Lipsey and Sjöholm 2005, p. 23). Put differently, although many governments seem to believe otherwise, there is no universal link between FDI and its effects in the host country.

These effects can be conveniently grouped into three groups: political, economic and social (Moosa 2002, p. 70). The political effects of FDI in the host country are often analysed in the context of how foreign companies erode national sovereignty (Bezuidenhout and Kleynhans 2015; Ruggie 2018). This is a well-evidenced phenomenon in low-income countries, with an archetypical example being Shell in Nigeria, which

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D. Kopiński et al. (eds.), *The Political Economy of Chinese FDI and Spillover Effects in Africa*, International Political Economy Series,
https://doi.org/10.1007/978-3-031-38715-9_3

stands accused of being a 'criminal enterprise' in bed with the local government (Amnesty International 2017). Meanwhile, the potential social effects of multinational corporations (MNCs) in the host economy include influencing people's behavioural or cultural patterns, contributing to social inequality (Herzer et al. 2014), impacting the environment (Maiangwa and Agbiboa 2013) and negatively affecting human rights (Giuliani and Macchi 2014).

Economic effects, meanwhile, are conventionally divided by the FDI literature into macroeconomic and microeconomic effects (Moosa 2002, p. 70). The former encompasses balance of payment effects or effects on output and income. The latter, by contrast, concerns the behaviour of individual firms and the industries they are associated with, exposed to or have influence on. Such behaviour can lead to a company or sector's development (by creating a more competitive environment) or possibly its demise (by creating monopolies or oligopolies that kill competition and lead to lower quality products, higher prices or both). Microeconomic effects are examined using divergent sets of criteria, as they operate through different channels.

The other distinction made in the literature is between the direct and indirect effects of FDI (Blomström and Persson 1983; Dunning and Lundan 2014). Direct effects are those that benefit different groups in the host country. For example, workers employed in local firms may enjoy higher wages, consumers may benefit from better quality, lower prices or both, and the local government may be able to collect more taxes. Direct effects are sometimes also discussed in relation to productivity growth, which occurs with the entrance of foreign investors. Conversely, indirect effects are associated with external effects or externalities, also known as spillover effects. This is when FDI affects other firms—either in the same sector (intra-industry spillovers, backward and forward) or in other sectors (inter-industry spillovers).

Direct Effects

The Provision of Capital

The macroeconomic literature, drawing largely on the assumptions of the two-gap model (Chenery and Strout 1966) and earlier Harrod-Domar model (Domar 1946; Easterly 1999; Harrod 1939), postulates that FDI flows can help plug savings and foreign exchange gaps in a host country,

thereby raising levels of capital formation and boosting growth potential. This effect is particularly important for developing and low-income countries, which are usually capital-starved and may lack viable alternatives for raising capital. Empirically, however, the provision of capital argument is shaky, as there is a lack of systematic evidence demonstrating the positive impact of FDI on domestic savings and capital formation. For some authors, the benevolent effects of FDI are overstated (Dhar and Roy 1996), while others question whether FDI can even perform this function in the first place, as capital in the form of FDI is relatively expensive and/or actual capital inflows may not be very large (Moosa 2002, p. 73). A large strand of the literature associates the FDI–capital provision link with the displacement of domestic investment, casting doubt on the benefits of foreign capital inflows. For instance, Ashraf and Herzer argue that greenfield FDI in developing countries has a large crowding-out effect (mergers and acquisitions (M&A) have no effect) and negatively affects domestic investment (Ashraf and Herzer 2014). Similarly, Agosin and Machado show that FDI tends to displace domestic investment (particularly in Latin America) (Agosin and Machado 2005). This is important; as if FDI crowds out domestic investment, the net effect of capital formation may be negative (private investment rises by less than the FDI).

Contrary to such evidence, numerous studies report positive effects on domestic investment and capital formation (Bosworth and Collins 1999; Xu and Wang 2007), with FDI shown to crowd-in domestic investment (private investment rises by more than FDI). The FDI–capital formation relationship should therefore be understood as being very complex, with a growing quantity of research demonstrating that FDI may indeed be a force of good, though not across the board. For instance, Amighini, McMillan and Sanfilippo demonstrate that FDI is more likely to have positive impacts in manufacturing (as opposed to other business activities within the manufacturing sector) or greenfield projects (as opposed to M&A, which often involve merely a change of hands) (Amighini et al. 2017). It should be noted that these effects differ significantly across regions and countries, making any generalisation difficult to substantiate.

FDI as a source of capital is considered relatively stable over time compared to other private flows, such as portfolio investments or debt-related flows. This is because it is driven by long-term commitments, rather than short-term profit maximisation, leaving it less prone to sudden

capital reversals.[1] Importantly, the benefits to the host country may extend beyond the capital transfer itself, as MNCs usually have access to capital markets and financial resources that are beyond the reach of the host country's firms or government (Mun 2016, p. 90).

Output and Economic Growth

The other type of macroeconomic effect pertains to output and economic growth. In the neoclassical growth model (Solow 1956), FDI is assumed to enhance economic growth only in the short run, with long-term growth the result of technological progress and/or population growth—both considered exogenous variables. Given the assumption of diminishing returns to capital inputs, an economy will eventually converge to its steady state with no lasting impact on output growth, 'as if FDI had never taken place' (De Mello 1997, p. 8).

By contrast, endogenous growth models (Romer 1990) open up numerous theoretical possibilities for FDI to positively affect long-term growth, particularly through technological progress. In general, there are two conditions seen as enabling such effects (Moosa 2002, p. 73): either the host country's stock of capital rises as a result of foreign investment (higher capital accumulation) or existing productive factors are more effectively utilised (higher efficiency). FDI's impact on output is usually examined using the concept of the multiplier, with calculation of its overall magnitude taking into account both domestic leakages (e.g. taxes, imports) and external leakages, mostly in a form of profit externalisation (dividends, interest payments) (Moosa 2002, p. 74). It is also dependent on the extent to which productive factors are utilised, with output size positively affected when resources are underutilised and possibly unchanged if FDI takes place in an economy operating at full capacity.

Overall, although FDI is conventionally assumed to be growth-enhancing—albeit conditionally—the literature is inconclusive as to whether it in fact positively affects economic growth. Lipsey, for example, claims it should not be taken for granted that any universal relationship exists between the ratio of inward FDI flows to GDP and a country's

[1] As argued by Peter Nunnenkamp, this property of FDI may be overstated, as foreign firms are able to employ a wide repertoire of methods to repatriate capital (Nunnenkamp 2004).

growth rate (Lipsey 2003). Along similar lines, Carkovic and Levine, having resolved many statistical problems 'plaguing' the literature, ultimately find no evidence that FDI 'exerts a positive impact on growth' (Carkovic and Levine 2005). This claim is, however, not free from criticism and 'leaves enough room for some fairly different interpretations' (Melitz 2005, p. 277). Most authors find FDI only has conditional effects on growth, linking it to technology diffusion. Borensztein, De Gregorio and Lee claim that FDI boosts growth more than domestic investment, but only in countries that possess a highly skilled stock of human capital (Borensztein et al. 1998; B. Xu 2000). Higher efficiency, therefore, becomes more important than higher capital accumulation spurred by foreign firms. Meanwhile, Blomström, Lipsey and Zejan do not find educational attainment particularly influential, instead asserting that the effects of FDI on growth hinge on a country's wealth, with FDI leading to higher rates of growth in countries with higher incomes (Blomström et al. 1992). Balasubramanyam, Salisu and Sapsford narrow their focus to developing countries, arguing that FDI can only enhance economic growth in countries with outward-oriented trade regimes (Balasubramanyam et al. 1996). Choe, on the other hand, shows no evidence that FDI supports economic growth (Choe 2003).

It has been noted that the mixed results of these various studies may partially be explained by inappropriate pooling of wealthy and poor countries, which obviously have different characteristics (Bloningen and Wang 2005). Others claim that these mixed results can be rectified by splitting FDI into different sectors, with Wang, for instance, providing strong evidence that FDI promotes growth only in the manufacturing sector (Wang 2009). No universal conclusions on FDI's growth impacts stand out in regard to developing countries. To cite Caves, 'the relationship between a less developed country's stock of foreign investment and its subsequent economic growth is a matter on which we totally lack trustworthy conclusions' (Caves 2007, p. 237).

Employment

The issue of FDI's effect on the labour market, particularly employment and wages, has attracted relatively scant scholarly attention compared to other FDI effects. This is perhaps puzzling given that FDI's employment creation aspect has been fiercely debated among policy-makers, and many host countries struggle with rampant unemployment.

Several factors should be incorporated into debates about the nature of this relationship. First is the fundamental question of whether FDI indeed creates jobs or merely displaces them. Here, there is abundant anecdotal evidence on both sides of the argument. For example, foreign firms pursuing workers employed by local competitors might lead to a shift in where they are employed, rather than an increase in the absolute size of the workforce (FDI substituting for domestic investment). Second, even if net employment does not change as a result of FDI inflows, jumping to the conclusion that FDI is employment-neutral is pre-emptive. Foreign capital can help firms retain workforces they would otherwise lay off. Third, what seems to matter is whether FDI is a greenfield project, which usually creates new employment (only in a very tight labour market does it tend to divert employment from other firms), or an M&A, which may even contribute to layoffs should the investor decide to divest and/or shut down existing facilities. Fourth, the employment effects of FDI in developed and developing countries are diverse due to different skill compositions, the technological gap between foreign and domestic firms and divergent investment motives (e.g. efficiency-seeking vs resource-seeking). As such, they should not be lumped together for the purposes of analysis. Finally, FDI may not only create jobs directly (e.g. by setting up a production plant), but stimulate job creation in other firms in the same sector and/or other sectors.

As with other FDI effects, however, the evidence presented in the literature is mixed, particularly for advanced countries. In developing countries, the relationship seems to be more positive (Hale and Xu 2016), although the available evidence is relatively slim. The FDI–employment nexus is often judged against the belief that the surge in FDI witnessed from the early 1990s onwards would bring plenty of new jobs to countries struggling with widespread unemployment. In many places, this assumption went unfulfilled. Ernst reports that in the case of Latin American countries; new investment came alongside modernisation and the rationalisation of production, resulting in labour shedding rather than job creation (Ernst 2005). In Africa, capital-intensive investment in extractive industries—which for many decades dominated the investment landscape—has brought few benefits to the labour market, despite several studies reporting positive employment effects (Abor and Harvey 2008; Coniglio et al. 2015). Waldkirch et al. (2009) draw different conclusions in the case of Mexico, finding employment-enhancing effects for both white- and blue-collar workers (Waldkirch et al. 2009). In a similar

vein, Karlsson et al. (2009) claim that China has directly and indirectly benefited from FDI in the manufacturing sector through employment creation by private domestically-owned firms (Karlsson et al. 2009). An interesting phenomenon is reported by Jude and Silaghi, who argue that FDI has caused creative destruction in the labour markets of 20 Central and Eastern European countries—first by destroying jobs through labour-saving techniques, then by generating employment when firms deepened their integration into the domestic economy (Jude and Silaghi 2016).

Quality of employment is another factor examined by numerous scholars, who rightly assume that 'good' jobs rather than 'any' jobs should be the ultimate goal of host country governments. From a country perspective, this includes jobs characterised by productivity above the country's average, with greater productive externalities and/or the potential for productivity growth (Javorcik 2015). Moreover, FDI may hold additional value in the form of greater job stability, with a handful of studies indicating that MNCs are less likely to shut down than domestic firms (Bernard and Bradford Jensen 2007)—these results are, however, conditional on the size and productivity of such firms. Similarly, a recent study finds that foreign-owned firms in sub-Saharan Africa offer more stable and secure jobs than their domestic counterparts—more workers enjoy full-time employment, unpaid work is less likely, and training intensity is on average higher (Blanas et al. 2019).

Wages

The relationship between FDI and wages is yet another aspect of the literature 'with little sign of convergence' (Lipsey and Sjöholm 2005). To begin with, there is some scattered and anecdotal evidence that foreign companies do pay higher wages than local firms. This wage premium may be considered a result of MNCs possessing higher levels of technology and other firm-specific assets (Caves 2007), as well as a fear of 'brain drain' to local firms (Kokko and Blomström 1998, p. 14). Higher wages are intended to deter trained, highly skilled workers from leaving MNCs and so prevent skills leakages. Glass and Saggi show that foreign companies may be willing to pay wage premiums to discourage local firms from hiring away workers informed of a new technology (Glass and Saggi 2002). This can also happen when foreign firms find themselves at a disadvantage and are forced to compete for scarce skills or workers by offering higher wages than the competition. The short-term profit loss

resulting from such behaviour is compensated for by the general profit increase arising from the MNC having a bigger share of the market, or even dominating it and forcing local rivals out of the business.

The fundamental question remains, however, of whether the wages of workers employed in domestically-owned firms also rise in the process—in other words, is there a wage spillover? This can happen for two reasons. First, if a domestic firm benefits from productivity spillovers, its labour productivity increases, which can lead to higher wages (increased productivity channel). Second, if a foreign company competes with domestic companies over the same pool of workers, the latter may have no choice but to increase wages to attract (or retain) workers (competition channel). Importantly, FDI and increasing capital flows in general may lead to rising wage inequality in the host country, particularly in developing countries, with China being a good example (Chen et al. 2011)—although the effect is not necessarily linear (Figini and Görg 2011).

There are several studies examining the relationship between FDI and wage levels in domestically-owned firms (see Görg and Greenaway 2001 for a comprehensive literature review of the topic). For instance, Lipsey and Sjöholm (2004) find a positive relationship in the case of Indonesia (Lipsey and Sjöholm 2004), with Foster-McGregor et al. (2015) reaching similar conclusions for 19 sub-Saharan African countries (Foster-Mcgregor et al. 2015). Conversely, of the three countries examined by Aitken, Harrison and Lipsey—Mexico, Venezuela and the US—two are shown to have experienced wage spillovers (B. Aitken et al. 1996). Other studies condition the wage premium on different factors, such as the nationality of the foreign acquirer or skills (Girma and Görg 2007).

Studies investigating the FDI–wages nexus suffer from a potential endogeneity problem—that is, higher wages paid by foreign-owned companies may not be down to the fact they are foreign, but may be due to such companies being attracted to industries where wage levels are on average higher in the first place (e.g. more technologically advanced or capital-intensive, or with a more highly educated workforce). In other words, observations regarding higher wages paid by MNCs may be contaminated by takeovers of domestic firms, where wages are already above average (Lipsey and Sjöholm 2005, p. 26). A number of studies have examined (and confirmed) this 'cherry-picking' behaviour by foreign firms (see Almeida 2007).

Importantly, the available literature indicates that wage spillovers are more likely in developed countries than developing countries, let alone low-income countries. Two possible explanations have been put forward for this (Lipsey and Sjöholm 2005, p. 28). The first is that the gap between foreign companies and domestic firms is simply too wide for one group to influence the other, while the second is that large wage segmentation in developing countries' labour markets means that any particular group is, by default, not easily influenced by other groups. Another possibility is that labour market rigidity in developing countries, reflected by how difficult it is to hire and fire people, makes the circulation of labour less likely.

Balance of Payments Effect

The balance of payments (BOP) effect of FDI has for some time been high on developing countries' political agendas. In fact, following the 1980s debt crisis and the fast-tracking of globalisation a decade later, FDI came to be regarded in many circles as a 'salutary' effect on BOP, or at least more salutary than debt finance (Sen 1995). This is largely because low-income countries can overwhelmingly be characterised as having limited access to foreign exchange, thereby rendering FDI a key provider of such funds. This can be broken down into two distinctive effects: direct and indirect (Moosa 2002, p. 83).

A direct effect is one that can be seen in the foreign exchange gap either immediately (initial, one-off effects, such as the purchase of machinery from abroad) or later on and is reflected (observable) in actual flows associated with an investment. This includes both inflows (e.g. imports of equity capital or loans from abroad) and outflows (e.g. capital goods, raw materials imported, royalties paid abroad). For both theoretical and empirical reasons, it is important to distinguish between the short-term and long-term effects of FDI and to consider the life cycle of FDI projects. In the short term, FDI's BOP effects are limited to foreign exchange associated with the capital flow and associated operations. This stage is typically where net capital flow is positive, mostly because the initial capital inflow is not matched by reverse outflows. Moreover, during this stage, foreign entrants typically operate at a loss or with little profit due to costs incurred, so no repartition of profits or reinvested profits are recorded—at least for greenfield projects, which compared to an M&A tend to be more costly and less profitable in the short term.

The long-run effects, by contrast, are less straightforward and determined by a range of factors, including magnitude of export earnings, import intensity of the FDI project and reinvestment or repatriation of profits (Sen 1995). The empirical evidence here is mixed, with the overall BOP effect largely dependent on the financial life cycle of FDI projects (Brada and Tomšík 2009). Since FDI flows do not necessarily move in synchronised fashion, their effects on the BOP may offset each other at a given point in time. In some countries, FDI has negatively affected the BOP, for example, due to high levels of inputs or machinery from abroad (Dhanani and Hasnain 2002), while other studies have demonstrated that the profitability life cycle of FDI projects may determine the overall macroeconomic benefits of FDI flows (Novotný 2015).

Indirect effects encompass everything that is not easily detectable as part of the initial FDI story but are nevertheless side-effects or consequences of the FDI, such as changed consumption patterns and higher (or lower) incomes. For low-income countries, the BOP effect is closely associated with the type of investment and its sectoral distribution. For instance, whereas FDI in extractive industries positively affects the BOP, FDI in manufacturing may have a detrimental effect due to the high import content of such investments, as well as the transfer pricing mechanism (Moosa 2002, p. 83). The long-term effects of FDI inflows on a host country's BOP is, however, rarely studied. As Lipsey points out, the scholarly community seems to have decided that 'there are other factors that determine a country's balance of payments surpluses or deficits over long periods' (Lipsey 2006, p. 3).

Impact on Trade Flows

Observing that FDI contributes to a host economy's overall trade balance is to state the obvious. How exactly FDI affects trade flows, in which directions, sectors, industries or products, and in which stages of the FDI life cycle, is, however, a matter of intense scholarly inquiry. In principle, foreign firms may contribute to an expansion of exports if they sell their products or services abroad or encourage other firms to do the same, with the FDI–export relationship relatively firmly established in the literature (Kastratović 2020). Foreign firms also add to a country's import bill when they purchase machinery or inputs from overseas.

It has been postulated that analysis of FDI–trade linkages should go beyond the mere export and import activities of foreign investors. Rather,

the main trade-related benefit of FDI, particularly for developing countries, 'lies in its long-term contribution to integrating the host economy more closely into the world economy' (OECD 2002, p. 10).

Foreign firms, and MNCs in particular, can bring a plethora of structural benefits to the host economy. They can help channel capital into the most productive sectors, which are also likely those in the best position to compete internationally. They can also use their global networks to facilitate access to overseas markets. Through so-called export spillover effects, they can transfer the knowledge, managerial techniques or marketing strategies needed to tap into export opportunities and more generally help in making the initial decision to export (Kneller 2005). In the end, foreign firms may—through their global networks—be instrumental in restructuring the host economy (Blomström et al. 2000). The turning of China's economy into the world's factory is an illustrative example of FDI-led economic transformation (Zhang 2006).

Low-income countries usually have small, open economies and so are particularly affected by the impact FDI has on trade flows. This is also related to the fact that most FDI in developing countries is carried out by MNCs, which are predominantly trade-intensive (i.e. they continuously export and import lots of goods and services). Additionally, there is often a great deal of trade occurring within an MNC itself (i.e. between subsidiaries and the parent company). It is relatively well-documented that in countries pursuing export-oriented policies, such as China or Vietnam; MNCs have been a major driver of rapid export expansion (Xu and Wang 2007; Xuan and Xing 2008; Zhang and Song 2001). In other instances, however, an MNC's presence in the host country may be reflected by rising imports, leading to a widening current account deficit.

Indirect Effects: Spillovers

There are two basic observations that inform scholarly inquiries into the impacts of FDI on development. First, much of the world's stock of technological knowledge is possessed by MNCs, and second, MNCs are on average more productive than non-multinational firms, even controlling for factors such as size, which in its own right is often associated with better performance. In fact, this technological superiority lies at the very core of MNCs' competitive edge in the global economy, particularly in developing countries, and looked at through the lens of the

theory of the multinational enterprise can be seen as an inherent advantage brought by an MNC to the host country (Markusen 1995). The strategic advantages of MNCs should be interpreted broadly and do not end with technology per se, but extend to innovative management and organisational processes, as well as new production methods (Görg and Greenaway 2001, p. 8). As such, it is assumed that foreign ownership 'conveys some intangible advantage and that proximity to foreign firms or plants can be beneficial to domestic firms' (Hoekman and Javorcik 2006). This is consistent with the view that, contrary to neoclassical models, FDI constitutes not only a pure transfer of capital, but 'the transfer of a "package" in which capital, management, and new technology are all combined' (Findlay 1978, p. 6).

Once a multinational has set up a subsidiary in the host country, some of its asset-specific advantages may not be completely internalised and thus spill over to domestic firms, creating social benefits that exceed its private benefits (Meyer 2004, p. 259), for which the MNC is not (fully) compensated (Smeets 2008). This is what scholars conventionally call 'spillover effects'. Such effects are typically studied in relation to the productivity growth of locally-owned firms.[2] To quote Smarzynska and Spatareanu, spillovers from FDI occur 'when the entry of presence of multinational corporations increases the productivity of domestic firms in a host country and the multinationals do not fully internalize the value of these benefits' (Javorcik Smarzynska and Spatareanu 2005, p. 47). Fundamentally, such productivity growth may occur due to two basic reasons (Kokko and Blomström 1998): first, MNCs bring superior technology, which other (local) firms can then observe, imitate and adopt for productive purposes; and, second, MNCs entering the host economy disturb market equilibrium, forcing indigenous companies to work harder and/or introduce changes.

Spillover effects should therefore be understood as indirect effects—that is, externalities transferred from foreign investors to domestic firms. Importantly, most potential spillover effects 'arise from non-market transactions when resources, notably knowledge, are spread without a contractual relationship' (Meyer 2004, p. 260). In this sense, spillovers bear

[2] Typically, productivity is calculated as value-added per unit of labour input, or value-added per unit of labour and capital input, or alternatively value of output per unit of labour, capital and intermediate product input.

some of the characteristics of public goods, particularly in terms of non-excludability—excluding local firms from obtaining knowledge can be difficult if not impossible, and also, to some extent, non-rivalrous, as once knowledge leaks from an MNC to the host economy it can be consumed by many agents without diminishing its utility.

It is important to distinguish spillover effects—which may occur involuntarily and are therefore treated as leakages—from other contractual forms of technology transfer. Being in possession of superior technology, MNCs have good reason to prevent others from benefiting from technology diffusion. Technology transfers may be also occur deliberately when a foreign firm encourages local suppliers to 'learn' new knowledge, adopt new standards and upgrade and improve productivity, thereby allowing the MNC to profit from better and/or cheaper intermediate goods. Here, MNCs permit local agents to benefit from positive externalities, having weighed the opportunity costs of technology transfers against the transaction costs of establishing barriers to knowledge flows. This is understandable, as MNCs are profit maximisers and are not in the business of 'creating benefits for others without being paid for it' (Meyer 2004, p. 260). Technology can also be transferred through more conventional modes, such as purchasing equipment (hardware technology), hiring consultants or signing a technology licencing agreement (Pack 2006). Even so, spillover effects are broadly associated with assimilating technology rather than obtaining it via market transactions.

Spillover effects have arguably garnered a disproportionate amount of attention, with many scholars arguing that they are the most significant and sought-after contributions made by foreign firms to local economies (see for example Meier and Rauch 2005). Spillovers have only been around in the literature since the early 1960s and were initially treated not as a separate theme but part of the discussion about foreign investment's general welfare effects (Kokko and Blomström 1998, p. 8). Among the first authors to systematically examine spillover effects were MacDougall (MacDougall 1960)—who discussed them alongside other benefits of FDI for the Australian economy—and Caves (Caves 1971). The spillover literature expanded exponentially in the early 1990s, when FDI rose to prominence in the global economy and FDI flows came to be regarded as a development game-changer for many developing countries.

Spillovers can be divided into horizontal and vertical effects. Horizontal spillover effects are also known as intra-industry effects, as they occur in the same industry. The literature discusses two separate, yet

empirically difficult to disentangle, mechanisms associated with horizontal spillovers. First, local competitors observe a given technology and imitate it (reverse engineering). They may also recruit workers employed in MNCs and exposed to tacit knowledge, or workers can leave an MNC to start their own business. For instance, a study prepared for the World Bank revealed a foreign economic zone in Mauritius was heavily populated (50 per cent of capital equity) by firms established by former employees of foreign companies (Rhee et al. 1990). This effect is called *demonstration* and is sometimes characterised as a 'real' horizontal spillover effect (Javorcik 2008, p. 142). Second, the entry of MNCs leads to fiercer *competition,* which is sometimes labelled a pecuniary externality. In the short term, this can result in foreign firms stealing local companies' market share, poaching their employees and restricting access to credit (negative pecuniary externality). As a result, it is not unusual to see MNCs driving weak performers out of the market. In the long term, however, competition may turn out to be a boon for the host economy, even if individual local firms pay the ultimate price for this upward shift. This is because resources are allocated away from less efficient to more efficient firms, increasing overall economic efficiency and potentially benefiting consumers through lower prices (Javorcik 2008, p. 142).

Given that these effects are sector-specific, there are stronger incentives for MNCs to prevent leakages (Kneller and Pisu 2007) and/or the 'defection' of managers, engineers and workers to local firms (Moran 2011, p. 42). Failure to do so makes competitors stronger (more efficient) or can lead to new competitors emerging. As demonstration and competition often occur simultaneously, horizontal spillover effects are difficult to observe empirically. Another mechanism observed within the realm of horizontal spillovers is a greater variety of inputs in upstream sectors, prompted by MNC demand for more specific intermediates (Javorcik 2008, p. 143). There is growing consensus, however, that focusing only on horizontal spillovers vastly underestimates the impact of FDI on a host economy, as this is not where most spillovers are likely to occur. This brings us to vertical spillovers.

Vertical spillovers—also known as inter-industry (or across industries) effects—can be further broken down into backward spillovers, which occur when technology spills over from MNCs to local intermediate input suppliers, and forward spillovers, which emerge when goods produced by an MNC become inputs for local firms. In contrast to their horizontal counterparts, vertical spillovers are mostly voluntary, with local

firms acting as stakeholders in, rather than competitors to, the MNC. Here, knowledge transfers are driven by opportunistic motives, although some effects may also be seen as leakages and occur unwillingly. Some scholars treat 'knowledge spillovers' and 'knowledge transfers' as conceptually separate categories, with the latter referring to purposeful and intentional diffusion of knowledge with no externality (Smeets 2008). This characteristic raises the question of why an MNC would transfer technology along the supply chain if superior knowledge is their strategic asset. Two basic reasons are offered in this regard: to reduce input costs and/or increase quality. Being profit maximisers, MNCs will engage with local suppliers if the products and services they provide are cheaper than their imported counterparts. Moreover, if their quality is not inferior, they have no reason to look elsewhere for inputs. This mechanism may extend beyond the direct relationship between an MNC and its local supplier. For example, according to interviews conducted by Blalock and Gertler in Indonesia, the MNCs do not mind local firms using their newly acquired skills and methods to partner with other buyers. In fact, they encourage them to do so, in the hope that they further improve their productivity and increase their economies of scale (Blalock and Gertler 2003).

Overall, the literature tends to focus on backward spillovers, which are more observable and common compared to forward spillovers. One reason for this is that many MNCs are export-oriented, meaning linkages with downstream sectors are typically limited. Of all the sectors, services is arguably the most likely to be associated with forward spillovers, with numerous industries in the host country potentially affected (Javorcik 2008, pp. 152–153).

In terms of vertical spillovers, a number of scenarios make actual spillover mechanisms difficult to pinpoint (Javorcik and Spatarenau 2005, p. 46). First on the list is 'cherry-picking', where foreign companies only award contracts to and cooperate with those companies that already possess the skills or knowledge required (in such cases, spillover effects are negligible or none—in fact, 'cherry-picking' cannot really be considered a spillover in the first place). Another possible effect is 'productivity shocks', which occurs when local suppliers experience a productivity shock due to foreign company assistance or supplier self-motivation, or alternatively when a foreign company offers domestic suppliers favourable terms—reflected in higher prices, greater order volumes and/or more reliable payments—to increase their productivity to the levels sought by the foreign company. Lastly, there is 'improving as you go', where

local suppliers gradually learn by cooperating with foreign companies, increasing their productivity in the process.

It is not a given that spillover effects will be positive—they may well be negligent (neutral) or even negative. In fact, the evidence supporting positive spillovers is, to cite Dani Rodrik, 'sobering' (Rodrik 1999, p. 39) (importantly, Rodrik appears to refer to horizontal spillovers). Aitken and Harrison, in their influential study, find no evidence to support the hypothesis that technology is transferred from joint ventures to domestically-owned firms in Venezuela (Aitken and Harrison 1999). Similarly, no spillovers are in evidence in Morocco (Haddad and Harrison 1993), while India yields only weak, partial evidence of spillovers (Kathuria 2000). Even so, there is abundant evidence that positive spillovers have occurred in, for instance, Australia (Caves 1974), Canada (Globerman 1979) and Mexico (Blomström and Persson 1983; Jordaan 2011).

There is a growing consensus that scholars have been looking for spillovers 'in the wrong place'. Although vertical spillovers have been robustly documented in many country settings, the scholarly record is much more ambiguous when it comes to horizontal spillovers. Importantly, the magnitude of FDI spillover hinges on a variety of factors, including MNC characteristics and their potential to create spillovers; host country characteristics, including the regulatory and institutional setting; and the absorptive capacity of domestic firms (Crespo and Fontoura 2007; Farole and Winkler 2014). It is also easy to confound productivity improvements that emerge in the host economy through spillover effects with those that arise merely due to an MNC's entry to the market (a positive demand shock). Javorcik, in a study focused on the Czech Republic, warns against this methodological pitfall (Javorcik 2008, p. 150). Local suppliers may, in some instances, improve performance and increase productivity before a relationship with an MNC has even been established, as they hope to be granted contracts in future.

Spillover Channels

In principle, FDI spillovers can occur through five main channels: (1) labour mobility; (2) demonstration (imitation); (3) competition; (4) backward and forward linkages with domestic firms; and (5) exports (Crespo and Fontoura 2007).

The labour mobility channel refers to when MNC employees, having been trained, acquired certain skills or accumulated practical experience, move on to local firms. Alternatively, former workers may decide to establish their own entrepreneurial business (spin-off). In both scenarios, the mechanism can be interpreted as a leakage—an unintended effect that foreign firms try to prevent by offering higher wages or pursuing certain legal arrangements, such as enforcing intellectual property rights and imposing non-compete clauses (Hoekman and Javorcik 2006, p. 7). Labour mobility effect can occur both horizontally (i.e. in the same sector) or vertically, when an MNC's employees move to local firms supplying intermediate inputs.

Fosfuri et al. (2001), show how, through the labour mobility effect, technology can involuntarily move from a foreign firm to a local one, leading to positive welfare effects. These positive effects may arise even if the transfer is prevented, as the retained local workers enjoy higher wages. A number of other studies have also empirically tested the labour mobility mechanism. In a poor country context, Görg and Strobl use firm-level data for manufacturing firms in Ghana to show that newly established firms run by owners who previously worked for multinationals in the same industry are more productive than other domestic firms (Görg and Strobl 2005b). More recently, in a completely different setting, Balsvik provides empirical evidence that Norwegian workers with MNC experience contribute substantially to the productivity of their new plants (20 per cent more to the productivity of non-MNCs compared to workers lacking such experience) (Balsvik 2011). In general, the likelihood of this kind of spillover hinges on several factors (Farole and Winkler 2014, p. 29). First, domestic companies must have the ability to attract labour that previously worked in an MNC, which is not easy given the wage premium MNCs usually pay to their workers. Second, a sufficient number of domestic firms are needed for labour turnover to occur, which in turn depends on the ease of establishing new local firms. Third, spillover effects through this channel are a function of the amount of training and knowledge, as well as the kind of skills, former MNC employees have retained. Fourth, a labour force's composition and degree of localisation (e.g. expats versus local workers) in a plant may determine the degree of spillover. Last but not least, the more rigid the labour market is on an institutional level (e.g. the more difficult it is to hire and fire), the lower the likelihood of technology and knowledge being transferred to local entities.

Spillovers are also created through two important mechanisms associated with horizontal, rather than vertical, spillovers. First, superior technology brought by foreign firms in the form of marketing knowledge, managerial techniques or export behaviour may be observed, imitated and applied by local competitors. To quote Das, the demonstration effect occurs when 'native firms in the same sector learn from the former (as an externality) and become more efficient' (Das 1987, p. 172). Additionally, the competition effect means that when foreign companies enter the market local companies are forced to 'try harder'—use available resources more efficiently, adopt different technology or simply do their tasks faster. Importantly, both effects typically occur without firms interacting. The mere presence of an MNC can lead to leakages, making local firms better off, including through productive gains (Kokko and Blomström 1998; Wang and Blomström 1992). It should be noted, however, that competition can take place in the complete absence of technology spillovers. In other words, local companies may increase their productivity only through the competitive pressure applied by MNCs (without any leakage). Therefore, formally, the competition effect does not entail technology transfer or is not 'pure', despite the literature sometimes examining it under the overarching umbrella of an externality occurring from inward FDI.

The demonstration effect is very difficult to pinpoint and document, simply because it usually occurs unconsciously, beneath the scholarly radar. Adopting new products, using new technology and acquiring new knowledge by local firms generally happens amid rather vague circumstances—in most cases, time and place cannot be clearly determined. The other problem with the demonstration effect is that it often blends with the competition effect (Kokko and Blomström 1998). Since most studies search for a correlation between FDI inflows and the total productivity factor of local firms in the same industry, they frequently 'jumble these two effects together' (Moran 2011, p. 50).

Blomström investigates the intersection between competition and demonstration based on Mexican locally-owned companies subject to competitive pressure from foreign companies (Blomström 1986). The author concludes that 'industries dominated by foreign firms tend to be more efficient than others in the sense that the average firms come closer to the best-practice firm' (Blomström 1986, p. 108). Jenkins (quoted by Blomström and Kokko), meanwhile, in discussing how increased productivity is driven by both competition and demonstration, writes:

> Over time, where foreign and local firms are in competition with each other, producing similar products, on the same scale and for the same market, there is a tendency for local firms to adopt similar production techniques to those of the MNCs. Indeed this is part of a general survival strategy, whereby in order to compete successfully with the MNCs local capital attempts to imitate the behaviour of the MNCs. (Jenkins 1990, p. 213)

The competition premise, compelling as it is, is often not relevant for least developed countries, where MNCs are overwhelmingly export-oriented, and either face very limited competition from local firms or do not compete at all. Therefore, the only fully-fledged competition effect may be when an MNC poaches employees from the scarce skilled labour force, contributing to a kind of domestic brain drain, although even this is rarely the norm (see Barry et al. 2005). As this book shows, such an assumption barely applies when Chinese firms enter the equation.

Spillover effects are associated with degree of competition in the sense that the latter determines the level of technology an MNC will choose to transfer to its host country subsidiary, which in turn affects the degree of spillovers. For example, Sjöholm posits that if foreign firms face higher levels of competition; they must then bring in more technology to make them competitive, enlarging the scope for spillovers (Sjöholm 1999). Similar conclusions are reached by, among others, Blomström, Kokko and Zejan, who argue that more competition spurs technology transfers from MNCs to their the host country affiliates (Blomström et al. 1994). Meanwhile, Javorcik argues that both foreign and local firms can win provided competition between them is not too fierce (Javorcik 2008), which could lead to the crowding out of domestic firms.

Certainly, in a competitive environment, MNCs do not want spillovers to occur for fear of losing the source of their competitive advantage. As such, they have a strong incentive to prevent leakages through such means as formal protection of their intellectual property, trade secrecy and paying higher wages in order to prevent labour turnover. An alternative strategy is for MNCs to operate in countries where local agents are unable to tap into the knowledge and technology entering the host country (Moran et al. 2005, p. 47). The age of technology has also been subject to scrutiny, with scholars arguing that it informs decision-making on what type of technology a firm is willing to transfer to a given location (Mansfield and Romeo 1980). It has, for instance, been argued that

the more modern and complex a technology is ('less codifiable and the harder to teach'), the greater the likelihood of an MNC transferring it to a wholly-owned subsidiary in order to avoid potential leakages (Kogut and Zander 1993). A related strategy is transferring 'older' technology, which may be considered relatively advanced by host country firms but still lags behind the state-of-the-art (Glass and Saggi 1998).

Another spillover channel that has attracted growing popularity in academia is vertical backward and forward spillover effects. Until the early 2000s, most research was focused on horizontal rather than vertical spillovers (with some notable exceptions, such as the study by Lim and Fong that employed three case studies of MNCs in Singapore to show that foreign firms do create local vertical linkages [Lim and Fong 1982]). There are a number of possible reasons for this paucity. For instance, Lall laments that 'the nature of the direct relationships established between firms engaged in complementary activities, buying from and selling to each other, is a murky area in the study of industrial economics' (Lall 1980, p. 203), while Javorcik Smarzowska points out that 'it is possible, though, that researchers have been looking for FDI spillovers in the wrong place' (Javorcik 2004, p. 606). Markusen and Venables, in a widely cited study that appears to look in the 'right' place, show how it is 'possible for FDI to act as a catalyst, leading to the development of the local industry which may, in turn, become so strong as to reduce both the relative and absolute position of multinationals in the industry' (Markusen and Venables 1999). In Markusen and Venables's partial equilibrium model, MNCs that are active in consumer products increase demand for local intermediate products, creating 'linkage effects'. Over time, this may boost industrialisation in the host country, as evidenced in the case of Malaysia (Rasiah 1995). Interestingly, an MNC can end up the victim of its own success when the local industry develops to the point where it creates enough competition to drive the firm out of the market. According to Javorcik and Spatareanu, when it comes to vertical spillovers, local firms may gain from the presence of MNCs through (Javorcik Smarzynska and Spatareanu 2005, p. 48):

> Direct knowledge transfer from foreign customers to local suppliers (sometimes this transfer is explicitly stipulated in contracts); imposing higher requirements for product quality and on-time delivery, which provide incentives to domestic suppliers to upgrade their management

or technology; multinational entry increasing the demand for intermediate products, which allows local suppliers to reap the benefits of scale economies.

The entry of MNCs and their engagement with local suppliers can sometimes lead to unwelcome consequences. Lin and Saggi present a model that captures two effects: the competition effect and the demand creation effect (Lin and Saggi 2007). The demand creation effect occurs when MNCs raise demand for locally-made intermediate goods. This, however, produces an adverse 'delinking effect', with local producers losing some of their old suppliers to the multinationals. As a result, the positive effects (i.e. demand-creating effects resulting from the entry of MNCs) may be offset by negative ones, eventually leading to the total output of intermediate goods shrinking. Rodríguez-Clare proposes a formal model that assumes MNCs generate linkages in developing countries, particularly in cases where such firms produce goods that use a lot of intermediate goods; there are high communication costs between headquarters and the production plant (transportation costs); and both the host and home country are similar in terms of variety of intermediate goods (Rodríguez-Clare 1996). This also gives rise to a 'gloomy' argument: it is unlikely that MNCs in least developed countries will create many linkages, as the firms that move there are precisely those that do not depend on a wide variety of local inputs (see the case of Chinese firms in Africa discussed in subsequent chapters). Along similar lines, Görg and Strobl demonstrate that MNCs benefit local firms not only through technological externalities but 'pecuniary externalities',[3] which occur when MNCs increase demand for intermediate goods supplied domestically. Over time, this leads to an expansion in the market for domestic supplies and associated price changes, which in turn can benefit local firms' entry, survival and growth (Görg and Strobl 2005a).

With the exception of case studies (Lall 1980) and anecdotal evidence, empirical work arriving at the conclusion that more attention should be paid to vertical effects was initially rare and has only recently expanded. In a 2004 article, Javorcik named just two known empirical studies that attempted to capture vertical spillovers (Javorcik 2004), namely those by

[3] 'Pecuniary externalities do not affect the production function of the benefiting firm, but impact on the profit function via reductions in costs or increases in revenues', see Görg and Strobl (2005a).

Blalock and Gertler (2003), who employed firm-level panel data from Indonesia and found strong evidence that vertical supply chains are a channel for technology transfers (Blalock and Gertler 2003), and Schoors and van der Tol (2002), who used FDI data from Hungry and claimed to be 'the first to analyse empirically the intersectoral effects of FDI' (Schoors and van der Tol 2002, p. 3). In 2011, in a comprehensive meta-analysis, Havranek and Irsova found 'robust evidence consistent with knowledge transfer from foreign investors to domestic firms in supplier sectors (backward spillovers), but only a small effect on firms in customer sectors (forward spillovers) and no effect on firms in the same sector (horizontal spillovers)' (Havranek and Irsova 2011).

Various studies show that specific production technology per se (e.g. production line design) is rarely transferred to local firms. Instead, spillovers often take the form of knowledge transfers, with local companies learning the business practices of MNCs and benefiting from employee training, quality control assistance and managerial techniques. Technical assistance and support to suppliers and customers has been documented as an important spillover mechanism. For example, Kohpaiboon shows how MNC automakers helped local Thai auto parts suppliers achieve needed quality levels by assigning technicians to assist them (Kohpaiboon 2006). Similar MNC help leading to improvements in the quality of inputs produced by local firms has been uncovered by Núñez in Mexico (Núñez 1990).

The final category of spillovers, which is sometimes handled separately in the literature, is export spillovers (also known as market access spillovers), although productivity and export spillovers 'are likely to be very hard to distinguish in practice' (Kokko and Blomström 1998). Export spillovers are associated with an MNC's multi-market presence, which—through vast overseas experience, knowledge about international marketing, export strategies, distribution channels and servicing of products—can pave the way for local would-be exporters. This argument is reinforced by the observation that, in general, exporting firms are more efficient than non-exporting firms (Greenaway et al. 2004). The channel is particularly important for low-income countries, where very few firms have the knowledge or technological capacity needed to establish export operations. Thus, whenever a local company, through its cooperation with MNCs, establishes its own export operations or, more generally, learns how to export, it can be considered a market access spillover (Kokko

and Blomström 1998). In terms of export spillovers, MNCs can influence local firms directly (through linkages struck with local suppliers that offer valuable knowledge about exporting activity), as well as through the increased production and economies of scale local firms enjoy as a result of MNC-spurred demand creation. A less direct way would, for instance, include hiring workers trained in export operations previously affiliated with MNCs, or benefiting from the demonstration effect (i.e. copying MNCs' export behaviour).

Export spillovers are most famously documented in a study by Aitken, Hanson and Harrison, who show that breaking into foreign markets by indigenous Mexican firms is facilitated by the proximity of multinationals (Aitken et al. 1997). The study demonstrates that MNCs can act as export catalysts and constitute 'a natural conduit for information about foreign markets and technology, and a natural channel through which domestic firms can distribute their goods' (Aitken et al. 1997, p. 128). The export-led productivity spillover effect has also been documented by Greenaway, Sousa and Wakelin in relation to UK-based firms (Greenaway et al. 2004).

Determinant Factors of Spillover Effects

Technology Gap

There is almost universal consensus that spillover effects do not materialise when the technology in question is not appropriate for the host country and/or does not fit into its factor endowment. A good example is the deep-water drilling technology used by oil companies in many African countries, which, realistically, cannot create extensive linkages with the rest of the economy, let alone lead to productivity improvements among domestic firms, either in a horizontal or vertical setting. Yet, there are many instances when the technology gap between investor and host economy can be seen to provide a breeding ground for technology transfers and a potential trigger for domestic productivity growth.

While it is generally agreed that a certain degree of technology gap is required for spillover effects to occur, the literature appears fundamentally split on how the size of the technology gap determines technology transfers (Lipsey and Sjöholm 2005). Some authors suggest that a wide technological gap renders spillovers more likely—an assumption often attributed to Paul Romer and his 'idea gaps'. Romer stresses that some countries lack the knowledge to create value, and that 'multinational

corporations can play a special role as the conduits that let productive ideas flow across national borders' (Romer 1993). Others claim that being too far apart technologically makes technology transfers less likely to occur. No group of scholars has been able to resolve this issue conclusively due to methodological and measurement problems (Sjöholm 1999).

Advocates of the idea of a big technology gap facilitating (rather than hampering) spillover effects draw their inspiration from the work of, among others, Findlay (1978). Findlay argues that the bigger the distance between advanced economies and what he calls 'backward regions' (relative backwardness), the greater the opportunities to be exploited in the less advanced economy, and, moreover, the greater the incentives for local firms to tap into new technologies, imitate and learn new knowledge (Görg and Greenaway 2001, p. 13). Findlay's model is designed in the spirit of Gerschenkron's catching-up hypothesis, sometimes called the Veblen-Gerschenkron effect (Gerschenkron 1952; Peri and Urban 2006), which posits a positive correlation between distance from the world's technological frontier and rates of economic growth (Gerschenkron 1952). Findlay compares foreign firms to vehicles of contagious disease, casting them as important drivers of change or 'carriers' of the disease. Following Arrow and Lancaster, he suggests that 'technical innovations are most effectively copied when there is personal contact between those who already have the knowledge of the innovation and those who eventually adopt it' (Findlay 1978, p. 3).

Another strand of thinking is premised on the notion that technology gaps, especially wide ones, prevent host countries from taking advantage of spillover effects (Glass and Saggi 1998), as local firms are unable to recognise and adopt new technology. Here, a significant technology gap acts as impediment rather than enabler. This is because a wide technology gap usually implies limited absorptive capacity on the part of local firms, as reflected in the stock of human capital, physical capital (roads, infrastructure) and technology accumulation in local firms. The size of the technology gap also determines the type of technology being transferred. The bigger the gap, it is argued, the lower the quality of the technology transferred to the host economy, which in turn affects potential spillover effects.

The concept of absorptive capacity has been theoretically developed by Cohen and Levinthal, who define it as the 'ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends' (Cohen and Levinthal 1990). According to Narula and

Marin, 'absorptive capacity includes the ability to internalize knowledge created by others and modifying it to fit their own specific applications, processes, and routines' (Narula and Marin 2003, p. 22). While absorptive capacity is intellectually easy to grasp, its measurement raises serious difficulties. A widely used method is to look at R&D spending (Cohen and Levinthal 1990; Griffith et al. 2003), but this hinges on data availability and poses a host of methodological problems, particularly in Africa.

A host country's absorptive capacity may actually prove to be a barrier (rather than a conducive factor), as it potentially discourages MNCs from bringing higher-quality technology into the country, thereby reducing the chances of productivity spillovers occurring (Görg and Greenaway 2001, p. 13). For example, Keller argues that if a country's absorptive capacity remains unchanged; it cannot really benefit from technology invented abroad. This can only happen when the labour force, which is largely home-provided, has built up corresponding skills (Keller 1996). Otherwise, the transfer pertains only to the information part of the technology, as expressed in blueprints or construction design.

This pessimistic premise has been empirically tested by a number of scholars. For example, Kokko, Tansini and Zejan, using the case of the Uruguayan manufacturing sector, demonstrate that local firms only benefit from MNC spillovers when there is a small to moderate technology gap. By contrast, large technology gaps 'may signal that foreign technology is not relevant, that local firms have nothing to learn from the foreign firms, or that local technological capability is so weak that foreign technologies cannot be used by local firms' (Kokko et al. 1996, p. 609). The above discussion is aptly summarised by Meyer, who writes that 'opportunities for knowledge acquisition increase with the technology gap, but recipients' ability to use it declines' (Meyer 2004, p. 263).

The lack of consensus surrounding the technology gap may partially be explained by how scholars define and measure it, which had led to controversy about what is actually 'wide' and what is 'narrow'. For example, Kokko defines the technology gap as the difference in labour productivity between domestic firms and MNCs (Kokko 1994). Girma, meanwhile, arrives at a middle-ground conclusion, arguing that there is a nonlinear relationship between a domestic firm's technology gap and FDI-induced productivity benefit: 'the productivity benefit from FDI increases with absorptive capacity until some threshold level beyond which it becomes less pronounced' (Girma 2005). Importantly, Girma points to a minimum

absorptive capacity threshold level below which productivity spillovers from FDI are negligible or even negative. Overall, however, the connection between size of technology gap and degree of spillover very much depends on which methodology is adopted (Sjöholm 1999).

To conclude, it is fair to say that some technology gap may be required in order for spillovers to occur. On the other hand, when the gap is too wide, spillover effects become less likely. In terms of the extent of the spillover, it remains unclear what competition does to technology transfers—in other words, does greater competition assist technology transfer or hamper it, as foreign firms have stronger incentives to prevent leakages? For instance, Sjöholm shows that competition determines the choice of technology transferred from an MNC to its subsidiary, which affects spillover effects (Sjöholm 1999). This suggests more competition could lead to more spillover effects. In least developed countries, the technology gap is reinforced by the nature of many FDI projects, which bear enclave characteristics (Gallagher and Zarsky 2018), thereby limiting the scope for spillovers. Moreover, the technology gap between foreign and domestic firms varies by country and industry.

Country of Origin

Crespo and Fontoura pose the question: 'Is FDI from different countries equally likely to generate spillover to domestic firms?' (Crespo and Fontoura 2007, p. 414). The simple answer is no, and the explanation is twofold. First, FDI is a 'package' containing, among other things, technology, knowledge and managerial techniques, all of which are heavily influenced by culture, language and norms. Second, investor nationality matters in the context of distance between home country (the multinational's headquarters) and the market the MNC is operating in. As a general rule, the greater the distance from the home country, the more likely it is that the purchasing of inputs takes place locally, thus increasing the likelihood of spillover effects. Rodríguez-Clare argues exactly this in demonstrating, using a formal model, that 'the strength of a multinational's linkage effect depends on the cost of communication between the headquarters and the production plant' (Rodríguez-Clare 1996). A similar argument can be applied to trade tariffs and rules of origin, which may be an additional consideration in deciding whether to source inputs locally or from other members of a trade block. Javorcik and Spatareanu test this premise positively for Romania, arguing that US and Asian

investors are more likely to source inputs locally, thereby creating more spillovers, than European firms (Javorcik and Spatareanu 2011).

In the same vein, Altenburg argues that 'Asian affiliates of American TNCs do more local sourcing than do Mexican affiliates of the same corporations, because a plant in Mexico can easily be served by established suppliers from the United States' (Altenburg 2000, p. 32). Additionally, Farole and Winkler point out that investor nationality may make a difference in terms of the end market for products (Farole and Winkler 2014), citing studies on Lesotho and Madagascar where the export destinations of different investors could partially be explained by their respective nationalities (Morris et al. 2011; Morris and Staritz 2014). It is also clear that different investors bring not only different technologies but different work cultures/ethics, managerial practices and legal knowledge, which can serve as catalyst or barrier to technology transfers. The literature probing the national characteristics of investors and how this affects knowledge dissemination for commercial ends is nevertheless relatively scarce.

Finally, a geographic factor that could potentially affect the degree of spillover is the foreign investor's market orientation. In short, spillover may depend on whether a foreign firm produces for local markets or for export. In the former case, the firm is more likely to source its inputs locally, increasing the chances of linkages and vertical spillovers occurring. Conversely, export-oriented foreign investors tend to use higher-quality inputs, usually sourced from abroad (Javorcik Smarzynska and Spatareanu 2005, p. 69). Kokko, Zejan and Tansini use the case of Uruguay to demonstrate that the actual degree of spillover may be related to the host country's trade regime (Kokko et al. 2001). In principle, MNCs may face stern local competition in countries following an import-substitution strategy or generally employing a lot of protectionist measures. To overcome such competition, an MNC will have to bring superior technology, which can, once it has leaked to local companies through demonstration/imitation effects, have positive effects on productivity levels. On the other hand, if MNCs are predominantly outward-oriented (and other businesses remain mostly interested in serving the local market), spillover effects may be very limited.

Length of Presence

Another important determinant of spillover effects is time. The conventional argument would have it that, over time, an MNC's operations become better integrated into the host economy—inputs are more likely to be sourced locally and cooperation between suppliers and foreign customers gradually intensifies, increasing the chances of spillover gains. Such a claim was put to the test in an early study by McAleese and McDonald on the Irish post-war economy (Mcaleese and McDonalrd 1978), which concludes that although new foreign-owned firms tend to have fewer linkages with other industries than new domestic enterprises, those 'linkages tend to increase over time in new enterprises and particularly in new foreign-owned enterprises' (Mcaleese and McDonalrd 1978, p. 336). This conclusion is confirmed by a number of studies. For example, Giroud and Mirza claim that the length of stay of MNCs in countries belonging to the Association of South-East Asian Nations (ASEAN) is positively correlated with the degree of local input linkages (Mirza and Giroud 2006). Moreover, Gorodnichenko, Svejnar and Terrell's study of 17 transition market economies shows that horizontal spillovers, as well as forward vertical spillovers, are positive for older firms (Gorodnichenko et al. 2014).

Foreign Ownership

Several general arguments can be made regarding how the degree of foreign ownership impacts spillover effects. First, shared ownership may facilitate the unintended leakage of proprietary knowledge and superior technology to local firms, as well as the host economy more widely. This is in contrast to fully (or majority) owned subsidiaries, where interaction, as well as the exchange of information with local agents, is reduced. It is, therefore, little wonder that many developing countries have adopted restrictive laws (e.g. imposing joint ventures or forbidding majority ownership, as seen in Zimbabwe's indigenisation policy and South Africa's Black Economic Empowerment policies) in order to benefit from technology transfers. In fact, as Moran recalls, in the early days of globalisation it was presumed that if restrictions were not imposed and MNCs were allowed to operate freely there would be no spillovers at all, whether horizontal or vertical (Moran 2011, p. 41). Second, it

has been claimed that combined local and foreign know-how is superior to know-how generated by foreign ownership alone (Arnold and Javorcik 2009). Third, foreign ownership matters in terms of what type of technology (degree of sophistication) an MNC is willing to transfer to its subsidiary, with partial ownership, and therefore reduced MNC control, potentially serving as a disincentive to transfer more advanced technology. This implies that the higher the foreign share, the more likely the technology transfer (Ramachandran 1993).

While these arguments may appear relatively uncontroversial, the evidence is again far from clear-cut. Blomström and Sjöholm argue that subsidiary companies that are only minority-owned by a foreign investor may offer greater potential for spillovers, as the local partner will be able to learn and gain experience of the new technology before transferring it to other local projects. Their own findings, however, indicate that the degree of foreign ownership does not matter (Blomström and Sjöholm 1999). Dimelis and Louri argue that minority-holding exercises create more productivity spillovers among local Greek firms than firms that are wholly foreign owned. They also find that greater control over the subsidiary may work as an incentive to transfer technology and knowledge to the host country (Dimelis and Louri 2004). Similarly, Takii, using data for Indonesia, claims that the magnitude of spillovers is reduced by a greater presence of majority- or wholly-owned foreign plants (Takii 2005), while Havranek and Irsova (2011) also find evidence for lower spillovers in fully-owned foreign affiliates (Havranek and Irsova 2011).

Conversely, MNCs may avoid host countries with laws restricting foreign ownership, or limit technology transfers where they are unable to set up a wholly-owned subsidiary. This is particularly the case for host countries with poor governance and weak rule of law, and where the MNC uses highly sophisticated technology that local agents could prey upon. Javorcik and Wei, for example, demonstrate that although higher corruption makes joint ventures more attractive for foreign entrants facing a non-transparent and difficult-to-navigate host environment; it may also act as a deterrent to foreign companies with highly sophisticated technology. Such investors are less likely to engage in joint ventures, fearing their intangible assets will not receive effective protection (Smarzynska and Wei 2000). Javorcik and Spatareanu also find a link between foreign ownership and degree of spillover in Romania. In terms of vertical spillovers, the authors argue that ‘the entry of partially owned foreign affiliates into downstream sectors should have a larger positive effect on

the performance of local firms in the supplying industries than the entry of wholly-owned foreign subsidiaries'. This is largely because an MNC can rely on its partner's knowledge and so faces lower costs when it comes to finding local suppliers (Javorcik and Spatareanu 2008). In terms of horizontal spillovers, Javorcik and Spatareanu conclude that local firms may benefit from spillovers since MNCs, in order to reduce leakages, transfer less-sophisticated technology to their partially-owned subsidiaries, while seeking to gain advantage through their local partners' better access to knowledge (Javorcik and Spatareanu 2008).

Entry Mode

Related to the above point is the foreign firm's mode of entry to the host economy. There is overwhelming evidence that, compared to wholly-owned greenfield projects, partial acquisitions are associated with greater cooperation between the MNC subsidiary and local suppliers (Javorcik and Spatareanu 2005, p. 67). This is because the MNC can tap into the acquired company's existing cooperation networks, while greenfield FDI must develop relationships from scratch. The other possible reason is that, generally speaking, greenfield investors use more sophisticated technology, potentially making it more complicated to find suitable local suppliers without assistance (Javorcik and Spatareanu 2005, p. 67). Conversely, Branstetter, in investigating Japanese investment in the US, reports higher spillovers from greenfield affiliates ('through deploying superior technology and/or managerial practices') and no spillovers from acquisitions (Branstetter 2006). According to Crespo and Fontoura, MNCs entering through M&A are more likely to adopt the host country's technology and to only gradually improve its technology (Crespo and Fontoura 2007).

Discussing FDI spillover in low-income countries, Farole and Winkler point out that the degree of spillover may also depend on the nature of ownership of local firms (Farole and Winkler 2014, p. 41), with the absorptive capacity of a private firm potentially different from that of a state-owned enterprise (SOE). The latter is usually larger, more experienced, and may have greater technological capability and easier access to state loans. As such, it will be the first to benefit from spillover effects. Private firms, on the other hand, may be more flexible and ready to imitate (demonstration effect) foreign company behaviour and practice. Several studies have tested these assumptions, with largely inconclusive

findings. Sinani and Meyer (2004), for instance, using a sample of Estonian companies, find that 'outsider-owned' private firms benefit from spillovers more than SOEs (Sinani and Meyer 2004). Meanwhile, Li, Liu and Parker, in focusing on China, find that both private companies and SOEs benefit from spillover effects, with the former taking advantage of the demonstration effect and the latter more likely to benefit from competition effects (Li et al. 2001).

FDI Motive

FDI is driven by a wide variety of motives, which in turn have a role in determining spillover effects. These motives can be analysed using the seminal framework proposed by Dunning whereby MNCs are either resource-seeking, markets-seeking, strategic asset-seeking or efficiency-seeking (Dunning 1993). It should be noted that this framework has been revised multiple times, particularly in the light of emerging market MNCs, which present some unique characteristics (Cuervo-Cazurra et al. 2015; Luo and Tung 2007). Although many findings are country- and/or sector-specific, it is possible to make some generalisations. For example, it is commonly believed that resource-seeking MNCs are less likely to create linkages in the domestic economy, as they are capital-intensive, use sophisticated technology and tend to operate in enclaves, whereas market-seeking investors are more likely to rely on local suppliers for inputs, thus developing more linkages and potentially more spillovers. Market-seeking MNCs also tend to have a more intensive supplier network than, for instance, export-oriented subsidiaries (Altenburg 2000, p. 8). Similarly, efficiency-seeking MNCs operating in the manufacturing sector have traditionally been associated with higher spillovers. In fact, of these categories, efficiency-seeking is regarded as the most conducive to industrial upgrading and structural transformation. Contrary to conventional views on the detrimental effects of mineral and energy extraction, some more optimistic studies claim that resource-seeking MNCs have embarked on sourcing strategies involving local suppliers and contractors, creating more space for backward linkages and productivity spillovers (Morris et al. 2012).

Technology Intensity

As Paus points out, not all 'FDI is created equal' with respect to its ability to create spillovers (Paus and Shapiro 2007, p. 221; Paus 2007). The relationship between inward FDI and growth is, among other things, highly sensitive to sectoral characteristics (Nunnenkamp and Spatz 2003), with the manufacturing sector having the greatest potential for linkage formation and spillovers. Nevertheless, it is the technology intensity of the goods produced that plays a critical role. In theory, more technology-intensive goods involve a greater degree of knowledge and broader set of skills, which can then be transferred to suppliers.

According to the technology intensity classification originally proposed by the OECD (see Hatzichronoglou 1997), goods can be divided into four groupings: (1) high; (2) medium–high; (3) medium–low; and (4) low. In general, scholars assume that high and medium–high technology yields greater spillover potential for productivity improvement across industries, although this mechanism is obscure, as demonstrated by Paus and Gallagher in the cases of Costa Rica and Mexico (Paus and Gallagher 2008). Moreover, technology intensity tends to be lower in cases where an MNC's production is highly internalised (Paus and Gallagher 2008), with different parts of the value chain produced within the MNC structure rather than outsourced to third-party agents (through arms-length contracts), which naturally generates more learning externalities.

Training of Local Personnel

An important channel for technology transfer, sometimes treated separately, is training of local personnel (Blomström and Kokko 2002). Most studies, however, seem to place training of local personnel within the labour turnover channel, both in terms of horizontal spillovers, when workers equipped with new skills move to a local competitor or set up a rival firm, and vertical background spillovers, when a local supplier hires a former MNC employee and in doing so absorbs newly acquired knowledge. While the magnitude of these effects is again contingent on the type of investment and the host country economy's absorptive capacity and stock of human capital, it is also determined by which level of the organisation is on the receiving end of training (e.g. low-skilled manufacturing operatives, supervisors, engineers, top-level managers). For instance, a great deal of FDI in low-income countries is very capital-intensive, which

severely limits the potential benefits of positive spillovers. Another plausible inference in such situations is that the limited availability of local labour places constraints on foreign firms, especially if they require certain skills. Given this, those MNCs that do enter the host country tend to be capital- and technology-intensive and not reliant on labour.

Also, scholars point out that training should not automatically be considered positive, as it may end up being useless or even detrimental to the workforce. In general, this type of spillover is very sought after in developing countries, where educational systems are weak and on-the-job training is a valuable asset. As such, it is assumed that training local personnel, who may later move to new firms or set up their own businesses, can bring about more spillovers than in developed countries. As documented by Fosfuri, the actual spillovers are determined by what type of knowledge is being acquired and transferred (Fosfuri et al. 2001). While more generalised knowledge can find wider application in the host economy, highly sophisticated knowledge is unlikely to yield significant across-the-board benefits.

Geographical Proximity

The relationship between geography and knowledge is fundamental. Few would likely disagree that being close to the knowledge centre impacts the payoff for local firms. Despite this, geographical (or spatial) proximity is not prominent in the spillover literature. In particular, analysis of the tacit 'dimension' of knowledge—that which cannot be expressed directly or easily, also because it often implies changes in the behaviour of acquirers (see Polanyi 1962, 1967)—and how its assimilation is shaped by 'distance, proximity and geography' is highly valued (Howells 2002). Moreover, tacit knowledge plays a significant role in influencing the appropriation of codified knowledge, which, on its own, is conventionally interpreted as less spatially constrained (Howells 2002). Geographical proximity appears vital for various spillover mechanisms. For instance, although geographical proximity is most often analysed in the context of vertical backward linkages, proximity to the knowledge centre is also highly relevant to labour mobility, constrained as it is by geography.

According to several studies, the degree of spillover effect interacts statistically with prospective beneficiaries' geographical proximity. Girma and Wakelin point out three important aspects that imply the geographical confinement of spillovers (Girma and Wakelin 2007, p. 401). First, direct

contacts in vertical linkages (i.e. between foreign firms and local suppliers or distributors in forward linkages) may be local in nature as a means of minimising transport costs and facilitating communication between firms. Second, where spillovers are associated with labour turnover, technology diffusion rarely occurs across different geographical regions or large distances. Finally, learning through demonstration requires relatively close geographical contact in order to observe and imitate superior technology. Thus, the domestic firms most likely to gain from spillovers are those that operate in the same region (province) as foreign companies (Barrios et al. 2012). Another study by economic geographers Ivarsson and Alvstam concludes that low transaction and communication costs, alongside the opportunity to interact regularly with a foreign investor (here, Volvo), positively determines the absorption of external technology by local suppliers in a range of countries (Ivarsson and Alvstam 2005).

Another interesting angle regarding the spatiality of knowledge spillovers is that knowledge apparently 'decays' strongly with distance (Bahar et al. 2014). This is particularly pertinent for knowledge diffusion requiring direct human interaction, making it akin to the 'spread of an infectious disease' (Arrow 1969, p. 33). As a result, knowledge diffusion may be impaired by having to travel long distances, implying that products whose technology exists nearby will be favoured (Bahar et al. 2014, p. 118). Although this assumption has been verified empirically (Jaffe et al. 1993; Keller 2002; Bottazzi and Peri 2003), the question of why this is the case and what mechanisms are responsible remain unresolved. FDI has been named among the potential 'prime suspects', and it has been postulated that 'future research should be able to explore this research avenue' (Bahar et al. 2014). It is therefore vital that researchers integrate this postulate more fully, for instance, by assuming that FDI arriving from closer geographical proximities (i.e. a neighbouring country or the same region) will be more effective in knowledge diffusion.

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CHAPTER 4

China–Africa Spillovers: The Literature Review

Dominik Kopiński and Pádraig Carmody

Introduction

Despite scholars now having a relatively good understanding of the levels of Chinese investment in Africa (Bräutigam et al. 2017), what drives them (Chen et al. 2018; Ross 2015; Kolstad and Wiig 2011), and how Chinese foreign direct investment (FDI) is distributed geographically and across sectors (Dollar 2016), the actual effects of Chinese investments in Africa remain relatively ambiguous. This is in contrast to the claim made,

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D. Kopiński et al. (eds.), *The Political Economy of Chinese FDI and Spillover Effects in Africa*, International Political Economy Series,
https://doi.org/10.1007/978-3-031-38715-9_4

with limited empirical evidence, that such investments are transforming the continent economically (Sun 2017; Lin and Xu 2019). Nonetheless, China's economic impacts have been growing. Since 2009, China has been Africa's top trading partner, with an all-time high of US$ 254 billion of merchandise traded between the two in 2021 (Oleander 2022). China is now also the fourth biggest investor in terms of stock, after the Netherlands, the UK and France, drawing ahead of the United States (UNCTAD 2021), which was previously the continent's biggest trade partner (OECD 2010).

Given the interest Chinese engagement in Africa has sparked across the media and academia, it is conspicuous that the effects of Chinese investments remain under-researched. Some studies are quick to refer to 'impact' or 'effects', but often use underdeveloped contextualization and/or rely purely on high-level econometric tools (Doku et al. 2017; Megbowon et al. 2019; Whalley and Weisbrod 2012; Busse et al. 2016, Negash et al. 2020; Seyoum et al. 2015). Methodologically, due to pervasive and well-known data problems, most scholars are reliant on interviews and firm-level surveys, with some also employing case studies. Many articles are descriptive, sometimes offering cautious conclusions along the lines of Chinese FDI in Africa 'has produced both positive and negative effects' (Fane Madouka Koumou 2016). Others rely on anecdotal evidence (Mohan and Lampert 2013) or use a small subset of case studies (Xia 2021). Most work is 'based on secondary sources' or has not adopted 'a systematic methodological approach' (Carmody and Hampwaye 2016, 196). As valuable as many of these studies are, they do not constitute a rigorous evaluation of how Chinese investments have impacted the development of the African continent.

Amidst this relative scarcity, scholars' views on the contribution of Chinese firms to Africa's development appear to have tilted towards a somewhat positive perspective. For instance, a comprehensive 'scoping review' of 103 relevant publications conducted by Calabrese and Tang asserts that 'on balance, the literature points to a positive role of Chinese firms' (Calabrese and Tang 2022). This is perhaps unsurprising in the sense that greater economic activity (and the jobs associated with this) is regarded as a positive. However, such firms can also generate competitive displacement effects (Senghaas 1985); may outcompete local firms for capital, bank loans (Chase Dunn 1989) and skilled labour; and may offshore, rather than reinvest their profits.

China-Africa Economic Relations: Different Lenses

The impacts of Chinese engagement on Africa's development have been approached through various research lenses, with varied objectives in mind. Given the longstanding and unresolved debate about localization and the nature of labour relations in Chinese investments (Sautman and Hairong 2016; Brooks 2010; Sautman and Yan 2012), probably the most significant scholarly interest has been directed at labour market dynamics (Carmody and Hampwaye 2016; Ofosu and Sarpong 2021; Lee 2018; Baah and Jauch 2009; Isaksson and Kotsadam 2018; Oya and Schaefer 2019).

Such interest is unsurprising given the political implications of the topic, with labour relations at the heart of growing anti-Chinese sentiments in many countries. Accusations have revolved around, among other things, imported labour depriving Africans of jobs, low labour standards and the maltreatment of locals. Many of these accusations have been debunked, while others may hold true—not just for Chinese investors, but rather for others too. Crucially, however, other studies have shown significant divergence among different Chinese projects, from 'bulldozers' that utilize a large number of Chinese workers and lack interaction with the host economy to 'locomotives' that rely more on local resources and have much more to offer in terms of long-term growth (Tang 2010). What determines the nature of this division remains controversial and unknown. Recent research has revealed substantial inter-country variation (Oya and Schaefer 2019), indicating the importance of contextual factors such as the nature of the project, local labour markets and labour law enforcement.

Another area of interest is the impacts made via trade, which various scholars have sought to unpack. One prominent example here is the effects of the (alleged) 'Chinese tsunami' (Taylor 2008)—cheap Chinese goods flooding African markets, potentially endangering local industries and driving them out of domestic and foreign markets (Jenkins and Edwards 2015; Kaplinsky and Morris 2008; Giovannetti and Sanfilippo 2016). On a more positive note, some studies have found that Chinese imports should be viewed as an opportunity rather than a threat, as they may enhance the productivity of indigenous manufacturing firms (Darko et al. 2021). Here, engaging in trade with China 'is an effective channel' for firms to become more productive if they can withstand

the competitive pressure (Hou et al. 2021)—although it appears relatively few can. The same applies to foreign investment in Africa, where 'especially in the textile sector, the scale of Chinese firms … greatly dominates that of African-owned firms' (Broadman 2007, 314). The trade channel naturally includes legions of Chinese traders who have made Africa their home, becoming suppliers of not only essentials to local populations, but also intermediate goods and materials to both Chinese and African firms (Dobler 2009; Haugen 2011; Giese 2013), thereby enabling improvements in supply chain efficiency.

Chinese involvement in the financing and building of infrastructure has also been keenly explored as an area where positive effects for host countries may be detected. This is understandable given that, according to Deloitte, China was responsible for 31 per cent of all infrastructure projects in Africa valued at US$ 50 million or more in 2020, up from 12 per cent in 2013.[1] There has been an outpouring of studies examining the impacts of Chinese-built infrastructure (Corkin 2012; Foster et al. 2009; Fei 2021; Goodfellow and Huang 2021), from nurturing local markets via demand for building materials (Wolf and Cheng 2018) to reducing existing infrastructure bottlenecks and helping in the diversification of exports (Habiyaremye 2016). Studies have also dealt with less glamorous aspects of Chinese-built infrastructure, such as its allegedly questionable quality, regarding which there is plenty of anecdotal evidence, although this has been disputed by some authors (see Farrell 2016).

Furthermore, as the debt distress of many African countries has become more apparent, so the economic and social returns of such projects have been increasingly questioned (Taylor and Zajontz 2020; Zajontz 2020; Carmody and Wainwright 2022). However, the Chinese role as financier and builder of African roads, railway systems and dams, let alone stadia and government buildings, is in most cases beyond the remit of pure 'investment'. Rather, they are debt-financed projects, lacking the most vital characteristic of FDI: 'control'. As Thierry Pairault points out, 'China does not invest in infrastructure in Africa but builds and finances African investments in infrastructure' (Pairault 2018). In a similar vein, Goodfellow and Huang (2021, 659) assert that 'when it comes to infrastructure China barely invests at all'. Other research,

[1] How Chinese firms have dominated African infrastructure, *The Economist*, 19 February 2020, https://www.economist.com/middle-east-and-africa/how-chinese-firms-have-dominated-african-infrastructure/21807721.

though, has found evidence of an increased number of public–private partnerships, such as in road-tolling (Zajontz 2020), although these have been scaled back as debts have 'bitten' (Brautigam 2022). One prominent example is the newly opened Nairobi expressway, which was built on a public–private partnership basis by the Chinese Road and Bridge Corporation.

Spillover Effects, Linkages and Technology Transfer in China-Africa Literature

The research gap is particularly striking when it comes to technology transfers and the spillover effects of Chinese FDI. This is to use Deborah Bräutigam's words, where 'the academic literature on Chinese investment in Africa is thin' (Bräutigam et al. 2017, 2), despite the question of technology diffusion by China in Africa going back to the famous TAZARA project (Liu and Monson 2011). This paucity calls for correction, especially now that China and Africa—after 20 years of extensive and 'enhanced' modern engagement—are purportedly entering a 'new era' (Large 2021), with debates apparently shifting towards 'economic complementarities between them and Africa's integration into global value chains' (Alden 2019, 84). Moreover, the positioning of China in the global economy and in Africa has evolved considerably. From being merely 'a potential emerging hegemon' (Carmody and Owusu 2007) in Africa, China has decisively graduated to 'an emerged power' (Breslin 2021).

With a few exceptions (see Ofosu and Sarpong 2022; Crescenzi and Limodio 2021), the empirical evidence for linkages and spillovers is modest. For instance, Bräutigam (2008, 65) quotes a study by Sanjaya Lall of Taiwanese investment in Lesotho's apparel industry, which paints a grim picture of 'wholly absent' backward linkages, 'almost no local firms' emerging as competitors, subcontractors or suppliers, and a general 'East Asian' culture that is not conducive 'to local skill creation or local participation at high levels' (Lall 2005). Another, widely quoted, study claims 'there are weak linkages between Chinese firms and local African firms. This influences the extent to which technological transfers and business know-how can be successfully undertaken' (Gu 2009, 576). Issues of 'language and cultural understanding' are cited as possible reasons behind this (Gu 2009, 576).

A more recent study by Bräutigam et al. also points to Chinese factories' limited local linkages, with a twofold explanation provided: firstly, the relatively short time these firms have been in operation; and, secondly, a lack of sub-sector clusters (Bräutigam et al. 2018). The authors find no evidence of Chinese firms working directly with local companies to improve the quality of inputs, with the potential such collaboration would hold for improving technological upgrading over time (ibid.). The study, however, deals only passingly with spillovers.

Another study, by Chen et al., concludes 'backward linkages between Chinese firms and the local economy was relatively low, which means this is not a promising mechanism for technology transfer' (Chen et al. 2016). While many European or US companies have programmes to develop local suppliers, this is not the case for most Chinese companies. However, 'a notable exception may be the telecommunications provider Huawei, which reports having one thousand African subcontractors with whom it spends in excess of $480 million annually' (Huawei 2013 cited in Berman 2013, 154). On the other hand, the company also dumps outdated products on the African market (Wen 2020), which could be considered a negative spillover, impeding the success of indigenous mobile phone plants, such as those of Mara group phone in Rwanda.

In general, the China–Africa spillover literature is akin to searching for unicorns—not in the sense of technology start-ups worth more than a billion dollars, of which there are now several in Africa, but the mythical kind. External economies of scale, or spillovers, are more likely to develop or be reinforced in industry clusters. There are relatively few of these in Africa (Oyelaran-Oyeyinka and McCormick 2007) and they tend to be informal, such as the Kumasi magazine (auto-parts cluster) in Ghana, whereas Chinese FDI tends to be formalized.

There are numerous methodological problems related to spillover studies (see Chapter 5). Firstly, although they declaratively investigate spillover effects, they often stop short of actually documenting them. Instead, they concentrate on alleged knowledge transfers. Despite some affinities, knowledge transfers and knowledge spillovers are two distinct analytical objects. While the former concentrates on the process (of transferring knowledge), the latter is more concerned with the outcome (whether the transfer leads to productivity gains or not). Merely acknowledging a knowledge transfer—an employee being trained or labour mobility across businesses—does not amount to a spillover effect.

Another problematic issue is that the Chinese presence in Africa, in contrast to many other entrants, has become extremely heterogeneous, with firms active in virtually all sectors, from retail, mining and tourism to telecommunications and manufacturing. Impacts may vary widely between sectors—as may the implications for economic transformation and development—meaning that each sector should ideally be gauged separately. This challenge renders the literature fragmented and difficult to reconcile, as while there may be positive examples of knowledge transfers and even spillovers in one sector, this does not necessarily amount to systemic, larger-scale impact. In fact, for each positive effect in one sector, there may be negative or zero spillovers in another sector that is beyond the scope of any given study to capture. This conundrum is illustrated by the work of Xia (2021), who reportedly found spin-offs from Chinese recycling plants in East Africa in the form of trash collection centres set up by former employees. While this is clearly a sign that the Chinese presence does make a difference on the ground, possibly leading to the creation of, if not new niche markets, then at least new business ventures, it does not confirm that Chinese FDI as such is upgrading productivity in Kenya or Tanzania. Although most studies that rely on interviews or firm-level surveys appear to conclude that they found examples of horizontal or vertical spillovers, these effects are not systemic or large scale (Xia 2021).

Many studies make great efforts to document 'spillover effects' and end up describing, for example, 'improving [the] recycling techniques' of aluminium scrap collectors (Xia 2021) or upgrading the sewing skills of Zambian farmers-turned-rosewood-cutters. The question is, even if Chinese investors contribute to developing such skills, and even if, formally speaking, this productivity increase can be achieved, can one realistically hope that such improvements contribute to economic transformation or industrialization? A related problem is that many of these studies are focused on whether or not spillover effects materialize, yet rarely address the broader context of industrial policy or macroeconomic impediments to spillover effects, often seeming to neglect the 'African' part of the equation.

While the behaviour of foreign firms when it comes to technology transfers may be key in certain scenarios—with some willing to facilitate such transfers and others not—in other cases spillovers may be unlikely due to the technological specificity of the business that firms are in, rather than their intentional conduct. This can be seen in the case of Chinese furniture manufacturers in both Zambia and Angola, which have very

few interactions with indigenous firms, and even those they do forge linkages with—such as local woodcutters—have little room for productivity improvements, let alone on a scale leading to observable structural economic transformation. What is of importance in such situations is the absorptive capacity of indigenous businesses and the local policy context (Farole and Winkler 2014; Paus and Gallagher 2008). Focusing on Chinese investors may help in understanding the 'what' of linkages or spillovers, but only by extending the research scope to indigenous firms and local politics can we hope to understand the 'why'.

Morrissey (2012) points out that there is often no clear demarcation between linkages—being mere productive interactions between firms—and spillovers, which not only entail technology transfers but also lead to productivity gains. As noted in Chapter 2, many studies appear to treat terms such as 'spillovers', 'linkages' and 'externalities' as being synonymous. Linkages can be formed without any learning taking place, and while such interactions between firms or industries are certainly not without merit, they will not necessarily lead to any spillovers occurring. Thus, paradoxically, the China–Africa spillover literature rarely documents actual spillovers. Instead, studies often document linkages with no learning effects, or linkages with learning effects but little evidence that this is linked to indigenous firms becoming more productive. Following Morrissey (2012), having spent weeks conducting fieldwork in both Zambia and Angola, we posit that the quest for spillovers in the African context is 'elusive', and that it is linkages rather than spillover effects per se that academics should be more concerned about. Linkages are not only easier to identify, but also tend to capture many of the effects of international businesses in Africa, particularly in terms of driving demand for inputs, which is beneficial in its own right. More importantly, reflecting Hirschmanian 'industrial interdependence', linkages may indeed hold the key to structural transformation (Table 4.1).

As noted in Chapter 2, there is scant evidence of spillovers from Chinese to African firms, with the evidence for linkages also quite sparse (see Carmody et al. 2020). The remainder of this chapter, therefore, seeks to interrogate and conceptualize why there have been so few demonstrable linkages and spillovers from Chinese firms to local African firms.

Table 4.1 Literature review of China–Africa literature investigating (or alluding to) transfer of technology/spillover effects/linkages

Authors	*Country*	*Type of spillover*	*Mechanism/channel*	*Spillover-related conclusions*
Mohan and Lampert (2013)	Nigeria	Horizontal	Labour mobility	Former staff of Nigerian Golden Telecoms claim they acquired skills enabling them to establish telecom engineering services
Seyoum et al. (2015)	Ethiopia	Horizontal	Not specified	Chinese FDI has different spillover effects on domestic firms depending on the latter's characteristics Domestic firms with higher absorptive capacity experience positive spillovers, while those with low-absorptive capacity experience negative spillovers
Bräutigam (2003)	Mauritius, Nigeria	Horizontal	Labour mobility	It is possible for business networks in Asia to form productive linkages with business networks in Africa, transferring ideas and technology, and facilitating the development of a dynamic manufacturing sector
Tang (2018)	Ghana	Horizontal and vertical	Backward linkages and labour mobility	Local backward linkages are very basic and the supply chain is short, yet the clustering of the plastic recycling sector has generated notable spillover effects to local manufacturers and suppliers The fundamental constraint for technology transfers and local linkages is Ghana's weak macro-economy and industrial basis Several local businessmen and former Ghanaian employees of foreign firms have started their own businesses by learning from Chinese investors

(continued)

Table 4.1 (continued)

Authors	*Country*	*Type of spillover*	*Mechanism/channel*	*Spillover-related conclusions*
Lall (2005)	Lesotho	Horizontal and vertical	Not specified	Fifteen years after the first garment factory was established, almost no local firms have emerged to compete with foreign firms, subcontract from them, or supply them with inputs such as packaging or accessories Supply linkages remain with the outside world rather than within the economy, with no spillover benefits to Lesotho
Gu (2009)	Various	Not specified	Not specified	There are weak linkages between Chinese firms and local African firms This is partially due to language and cultural understanding issues faced by Chinese companies, as well as different working practices
Bräutigam et al. (2018)	Ethiopia, Ghana, Nigeria and Tanzania	Horizontal and vertical	Not specified	Fairly limited effects in terms of technology transferred and skills diffused to African firms There are many reasons behind Chinese factories' relatively limited linkages, including the relatively short time they have been operating in most countries, and the fact that firms are generally not forming geographic clusters in a sub-sector
Elu and Price (2010)	Ghana, Kenya, Nigeria, South Africa and Tanzania	Not specified	Not specified	There is no relationship between productivity-enhancing FDI and trade with China

Authors	*Country*	*Type of spillover*	*Mechanism/channel*	*Spillover-related conclusions*
Auffray and Fu (2015)	Ghana	Horizontal and vertical	Transmission of managerial knowledge to different actors	Limited local employment at the managerial level in Chinese construction firms is the main impediment to managerial knowledge spillovers, with cultural and linguistic barriers potentially explaining this situation
Chen et al. (2016)	Nigeria	Vertical	Backward linkages and skills transfers	Backward linkages with local firms and suppliers are weak and generally shallow, with little sign of significant technology or skills transfers A number of positive technology transfers were observed in the firms surveyed, in the form of skills transfers and production method trainings. However, this was not a systematic trend
Corkin (2012)	Angola	Vertical	Backward linkages	The prescriptive nature of the financing mechanism curtails the development of local linkages
Tang (2021)	Malawi and Zambia	Vertical and horizontal	Training, demonstration, and backward and forward linkages	Chinese investors flexibly modify conventional knowledge transfer channels, such as labour training, demonstrations and forward and backward linkages, to fit their business models and local socio-economic contexts

(continued)

Table 4.1 (continued)

Authors	*Country*	*Type of spillover*	*Mechanism/channel*	*Spillover-related conclusions*
Chen (2021)	Nigeria	Vertical and horizontal	Training and backward linkages	Most firms rely on relatively informal skills training programmes and labour mobility has not led to significant horizontal spillovers No strong linkages between Chinese investors and domestic Nigerian firms. True joint ventures, which could foster the development of industrial clusters and supply chains, were limited
Loundry and Chen (2021)	Madagascar	Vertical and horizontal	Training, distribution of technology and machinery, and backward linkages	Positive skills and technology transfers in the form of agricultural training programmes and the distribution of agricultural biotechnology and machinery (but limited impacts) Backward linkages via supply chains remain relatively absent
Bräutigam and Tang (2014)	Various countries	Vertical	Backward linkages and skills development	Little sign of clusters in the special economic zones and minimal efforts to promote linkages with local companies Overseas zones are at present unevenly linked into local training and research and development networks
Crescenzi and Limodio (2021)	Ethiopia	Vertical and horizontal	Backward linkages and competition	Firms operating in relevant upstream and downstream sectors in the same district benefit from Chinese FDI and expand their operations The effects of Chinese FDI are highly heterogeneous, but overall positive in the medium run

Authors	*Country*	*Type of spillover*	*Mechanism/channel*	*Spillover-related conclusions*
Xia (2019)	Tanzania	Vertical	Backward linkages	Chinese investors in the plastic industry mainly rely on locally recycled waste plastics as raw materials and have therefore stimulated the local supply and growth of plastic recycling activities Chinese investors facilitate knowledge transfers with local suppliers by providing them with technological and financial support, as well as transmitting information about opportunities to participate in global value chains
Wolf (2017)	Angola	Vertical	Domestic market formation	The two main industries building materials and beverages production—both emerged in response to a (perceived or expected) increase in domestic demand
Sun et al. (2017)	Various	Vertical	Backward linkages	More than 1000 firms reported that, on average, only 47 per cent of procurement by value was locally sourced
Wethal (2018)	Mozambique	Vertical	Backward linkages	Chinese companies involve Mozambican businesses in their activities to only a minor extent, but this has less to do with a 'Chinese business model' and more to do with capabilities in the local industry and the local policy environment

(continued)

Table 4.1 (continued)

Authors	*Country*	*Type of spillover*	*Mechanism/channel*	*Spillover-related conclusions*
Tugendhat (2021)	Kenya and Nigeria	Not specified	Training and knowledge transfers	Huawei's training centres have no desire to transfer knowledge that could catalyse the establishment or rebuilding of domestic equipment manufacturers in Kenya or Nigeria Huawei trains their local staff in sales and management techniques, but absolutely no more than this
Agbebi (2018)	Nigeria	Vertical and horizontal	Labour mobility, training and backward linkages	The prominence of local firms in Huawei's supply chain and supplier development programmes is indicative of considerable backward vertical linkages with local suppliers Training and experience obtained by Nigerian employees from Huawei have proved valuable, enabling them to further their careers in other telecom companies
Negash et al. (2020)	Ethiopia	Horizontal	Not specified	Local firms with high absorptive capacity gained significant positive spillovers, whereas low-absorptive capacity firms suffered negative spillovers
Xia (2021)	Kenya and Tanzania	Vertical and horizontal		There are both vertical and horizontal spillovers, but technology transfers are more prominent in industries with low entry barriers, such as the plastic recycling and assembly industries

Explaining Absence

The following is a non-exhaustive list of reasons explaining the relative lack of linkages or spillover effects from Chinese companies to local African firms and economies:

- Chinese manufacturing firms often set up operations in Africa on a 'tariff jumping' basis or to take advantage of 'natural protection'. The general lack of forward integration into global value chains or global production networks (GPNs) puts less pressure on them to tighten lead times, meaning there may be less need to source locally produced materials or intermediate inputs—although Amendolagine et al. (2017) find that market-oriented FDI generates more backward linkages than is the case with domestic firms (i.e. they are more embedded). Consequently, many Chinese manufacturing firms continue to use Chinese inputs, which is of primary benefit to the Chinese economy rather than to the 'host' economy.
- Quality is an overriding priority in the international market, often leading to a reliance on Chinese imports or intermediate goods. One Chinese manager noted, 'if one component does not meet European or American standards, the whole container (of finished products) will be disqualified or returned' (Young quoted in Tang 2020, 149).
- Given the small size of most domestic markets in Africa it may be difficult to achieve economies of scale, a potential prerequisite—depending on sub-sector—for the international competitiveness needed to stimulate demand for local inputs.
- Subsidies, advanced infrastructure, high firm productivity and active exchange rate management may make it difficult for local firms to compete with Chinese-based producers when it comes to intermediate goods or forward linkages of components.
- Local sourcing and content policies, and the nature of economic structures more broadly, have often been ineffective in promoting domestic value-added (Ovadia 2016), meaning there may not be local suppliers to link with even if Chinese companies wish to. In the oil industry in Nigeria, only about 40 per cent of fabrication content is domiciled in Nigeria (Nigerian Content Development and Monitoring Board [NCDMB] cited in Ovadia 2016).

- Domestic demand effects may be limited if Chinese firms employ substantial numbers of home country workers, particularly if wages are paid to bank accounts in China, as has sometimes been the case (Gonzalez-Vicente 2019). This also implies a lack of tax revenue, which could be used to build infrastructure or pay for linkage programmes.
- Offshoring or repatriation of profits from Chinese branch plants may undercut domestic investment, as may overseas financing of projects where loan payments flow overseas.
- Language and cultural barriers may prevent skilled labour movement from Chinese to African firms, as well as the diffusion of tacit knowledge, often vital to economic development (Amin and Cohendet 2004).
- Foreign firms have an incentive to prevent horizontal spillovers through patent protection, although they may have an incentive to transfer knowledge or technology to local suppliers in order to make their value chain more efficient (Broadman 2007).

Given the above, it seems clear that expectations of substantial linkage or spillover effects from Chinese manufacturing investments in Africa are misplaced. For this to occur there would already have to be a developed base of manufacturing firms with which to establish such relations. This is not the case for most of the continent, aside with some exceptions such as South Africa, or Ethiopia where manufacturing investment is heavily concentrated in industrial parks (although these may have been over-promoted, see Cramer et al. 2020). As Tang (2020, 146) notes in relation to Chinese investors in Africa, 'the lack of supporting industries greatly constrains the growth of manufacturing investments. But as the number and scale of existing manufacturers are small, they can hardly persuade the upstream and downstream enterprises to move to Africa with them together'. Furthermore, the underdevelopment of manufacturing on the continent represents one of its attractions for foreign investors: 'As the Chinese investors state, Africa's market is "empty"; namely there is still much untapped potential' (Tang 2020, 164). A survey of Chinese firms in Africa found 'market seeking' to be the primary motivation for their investment, followed by government support (Yao and He 2005 cited in Broadman 2007).

Difficulties with infrastructure further hinder investment potential. For example, it took three years to connect the Lusaka branch of the Zambia–China Economic, Trade and Cooperation Zone to the national grid (Tang 2020). Moreover, 'China–Africa cooperation zones have hardly built functioning synergisms between the zones and the local societies … Apart from general problems of infrastructure and industrial support, the unique stakeholder structures of cooperation zones proves to be a major obstacle for replicating Chinese SEZ successes in Africa' (Tang 2020, 196).

Africa continues to experience relative deindustrialization, with manufacturing's share of gross national income contracting due to slower growth than other sectors, despite some increases in absolute output (often of resource-based manufactures). Overall, the continent has experienced productivity-reducing structural change (Oyelaran-Oyeyinka 2020), or what is sometimes called 'detransformation'.

In some countries, such as Angola, greater Chinese engagement has been associated with domestic market formation in final consumer goods industries or intermediate inputs with high transportation costs, such as cement (Wolf 2017)—although for the most part, this process has been relatively shallow. In terms of cement, its limited shelf life of 120–180 days also generates some pressure to produce close to market (Arkebe 2015).

In a sense, all of this relates to the debate about whether Chinese (neo)globalization has been inclusive or exclusive (Carmody and Hampwaye 2010; Carmody and Murphy 2022). Somewhat paradoxically, if Chinese firms—connected or constitutive of competitive GPNs—outcompete local producers, they further reduce the potential for spillover or future linkage effects. As such, they may be constitutive of an exclusive or 'enclaved' GPN, which is difficult to gain access to given the lack of *guanxi* (trusting business relations) with African firms (Bian 2019).

The limited spillovers and linkages between Chinese firms and host economies fit with a more general pattern of extractivist Sino–African economic relations (Carmody 2017). Chinese 'commodity power' expresses the competitiveness of exports from China, as well as the tax revenues from production that feeds Chinese state capacity development recursively. In a sense, the vectors of extractivist linkages are the flipside of a lack of domestic linkages, with examples including:

- FDI profits—offshored.
- Debt repayments—offshored.

- Imports—benefits primarily to the Chinese economy.
- Construction contracts—benefits largely flow to Chinese contractors. EximBank requires the use of Chinese contractors for loans, which undermines the domestic macro-economy, making it less conducive to firm development.
- Chinese workers' salaries—sometimes lodged in bank accounts in China, meaning a loss of spending and investment in the domestic economy, as well as lost tax revenues.
- Chinese traders' profits—may be offshored, although African elites also do this.
- Export emphasis on raw materials—value-addition is largely captured in the Chinese economy.
- 'Trade in tasks' (Newman et al. 2016)—relatively little value is added for export-oriented firms. For instance, Ethiopia has the lowest wage rates in the world for the textile industry (Barrett and Baumann-Pauly 2019).

By way of example, in terms of regional relations with the Southern African Development Community (SADC), which includes Zambia and Angola, China is extractive of both value and resources. SADC has generally had a trade surplus with China in recent decades due to Angolan oil, but when this is excluded the balance of trade swings in China's favour to the order of almost 2:1 (Carmody 2017), with some resource exporters such as Zambia and South Africa running particularly large deficits. This value extraction undermines the broader prospects for reinvestment and economic development, impeding the construction of an articulated economy (De Janvry 1981) with substantial backward and forward linkages and spillover effects. The share of manufacturing accounted for by China in developing countries rose from 34 per cent in 2000 to 58 per cent in 2017, while Africa's share fell from 4 to 3 per cent during the same period (Word Development Indicators, cited in Tang 2020). There is also empirical evidence of negative spillovers in terms of Chinese-funded development projects being associated with corruption on the continent (Brazys et al. 2017).

In China, rather than occurring 'naturally', foreign investment into the country was regarded as something that had to be forced through, via the mandating of joint ventures with foreign investors (for example see Prestowitz 2021). According to a United Nations report, 'Some ASEAN [Association of South-East Asian Nations] governments have imposed

joint venture conditions to nurture domestic enterprise' but 'All ASEAN countries have exempted export-oriented FDI from the joint venture requirement' (United Nations Conference on Trade and Development and United Nations Development Programme 2007, 47). The same report states that 'the greatest gain for the ASEAN-5 has come through the imparting of "world class" technology, knowledge and expertise to local suppliers, essentially because it is important for TNCs to maintain quality and efficiency in global supply chains' (49). However, much of the FDI into ASEAN is export, rather than domestic market, oriented.

Similarly, it is almost certainly the case that joint ventures may be required in Africa, particularly in light of the often substantial relational distance between Chinese investors and local firms and populations. Given that African countries often have unattractive investment environments, however, their policy regimes tend to be more liberal in order to attract FDI. In the Chinese case, accessing Africa's fast-growing internal market was a major incentive to FDI. Moreover, the establishment of the African Continental Free Trade Area may offer further incentives to locate FDI on the continent, although it will likely have disequilibrating effects in terms of regional development (Cramer et al. 2020) unless countered by active, effective industrial policies (Odijie 2018). The assumption that FDI will automatically generate linkages and spillovers is misplaced. Rather, it depends on—among other factors—the sector; cultural and relational proximity in business networks; policies; local economic structures; and the absorptive capacity of local firms.

In a small economy, manufacturing FDI can play a decisive role in fostering spillovers. For example, the total stock of US foreign investment around the world is estimated to be around US$ 6 trillion (Mohseni-Cheraghlou 2021)—more than a sixth of this is invested in the Republic of Ireland alone (O'Toole 2022), whereas China only accounts for around half-a-trillion dollars of US FDI (Organisation for Economic Cooperation and Development 2022). Given the scale of investment and cultural proximity between American and Irish firms, there have been substantial linkage and spillover effects (Barrios et al. 2004). This, though, was dependent on local firms having absorptive capacity, with the same study finding no evidence of spillovers from FDI in Greece. The technological gap between Chinese and African firms is lower than with Organisation for Economic Co-operation and Development (OECD) firms, however, giving them higher potential absorptive capacity on this vector, if not

others (Amendolagine et al. 2017). Even so, this potential appears to be quite latent at present given other barriers to spillovers.

Is the scale of Chinese investments in manufacturing sufficient to drive Africa's industrial transformation in the same way as it was seen to in ASEAN's 'second-tier newly industrialized countries'? This has not been the case thus far and is unlikely to be so in the foreseeable future, for a variety of reasons. Firstly, the scale of investments is relatively limited. Secondly, there is a general lack of domestic firms to link with, or spillover to, and those that do exist often lack absorptive capacities. And thirdly, the over-supply of labour means wages are 'cheap' (Deaton 1999), restricting the stimulus of effective demand.

It is therefore perhaps unsurprising that there is limited evidence of spillovers and/or linkages in Sino–African economic relations. Amendolagine, Coniglio and Seric (2017, 98), in their study of Africa, find that:

> Foreign investors from rich countries generate a higher share of linkages with domestic suppliers although we also document a higher propensity of firms from BRICS [Brazil, Russia, India, China, South Africa] origin to sign long-term contractual arrangement with them (a proxy for more intense collaboration between domestic and foreign firms). This result seems to confirm some existing anecdotic evidence on the relative scarce linkages generated by some South–South investors such as the Chinese. (Ozawa and Bellak 2011; Vito Amendolagine et al. 2013)

The same study found that labour demand is higher from BRICS investors—Chinese firms employ an average of 42.5 per cent more workers than similar domestic firms—while rich country investors pay higher wages and create 'better jobs', as they use more white-collar labour. On some metrics, however, the differences may ultimately be relatively small. For example, data from a survey of 19 countries in Africa conducted by the United Nations Industrial Development Organization (UNIDO) shows that for OECD firms 17.6 per cent of their total inputs are locally sourced, versus 14.4 per cent for investors from BRICS countries. Furthermore, Chinese companies pay approximately 60 per cent lower wages than domestic companies, substantially reducing the multiplier effects of investments. Lower wages also mean employment instability is higher in Chinese companies in, for example, Angola (Quintão and Santos 2012). According to Tang (2020, 142), however,

'neglecting profit and the market while paying exclusive attention to political and social benefits is like "killing a chicken to get the eggs"'.

Another channel through which Chinese investors may have a positive impact on host economies is the development of spin-off or out companies. While there have been some instances of this happening in Africa, 'examples of African workers transitioning into investment are few, mainly because of capital constraints. Most of the spin-offs are established by former Chinese supervisors or technicians, as witnessed in Ghana's plastic sectors and southern Africa's garment sector' (Tang 2020, 158). There are also a variety of other potential spillover mechanisms (examined in other chapters of this book), including skilled workers moving between firms, workers starting their own businesses, transfers of tacit knowledge through conversations and socializing, and (participant) observation of working practices.

Spillovers and Upgrading: Exploring the Relationship

What is the relationship between spillovers and upgrading? There is now an extensive literature on upgrading in African economies, with the book *Trading Down* perhaps one of the seminal works in this area (Gibbon and Ponte 2005). Positive spillovers should lead to product or process upgrading, thereby improving productivity. There are other ways of increasing profits, however, through scaling up or even downgrading the quality of what is produced (see Ponte and Ewert 2009).

In addition to economic upgrading, there is social upgrading, which can take place in firms where, for example, wages, working conditions and promotion prospects are improving (Barrientos et al. 2011). Productivity increases arising from spillovers may facilitate this by raising profitability and allowing higher wages to be paid, thereby recursively contributing to rising productivity and profits. In the absence of spillovers, though, such 'virtuous circle' dynamics are unlikely to emerge. Successful industrialization is a process of technological capability building (Lall and Kraemer-Mbula 2005)—while space prevents an extensive discussion here, the issue will be returned to in the conclusion.

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CHAPTER 5

Eurocentrism, FDI and Spillovers: Conceptual and Methodological Challenges

Dominik Kopiński and Jarosław Jura

Introduction

There are two sets of issues that affect spillover studies in Africa and, more importantly, might seriously impact their findings: firstly, which categories are used and how they are defined, and, secondly, what methodology is employed to study the given phenomena.

Many of the conceptual challenges we detected prior to and in the course of our fieldwork can be attributed to the biases of 'Eurocentrism'—a term originally coined by Samir Amin in the 1970s and introduced to a wider audience through his seminal 1989 publication of that name. Amin (1989) discusses the eurocentric thesis in terms of Christianity—especially Protestantism (Weber 1958)—having certain unique

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D. Kopiński et al. (eds.), *The Political Economy of Chinese FDI and Spillover Effects in Africa*, International Political Economy Series,
https://doi.org/10.1007/978-3-031-38715-9_5

characteristics that make it 'more favorable than other religions to the flourishing of the individual and the exercise of his or her capacity to dominate nature' (Amin 1989, 162). Moreover, he rejects the concept of a uniform development path typically associated with both the Western evolutionary approach (ibid.) and, to a degree, Marxist-based materialism or 'economism' (Kvangraven 2020). Amin's thoughts on eurocentrism have been inspirational for legions of scholars, significantly influencing subsequent discourse on the topic.

In the spirit of Amin's works, numerous eurocentrism-related publications have focused on historical processes, with a particular emphasis on developmental issues (Brohman 1995; Austin 2007; Asiwaju 2006). Most authors share Amin's rejection of the universality of developmental processes, as well as the universalism prevalent in the social sciences more generally (Joseph et al. 1990; Brohman 1995; Braidotti 2010). Some also highlight the imperialistic bias that exists in both practical approaches to the development of postcolonial states and relevant social science methodologies (Joseph et al. 1990; Harding 1992; Brohman 1995).

The notion of eurocentrism has important methodological implications for African studies, one of which is 'conceptual eurocentrism', as popularised primarily by Austin (2007). Austin points out that using concepts derived from Western science to analyse 'Africa's past', particularly its economic history, is ill-advised, as many terms assumed to be universal by Western economists cannot be usefully applied when investigating the development trajectories of African economies. One such example is 'market', which, according to its Western meaning, did not even exist in pre-colonial Africa. Thus, Austin suggests scholars should follow 'reciprocal comparison' (Wong 1997; Pomeranz 2000) procedures in order to avoid conceptual bias. In the words of Pomeranz, this would entail treating 'both sides of the comparison as "deviations" when seen through the expectations of the other, rather than leaving one as always the norm' (Pomeranz 2000, 8). In our case, this translates to not only asking why China in Africa is different from the West in Africa, but also why the West in Africa is different from China in Africa, and, moreover, how Africa with its own 'idiosyncratic' features can be inserted into such an analysis.

According to Austin (2007), a good example of reciprocal comparison is when scholars examine processes or phenomena observed in the Western world based on models or theories derived from developing countries. Examples of such an approach include Goody's comparative analysis of production patterns in the context of domestic institutions

(1977) and the role of cuisine in social stratification (1982). When done correctly, this method should lead to the development of concepts free from conceptual eurocentrism (Austin 2007). Unfortunately, Austin does not provide specific rules on how to achieve this goal.

The application of 'conceptual eurocentrism' and 'reciprocal comparison' has mostly been confined to studies of African history (Asiwaju 2006; Dedieu 2020). References to present-day economics are relatively rare, despite Western approaches to its study being 'intimately connected to eurocentrism' (Milanovic 2021), with historical yardsticks such as the Age of Enlightenment and the European Industrial Revolution prevalent. One prominent example can be seen in discussions on economic growth and its measurement, with scholars rightly challenging the degree to which this Western concept is compatible with the economic, social and cultural contexts of the developing world (Weeks 2012; Fioramonti 2013; Taylor 2016; Obeng-Odoom 2017). Jerven criticises GDP measures as eurocentric and essentially biased against non-Western countries (Jerven 2012, 2013). Others point to concepts such as 'modernity' or 'welfare', which originally emerged in Europe and only later travelled overseas. In a similar vein, certain categories, methodologies and analytic tools devised in the West seem ill-suited to local conditions. Alenda-Demoutiez and Mügge (2020), for instance, contest South Africa's adoption of a narrow definition of 'unemployment'—an ambiguous concept originally conceived as a weapon of class struggle in the West. Given all this, it is perhaps unsurprising that there have been repeated calls to 'decolonise' economics, which according to critics of Western-centric approaches offers a false depiction of capitalism's development (see the work of heterodox economists affiliated with the Diversifying and Decolonising Economics (D-Econ) network, www.d-econ.org).

Spillovers, Linkages and Foreign Direct Investment (FDI) in the Sino-African Context

The concept of eurocentrism can, to a certain extent, be applied to the terms used in this study. At various stages of the project, it became clear that our definitional toolkit was lacking, with the concepts employed prior to fieldwork requiring fine-tuning, or at least better contextualisation. As highlighted in previous chapters, a variety of terms are used in the literature to discuss the potential impacts of Chinese firms on the structural transformation and industrial upgrading of African economies, including

'linkages', 'knowledge transfers', 'productivity spillovers', 'externalities' and 'knowledge spillovers'. It is important to draw distinctions between these terms and contextualise them within the adopted research agenda. In doing so, this chapter highlights a number of practical challenges concerning theoretical concepts developed in the West that are ill-suited to African realities in general and China–Africa ties in particular.

Linkages, as we have noted, denote relationships between various industries, reflecting what one might call 'industrial interdependence'. More specifically, productive linkages can be observed when one industry is providing inputs for other industries, stimulating their growth. In our research, these effects are attributed to interactions between foreign firms (Chinese) and their domestic suppliers (African, in our study Zambian and Angolan) as part of the process of supplying inputs. As later chapters will show, such interactions are in fact extremely rare. Moreover, the linkages that do occur relate to low technology inputs with limited scope for transferring productivity-enhancing knowledge. This is not to say, however, that linkages are unimportant. In fact, it well may be that in the context of low-income countries, linkages are crucial to industrial upgrading even in the absence of knowledge spillovers (Morrissey 2012).

A Chinese factory that produces shoes or furniture in Africa utilises two general classes of 'suppliable' and material inputs that are potentially vital if spillover effects are to occur: machinery and production materials. Whereas the first category, as we learned during fieldwork, is typically unavailable in Angola and Zambia and thus has to be imported (mostly from China), the second category is almost entirely constituted of simple products that fall into the medium–low and low technology spectra. Also, technology intensity tends to be lower where a multinational corporation (MNC)'s production is highly internalised—that is, when different parts of the value chain are contained within the foreign firm's structure, rather than outsourced to third-party agents (through arms-length contracts), which 'naturally' generates more learning externalities. Given Chinese firms have often moved to capture different parts of the value chain up and downstream through vertical integration, thus becoming their own suppliers (and sometimes distributors too), fewer linkages should be expected.

Our work in Zambia and Angola revealed the limits of universalised, eurocentric analytical lenses. Most available spillover studies take linkage formation for granted, at least beyond the natural resources sector, and instead tend to focus on—and measure—knowledge transfer and

spillovers. It is widely assumed that the entry of MNCs will sooner or later yield a certain amount of linkages with local agents, with it merely being a question of 'how many', 'what types' and 'when'. We find this approach impractical in the context of China–Africa studies.

Furthermore, although linkages are often accompanied by some kind of **knowledge transfer** or knowledge diffusion from MNCs to local agents, in themselves they are merely channels through which such knowledge can be passed from one firm to another. If, however, a knowledge transfer helps the recipient upgrade its productivity, then it amounts to a **knowledge spillover**. Some authors posit that knowledge transfers arise primarily from the intentional behaviour of MNCs, whereas knowledge spillovers emerge from the unintended consequences of an MNC's presence in the host economy (Smeets 2008, 109), with the latter likened to the concept of 'trickle-down' economics (Tugendhat 2021). This is not entirely accurate, as much depends on the type of spillover.

On the one hand, horizontal spillovers—associated with imitation, demonstration and/or competition within the same industry—do often occur unintentionally, as MNCs have no interest in sharing their superior knowledge and technology with local companies, which are or may end up being rivals. These knowledge spillovers should therefore be treated as 'leakages' and a type of public good, with examples including workers employed by a Chinese firm setting up their own business or a local firm learning from its Chinese rival.

On the other hand, vertical backward spillovers (between the buyer and the seller of inputs) may be a part of a deliberate arrangement between the two parties. Here, foreign-owned firms can benefit from transferring their knowledge to local suppliers in order to reduce costs and ensure desirable quality or timely cooperation—for example, a Chinese cement producer giving feedback to its Zambian partner regarding improving the quality of sandbags.

The conceptual blending of knowledge transfers and knowledge spillovers has been highlighted by a number of China–Africa studies. Tugendhat (2021), for instance, argues that the knowledge transfers arising from Huawei's training contributions have been vastly overstated, and that scholars hoping to detect knowledge spillovers should first consider the type of investment.

One thing distinguishing knowledge transfers from knowledge spillovers is that the latter are a type of **externality**—that is, agents

cannot fully appropriate all the benefits arising from their own actions—although the FDI spillover literature often blurs this distinction in its empirical investigations (Keller 2021). If FDI flows are associated with externalities, policymakers may be willing to spend taxpayers' money and provide public incentives to attract them. Thus, positive externalities in the form of knowledge generated by MNCs and absorbed by local firms become the main justification for attracting foreign-owned firms. By contrast, knowledge transfers alone may not warrant generous interventionist public policies—at least not in all sectors—as they often occur via market mechanisms (Smeets 2008, 131). It is therefore imperative to detect not only which sectors hold the greatest likelihood of creating linkages and spillovers, but also where these interactions are most in need of state backing.

Another conceptual problem confronting our investigation is the question of '**what is local?**' The conventional FDI spillover literature is essentially concerned with whether local agents can internalise the technology introduced to host countries by foreign investors, and to what effect. In most emerging and advanced economies, answering this question is relatively straightforward, boiling down to who is resident versus who is not. As the Organisation for Economic Co-Operation and Development (OECD) definition has it:

> Direct investment is a category of cross-border investment made by a **resident in one economy** (the direct investor or parent) with the objective of establishing a lasting interest in an enterprise (the direct investment enterprise or affiliate) that is **resident in an economy other than that of the direct investor**.

In the African setting, particularly when China is involved, this distinction raises various conceptual challenges. The local content literature points to three general definitions of 'local', each affecting the methodology employed: (1) geographic location; (2) value addition criterion'; and (3) ownership (Caramento 2020). For instance, in Zambia, a 'local' supplier is conventionally based on national criteria—i.e. it refers to Zambian citizens or a company owned by Zambian citizens—whereas in Ghana, interpretations vary from 'local' entities, meaning businesses registered in the country, to 'local-local' businesses, which refers to indigenous business communities (Nickerson and Geipel 2019, 6). Even if one adopts

the ownership definition of 'local', various practical issues present themselves, such as what percentage of capital or shares are held by nationals, how many local staff are employed and whether management is controlled by locals.

In our research, we sought to define local firms based on the ownership-capital criterion, which has not always been easy in light of several practices adopted by Chinese entrepreneurs in Africa. For example, investors may register their businesses locally and subsequently refer to them as 'Zambian' or 'Angolan', blurring the distinction between local and indigenous ownership. Researchers should be cautious about such dilution—or in some cases outright manipulation—of nationality for two reasons. Firstly, some Chinese investors talk of sourcing their inputs from local suppliers, when in fact these entities are owned—fully or partially—by Chinese citizens or people of Chinese origin. Alternatively, the local entity may on paper be owned by Zambians or Angolans, but in reality is controlled by a Chinese owner. Secondly, some Chinese investors or economic migrants do not have FDI status in the Western sense of the term, as they are registered as a local entity and so lack a traceable capital inflow. This conceptual conundrum raises methodological questions. Even if registration as a local entity is used as a criterion for excluding such businesses from academic scrutiny, in practical terms they affect the local economy no differently from 'proper' Chinese investment. We will return to the ambiguities of the term 'Chinese investment' later in the chapter.

This brings us to the very definition of FDI, which our fieldwork in both Zambia and Angola revealed to be conceptually and methodologically problematic. According to the OECD benchmark definition, FDI is 'the category of international investment that reflects the objective of a resident entity in one economy to obtain a lasting interest in an enterprise resident in another economy' (OECD 2008). FDI is widely considered a prime force of globalisation, and for many developing countries represents a vital source of foreign external finance.

Instrumental in FDI are MNCs, which are typically defined as 'an enterprise which owns and controls activities in different countries' (Buckley and Casson 1976, 33). These two concepts—FDI and MNCs—are notoriously treated as synonymous (Caves 1974; Blomström and Persson 1983; Kokko and Blomström 1998; Javorcik 2004a, b), with Lipsey et al. (1999, 309) noting, 'direct investment is often discussed as if it consisted entirely of the investment associated with multinational

corporations'. It also reflects how data is collected by host countries and international agencies (Narula and Dunning 2010). A sample of such thinking is provided by Meyer, who writes that 'scholarly research has for many years analysed FDI, aiming to contribute to a rational assessment of the impact of MNEs [multinational enterprises] on their host societies' (Meyer 2004, 260). In fact, it is not uncommon for FDI to be used as a proxy to quantify multinational activity in the global economy (Jones 2005).

The concepts do not always overlap, however—there are MNC activities that do not fall under the category of FDI, and some FDI flows that do not involve multinationals (Lipsey et al. 1999). Today, ownership of productive assets has ceased to be a useful benchmark, as 'an MNE may simply be a set of establishments in different locations, which are actively coordinated and controlled, without involving ownership' (Narula and Dunning 2010, 273). Instead of being a single entity in the traditional sense, MNCs increasingly fall within the concept of global production networks (Fuller and Phelps 2018)—extensive, complex networks of both equity and non-equity linkages with suppliers and customers. Moreover, as Lipsey reminds us, the definition of FDI, and therefore its measurement, has evolved considerably over time (Lipsey et al. 1999). This process has been formulated and tightly controlled by the West and Western-controlled international institutions, particularly the International Monetary Fund and OECD.

A similar observation can be made regarding the voluminous literature investigating the effects of FDI in host countries, the focus of which is essentially restricted to MNCs (see Kokko and Blomström 1998). Scholars, it appears, rarely bother with firms or transactions that do not fall neatly into the MNC category. As Javorcik bluntly puts it: 'Spill-overs from FDI take place when the entry or presence of multinational corporations increases the productivity of domestic firms in a host country and the multinationals do not fully internalize the value of these benefits' (Javorcik 2004a, b, 607). Obviously, there is a logic behind such reasoning. MNCs possess firm-specific advantages over local firms, such as technological efficiency, productive knowledge, managerial techniques and skilled entrepreneurship. This 'superior' technology may later spill over to indigenous firms, resulting in improved productivity. Additionally, MNCs do indeed dominate FDI transactions, which could be seen as justifying an approach that reduces the spillover debate to MNC activity.

While the role of MNCs is of vital importance, our investigation is motivated by what is happening at the margins of the Western-driven discourse and the observation that '"lower end" globalization is occurring alongside the more obvious world of large TNCs' (Mohan 2013, 1268). There are a multitude of transactions and actors associated with Chinese activity in Africa—together, these potentially amount to a force for structural transformation and industrial upgrading, yet they operate outside the realm conventionally examined by the FDI literature. We also approach the topic in the spirit of a new trend in China–Africa scholarship that tilts towards 'perspectives that transcend meanings deriving from a Western-centric perspective' (Alden and Large 2018, 18).

Three Types of Conceptual Bias

There are three conceptual issues we regard as potential biases in China–Africa FDI/spillover studies. Firstly, most FDI and investment-like activity in Africa is carried out by small and medium Chinese firms, which either have no headquarters back in China or are registered in Africa with no traceable cross-border capital transactions. According to the spillover literature, such companies, lacking the attributes of MNCs, are unlikely to have a significant or measurable impact on local business productivity. Our fieldwork demonstrates such an assumption is premature. Secondly, although many Chinese business activities in Africa are not FDI (even if we stretch the formal definition), they may still contribute to linkage formation and technology transfers. Thirdly, while Chinese MNCs may in theory conform to the Western definition, beyond the formal facade many are MNCs in little more than name—their sales are derived from China-based operations and their international exposure is limited. Even if these companies are savvier in international business, simply assuming they all possess firm-specific advantages and 'superior' technology is without merit, or at least open to question. More generally—in terms of all three issues laid out above—there is the local context to consider, which in many ways is distinct from the high- and middle-income country setting that has dominated spillover studies. Similarly, we posit that Chinese economic activity in Africa bears its own characteristics.

In principle, there are two different varieties of Chinese capital in Africa: private and state (Lee 2017). For many years, big state-owned enterprises such as CNPC or CITIC acted as the vanguard of Chinese investment on the continent, with private investment lagging behind.

According to Shen, the Chinese Ministry of Commerce registered only two overseas FDI projects, and no private projects at all, before 2000 (Shen 2015). With prestige multi-billion projects and high visibility, China's 'first-movers' (Alden and Davies 2006) understandably captured the attention of both media and academic circles (see Kaplinsky and Morris 2009; Yi-Chong 2014), overshadowing other types of engagement. Over time, however, the investment landscape has become increasingly dominated by Chinese private business (Wang 2007; Gu 2009; Shen 2015). According to McKinsey, there are currently more than 10,000 Chinese-owned companies operating across the region, nine in ten of which are privately owned (Sun et al. 2017). A large proportion of these private companies are small, self-financed, family-owned enterprises. As a result, even if the modus operandi and motives of these companies may be unexceptional relative to other entrants (see Hairong and Sautman 2013), Chinese 'investment' patterns in Africa exhibit a degree of exceptionality given the current mode of global capitalism in which MNCs are the main driving force (Jones 2005; OECD 2018). This presents both conceptual and methodological challenges.

Given that many of these companies are not entering Africa through standard FDI flows, their activities are in turn not being captured by relevant investment data. Instead, Chinese entrepreneurs often invest funds accumulated overseas. This, plus the rerouting of money through financial centres such as Hong Kong, may explain why researchers observe such massive discrepancies between data derived from the Chinese Ministry of Commerce (MOFCOM), Chinese embassies, and local business chambers/associations or local investment agencies (Xia 2021, 273). For instance, during our fieldwork in Zambia, we came across multiple examples of firms registered at the Registrar General's office by former managers or employees of Chinese state-owned companies—a pattern also acknowledged by other scholars (Kragelund 2009b; 2009a). Another under-the-radar example is Chinese companies that are de jure controlled by Zambian citizens—in reality, these 'owners' merely serve as fronts (Kragelund 2009b; 2009a). Some Chinese do not bother to register their firms at all, choosing to operate at the frontier between the informal and formal. Others register their businesses multiple times or change legal names every few years to continue enjoying the benefits local governments extend to new foreign investors, such as tax holidays (Xia 2021, 273).

Following Ozawa (2015), many such small firms can be framed as 'entrepreneurial settlers' akin to initial European family-driven business ventures in North America or the 'free standing company' studied by Mira Wilkins (Wilkins 1989, 1998). This vigorous and aspiring class of Chinese capitalists, labelled 'bamboo capitalists' by the *Economist* (Economist 2011), is tightly knitted into Chinese social relations of trust known as '*guanxi*'. They often operate as 'family multinationals' (Ozawa and Bellak 2011)—a network of kin and relatives in both Africa and China, managing different ends of the international enterprise and moving progressively towards more advanced forms of business presence (from trading to manufacturing to the establishment of industrial parks, or what Gu (2009) calls the 'three-stage jump'). Some scholars characterise many such operations as 'primitive' or 'immature' relative to Western business ventures, citing the following reasons (Ozawa and Bellak 2011):

- Most are opened by immigrant entrepreneurs and small businesses, and rarely by large-size MNCs.
- Most Chinese operations in Africa are self-financed or *guanxi*-funded, rather than financed by banks or through formal capital mobilisation.
- Most (manufacturing operations are small-scale processing types, with materials imported from China or overseas Chinese diasporas.

Although the ethnic identity of these entrepreneurs is clear, their formal status is often questionable, particularly with the passage of time. There is, for instance, a class of Chinese investors in Zambia who proudly call themselves 'Old Zambians', as they arrived in the country decades ago and can now boast of their local embeddedness. Although Chinese entrepreneurs' level of embeddedness in Angola is discernibly shallower (one reason being that the civil war only ended in 2002), it is nonetheless legitimate to argue that—in the case of both Angola and Zambia, and in fact Africa as a whole—simply calling them 'Chinese investors' is increasingly off the mark. There is a subtle yet incremental 'dilution of Chineseness' (a term borrowed from Goodfellow and Huang 2021, though applied here with a slightly different meaning) taking place on the margins of China's forays into Africa, something that is only to be expected by economic historians. After all, as Wilkins notes, 'it is bizarre

to call the Scottish-born Andrew Carnegie a "British investor in the United States"' (Wilkins 1998, 12).

Such diaspora-forming investment-like activities are conceptually distinct from the FDI activities described in mainstream Western scholarship (Hymer 1976; Dunning 1993), which stresses how foreign companies' firm-specific advantages help them overcome the liability of their foreignness, defined as 'the costs of doing business abroad that result in a competitive disadvantage for a multinational enterprise (MNE) subunit' (Zaheer 1995, 342). Typically, however, the advantages enjoyed by Chinese investors are not firm-specific, but idiosyncratic in their entrepreneurship and collective nature (Ozawa 2015). Entrepreneurial as they are, smaller Chinese investment-like firms are more often driven by 'escape' motives (Witt and Lewin 2007; Kobrak et al. 2017)—i.e. escaping an increasingly restrictive and costly business environment—rather than Dunning's four 'seeking' motives: (1) market-seeking; (2) resource-seeking; (3) strategic assets-seeking and (4) efficiency-seeking (Dunning 1993).

Against this background, analysing the Chinese presence in Africa as a phenomenon restricted to multinationals or FDI in the traditional sense is problematic. As noted by French, 'very often reality is more meaningfully shaped by the deeds of countless smaller actors, most of them for all intents and purposes anonymous' (French 2014, 5). We argue that this is precisely the case when it comes to much Chinese investment in Africa. Although the linkages generated in African economies by these myriad investment-like companies may be qualitatively different from those created by MNCs—which possess superior technology or have some form of firm-specific advantage—ignoring their potential impact on technology transfer is methodologically questionable (despite being consistent from a Western-centric point of view).

The second, related, potential bias involves the exclusion of certain Chinese firms because they do not act like foreign investors (rather than, as above, being deemed to not formally constitute FDI despite acting like foreign investors). Here, Chinese construction companies in Africa—designated in the nomenclature of the *China Statistical Yearbook* as 'Chinese-contracted overseas projects'—provide a key example (Chen et al. 2009). Such companies are either *en block* explicitly referred to as investments (Arewa 2016; Lee 2017) or categorised alongside genuine investment projects (Feng and Pilling 2019; Auffray and Fu 2015). Frequently, Chinese firms building infrastructure are simply referred to

as investors (Kaplinsky and Morris 2009). All this is despite many of these projects (local subsidiaries set up by Chinese state-owned enterprises, which are rare, excluded) falling outside the remit of FDI flows. Rather, they are debt-financed projects lacking the most vital characteristic of FDI: 'control'. As aptly pointed out by Thierry Pairault, 'China does not invest in infrastructure in Africa but builds and finances African investments in infrastructure' (Pairault 2018). In a similar vein, Goodfellow and Huang (2021, 659) assert that 'when it comes to infrastructure China barely invests at all'.

There is growing evidence, nonetheless, that in terms of forging productive linkages with local firms, Chinese construction firms—including China Railway Construction Corp. (CRCC), China State Construction Engineering Corp (CSCES) and China Civil Engineering Construction Group (CCECG)—may, despite many lacking FDI status, have made important contributions to technology transfers, industrialisation and growth. This contribution can primarily be ascribed to a spurring on of building materials production through 'powerful linkages and feedback loops' (Wolf and Cheng 2018)—exactly what the spillover literature is centred on. Thus, spillover scholars who exclude such firms from investigation risk making a significant omission, again due to the lack of recognition afforded such phenomena in the Western-centric FDI literature.

Admittedly, there has been an outpouring of papers investigating the link between infrastructure and economic growth (Esfahani and Ramírez 2003; Timilsina et al. 2020). In Africa, particularly, filling the infrastructure gap (Lakmeeharan et al. 2020) and easing supply-side bottlenecks obstructing the region's industrialisation (Ajakaiye and Ncube 2010) has been acknowledged, including China's potentially catalytic role (Lin and Wang 2017; Wolf and Cheng 2018; Gu and Carey 2019). Only rarely, however—and even then only on the margins of the discourse—have construction firms been associated with spillover effects. Furthermore, Chinese-contracted projects have what many small and medium Chinese firms lack: economies of scale arising from the sheer size of such projects (Foster et al. 2009). The magnitude of their activities is also massive relative to other sectors. According to the Infrastructure Consortium for Africa (ICA 2018), China alone funded 26 per cent of the region's infrastructure projects in 2018, valued at US$ 25.7 billion. Moreover, construction projects, which are typically undertaken by state-owned

enterprises, are on average of a larger scale than manufacturing, where small and medium companies dominate.

The third bias relates to the fact that not all MNCs are created equal, with the delineation between Western MNCs and what are sometimes called 'Third World multinationals' particularly well articulated (Lall 1983; Wai-Chung Yeung 1994; Wells 1983). To begin with, many Chinese MNCs are 'not really multinationals' (Shambaugh 2012). Rather, they are essentially what Yao-Su Hu once called 'national firms with international operations' (Hu 1992). A few exceptions aside, they generate revenues mostly in China and boast unimpressive foreign assets and sales relative to established Western MNCs (Shambaugh 2012). More importantly, Chinese MNCs operating in Africa have certain distinct features that the spillover literature should try to accommodate. The status of a Chinese MNC is often unclear, with a good case in point being the firms described by Xia (2021), where the 'parent company' in China was established years after the African 'subsidiaries'. This reverse sequence was pursued to maintain government relations and supplier networks back in China. This observation echoes Narula and Dunning's (2010) calls for 'refocusing analysis on the role of subsidiaries', as spillovers and linkages in the host economy are often detached from the parent firm's operations as a whole.

This and other Chinese 'specificities' have been acknowledged by numerous authors, who argue that the current methodological straitjacket should be abandoned (Deng 2004; Child and Rodrigues 2005) in order to refine a framework originally developed by international business scholars 'in a Western context and for Western companies' (Gugler and Boie 2008). It is therefore imperative that Chinese MNCs are not uncritically lumped together with their Western counterparts in spillover/FDI studies. The Western perspective has been forged based on the endeavours of large European and American companies whose internationalisation was mostly evolutionary, incremental and launched from a position of already considerable domestic strength, as discussed in the popular Uppsala model articulated by Johanson and Vahlne (1977). In many instances, the internationalisation of Chinese MNCs has been less straightforward—they have ventured overseas due to 'pull' factors such as tapping into natural resources or accessing African markets, without exploiting the firm-specific advantages the Western literature is centred on. In fact, Child and Rodrigues argue that despite studies assuming that multinationals exploit competitive advantages, Chinese MNCs are in

fact driven by 'competitive disadvantages', such as outdated technology relative to Western MNCs, a heavy reliance on expatriates and limited knowledge of foreign markets (Child and Rodrigues 2005).

More recently, however, structural changes in the Chinese economy—such as a shrinking low-cost labour force, increasing production costs, overcapacity and stifling regulations—have led to 'push' factors becoming more prominent. The so-called escape motive featured heavily among many of the Chinese firms we studied in Zambia and Angola. This has significant implications for spillover findings, which are notoriously inconclusive precisely because 'existing studies typically treat foreign affiliates (FAs), of whatever home origin, and locally owned enterprises (LOEs), of whatever type of domestic ownership, as a whole' (Buckley et al. 2007, 143). Thus, our fieldwork demonstrates that Chinese investment patterns, cultural characteristics and 'ways of doing things'—despite essentially being driven by the same capitalistic logic directing non-Chinese firms—require a more flexible research approach that avoids the pitfalls of conceptual eurocentrism.

Chinese Investment and Conceptual Chaos

Conceptual bias is not the only problem plaguing the scholarly quest to unpack the spillover effects of Chinese investment in Africa, or technology transfers more broadly. A closely related issue is what can be termed '**conceptual chaos**', which manifests in the lack of academic consistency regarding what actually constitutes Chinese investment. We have already noted the literature's frequent conflation of Chinese 'investment activity' in the region with the straightforward 'economic activity' of Chinese-owned firms, where the latter often offers no clear evidence of formal cross-border capital flows. An acclaimed 2017 report by McKinsey on Chinese investment in Africa, for example, frequently blurs the delineation between Chinese 'investors' and 'businesses' or 'firms'. More importantly, the report considers any such distinction as flat-out irrelevant in terms of technology transfers/potential spillovers (Mckinsey 2017). Other studies also take a relaxed approach to the Chinese investment presence—despite discussion of investors in the context of FDI, it is often hard to establish whether the entities quoted/interviewed/surveyed are indeed investors in a formal 'FDI' sense, or just, more broadly, Chinese 'enterprises' (Warmerdam and van Dijk 2013; Gu 2015; Xia 2019), Chinese 'firms and investors' (Chen 2021) or Chinese 'manufacturing firms' (Bräutigam

et al. 2018) operating in Africa. Other authors purporting to analyse the effects of Chinese MNCs turn out to be investigating construction sector contractors (Auffrey and Fu 2015)—as argued above, these companies provide construction services rather than 'invest'.

These problems are compounded by divergences between data sources, with some scholars relying on MOFCOM data (Chen et al. 2016), others on national investment promotion agencies, and others still on a combination of the two (Shen 2013). It becomes even more difficult when other sources again are consulted, such as Chinese business associations, embassies or policy banks (Gu 2015). Our fieldwork confirmed that understandings of the term 'investment' can vary widely between actors, and it is often treated casually rather than formally. For practical reasons, many scholars use snowballing techniques (Xia 2019; Chen 2021), which, in moving beyond the initial sample, may ultimately include firms with different statuses.

Multiple reasons underly this conceptual chaos. One commonly identified problem is that assessments of Chinese investment in Africa suffer from notoriously poor data quality (see Bräutigam et al. 2017). Another factor is a tendency to take the term 'investment' for granted, instead of treating the available data with sufficient analytical rigour. It may also be that Chinese investments are being examined by scholars not formally trained in economics or who pay insufficient attention to a firm's official standing. This brings us to the contentious but compelling interpretation that this conceptual chaos is at least partly caused by conceptual bias. Moreover, the fact that some authors use a Western-infused economic glossary while simultaneously failing to adhere to well-established definitions may be regarded as a kind of repair mechanism rather than a mistake. By this, we mean that such situations may arise from the definition not fitting the reality, rather than from scholars failing to apply that definition. If we take this position, it may paradoxically turn out that not being fully trained as an economist or rigidly adhering to the Western economic nomenclature may in fact be an asset, as such a mindset allows the researcher—often subconsciously—to better speak to the situation on the ground. A good example of this is the term 'Chinese business networks' employed by Bräutigam (2003), which, as an operationalisation/capturing device of Chinese ventures into Africa, is often a more accurate descriptor than FDI. Nevertheless, even if the above interpretation is valid, the ultimate outcome of conceptual chaos is lack of consistency and terminological disarray. Thus, it is no longer feasible

to solve the problem simply by excluding activities that fall outside the standard definition.

Conceptual Framework

As we demonstrate in subsequent chapters, few linkages are derived from the Chinese investment presence on Africa, and even fewer spillovers. We trace this puzzle of 'linkage scarcity' to what we call 'the spillover potential' of Chinese (foreign) investors; industrial policies and institutional setting; and the absorptive capacity of the local industrial base. In this, we draw on a conceptual framework proposed by Paus and Gallagher (2008) and extended by Farole and Winkler (2014).

The spillover potential of foreign firms is obviously and understandably the starting point of any spillover investigation. Spillover potential is based on an MNC's superior knowledge and its anticipated 'leakage' into the host economy, which may eventually lead to knowledge spillovers and productivity gains. The likelihood and extent of such an outcome are, however, determined by more than just the characteristics and spillover potential of foreign-owned firms, which should be regarded merely as carriers of superior technology. In our study, for instance, we tested several characteristics of Chinese firms that we found to be conducive to linkages and spillovers, such as entry mode, ownership structure, investor nationality, length of presence in the local economy, investment motive and technological intensity of supplied inputs. There is therefore a need to move from FDI more generally to MNCs specifically, as spillover opportunities reside with the latter. Furthermore, the spillover potential of MNCs is not a given, with different firms potentially playing different roles as 'catalysts, participants and instigators' in development (Narula and Dunning 2010, 263).

Spillover potential is, therefore, a necessary condition, but not a sufficient one. In order for spillover effects to materialise, agents at the receiving end of knowledge transfers—namely, indigenous firms—require certain features that make assimilation, internalisation and eventually adaptation of knowledge for productive purposes more likely. To accomplish this, they too require characteristics that will enable them to meet a set of conditions related to, among other things, human capital, scale of production and firm location. Importantly, the absorptive capacity of indigenous firms is determined by the relative technological distance between them and MNCs: the so-called technology gap.

Although the spillover potential of foreign investors in conjunction with the absorptive capacity of local firms can help in determining whether (and why) spillovers will occur, various exogenous mediating factors can increase (or decrease) the chances of this happening. Scholars have long suspected that spillover effects do not happen in a vacuum and are more likely when the host country offers a conducive business environment and spillover-friendly policies—that is, policies 'to advance national capabilities, overcome market failures, and support the integration of national producers into TNCs' global production networks' (Paus and Gallagher 2008, 53). In the absence of such conditions, even the strongest combination of spillover potential and absorptive capacity may be insufficient to yield substantive productivity gains, particularly economy-wide. For instance, the prevalent issue in Zambia is lack of access to finance for local entrepreneurs and the limited possibilities for mobilising capital for investment due to prohibitively high interest rates and restrictive banking rules. This feature of the business environment makes competition against foreign rivals difficult, deters workers from leaving relatively well-paid and/or stable jobs to launch a start-up and prevents local suppliers from modernising their factories or purchasing new equipment to meet the standards of foreign businesses. Importantly, government policies and regulations not only determine the likelihood of spillovers at the initial point of FDI inflow, but also may determine whether 'national absorptive capacity expands in synch to generate dynamic positive interactions with FDI production, thus engendering a virtuous cycle of advancing national knowledge-based assets' (Paus and Gallagher 2008, 56).

The list of potential factors playing a mediating role includes labour market regulations, intellectual property rights, learning infrastructure, government expenditure for R&D, trade policy, governance (e.g. corruption, transparency and bureaucracy), and last but not least industrial policy, which is 'particularly important where the technology and productivity gap is large between foreign and local firms, or if few local firms exist at all, due to a range of domestic market weaknesses' (Farole and Winkler 2014, 46). As noted by Narula and Dunning (2010, 272), 'inefficient institutions can slow the efficient accumulation and transfer of knowledge between industrial enterprises and other economic actors within their milieu, influencing growth in general'. Here, one might also wish to include issues such as the size of the economy and income levels, with the former in particular potentially having a significant impact on spillover opportunities. Smaller economies may find it much harder to reap the

benefits of economies of scale, although the examples of Singapore and Ireland when it comes to creating spillovers via FDI demonstrate this is not 'an insurmountable obstacle' if there is substantial export orientation (Paus and Gallagher 2008, 76). Poorer countries, meanwhile, come with their own set of limitations regarding industrial base, economic diversification and size of domestic market—all of which determine levels of productive capability when providing inputs domestically. The Zambian economy is relatively small *and* poor, which impacts 'national absorptive capacity' and further explains why hopes for spillovers may be difficult to realise.

Methodological Avenues for Investigating Spillovers

Spillover effects are difficult to detect and measure. They often occur unintentionally and, more importantly, as pointed out by Krugman, 'leave no paper trail by which they may be measured or tracked' (Krugman 1991, 53). It should not come as a surprise, therefore, that the evidence cited in Chapter 3 is far from conclusive or universal. Rather, 'The empirical inconclusiveness has become so infamous' that most spillover studies 'begin with this observation as its main motivation' (Smeets 2008, 108).

There are three types of studies in the spillover literature (Beata Smarzynska Javorcik 2004b, 605–606). The first is the case study, which often provides a great deal of vital information and helps in understanding spillover mechanisms in a specific country or industry. Only relatively rarely, however, does the FDI literature make use of case studies to demonstrate and capture spillover effects, in part because case studies are 'highly unusual in the economics community' (Moran 2011, 52). One of the reasons case studies are sometimes frowned upon by the economic community is that they, by definition, scrutinise only a small fraction of reality. Furthermore, as a method, their outcomes may be flimsy, anecdotal, hard to extrapolate and prone to selection bias. Worse still, they can even be misleading, with results from an individual case study presented as definitive evidence of spillovers in the host economy. Put differently, the question of whether foreign-owned firms transfer technology may yield a positive answer, but this does not necessarily shed light on average productivity improvements across the whole economy (Lipsey and Sjöholm 2005). Moreover, the conclusions gleaned may simply be the result of how a given case study has been selected from the wider universe

of firms, with various complexities glossed over—for example, some firms may enjoy benefits from linkages and technology transfers while others are left worse-off. Given that many studies on Chinese investments in Africa use a relatively small sample of firms or rely on case studies of individual firms, any observations that arise should be treated with caution, especially when followed up by broader conclusions related to economic transformation or industrial upgrading.

Nevertheless, while poorly handled case studies may not yield any new knowledge, careful case studies—if sufficiently detailed and specified, particularly combined with firm-level surveys—can shed new light on the mechanisms underlying spillover effects. They are also important in terms of bolstering confidence regarding inferences about causation (Moran et al. 2005, 389). By multiplying observations and through taking precautions against selection bias, case studies can offer useful insights and provide much-needed flexibility. They are also particularly valuable in terms of uncovering the specific characteristics of firms, industries and countries that make spillovers likely—an objective that econometric studies often fail to recognise (Lipsey and Sjöholm 2005, 40).

The second type of study relates to econometric studies that utilise aggregate data to establish a correlation between the presence of MNCs and spillover effects. Here, 'The usual approach has been to assume that the major knowledge spillover effect is on the receiving firm's productivity, often measured by changes in the receiving firm's productivity following entry of the multinational enterprise, controlling for other observable determinants of productivity' (Smeets 2008, 110).

There are many problematic aspects to these studies, foremost of which—especially for the early spillover studies—being their assumptions regarding the direction of causation are often incorrect (the question of endogeneity). For instance, a positive relationship between FDI inflows and spillover effects, manifested as a rise in average productivity, may well be the result of MNCs forcing local firms out of business, with only the better performers surviving. Another example is an inflow of FDI coinciding with a series of business-friendly reforms. Here, observed productivity gains may be the result of a more conducive business environment, rather than the increased presence of foreign firms (Moran et al. 2005).

Another challenge is that such studies seek an average effect, which runs contrary to the basic observation that host economy firms and industries differ in terms of their ability to absorb and benefit from MNCs' superior knowledge. This suggests that perhaps 'the search for universal relationship is futile' (Lipsey and Sjöholm 2005, 40), especially when it comes to the often immense differences between industries in developing countries (FDI in the Angolan oil industry vs, say, the retail sector in Senegal). Moran aptly suggests that using aggregate data is like asking 'whether or not the FDI tree produces fruit punch (apples, oranges, bananas and pears)' (Moran 2011, 2). As a consequence, aggregate analysis has little to offer in terms of policy formulation. A related issue concerns how spillover effects are measured, which is far from straightforward in its own right and becomes even more problematic when applied to total factor productivity or other measures.

The third type of study encompasses research based on firm-level panel data, with the aim of establishing a link between productivity in a given sector and the presence of MNCs. Scholars using this approach usually reach one of two conclusions: either there is a lack of significant spillover effects or there is negative evidence of horizontal spillovers. Interestingly, Paus and Gallagher identify a pattern whereby regressions based on cross-sectional data tend to find positive spillovers, while studies based on panel data are more likely to find negative spillovers (Paus and Gallagher 2008).

The studies reliant on firm-level panel data have led to a literature more concerned with the outcomes of FDI presence—in terms of both positive or negative effects on the productivity of local firms—rather than regarding it as merely a mechanism for bringing about changes in productivity. Problematically, spillover effects can be conflicting, resulting in opposing effects. As Kinoshita observes, it is 'difficult to distinguish one from the other, since the mechanism of technology spillovers from FDI is complex and often interdependent' (Kinoshita 2001, 5). While studies built on firm-level panel data may reveal the overall impact of MNC presence on the productivity of local firms, they 'are generally not able to say much about how the effects come about' (Blomström and Kokko 2002). As Görg and Strobl point out, most empirical studies in this area shy away from the mechanisms of spillovers, treating them as a 'black box' (Görg and Strobl 2005, 154).

Econometric studies are rarely able to unpick the different types of effects resulting from FDI entry, be this increased competition, demonstration effects or labour turnover. Thus, despite capturing the

overall effect of FDI, they generally lack explanatory power. For vertical spillovers, there may be other confounding effects, such as MNCs 'cherry-picking' local firms to work with that already possess certain productivity advantages. Another example is when the entrance of foreign firms causes an exogenous productivity shock unrelated to interactions with local firms (Javorcik Smarzynska and Spatareanu 2005). In both cases, the productivity spillovers assumed by researchers may not actually exist. For example, Javorcik and Spatareanu admit that although they have detected externalities in the form of increased productivity, this may be due to increased competition provoked by the entrance of foreign investors rather than knowledge spillovers. Similarly, when it comes to vertical spillovers, the authors admit they cannot distinguish between knowledge spillovers and the benefits of scale economies that local firms may enjoy as a result of sourcing their inputs from MNCs (Javorcik and Spatareanu 2008, 212).

This is why some authors have promoted surveys as an effective solution for disentangling FDI effects and studying both the mechanisms and outcomes of spillovers. The usefulness of this method is, however, determined by how managers interpret questions (Hanson 2005, 177). For example, asking managers about the link between an MNC's arrival and improved productivity may again result in an answer that gets the causality wrong (e.g. the MNC may have been attracted to invest in places that have higher productivity or there may have been another external factor responsible for productivity improvements). Interviewing should therefore ideally take place before *and* after the arrival of an MNC, although this would make such research near impossible to conduct, as the initial research 'need' arises with the inflow of the MNC's capital. Another pitfall in surveying comes when interviewees have a biased perception of their performance. For instance, local companies have a strong tendency to blame foreign competitors for their underperformance and financial difficulties, often accusing them of—among other things—stealing away the market, when in reality their business standing is unrelated to the entrance of FDI (correlation does not mean causation) (Javorcik Smarzynska and Spatareanu 2005).

Ideally, studies should combine econometric investigation with a well-structured representative survey, including the characteristics of respondent firms (Moran 2011, 52). In a similar vein, Torunn Kvinge argues that econometric studies should be supplemented by case studies focused on 'imitation of technologies, engagement of workers trained by MNEs,

the extent of innovation networks and cooperation projects between foreign and local firms, as well as spin-offs in the form of new domestic firms' (Kvinge 2004). Such an approach could help in uncovering not only spillover channels but also how these are determined by investors and the host country's characteristics. As Javorcik notes, 'it would be interesting to learn more about the host country and investor characteristics that determine the extent of spillovers operating through different channels' (Javorcik 2004a, 65).

All in all, while each methodology has certain advantages, in isolation they obscure aspects of the studied reality. The solution would therefore appear to be what Moran (2011, 140) calls 'multimethodology' research techniques, which combine surveys, case studies and sophisticated econometrics (when data allows it)—unfortunately, as Moran bitterly acknowledges, the ways in which academia is structured discourages the pursuit of such strategies. Nevertheless, despite such reservations and in the face of severe data limitations, we have rigorously pursued a combination of firm-level surveys, interviews and case studies.

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CHAPTER 6

Institutional and Cultural Obstacles of Chinese Spillover Effects in Angola

Jarosław Jura and Paulo de Carvalho

Introduction

The overarching aim of the research detailed in this chapter (and throughout the book) is to examine the spillover effects of Chinese investments, as well as Chinese long-term economic activities more generally, in Africa. This broad focus stems from the observation that analysis of spillover effects is typically confined to foreign direct investment (FDI) outcomes, a framework that may be suitable for Western business practices but lacks applicability in the Chinese (and to some extent, African)

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D. Kopiński et al. (eds.), *The Political Economy of Chinese FDI and Spillover Effects in Africa*, International Political Economy Series,
https://doi.org/10.1007/978-3-031-38715-9_6

context. As such, it reflects a form of conceptual eurocentrism.[1] Therefore, in the research's latter phase, long-term project contracts initiated by Chinese companies, particularly state-owned enterprises (SOEs), were also included as potential sources of spillover effects.

Even with the expansion of the scope, the study still only identified a limited number of minor spillover effects resulting from Chinese economic activities. At the same time, multiple obstacles to the emergence of these effects were observed, attributable to a combination of economic, political and cultural factors. With the economic determinants having already been presented in earlier chapters of this book, this chapter shifts the spotlight to the institutional, political and cultural obstacles hindering the emergence of Chinese spillover effects in Angola. The findings are derived from 61 in-depth interviews conducted in Angola in 2019 and 2022 with foreign diplomats, local journalists, academics, officials, politicians and Chinese entrepreneurs, supplemented by existing literature on the topic.

The chapter proceeds as follows. Firstly, it describes the institutional features of both China and Angola relevant to the research problem, before going on to analyse how these factors contribute to the emergence of obstacles to spillover effects. Next, it examines how cultural differences can create further obstacles. Finally, the chapter assesses whether these obstacles can be eliminated given the significant changes in Chinese economic activities following the collapse of the 'Angola model' and the Sino–Angolan 'marriage of convenience' (de Carvalho et al. 2021).

Chinese and Angolan Institutional Framework

Despite China's substantial economic involvement in Angola, both countries have distinct institutional frameworks that have resulted in a lack of significant spillover effects. With this in mind, we outline below the countries' respective institutional and political systems.

[1] See Chapter 5 of this book.

Angola's Institutional and Political System

Although the political system in Angola is theoretically multiparty, it is de facto dominated by the People's Movement for the Liberation of Angola (balance of payments) (Martins 2017). Despite receiving only 51 per cent of the vote in the most recent national elections (Vines 2022), the MPLA has been in power since Angola gained independence in 1975, with no transfers of power to another party during this time. The main opposition party, National Union for Total Independence of Angola (UNITA), whose armed forces fought the MPLA in a long and bloody civil war,[2] has little chance of winning elections (Martins 2017). In fact, as one interviewee observed, 'In that way or another, the MPLA is going to win these elections'.[3]

The MPLA, which has a long history in African politics, is actually governed by a relatively small number of influential families/clans, who compete for power while maintaining stability within the system (Martins 2017). Until 2017, power was concentrated in the hands of José Eduardo dos Santos, along with his family and close supporters (Wanda 2022).

Although officially based on Western democratic patterns, Angola's institutional system has inherited the burden of Portuguese bureaucracy (Birmingham 1988), making it challenging to conduct business without proper contacts or facilitators among local elites. Despite President João Lourenço's efforts to combat corruption, the bureaucratic system remains stagnant. As one interviewee asserted, the process of 'arranging' things has in fact become even more complicated than during the dos Santos era, when bribes were at least an option.[4]

As a resource-rich country, Angola suffers from the 'resource curse' phenomenon (Gonçalves 2010; Teixeira 2011). Aside from the economic consequences—including price fluctuations, export vulnerability, macroeconomic instability, decline of terms of trade, Dutch Disease syndrome, fiscal mismanagement and impaired human capital accumulation (Kopiński et al. 2013)—there are significant institutional and political

[2] On the Angolan civil war, a war of total destruction, see Gonçalves (1991), Messiant (1994), Anstee (1996), Correia (1996), Wright (1997), Hare (1998), de Carvalho (2002). On the genesis of the Angolan conflict, see Guimarães (1998), Kissinger (1999), Jorge (2000), de Carvalho (2002).

[3] Interview with Angolan official, 12.05.2022, Luanda, Angola.

[4] Interview with Angolan official, 12.05.2022, Luanda, Angola.

outcomes. The heavy reliance on natural resources and specific political systems has resulted in the state controlling a major portion of the economy (Gonçalves 2010; Rocha 2011). Here, it is relevant to note that, due to the prolonged civil war, a significant number of these state elites are associated with the military (Bernardino 2019; Roque 2022). Moreover, the fact that much of Angola's revenue comes from resources means that the state is one of the largest employers, with little emphasis placed on developing the private sector, especially during José Eduardo dos Santos's presidency. As a result, the majority Angola's employed population (eight out of ten workers) work in the informal sector, while the unemployment rate is a hefty 30.8 per cent (INE 2022).

Angola's heavy reliance on commodity exports, particularly crude oil, gas and rough diamonds, has driven the government to maintain commodity export-oriented policies. This has led to deindustrialisation and limited investment in agricultural development, which in turn has resulted in a high dependence on imports for food, beverages, clothing, footwear and medicines, as well as foreign skilled labour (Rocha 2000, 2011, CEIC 2021, IMF 2021), even though other authors have pointed to some successes in domestic-market formation via Chinese contracted project (Wolf 2017).

In 2021, Angola exported 394 million barrels of crude oil, bringing in state revenues of US$ 27.87 billion. In the first half of 2022, Angola's GDP grew by 3.2 per cent and was estimated to grow by 2.7 per cent over the course of the entire year (Ministério das Finanças 2022, pp. 11, 17). Oil revenues accounted for an estimated 60 per cent of current revenues in the 2022 state budget (Ministério das Finanças 2021, p. 72), with the total 2022 budget amounting to just over AOA 20,104 billion (Diario de Republica 2023, p. 623), equivalent to almost US$ 40 billion. Despite the current monetary stability of the kwanza (its exchange value having gone unchanged from June 2022 to February 2023), the annual inflation rate remains relatively high at 11.54 per cent as of February 2023 (a fall from 27 per cent in March 2022) (Banco Nacional de Angola 2023).

Recently, there has been an increasing focus on local production, including food production in the agricultural sector, with an increase of about 16 per cent in non-oil revenues expected for 2023 (Ministério das Finanças 2022, p. 45). This indicates growing awareness of the need to diversify the economy and reduce dependence on oil revenues, which could lead to more sustainable economic growth in future.

Chinese Institutional and Political System

China's system does not strictly adhere to the traditional communism envisioned by Marxist theory, which calls for the abolition of private property and a classless society. While China did once have a centrally planned economy, this has undergone significant changes since market-oriented reforms were initiated under Deng Xiaoping's 'opening reform' policy of the late 1970s. Today, China's model combines elements of socialism, market-oriented reforms and state intervention in the economy, and is often referred to as 'socialism with Chinese characteristics'. Alongside this, China's political system is known for its lack of pluralism, limited freedom of expression and press, and strict controls on civil society. This has led to debates among scholars about the true nature of China's system, with some arguing that it can be more accurately described as authoritarianism rather than communism (W. Tang 2016).

Given the focus of this chapter, it is unnecessary to delve into analysis of the Chinese autocratic political system itself—rather, what is important here is the role of the Chinese state in economic activities. As early as the 1980s, the Chinese government allowed the establishment of private enterprises, although initially with constraints, such as having no more than eight employees (Naughton 2007). As data published by the National Bureau of Statistics of China demonstrates, however, grassroots-based private enterprises do not comprise the majority of the Chinese economy. While there have been exceptions, such as Jack Ma's economic empire, SOEs continue to dominate the Chinese economy, receiving preferential treatment and support from the government.

In 1994, as part of the reconstruction and commercialisation of SOEs, China's government introduced a policy called 'grasping the large and letting the small go' (*zhuada fangxiao*) (Cao et al. 1997). The policy aimed to gradually close fundamentally unprofitable SOEs while transforming, merging and adjusting promising ones to market economy standards (Nolan and Xiaoqiang 1999). Some SOEs were fully privatised, some took on mixed forms and some remained fully state-owned (Lin and Zhu 2001).

What is noteworthy, however, is that even companies that are formally private, such as Lenovo, usually have significant connections with state institutions, such as the Chinese Academy of Science and/or state officials (Xie and White 2004). Similarly, companies like Huawei have close ties between management and the ruling Communist Party of China (CPC),

including the army component. While the majority of Huawei's ownership is officially in the hands of its employees, they are unable to sell their shares, and ownership is controlled by the labour union, which in turn is dependent on the CPC (Balding and Clarke 2019; Hawes 2021). These examples highlight the influence of the state and CPC in China's economic activities, even in supposedly private companies.

The construction sector, which plays a crucial role in China's economic activities in Africa, is dominated by state and public ownership (Chen et al. 2009; Zhou et al. 2009). Many construction sector SOEs in China enjoy significant advantages, including access to politically related economic decisions, credit lines and state assistance in times of trouble, as evidenced by recent cases such as Evergrande (Jim and Xu 2021). These characteristics are also applicable to Chinese construction companies operating in Africa (Chen et al. 2009).

Institutional Framework and Spillover Obstacles

The above characteristics, along with Angola's situation in the wake of the civil war, have led to a particular pattern of Chinese economic activity in Angola, known as the 'Angola model' (Brautigam 2011). After the war finished in 2002, Angola sought Chinese aid for the challenging task of national reconstruction. Since then, Angola is estimated to have received over US$ 42 billion of loans from China (Wanda 2023).

In 2022, 54 per cent of Angolan oil was exported to China (Permanent Secretariat of Forum for Economic and Trade Co-operation Between China and Portuguese Speaking Countries [Macao] 2023). The oil is used to pay for financing lines with China and commercial sales. Additionally, China was the largest supplier of goods to Angola in 2021, with their value amounting to US$ 1.71 billion, representing 15 per cent of total Angolan imports (Trend Economy 2022).

The most significant part of Chinese activities under the 'Angola model' relates to infrastructure projects funded by resource-backed loans from China Exim Bank and constructed by Chinese SOEs. Thus, to a large extent, Sino–Angolan economic relations appear dominated by state- or state-to-state-related contracts. Long-term contracts are not typically considered in analyses of spillover effects in the Western literature, as they are not classified as FDI. If, however, we consider that these long-term contracts may span several years, then—as argued in chapter four of

this book—there is no reason why they should be excluded as potential sources of spillover effects.

One relevant example here is the Angolan government-supported farm development projects carried out by Chinese companies. A policy paper by the China Africa Research Initiative at Johns Hopkins University outlines how seven farms ranging from 1000 to 45,000 hectares were to be developed by Chinese contractors, involving construction, cultivation and worker training. For this, the Angolan government received approximately US$ 600 million of credit from Chinese banks (Zhou 2015).

Little attention has, however, been paid to the results of these projects, which according to interviewees were disappointing. Despite construction, as well as delivery of machinery and equipment, being completed, the farms were left to deteriorate, with machinery rusting away.[5]

These projects had the potential not only for spillover effects but also direct developmental impacts, as they spanned several years and were supposed to include technology transfers through the training of Angolan farmers. Moreover, they were conducted in the agricultural sector, where the technology gap between China and Africa is not significant compared to, for instance, the ICT sector.

If we focus solely on the spillover effects of infrastructural projects, such as the technology transfers mentioned above, the situation does not appear any better. Theoretically, long-term projects can bring about spillover effects, such as increases in employee skills that can then be utilised in other companies, thereby strengthening the competitiveness of Angolan contractors. Reality, though, is a different picture.

The main reasons underlying why Chinese activities in Angola fail to produce significant development effects—either directly or in the form of spillovers—arise from the institutional characteristics of both countries. Firstly, state-to-state relations are often less flexible when it comes to adjusting to the local environment, building meaningful links and adapting to local conditions. Both sides have their own goals, which are not always focused on economic efficiency. Chinese SOEs typically have easy access to state support, credit lines and a Chinese labour force, strengthening a reliance on their own resources.

[5] Interview with journalists, Benguela, 20.05.2019.

Secondly, Chinese SOEs are largely driven by the pursuit of profit, which may not always align with the project's wider goals. Chinese companies often prioritise completing a project regardless of whether this means compromising on quality—as has been the case in road projects—and may even pay bribes to African officials. Corruption among African elites has regularly been cited as a reason behind the failure of Chinese projects and the resultant lack of spillover effects, such as technology transfers.

Thirdly, despite an Angolan law requiring that companies hire at least 70 per cent of their employees from the local population (X. Tang 2016), the regulation has not always resulted in significant positive spillover effects. Theoretically, the law should foster the development of local labour force skills, which can over time—through employees changing jobs—be transferred to local firms. However, this regulation has not always been respected, and even when the number of local workers has increased they have mainly been engaged in simple jobs that do not require significant skills. Additionally, Chinese construction companies often prefer to import necessary products from China and/or hire Chinese subcontractors, either directly from China or through localised Chinese companies, further limiting the potential for skills development and knowledge transfers to the local workforce. Chinese companies often attribute this to the lack of a skilled labour force in Africa, which our respondents indicated is only partly accurate. The main reason for such practices lies in the culture of Chinese companies, which will be further explored in the following section.

Another crucial aspect that enables the Chinese to bypass existing rules in Angola is inadequate implementation of regulations and a general lack of control over projects by Angolan government and state institutions, which a majority of respondents (55 per cent) mentioned when asked for their opinion on assessment of Chinese economic activities in Angola. Furthermore, 27 per cent of respondents—over half of which were, interestingly, Angolan officials—pointed out that a significant portion of Chinese projects were introduced under military agreements. Given Angola's history and the military's position in the country, this has made exerting control over Chinese activities extremely difficult, with the

companies able to appeal directly to their military 'protectors'—such as General 'Kopelipa'[6]—in the event of any problems.

It is worth noting that implementation of regulations may not always have the desired effect. For instance, according to an official at AIPEX (Agency for Private Investment and Promotion of Exports of Angola), a law requiring partnerships between local and foreign companies was abandoned because it was difficult for foreign companies to find Angolan partners, resulting in a lack of investment.[7] Furthermore, due to the short-term economic and political interests of both the local and Chinese sides, an environment that is supportive of local economic activities has not been properly cultivated. For example, there was lack of acceptable local suppliers when the Chinese initially established their presence in Angola, prompting the Chinese to import the materials they needed from China. During this time, the Angolan government made no effort to protect and develop local production.

Later, when regulations supporting local producers were passed, local cement and brick factories appeared on the market. This, however, coincided with the end of the construction boom in Angola, and many Chinese SOEs left the country. As a result, these local companies now not only face a lack of spillover effects, but also a general lack of demand for cement.[8]

Cultural Differences as Spillover Obstacles

Cultural differences can pose significant obstacles to the emergence of spillover effects in the context of Chinese economic activities in Angola. One key factor is that China is generally a network-based society, with *guanxi* (relationship-building) a prominent aspect of this within the academic discourse (Jiang and Barnett 2013). *Guanxi* is not inherently nation-based, however, and can theoretically include members from different nations. Nevertheless, building and maintaining *guanxi* takes time and is typically based on mutual trust (Lee and Dawes 2005), which

[6] General Manuel Hélder Vieira Dias Jr., Angolan general, public official and businessman closely associated with former president José Eduardo dos Santos.

[7] Interview with AIPEX officer, 25.05.2019, Luanda, Angola.

[8] Interview with foreign businessman, 10.05.2022, Luanda Angola.

is not easily achieved over a short period. As a result, Chinese individuals who come to Angola often prefer to rely on their existing networks, which are typically limited to other Chinese individuals.

This reliance on established networks can limit the opportunities local Angolan companies have to benefit from spillover effects. For instance, when larger companies are looking for contractors, they may choose people they already know, which often means Chinese contractors. This mentality can also encourage more Chinese individuals to come to Angola and start businesses, as they will potentially have easier access to contracts and emerging opportunities. Thus, any horizontal spillover effects that do occur may be constrained to local Chinese companies rather than Angolan ones. The cultural difference evidenced in the Chinese network-based approach hinders the potential for spillover effects beneficial to Angola's broader local economy.

There are also challenges related to the preparedness and absenteeism of Angolan employees working for Chinese employers. Angolan workers may need to take time off to deal with illness or death in their extended family or neighbourhood, which is not always tolerated by Chinese employers (Lelo 2015).

These issues are compounded by numerous other cultural differences, which create an atmosphere of mistrust between Chinese and Angolan workers. Differences in work ethics and understandings of concepts related to business cooperation may contribute to Chinese employers' perception of Angolan workers as unreliable (Schmitz 2021). Moreover, there may be differences in understanding when it comes to corruption or exchanging favours. In Angola, the term '*gasosa*' (soft drink) is used for favours, while in China '*xiaofei*' (tip) is used. In both countries, giving or receiving favours in certain situations is considered normal. In Chinese culture, however, one is expected to provide something in return when accepting a favour, and the amount requested should not be exaggerated. According to Chinese informants cited by Chery Mei-ting Schmitz, Angolans often ask for too much in return for a favour and may not be seen as trustworthy in fulfilling their part of the exchange (Schmitz 2021).

Another factor that exacerbates these mistrust-related issues relates to a division, rooted in Chinese racism, between 'civilised' Chinese people ('*huaren*') and 'barbarians' (Dikötter 2015). According to this mindset, non- 'civilised' people, including Africans, are regarded as 'barbarians' unless they show indications of being sinicised or part of a technological

and/or economically developed society.[9] This inherent belief in Chinese superiority leads to a lack of confidence in cooperating with 'barbarians'. While Westerners have been partially excluded from this category due to the humiliation China endured in the nineteenth century, Africans are still often considered inferior and untrustworthy from an economic and technological perspective (Cheng 2011).

This lack of confidence in Africans' professionalism is compounded by the importance of personal connections (the above-mentioned *guanxi*) in Chinese business culture. Angolans are unlikely to receive real skills or knowledge transfers, as Chinese employers prefer to entrust management and crucial tasks to people they trust—namely, Chinese personnel. This issue of lack of connection and Chinese isolationism was raised by several interviewees. In one case, workplace apartheid and discrimination against local workers were cited as an obstacle to skills transfers (see also Ganga 2019).[10]

The language barrier can also pose a significant obstacle to cooperation and skills transfers between Chinese and Angolan workers. Most Chinese workers do not speak foreign languages, including Portuguese, which is the official language of Angola (Lelo 2015). This can make it more challenging to transfer skills and knowledge effectively. In a similar case in English-speaking Kenya, lack of proper translation was identified as a barrier to skills transfers.[11]

Furthermore, lack of proper translation relating to machinery, electronic equipment and software provided by the Chinese only hinders the ability of Angolan workers to use and benefit from such technology. For example, one respondent mentioned that the machinery, electronic equipment labels and software to control their work provided for agricultural projects and the Ombaka National Stadium in Benguela were only in Chinese, preventing Angolans from using them effectively.[12]

Interpersonal barriers and lack of emotional involvement between Chinese and Angolan workers can also affect the transfer of skills and knowledge. As one respondent observed, Chinese workers do not

[9] Of course, we do not claim that this applies to all the Chinese present in Angola; at the same time, however, we cannot pretend the issue does not exist. Moreover, such attitudes do not, sadly, pertain only to the Chinese.

[10] Interview with Angolan journalist, 20.05.2019, Benguela, Angola.

[11] Interview with Kenyan academic, 5.02.2022, Kilifi, Kenya.

[12] Interview with Angolan journalist, 20.05.2019, Benguela, Angola.

typically engage emotionally with Angolan workers,[13] with any such involvement often limited to Chinese men getting involved with Angolan women. This can create interpersonal barriers and hinder effective communication and cooperation.

There are also a number of cultural factors in Angola that can pose challenges to spillover effects. Firstly, both China (Jiang 2018) and Angola (Chêne 2010) rely heavily on patronage systems, but their understandings of how this system should work often differ significantly. This disparity can—as mentioned previously—result in increasing levels of mistrust on the Chinese side, hindering effective cooperation and skills transfers.

Secondly, local work ethics in Angola often differ from those in China, with Angolan workers sometimes prioritising the short-term impacts of their work over long-term effects or savings (Schmitz 2021). This difference in work ethic may lead to a perceived lack of reliability in the eyes of Chinese partners, again constraining the possibilities for meaningful skills transfers.

Thirdly, as a local businessman from Israel asserted, one of the biggest challenges in Angola is the pervasive atmosphere of living in hardship. Even if Angolan workers are trained, the reality of their lives outside work—including issues such as family sickness, death and poverty—may force them to prioritise personal concerns over professional development, they just obey orders instead of internalising knowledge.[14] This can lead to a swift decline in their proficiency of acquired skills.

Another interpretation of this phenomenon is that Angolan workers tend to rely on waiting for orders rather than using their own initiative and applying their learned skills in a creative way. This preference may be influenced by the priorities of the colonial education system, which, in many cases, persisted in the postcolonial period (Sifuna 2001). In essence, if children are primarily taught to memorise content provided by teachers who may not possess advanced skills (Arias et al. 2019), it becomes challenging to expect them to engage in critical thinking and effectively internalise and apply their acquired skills in a creative manner.

Lastly, the postcolonial past may contribute to a rejection attitude. Specifically, Africans may comply with orders but perceive them as

[13] Interview with Angolan journalist, 21.05.2019, Benguela, Angola

[14] Interview with foreign entrepreneur, 12.05.2022, Luanda, Angola.

imposed. Therefore the lack of internalisation can be a result of the historical legacy of colonialism.

Additionally, one interviewee revealed that Chinese employers often fail to respect Angolan labour laws, requiring workers to work long hours without proper rest and disregarding the fact that Angolan workers have children to educate at home.[15] This lack of consideration for labour laws and cultural norms further exacerbates the cultural gap, leading to resentment among Angolan workers and making it difficult for them to integrate into the Chinese work environment.

Fourthly, there is a notable cultural gap between China and Angola, as well as between China and the West. It is important to consider that Angola was one of the first African countries to be colonised, resulting in considerable internalisation of Portuguese or Lusophone culture, especially among Angolan elites. By contrast, Angolans are unfamiliar with China, potentially pushing them towards ignoring rather than internalising or integrating Chinese culture. This can result in skills obtained while working with the Chinese being perceived as irrelevant after their departure from Angola, as they may not be applicable or accepted in the local context.

A relevant example of this phenomenon can be seen in the agricultural industry, with a respondent highlighting two issues related to skills transfers involving workers who previously worked in Chinese farms.[16] The first is that the products produced in Chinese farms are typically geared towards Chinese cuisine, with the vegetables grown not familiar to or widely accepted by Angolans. As a result, when the Chinese farms left, there was no demand for these vegetables in the local market.

The second issue concerns Chinese farms' practices, with techniques such as using human excrement as fertiliser considered culturally unacceptable, even disgusting, by Angolans. This can result in a reluctance to buy food from Chinese farms, as well as a perception that skills obtained while working in such farms, including fertilising techniques, are repugnant and useless.

Similar issues apply to other types of skills obtained by Angolans while working with Chinese counterparts, with the cultural, language and technical incompatibilities between Chinese and Angolan or Western solutions

[15] Interview with Angolan official, 25.05.2019, Luanda, Angola.

[16] Interview with Angolan academic, 19.05.2022, Luanda, Angola.

rendering the acquired skills irrelevant or ineffective in the local context. This underscores the importance of taking cultural differences and local acceptance into consideration when attempting to ensure the long-term effectiveness and sustainability of skills transfer processes.

The relevance of this is further reinforced by the recent withdrawal of Chinese companies from Angola. Any technology or skills transfers that have occurred may become useless in the wake of these companies' departure due to uniqueness of Chinese solutions and technology. Thus such withdrawal can result in limited developmental effects of Chinese presence (infrastructure excluded), as local people may be unable to effectively utilise previously acquired skills when they come to cooperate with local, Western or Brazilian companies.

Summary and Conclusion

One of the main reasons behind the limited developmental impacts of Chinese economic activities in Angola, including indirect spillover effects, is the technological gap as discussed in Chapter 3 and underdevelopment of the local business sector and industry. On top of this, institutional and cultural factors further diminish the potential for positive outcomes.[17]

Among the institutional factors, the strong presence of the state in the economies of both countries is particularly significant. Cooperation between China and Angola has largely focused on large-scale infrastructure projects necessary for post-war reconstruction, and been based on state-to-state contracts. These contracts have often involved collaboration between Chinese SOEs and the Angolan military administration, resulting in limited social or judicial control over cooperation standards. This lack of oversight has impacted the quality of construction and may have reduced the effectiveness of regulations such as the requirement that 70 per cent of employees be local workers, which could have facilitated skills transfers. More generally, inflexibility and lack of adjustment to local

[17] Chinese are becoming increasingly aware of the cooperation problems, which is reflected in their efforts to introduce Chinese Corporate Social Responsibility (CSR) into the African context, as described by Tan Mullins (2020). However, it should be noted that many of these initiatives are largely declarative in nature and may not always translate into concrete actions. This can be seen in the case of the described in the text Angolan farm projects. Furthermore, even if these activities were to be implemented, they may no longer be applicable to Angola due to the significant withdrawal of Chinese state-owned enterprises (SOEs) from the country.

needs in state-to-state cooperation can render an entire project ineffective in terms of direct and indirect developmental effects.[18]

The cultural features of Chinese and Angolan society also contribute to institutional spillover obstacles. Both cultures place strong emphasis on informal network-based business relations, which can have significant repercussions, including the potential for corruption. According to informants, Angolan elites often initiate projects with the primary goal of obtaining commissions, which can amount to 10–20 per cent of the contract value.al.

When the focus is solely on personal gain rather than the actual outcomes of a project, the probability of achieving spillover effects is very low. This is because there is a lack of control over Chinese activities from the Angolan side. Additionally, from the perspective of the Chinese, such effects may not be seen as profitable for them.

On the Chinese side, while they generally accept the idea of 'exchange of favours', they may not be amenable to the lack of reciprocity in business relations, leading to a lack of trust towards local business partners. This can hinder cooperation development, including skills and knowledge transfers. Moreover, Chinese isolationist tendencies can reinforce mistrust, resulting in a preference for hiring their own people instead of local workers or contractors. Local regulations protecting the local labour force may be ignored by leveraging local connections (*guanxi*) and relying on military officials as local patrons. Furthermore, cultural and technological incompatibilities between Chinese and Angolan solutions mean that even the limited technology and skills transfers applicable to Chinese working environment that have occurred may become obsolete following the withdrawal of the Chinese presence from Angola.

The various issues detailed above mean the effects of Chinese economic activities in Angola appear primarily to have been restricted to mobile technology and infrastructure development (often of low quality), as well as trade (with an unfavourable trade structure for Angola). Meanwhile, Angola is left with significant debt and a lack of substantial developmental impacts, including spillover effects.

If significant spillover effects arising from Chinese economic activities in Angola are to occur going forward, then the institutional, cultural and economic obstacles that have limited developmental impacts thus far need

[18] A good example of such a project could be the big, empty hotel on the outskirts of the small Angolan town of Sumbe.

to be addressed. This, however, may not be a straightforward task, for a number of reasons.

Firstly, addressing the institutional challenges would require reducing corruption, improving regulatory frameworks and ensuring social and judicial control over cooperation standards. This would necessitate significant reforms in both China and Angola aimed at creating a more transparent and accountable business environment.

Secondly, addressing the cultural challenges would require building trust and reciprocity in business relations, overcoming isolationist tendencies and promoting local participation and compliance with regulations. This would necessitate efforts from both Chinese and Angolan parties to understand and respect each other's cultural norms and practices.

Thirdly, addressing the economic challenges would require diversifying economic cooperation beyond infrastructure and trade, and promoting skills and knowledge transfers to build local capacity. This would necessitate strategic planning, investment in education and training, and promoting entrepreneurship and innovation in Angola.

Substantial Chinese withdrawal from Angola and growing scepticism in some African countries towards continuing economic cooperation with China pose additional challenges. Overcoming these may require a complex reformulation of the cooperation model, including a shift towards more 'people-to-people' focused relations rather than just state-to-state contracts. Such a reformulation would involve local communities, businesses and civil society assuming a greater role in decision-making processes and project implementation.

Overall, achieving significant spillover effects from future Chinese economic activities in Angola requires a comprehensive approach involving institutional, cultural and economic reform, as well as a willingness from both countries to adapt their cooperation model. Issues related to debt sustainability, environmental sustainability and social inclusiveness also need to be addressed if a more sustainable and mutually beneficial partnership between the countries is to be constructed.

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CHAPTER 7

The Institutional and Political Dimensions of FDI Spillovers in Zambia

Andrzej Polus

Introduction

This chapter sets out the political and institutional context behind the (lack of) spillover effects arising from Chinese private investments in Zambia. One of the key conclusions drawn from fieldwork conducted in the country in 2019 is that even when Chinese firms possess latent potential for foreign direct investment (FDI) spillover effects, there is a lack of other firms in which such effects can be realised. Furthermore, as one respondent notes, even when there is potential for spillover effect, the 'technology gap makes it difficult to absorb skills and knowledge'.[1]

At the level of political rhetoric, high-ranking Zambian politicians declare that they want knowledge and skills transfers to the Zambian

[1] Interview with Kanenga Haggai, Lecturer/Researcher, University of Zambia, School of Humanities and Social Sciences, Department of Development Studies, 30 April 2019.

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D. Kopiński et al. (eds.), *The Political Economy of Chinese FDI and Spillover Effects in Africa*, International Political Economy Series,
https://doi.org/10.1007/978-3-031-38715-9_7

economy,[2] with President Hakainde Hichilema posing the following question in the wake of his 2021 election victory: 'How to run the economy where the population is unskilled?' There is, however, a divergence between often wishful thinking (also evident in the academic discourse [Kotey 2019]) regarding the kinds of investment Zambia needs and the reality of what flows into the Zambian economy, resulting in structural constraints when it comes to creating FDI spillover effects. As such, FDI spillover effects in Zambia can be described as 'unicorns'—mythical animals whose appearance and behaviour are well described, despite the fact they do not actually exist. Moreover, just as the unicorn's horn was reputedly a panacea for all diseases, spillover effects are sometimes presented as part of an arsenal of silver bullets that should have ensured the development of sub-Saharan countries, Zambia included (Bwalya 2006).

A similar (one may argue banal) rationalisation for the non-occurrence of spillover effects has been proposed by Mim et al. (2022), who state that the 'FDI's spillover effects are conditional to the host countries' absorptive capacity'. This means that factors other than the effectiveness of institutions—which, after all, cannot create spillover effects on their own—may be significantly more important in understanding why these effects are barely seen in Zambia or other sub-Saharan states. This is not to say that political and institutional environments should simply be ignored when considering FDI spillover effects. Oliver Morrissey, for example, claims that in terms of know-how, 'some government support is helpful' to transfers from investors to local companies (Morrissey 2012). The impossibility of fashioning such support in Zambian conditions was one of the main reasons prompting this research.

Essentially, the question driving our study visit to Zambia was this: How is it possible that copper-rich Zambia, independent for almost 60 years, has failed to create institutions effectively implementing government policies? In the academic discourse, the success of the state is often associated with robust and efficient institutions (Bertocchi and Guerzoni 2012; Wunsch and Olowu 2019). The main points of reference for scholars ruminating on the effectiveness of institutions in sub-Saharan Africa are, however, examples drawn from the developed world. This approach has been made manifest in the concept (and even doctrine,

[2] Interview with Minister of Presidential Affairs Freedom C. Sikazwe, Lusaka, 31 April 2019.

promoted by the West in sub-Saharan Africa [Börzel and Hackenesch 2013]) of 'good governance' (Davis 2017), whereby checks and balances maintained by various interdependent institutions are meant to lead to development. The good governance mantra is effectively a variation of Montesquieu's principle of balancing the powers of state. While in principle there is nothing wrong with different centres of authority balancing each other out, both the very idea of balancing and the types of institutions envisaged are—for the most part—modelled on 'patterns' from the developed world. By contrast, this chapter concurs with Acemoglu and Robinson's (2012) argument that those wishing to understand the efficiency of institutions in a given country should first focus on the political context and how political power is exercised.

The chapter unfolds as follows. Following a brief reflection on the possible incommensurability of Western concepts when applied to sub-Saharan Africa, and the defining of 'habitus'—the theorem used to conceptualise the functioning of Zambian institutions—the Zambian political context is set out. Next, the results of interviews with representatives of Zambian institutions are presented, before the spotlight is switched to how Zambian institutions are perceived by Chinese private investors. The concluding section explores the implications of these findings.

Before proceeding, I wish to pay tribute to the late Professor Ian Taylor. Professor Taylor was to be the co-author of this chapter, which made working on the text emotional, especially when analysing the epistemological guidelines he left and the notes from the interviews we conducted. Professor Taylor prepared an outline of the chapter, identifying the issues that needed to be addressed. In writing this chapter, therefore, I have tried to reflect the spirit of our discussions about Zambia's politics and the lines of reasoning he suggested. Nevertheless, I am solely responsible for any errors, inaccuracies or omissions in the text.

Incommensurability of Epistemologies and the Concept of Habitus

As a term, 'FDI spillover effect' is entangled in a diverse network of meanings, redefinitions and practices. The majority of people interviewed for this study at Zambian governmental institutions were wholly unfamiliar with the term and required an explanation. This suggests two things. Firstly, there is no institution explicitly dedicated to monitoring

(or, indeed, supporting the occurrence of) FDI spillover effects, which implies that any occurrence of these effects is a matter of chance rather than planning (although, in terms of creating spillover effects, the Zambia Development Agency comes closest to having a mandate in this area). Secondly, the FDI spillover effect is a Western concept and as such may not be appropriate for a sub-Saharan context, because the phenomenon was defined for countries with more diversified economies than Zambia. Moreover, as argued above, it may be viewed as yet another in a long series of suggestions lecturing African countries on how they should manage their economies (Alfaro et al. 2003).

International financial institutions have, over the years, proposed a number of strategies supposedly aimed at ensuring development in sub-Saharan countries, including privatisation, economic openness and the creation of favourable conditions for the inflow of foreign capital. As noted by Ndulo (1999), in the 1980s, following the collapse of copper prices, the idea of 'growth from own resources' failed 'because the country had few resources of its own to finance the ambitious recovery program'. Crucial questions concerning capital accumulation in Zambia and its reinvestment were not even raised, as the capital was supposedly already 'out there' in the 'global economy', and it was the sub-Saharan state's responsibility to create conditions favourable to capital inflows.

In the 2000s, so-called good governance, with its emphasis on efficient institutions, became the new mantra in international relations. As a consequence, lack of development was often ascribed to the ineffectiveness of institutions operating in the Global South. Here, it is pertinent to note that in the post-Cold War era, thanks to such concepts as neopatrimonialism, clientelism (Thomson 2004: 107–120), kleptocracy, façade democracy and 'politics of the belly' (Bayart 1993), academic attention has been focused on endogenous issues, while those dealing with the structural conditions of the world economy are associated with discredited neo-Marxist ideology. I am not, of course, arguing that no neopatrimonial political systems exist in Africa—on the contrary, despite the concept's origins in Western-centric discourse (since 'patrimonialism' is a European term), and being aware of its limits, it is used here for describing realities in Zambia. Nevertheless, if there is a common denominator to be drawn from the in-depth interviews conducted with Zambian intellectuals, it is that Zambia should not be compared to European countries. Fulfilling this requirement is extremely difficult, however, as there are no existent Zambian categories to describe the political and economic

processes taking place in the country, with the overwhelming majority of reference points in the academic discourse created in the West.

Bearing such challenges in mind, this chapter—the main purpose of which is to present understanding (rather than explain)—will attempt to use the concept of 'habitus' developed by Pierre Bourdieu. While utilising a theorem derived from the European sociological tradition (most often deployed to study the French education system) (Bourdieu and Passeron 2011) may seem inconsistent as an attempt at avoiding Eurocentrism, my search for a philosophical concept in Zambia better suited to unravelling the functioning of local institutions has proven fruitless. Moreover, given Bourdieu left no methodological guidelines on how to use his concept in research practice, I can only hope that my operationalisation of habitus (in the service of understanding and reflexivity, rather than for complex explanation) is in fact 'Bourdieuan'.

Some authors equate the concept of habitus with culture (Mearsheimer 2021). Such a generalisation, however, seems to go too far—though habitus is related to culture, it is a narrower concept. In academia, the concept is usually associated with Pierre Bourdieu (2020), but has more recently been popularised by Norbert Elias (1996; Loyal and Quilley 2020) and can be traced back to Aristotle, who associated it with national character. In terms of this chapter, habitus is understood as:

> principles, creating a system of durable dispositions and structures, responsible for organised, semi-conscious, or unconscious practices. These principles and rules are seen as common and are treated as objective. The principles are not orchestrated by any given actor but are collectively produced and reproduced. Adherence to the rules comes from their perceived objectivity. (Chwedczuk-Szulc and Polus 2020: 3)

In other words, it is a durable ideational structure that sets standards of behaviour in a given context. Context and habitus are interlinked because the habitus is an important component of the ideational context—something that will be demonstrated below in relation to Zambia.

The Zambian Context

Western-centric discourse has a inbuilt tendency to create typologies and divisions (Wallerstein 2007a). This derives from the Enlightenment and its positivist/mechanistic model of scientific activity, where in order

to explain 'reality', the smallest possible components of it—as well as the interactions between them—must be defined. In social sciences, this tendency manifests itself, among other ways, in the periodisation of history (Buzan and Little 2011: 490–526). By contrast, competing schools of thought stress continuity and focus on 'long cycles' (Wallerstein 2007b). My belief (which I assume is in line with Bourdieu) is that it is wrong to 'extract' the studied phenomenon from the space–time continuum. Even if this is done, the context and mutual relationality of the research subject should at the very least be indicated (for Bourdieu, 'real is relational'). As such, the Zambian political context will be described, and an overview provided of how certain practices developed in the postcolonial period have informed the functioning of selected state institutions.

The recent history of Zambia is treated here as a continuum rather than a series of distinct episodes. Nonetheless, the history of Zambia is usually divided into four periods: (1) the colonial period; (2) the First Republic (1964–1972); (3) The Second Republic (1972–1990); and (4) the Third Republic (1990–present). Kenneth Kaunda dominated the First and the Second Republics, and during his rule the practices of, and durable dispositions to act in certain ways, state institutions were created. As Baylies and Szeftel (1992: 77) argue, in Zambia:

> post-colonial political process was the legacy of colonial exploitation – uneven development, integration into the global economy through the production of a single export commodity, the domination of multinational mining corporations, and the singular exclusion of Zambians from social and economic resources. It left a society without control of capital or skills.

The 1968 Mulungushi Reforms were aimed at changing the conditions in which Zambia had had to function after 1964. It resulted in the creation and nationalisation of multiple parastatals, driven by ideas of self-determination and state control over Zambian assets, which were seen as offering a path to full independence (Kaunda 1968). Simultaneously, a vast patronage network was created, linking ethnic, regional and personal interests (Szeftel 2000).

The origins of this patronage network can be traced back to the late 1960s and the multidimensional conflict taking place in the United National Independence Party (UNIP). This manifested itself in clashes between President Kaunda and the ruling party's deputy leader, Simon

Kapwepwe, which eventually led to Zambia's transformation into a one-party state in 1972 (Larmer 2008). Levitsky and Way (2012: 878) argue that 'lacking alternative sources of cohesion, Kaunda relied heavily on patronage to sustain a "maximum coalition" that encompassed "as wide a range of ethnic, regional, and ideological groups as possible"'. According to Meredith (2013), in Lusaka alone Kaunda was sustaining 40,000 clients. Szeftel (2000: 208), meanwhile, states that the Second Republic 'set up a one-party state which institutionalised central political control over the distribution of spoils'.

Neopatrimonialism is often criticised for promoting people on the basis of their connections or the group they belong to (Bourdieu would call it having specific social capital) rather than their skills or knowledge, which, in terms of state institutions, translates into ineffective/incompetent management. Moreover, in the absence of the specific competencies required, an institution may be unable to fulfil the main function it was originally established to carry out. Instead, its functionality is redefined to facilitate access to resources for those who have taken control. Of course, in order to function at all, the sub-Saharan state must have so-called islands of efficiency. Across the continent, the army has been perhaps the most stable institution due to its specificity and resources, often taking over power. On the other hand, compared to other sub-Saharan nations, Zambia is usually presented as an oasis of peace—a country that has never experienced a military coup (although at least six attempts have been documented) and where the security apparatus has not been deployed against citizens on a massive scale.

Using counter-factual thinking, one could ask: If Kenneth Kaunda had *not* allocated positions so as to satisfy the interests of various groups, would Zambia have become an oasis of stability? The correlation between patronage network inclusiveness and political stabilisation (understood as no successful coups) has been proven in African studies literature (Arriola 2009), and—from the moment carefully appointed the highest-ranking officers so as not to allow any ethnic group to dominate the army onwards—this approach has undoubtedly worked well in Zambia. In terms of central and local administrations, it has made possible the realisation of individual and groups interests—if not in terms of the redistribution of profits to all citizens, then at least performatively through a feeling of being personally represented by someone who has secured a position in the state administration system.

Patronage lasts only as long as it is inclusive and hierarchical (while there are obvious examples of exclusive patronage networks, their functioning is usually supported by other factors, such as a security apparatus). As such, there is a constant requirement to include new clients, leading to an ongoing expansion of the network of connections. Inevitably, this leads to ineffectiveness, with the state forced to calculate the economic losses arising from the costs of maintaining the patronage network, as well as the lack of appropriate competencies of those included within it. Another obvious by-product of this process is that the loyalty of clients lies with their patrons rather than the institutions in which they work.

In the case of Zambia, patronage worked relatively well when there was sufficient economic capital in the system, mainly from copper exports. The collapse of copper prices (starting in 1976), however, meant that international financial institutions became the main source of capital necessary for the functioning of the state. Such capital came not only with macroeconomic strings attached, but also socio-political ones. As a result, new centres of authority were created, with the reintroduction of political pluralism the most visible change. At the same time, one of the main external rationalisations for maintaining the one-party system in Zambia—the existential threat to the country posed by the Republic of South Africa—disappeared due to the Apartheid regime's demise. Moreover, in Tanzania—which had provided inspiration for the introduction of the one-party state in Zambia—changes in terms of the opening up of the political regime were evident (Burnell 1995: 399). The narrative in favour of introducing political pluralism in Zambia was further reinforced by the collapse of the Eastern Bloc.

While the multi-party elections held on 31 October 1991 led to a political transition and the establishment of the Third Republic, little has changed in terms of the political culture (Van Donge 2002). Translated into the language of Bourdieu's theory, it can be said that the habitus, understood as dispositions towards a specific action, remains unchanged. Given the Zambian political elite is relatively small, the process of political elite recycling is clearly evident (Hinfelaar and Achberger 2017: 16). What changed after 1991 was that activists from the ruling party could—should their ambitions not be met—officially choose to join the opposition or create their own opposition parties. Here, the example of Michel Sata is illustrative. Sata, who had been politically active under Kaunda (Sishuwa 2020), decided in 2001 to leave the ruling Movement for Multi-party Democracy (MMD) party and form the Patriotic Front (PF), which

attracted many MMD politicians who had previously been members of UNIP.

Despite the formalisation of political pluralism, Zambian politics remains a zero-sum game of winner takes all. This situation impacts the functioning of state institutions. A decade ago, in a study devoted to aid ineffectiveness in Zambia, Beuran et al. (2011) presented some powerful ideas regarding the political economy of how Zambian institutions function. According to the study—the institutions' 'failure to effectively achieve their mandates is primarily due to the politicization of the Zambian civil service' and 'a culture of misuse and patronage [has] been allowed to develop'. I would argue that this 'culture of patronage' not only remains, but also constitutes the backbone of the institutional habitus. In 2019, we obtained reports that the government was using security forces to quell social unrest related to the deteriorating economic situation. It was also clear to the vast majority of Zambian intellectuals that the patronage network had in no way disappeared under Edgar Lungu's administration, which came to power in 2015. In fact, the frantic and often brutal actions undertaken by the PF administration (Amnesty International 2021) were explained by the fact that 'the resources of the state to feed the patronage system were running out'.[3]

The Perspective of Zambian Institutions

A lack of resources and staff shortages are another common denominator in the statements made by the representatives of Zambian institutions interviewed in May 2019. Additionally, the level of efficiency at an interviewed state institution was often associated with other institutions' ineffectiveness in terms of providing adequate data or fulfilling their tasks, with the knock-on effect that the interviewed institution was also unable to operate efficiently.

Effective implementation of any policy relies on accurate data, with the effects of the policy verifiable based on that same data. Morten Jerven (2013) has written extensively about the reliability of statistics (or lack thereof) in sub-Saharan African countries, and a visit to Lusaka's Central Statistical Office (CSO) revealed that its employees—despite not having heard of Jerven—at least partly agreed with his diagnosis. According to

[3] Interview with Charles Mafa, independent journalist, Lusaka, 8 May 2019.

them, the CSO's main problem is its limited ability to independently collect statistical data. The various ministries produce their own statistics and there is no information management system, potentially resulting in problems of data incommensurability. According to the accounts of two CSO employees, while they do not doubt that the statistical operations performed by their office are correct in themselves, the data on which they are based often lacks the necessary information. This situation was directly linked to a lack of resources and staff shortages.

Minister of Labour and Social Security Joyce Nonde-Simukoko spoke in similar tones, stating that in terms of her ministry's monitoring of labour rights compliance, she was 'supposed to have 1,000 inspectors but there are only 10'.[4] Despite such limitations, she claimed that the ministry tries to do its best, but that it is impossible to fulfil all the obligations imposed on its staff. Even if the proportion of needs-to-resources given was merely figurative, a quick calculation shows that the resources at hand for the ministry's monitoring capacity are, according to the minister, only around 1 per cent of what is required, making it practically impossible to operate effectively. In the minister's own words, 'We are caught up in a situation and we don't know what to do'.[5]

The institution whose mandate seems closest to promoting spillover effects from FDI is the Zambia Development Agency (ZDA)—although the agency should be considered more a promoter than a regulator of FDI. The ZDA's responsibilities include, among other things, the monitoring and certification of foreign investments flowing into Zambia. The investment threshold above which an investment is recorded, however, is $250,000, potentially meaning that some small private investments that could result in knowledge/know-how transfers to Zambia are not registered at all.[6] That said, while the topic of foreign micro-investments and related spillover effects appears worthy of future study, even if spillover effectiveness was to be demonstrated this would almost certainly not have had any past structural impact on the Zambian economy.

[4] Interview with Joyce Nonde-Simukoko, Minister of Labor and Social Security, Lusaka, 7 May 2019.

[5] Interview with Joyce Nonde-Simukoko, Minister of Labor and Social Security, Lusaka, 7 May 2019.

[6] It should be noted that the ZDA was aware of this and, as of 2019, was open to the idea of obligatory reporting to the ZDA on even the smallest foreign investment.

After issuing an investment certificate, the ZDA is supposed to carry out 'aftercare visits', during which an ZDA inspector checks whether the investor is operating in accordance with Zambian law—it is perhaps at this point that the ZDA could highlight local entities with which cooperation might be established. In 2019, however, the ZDA had just three people available to monitor the entire country, in a context where, since 2006, there has been an average of 350–400 investments registered per year. Meanwhile, the ZDA's research department is comprised of five people, with our respondents claiming that at least ten were needed. Additionally, the ZDA's local branches were closed. The major challenge emphasised by the ZDA interviewees was funding—according to the information obtained in May 2019, the agency's budget amounts to 500,000 kwacha per division, which is insufficient to cover even the basic services it is supposed to provide, let alone capturing FDI spillover effects. According to the ZDA's 2019 annual report, the agency 'recorded a deficit of 18,725,468 kwacha and net current liabilities of 136,406,124 kwacha' (Zambia Development Agency 2020: 65). This huge budget deficit, accrued even before the Zambian government declared it was bankrupt in 2020, shows that the state was already in soft default,[7] with government agencies allowed to continue operating on credit. Complaints of insufficient funds and scarce resources were echoed by the Citizens Economic Empowerment Commission[8] and the Ministry of Commerce, Trade and Investment.[9]

If, as argued in the literature and claimed by independent Zambian journalists, the patronage system was unsustainable in 2019 due to shortages of capital, the fact that the operating budgets of state-led institutions were reduced does not alter their basic function as a political spoil. If the institutional habitus created during the Second Republic still exists—and it is extremely difficult to muster arguments contradicting its continued existence—then the inefficiency of institutions was actually useful for those controlling them.

[7] Interview with Mwanda Phiri and Shimukunku Manchishi, Zambia Institute for Policy Research and Analysis (ZIPAR), Lusaka, 3 May 2019.

[8] Interview with Arthur Luyuwa, Lusaka, 9 May 2019.

[9] Interview with John Mulungoti, Lusaka, 9 May 2019.

The Perspective of Chinese Investors

Due to the sensitive matters involved in the questions asked, and the confidentiality of the conversations held, only the aggregated results of the interviews held with nearly 30 Chinese private investors in the Lusaka region are presented below.

In general, Chinese investors try to avoid the Zambian state administration. When asked about the state institution they most often meet, the commonest answer given was 'the police'. The issue of having to pay bribes was raised on several occasions. Interestingly, the mere necessity of paying a bribe was not condemned—in fact, Chinese businessmen showed great 'understanding', stating that those who expect a bribe 'also have families that they have to support'. Rather, the root of the investors' complaints lay in the lack of certainty that a given 'issue' would be positively resolved following the bribe.

None of the Chinese private investors interviewed were able to point to any deliberate actions on the part of state institutions aimed at creating spillover effects. Investors were also unaware of the Zambia local content law. While some respondents indicated that their companies engaged in what may be called corporate social responsibility (for example, supporting communities through credit actions or donating desks and uniforms to local schools), such support was by no means imposed on them by the government.

Conclusions

As noted in the introduction, the existence of factors other than dysfunctional (in the Western sense) state institutions may make the spillover effects of FDI difficult to define in Zambia. In 2019, we found no arguments rebutting the claim that the institutional habitus developed during the Second Republic had changed/disappeared after 1991. On the contrary, our research only confirmed its continued existence. This is partly down to the fact that the political elite has not changed, and the class of professional civil servants needed has not been created. The network of political patronage can be sighted in President Hakainde Hichilema's accusations that top former government officials stole state funds. While embezzlement of public money is one thing, the scale of the phenomenon revealed suggests the practice had top-down consent—such consent may be considered the main manifestation

of the institutional habitus. The arrests of and charges against former minister of justice and acting PF chairman Given Lubinda, former foreign affairs minister Joseph Malanji, and former secretary to the treasury Fredson Yamba have been spotlighted in the Zambian news and beyond (Africanews 2022; Ayeni 2022). Meanwhile, the sheer magnitude of the theft of state funds has been revealed by the Zambian auditor general's audit of the government payroll, which exposed over 9800 government ghost workers who, over the previous four years, had been paid over $45 million (Skrdlik 2022). Systemic corruption is merely the effect of the durable dispositions rooted in Zambian institutions—dispositions that allow ineffectiveness and the seizure of state funds. Taking into consideration, as outlined above, (1) the lack of institutions clearly mandated to create/enforce FDI spillover effects in Zambia; (2) the shortage of capital under President Lungu, which made maintaining the inclusiveness of the patronage network impossible and so influenced the efficiency of Zambian institutions; and (3) the existence of the institutional habitus, where control over an institution is regarded as providing informal permission to derive personal benefits rather than achieving, socially and economically important goals; the occurrence of state-supported/enforced FDI spillover effects in Zambia is almost certainly no more than coincidence. In short, to return to the metaphor used in the introduction, finding an FDI spillover effect in Zambia is akin to coming across a unicorn.

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CHAPTER 8

Chinese Investors in Zambia and Angola: Motives, Profile, Strategies

Hangwei Li

Introduction: An Overview of Chinese FDI in Zambia and Angola

Over the past twenty years, Chinese foreign direct investment (FDI) in Africa has grown exponentially, with FDI stocks increasing almost a one 100-fold from US$ 490 million in 2003 to US$ 43.4 billion in 2020 (Fu 2021). Despite Chinese FDI flows to Africa dropping to US$ 2.7 billion in 2019, they rebounded to US$ 4.2 billion the following year even amidst the COVID-19 pandemic (Fu 2021). Zambia and Angola in particular have been significantly impacted by China's growing influence in the region (Bastholm and Kragelund 2009; Kopiński and Polus 2011; Kopiński et al. 2011; Lee 2018; de Carvalho et al. 2022) (Fig. 8.1).

The deepening of Zambia's relationship with China has been marked by, amongst other things, the construction of the Tazara railway, the establishment of an overseas office for the Bank of China in 1997 and

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D. Kopiński et al. (eds.), *The Political Economy of Chinese FDI and Spillover Effects in Africa*, International Political Economy Series,
https://doi.org/10.1007/978-3-031-38715-9_8

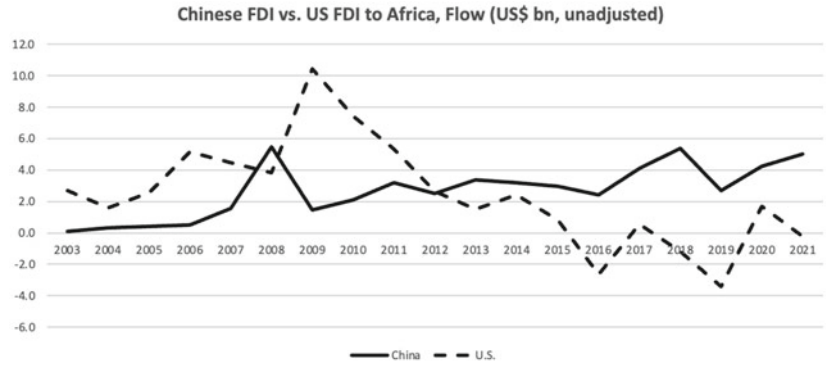

Fig. 8.1 Chinese FDI vs. US FDI to Africa, flow (*Source* Johns Hopkins University SAIS China-Africa Research Initiative)

the creation of the first African special economic zone (Kragelund 2009; Brautigam and Xiaoyang 2011). Chinese investors have also invested in non-ferrous mines and agricultural projects, with the country consistently being amongst the top ten destinations for Chinese investment in Africa. According to data from the Chinese Ministry of Commerce, the stock of Chinese direct investment in Zambia had reached US$ 3.055 billion by the end of 2020 (Chinese Academy of International Trade and Economic Cooperation et al. 2020). Moreover, a 2017 survey estimated the number of Chinese companies in Zambia as being close to 900—aside from Nigeria, this is the largest number on the continent (Sun et al. 2017).[1]

Meanwhile, China's relationship with Angola has shifted from defence and security to economic development since the end of the latter's civil war in 2002 (Campos and Vines 2008; Ovadia 2013). Since then, Angola has seen huge numbers of Chinese migrants enter the country, many of been engaged in post-war reconstruction work (Zhuang 2020). According to then Minister for Home Affairs Sebastiao Martins, the number of Chinese in Angola peaked at 259,000 in 2012 (Club-K 2012). Between 2002 and 2008, Angola experienced a 'golden age' of post-war growth thanks to the rapidly increasing oil price. In more recent years

[1] According to a Chinese community leader, there are already more than 1000 Chinese companies in Zambia (Che 2020).

(especially 2016–2018), however, the global financial crisis and falling oil prices have resulted in many Chinese investors leaving the country. Nevertheless, according to data from the Agency for Private Investment and Promotion of Exports of Angola, China ranked third in FDI to Angola between 2018 and 2022 (China-Lusophone Brief 2022).

Table 8.1 presents key data on Chinese economic engagement with Zambia and Angola. Following this, Fig. 8.2 shows Chinese FDI flows to Angola and Zambia from 2003 to 2021, whilst Fig. 8.3 reveals Chinese FDI stock in Angola and Zambia between 2003 and 2021. Finally, Fig. 8.4 sets out data on trade between China and Angola/Zambia from 1992 to 2021.

Table 8.1 Key data on Chinese economic engagement with Zambia and Angola

	Zambia	*Angola*
Year of establishing diplomatic relationship with China	29 October 1964	12 January 1983
Chinese FDI Stock (by 2020)	US$ 3.055 billion	US$ 2.690 billion
Chinese FDI flow (by 2020)	US$ 125.36 million	US$ 214.26 million
Major destinations of Chinese FDI	Lusaka, Copper Belt Province	Luanda and Benguela

Source Compiled by the author

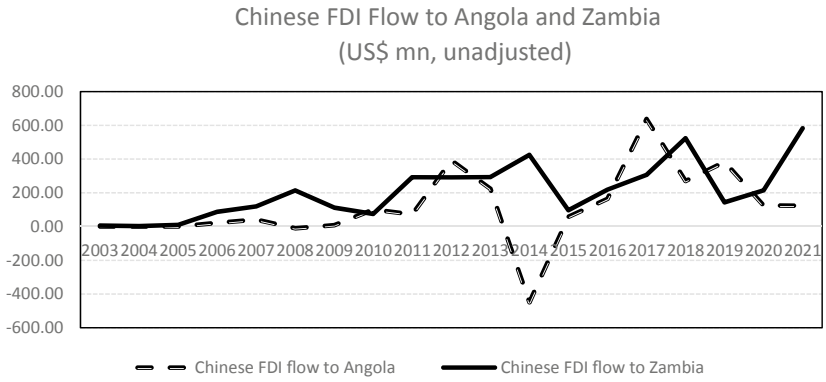

Fig. 8.2 Chinese FDI flows to Angola and Zambia (US$ million) (*Source* Johns Hopkins University SAIS China-Africa Research Initiative)

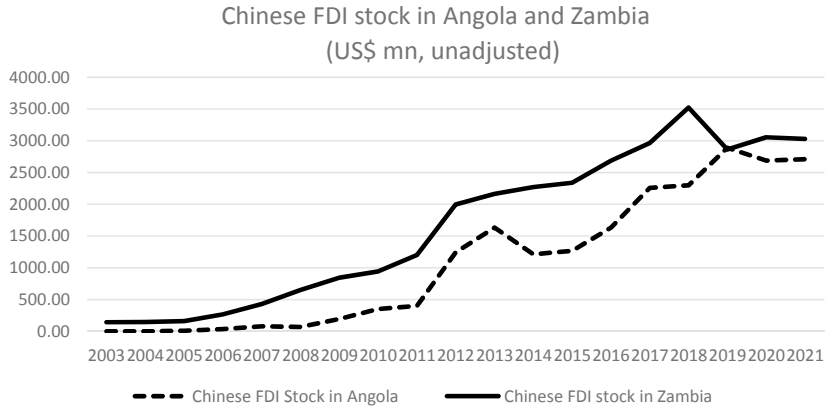

Fig. 8.3 Chinese FDI stock in Angola and Zambia (US$ million) (*Source* Johns Hopkins University SAIS China-Africa Research Initiative)

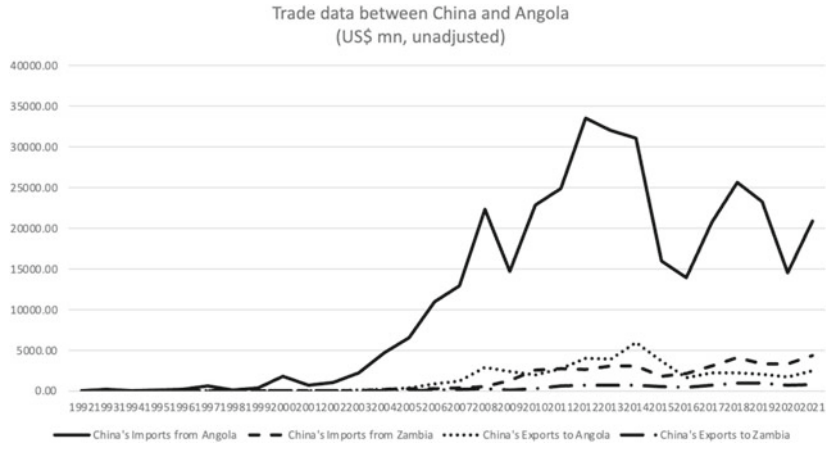

Fig. 8.4 Trade data between China and Angola/Zambia (US$ million) (*Source* Johns Hopkins University SAIS China-Africa Research Initiative)

Although previous studies on Chinese FDI in Africa provide valuable insights, they are largely based on research conducted nearly a decade ago. Consequently, they fall short in providing a comprehensive picture of the newer Chinese firms established or documenting the changing

landscape of Chinese economic engagement with African countries. For instance, in 2012, international media outlets such as the BBC portrayed Nova Cidade de Kilamba, a residential development built by China International Trust and Investment Corporation (CITIC), as a 'ghost town' (Redvers 2012). During our research team's visit to Cidade de Kilamba in 2019, however, we observed that the residential area was fully occupied, despite it still being presented as deserted in academic conferences or discussions. This highlights the importance of conducting updated fieldwork, particularly given Africa's fast-changing economic environment. As such, this chapter offers a comprehensive and up-to-date evaluation of Chinese FDI in Africa, with specific emphasis on the motives, profiles and strategies of Chinese investors in Zambia and Angola.

Methods

This chapter draws on fieldwork conducted in 2019, when our research team visited and interviewed 50 Chinese companies in Lusaka, Zambia and Luanda, Angola (25 in each country).[2] This involved participant observation at various Chinese factories, farms and internal conferences, as well as attending dinners, events and other activities organised by Chinese entrepreneurs, Chinese associations or the Chinese embassy in Zambia and Angola. Follow-up interviews with Chinese investors and managers, as well as Zambian and Angolan stakeholders, were conducted in 2020 and 2022 through WeChat, WhatsApp and emails. Tables 8.2 and 8.3 list the interviewed Chinese companies in, respectively, Zambia and Angola.

Profile of Chinese Firms in Zambia and Angola

Private Chinese firms have emerged as a prominent form of Chinese presence in Africa, with Sun et al. (2017) estimating that 90 per cent of Chinese companies are privately owned. This challenges the notion of a monolithic China Inc. operating in Africa. All the private Chinese investors in Zambia and Angola we spoke to noted that the Chinese

[2] It should be noted that some of the 50 companies we visited are conglomerates with multiple subsidiary firms. For example, the Luanda-based Guangde Internacional Group LDA has over ten subsidiary companies operating in the construction, trade and manufacturing sectors. In such cases, we only counted Guangde as a single company.

Table 8.2 List of interviewed Chinese companies in Zambia

Company name	*Sector*	*Ownership*
Jihai Agriculture Investment and Development Group	Agriculture	Private
Laohu's Farm	Agriculture	Private
Zeng's Farm	Agriculture	Private
China–Zambia Friendship Farm	Agriculture	State-owned
JK Farm	Agriculture	State-owned
Xinglong Investment	Manufacturing	Private
HK Spring	Manufacturing	Private
CNC Furniture	Manufacturing	Private
Goodtime Steel	Manufacturing	Private
VOTO Zambia	Manufacturing	Private
Huamei Zambia Investment	Manufacturing	Private
Kafue Quarry	Manufacturing	Private
Xinheda Zambia	Manufacturing	Private
Zambezi Liquid	Manufacturing	Private
Marco Polo Tiles	Manufacturing	Private
Double Impact Construction Limited	Manufacturing	Private
HY	Manufacturing	Private
Chenguang Biotech Zambia Limited	Manufacturing	Private
Deep Foods Zambia Limited	Manufacturing	Private
Sinomine Resourcre Group Zambia Limited	Manufacturing	Mixed
China National Material Group (Sinoma)	Manufacturing	State-owned
Tubombeshe Mining Limited	Mining	Private
YS Investment	Mining	Private
China Nonferrous Metal Mining (Group)	Mining	State-owned
Chambishi Copper Smelter Limited (CCS)	Mining	State-owned

Authors' note Company names are based on interviewees' preferences, and may not be the companys' legal or official name

government—or any other Chinese state actor such as the Chinese embassy—did not interfere with their investment decisions or daily operations. Whilst some Chinese private investors have attempted to establish relations with the Chinese embassy to gain social capital amongst Chinese communities, the majority indicated they did not interact with Chinese state actors. In fact, several private investors expressed frustration at the lack of support available from the Chinese government, policy banks or the Bank of China. These findings challenge the argument put forth by some scholars that Chinese investment in Zambia is state-driven or state-led (Bastholm and Kragelund 2009). Whilst it is certainly incorrect to claim that Chinese economic engagement in these countries is

Table 8.3 List of interviewed Chinese companies in Angola

Company name	*Sector*	*Ownership*
Jiangzhou Agriculture	Agriculture	Private
Luckyman Angola Desenvolvimento LDA	Agriculture	Private
Daping Fishing	Agriculture	Private
Dongfang Farm	Agriculture	Private
Full Bliss	Manufacturing	Private
Guangde Internacional Group LDA	Multiple (manufacturing, construction and trade)	Private
Agir-Huang Mecanical & Electrical Company LDA	Manufacturing	Private
Fuhua Textile	Manufacturing	Private
Sanyuan Steel	Manufacturing	Private
Sanyang International	Manufacturing	Private
Sujie International	Manufacturing	Private
Sun International	Manufacturing	Private
Striver	Manufacturing	Private
Wangol Groupo	Manufacturing	Private
Nice Group	Manufacturing	Private
Coreangol	Mining	Private
Zhuoyue	Mining	Private
Kilamaba	Commercial real estate	Private
Ango-Chi shopping	Commercial real estate	Private
Yewhing	Multiple sectors and international trade)	Private
Sino-Ord Parque Industrial. LDA	Multiple sectors	State-owned
China International Trust Investment Corporation (CITIC)	Construction, Real estate and others	State-owned

Authors' note Company names are based on interviewees' preferences, and may not be the company's legal or official name

no longer influenced by the Chinese state, it is crucial—as suggested by Lee (2018)—to differentiate the different 'varieties of capital' (especially state capital and private capital). Making this differentiation enables better understanding of the dynamics and complexities of Chinese investment in Africa.

There are also other misconceptions about Chinese economic engagement with Africa, often arising from confusion between investment, financing and contracting (Lee 2018; Pairault 2018; Goodfellow and

Huang 2021). The difficulty in discerning what counts as overseas development assistance, aid or investment further exacerbates this confusion. Goodfellow and Huang (2021: 659) have emphasised that 'when it comes to infrastructure, China barely invests at all'. This underscores the fact that many Chinese state-owned enterprises (SOEs), also known as 'national champions' in the international contracting industry, primarily focus on engaging in engineering, procurement and construction (EPC) contracts in Africa, as opposed to direct investment in Africa.

Since 2019, both Zambia's and Angola's economies have been badly affected by debt distress, leading to a mass exodus of Chinese contracting companies. Chinese investors often face higher exit costs than contracting companies, which is why many agricultural, manufacturing and mining companies have elected to remain. These companies are fundamentally different from contracting companies, as they have come to Zambia for long-term investment purposes rather than short-term 'projects' that end once their objectives are met.

As for the profile of Chinese private investors in Angola and Zambia, the majority of their investments are 'greenfield'. Our research found Chinese–Zambian/Chinese–Angolan joint ventures and acquisitions to be extremely rare. Amongst the 25 Chinese firms we visited in Zambia, only two operated as joint ventures: CNMC Luansha Copper Mines and an emerald producer, which was owned by Chinese (70 per cent) and Indian (30 per cent) partners. In Angola, meanwhile, just one—an agricultural firm—operated as a joint venture. The owners of the Chinese firms offered an array of explanations for this relative dearth of joint enterprises, including lack of trust, unreliability of local partners, a 'distinctive' business culture in the host country and a general mismatch between Chinese and local 'ways of doing things'. Moreover, for the majority of Chinese companies, efficiency was identified as the main operating principle, with many company owners explaining that they prioritise 'full control of the company' and 'do not like to complicate things'.[3] Local entrepreneurs have often been criticised by the Chinese entrepreneurs for

[3] Interview with Chinese investors in Lusaka and Luanda, April and May, 2019.

'lacking vision and professionalism', or 'not being reliable',[4] making it 'impossible' to run the company together.[5]

The owner of a Lusaka-based manufacturing firm observed: 'this is not Europe or America. It is difficult to find a local company with the technology, capital and expertise to run a company with. What can a Zambian company offer me? Nothing'.[6] Another manager lamented that 'there are a lot of uncertainties if you work with local partners. They don't deliver on time. They sometimes use our money on other things. Their ability to perform contracts is low'.[7] A former Chinese journalist in Angola went as far as directly attributing the failure of a joint venture to the local partner:

> Angolo-Chi Shopping (海山商贸城) was one of the earliest business and trading centres in Angola and initially attracted large numbers of customers. However, it ultimately failed. Many of us believe it failed because it partnered with Angolan, who are not reliable. So it was doomed.[8]

Motivation: Combination of Push and Pull Factors

Previous studies have explored Chinese companies' move into Africa (see for example: Biggeri and Sanfilippo 2009; Gu 2009; Chen 2021; Jenkins 2022). This section examines a number of 'push factors' (incentives in China that facilitate investment abroad), as well as 'pull factors' (incentives in Zambia and Angola that facilitate Chinese investment into their respective countries). These push and pull factors are closely intertwined, something it is important to understand when analysing the current state of Chinese FDI in Zambia and Angola.

[4] Schmitz's (2021) ethnographic work in Angola echoes this observation, noting a general atmosphere of mistrust between Chinese and Angolan entrepreneurs, with the former repeatedly questioning the reliability of potential collaborators.

[5] Interviews with Chinese entrepreneurs in Lusaka and Luanda, April and May, 2019.

[6] Interview with a managing director of a Chinese manufacturing firm, Lusaka, 29 April 2019.

[7] Interview with a manager of a Chinese mining company, Lusaka, 3 May 2019.

[8] Interview with a former Chinese journalist in Angola, WeChat, 30 January 2023.

Push Factors

Previous research has posited that intense domestic competition and ongoing structural changes in the Chinese economy are the impetus behind Chinese firms deciding to invest in African markets (see for example: Gu 2009, 2011; Shen and Power 2017). In 2014, He Yafei, vice-minister of the Overseas Chinese Affairs Office of the State Council, noted that:

> The excess capacity has been caused by China's fundamental economic readjustments against the global economy. With the ensuing knock-on effects of the global financial crisis manifesting in the economic stagnation of advanced nations, coupled with the slowdown in China's domestic demand, industrial overcapacity, accumulated over several decades, has been brought into sharp relief … [and] has resulted in a steep drop in profits [and] the accumulation of debt and near bankruptcy for many companies. If left unchecked, it could lead to bad loans piling up for banks, harming the ecosystem and bankruptcy for whole sectors of industries that would, in turn, affect the transformation of the [Chinese] growth model and the improvement of people's livelihoods. It could even destabilise society. The Chinese government, guided by the principles laid out at the third plenum, has put forward guidelines for its resolution. The most important thing is to turn the challenge into an opportunity by 'moving out' this overcapacity on the basis of its development strategy abroad and foreign policy.

The Guiding Opinion on Eliminating Severe Excess Capacities, issued by China's State Council in 2013, highlighted the pressing need to tackle overcapacity, especially in 'traditional manufacturing industries' such as cement, steel and flat glass. This crisis of over-production has necessitated new channels for investment, which is now playing out in terms of Chinese FDI in Africa (see Taylor and Zajontz 2020). Overcapacity in China is therefore a major push factor for Chinese companies to invest in Africa, including Zambia and Angola. A case in point is a Lusaka-based cement manufacturing plant, a subsidiary of a Chinese SOE (Sinoma Cement Co., Ltd.), which has an output of 60,000 bags of cement per day. According to the factory' senior manager, overcapacity in China was the key reason the company turned its attention to Zambia:

> Around 2012, we began to face very serious overcapacity in the domestic cement industry. I remember the National Bureau of Statistics of China officially and publicly warned us too much cement was being produced. Our headquarters adjusted our business strategy – we closed some of our cement factories in China and started to focus on expanding foreign market. Zambia was one of the choices.[9]

Fierce competition within China's domestic market has also been a major driving force behind Chinese investors seeking out opportunities in Africa. For example, Lusaka-based Chinese entrepreneur Mr. Hou observed:

> The competition in China is fierce. If I were in China, I could only have an ordinary '996 working life' [a reference to Chinese work culture – work at 9AM, leave at 9PM, work six days a week]. I have no capital and there are not many opportunities for me in the Chinese context. It is different in Zambia. I worked hard for some years for a Chinese company in Zambia, I then borrowed some money and was able to start my own business here.[10]

The vast majority of firms we interviewed in Zambia and Angola stressed the importance of push factors in their decision to internationalise. Even if other considerations propelled them to invest in Africa initially (e.g., market-seeking), push factors keep them there despite the increasingly difficult environment. The companies we interviewed entered the Zambian market during different time periods (ranging from 1990 to 2018). During 1990–2000, the majority of Chinese companies in Zambia were either Chinese SOEs or companies established by earlier groups of diplomats and aid experts who chose to stay after their duties ended. As time has gone on, with the Chinese economy restructuring, push factors have become ever more prominent in China–Africa ties.

This is confirmed by other studies. For instance, Gu notes that Chinese firms are seeking 'an escape from the pressure cooker of domestic competition and surplus production. China's private firms find some relief overseas in Africa's large markets and relatively less intense market competition from local firms' (Gu 2009: 572). Thus, Chinese firms are pushed to move to Africa by the disadvantages they increasingly face at home, rather than simply being pulled in by market opportunities. In fact, similar

[9] Interview with a manager from Sinoma Cement Co., Ltd., Lusaka, 9 May 2019.

[10] Interview with Mr. Hou, Lusaka, 1 May 2019.

to Child and Rodrigues (2005), we argue it is not competitive advantages but competitive disadvantages—in the form of domestic constraints and pressures—that have been driving the recent internationalisation of Chinese firms in Africa. Indeed, many of our interviewees highlighted intense competition within the Chinese market as a driving force behind their decision to invest in Zambia or Angola.

Due to intense competition in China's domestic market for raw material production, coupled with overcapacity, many Chinese-owned industrial raw material production plants have been established in Africa. During our fieldwork, we identified over ten such plants in Zambia and Angola, which are amongst the largest in the two countries. For example, the state-owned China National Building Material Group has established the Zambia Industrial Park in Zambia, where it operates four production lines capable of producing 2500 tons of clinker cement per day, as well as 200,000 cubic metres of concrete, 700,000 tons of aggregate and 60 million sintered bricks per year (State-owned Assets Supervision and Administration Commission of the State Council 2020). Another noteworthy competitor is the privately owned steel production company, Good Time Steel, which accounts for more than half of Zambia's steel production. In Angola, we also observed the presence of Chinese steel companies such as Sanyuan Steel.

Another often neglected push factor relates to soft power and is not entirely consistent with market logic. In the agricultural sector, investments made by Chinese SOEs are often part of a mission to improve China's national image, enhance its soft power and strengthen relationships with African countries (also see: Brautigam 2015; Zhou 2015). African leaders consider agriculture an area of the utmost importance (Wu 2006), which is why we can observe Chinese SOEs participating in agricultural cooperation in Zambia and Angola despite the expected profits failing to materialise. According to the manager of the state-owned China–Zambia Friendship Farm, the farm has no plans to export food to China. Here, the investment made by China is not driven by domestic food demand or the so-called 'Chinese strategy for food security', but by China's desire to maintain a positive image in developing countries. The manager, who indicated the farm had been loss-making from the beginning, stated that:

> Agricultural investment (especially in Africa) may not always yield a profitable outcome due to various challenges. Yet, we continue to be active in Zambia. There is historical reason, but the key reason is that our company is a state-owned enterprise. So in this sense, we are distinct from private companies – they only care about profit, but we shoulder social responsibilities and we are the symbol of China–Zambia friendships.[11]

Pull Factors

On the 'pull' side, Chinese investors have been drawn by Africa's abundance of natural resources, the large population size and market potential. Reflecting this, our fieldwork suggests that abundant local resources and growing markets have been important factors pulling Chinese investment into Zambia and Angola.

Previous studies have indicated that the primary motive for Chinese companies entering the African market is gaining access to natural resources. Zambia and Angola, in particular, offer rich resources such as copper, cobalt and oil, making them highly attractive to Chinese investors. Chinese companies have already invested heavily in Zambia's mining sector, with China Nonferrous Metals Mining Group—purchased through an international bid in 1998—the largest and oldest Chinese-owned mine in the country. By 2017, it had received investments totalling US$ 160 billion to exploit 5 million tons of copper and 120,000 tons of cobalt.

Market potential is also an attractive pull factor. Our fieldwork suggests Chinese investors are attracted by growing consumer demand in Angola and Zambia, as well as their neighbouring countries. Despite being a landlocked country, Zambia adjoins eight other countries, making it an ideal hub for businesses looking to expand their reach in the region. For example, an investor in a mushroom-growing business explained that one of the reasons they had chosen Zambia as a site for the business was its location as an overland hub, which makes it easier to export mushrooms to other countries in the region and beyond.[12] Angola, meanwhile,

[11] Interview with the manager of China–Zambia Friendship Farm, Lusaka, 2 May 2019.

[12] Interview with Mr. Yao, managing director of Jihai Agriculture Investment and Development Group, Lusaka, 29 April 2019.

boasts a large and rapidly growing market, with Chinese investors indicating that the country's substantial population of over 25 million people made it an attractive destination. In Luanda, we visited a new energy plant that specialises in producing rechargeable batteries. The factory was experiencing a surge in demand, both domestically and in neighbouring countries such as the Democratic Republic of Congo and Zambia, and had plans to ramp up its daily output from 1000 to 4500 units.[13]

A further pull factor is the availability of cheap labour. Our fieldwork revealed that a significant number of Chinese investors opt to invest in the manufacturing sector, with their primary motive for opening factories in Zambia and Angola being the low-cost labour force available in these countries. This has enabled them to manufacture goods at significantly lower costs compared to their home country.

Another pull factor when it comes to Zambia is its stable political environment, with the country recognised as the fourth most peaceful country in Africa, behind only Mauritius, Botswana and Ghana (Lusaka Times 2020). This stability represents a key advantage compared to other countries in the region, such as Angola, where political risks and crime rates are higher.[14] During our fieldwork in Zambia, we spoke with Mr. An and Mr. Wang, both of whom had previously conducted business in Angola and Nigeria but had since relocated to Zambia. They noted that one of the main reasons for this move was their belief that Zambia was safer and more peaceful than these other countries. The Managing Director of Bank of China in Zambia also attested to the country's relatively stable political environment and its conduciveness to foreign investors.[15]

In sum, Chinese investment in Zambia and Angola is motivated by both 'push' and 'pull' factors, with political and economic conditions in China and the host countries playing a significant role. China's economic environment—which includes rising wages, intense competition in domestic markets and stricter environmental regulations—as well as the host governments' policies and resources have all contributed to the above-mentioned factors.

[13] Interview with a manager, Luanda, May 2019.

[14] Chinese in Angola are more concerned about safety and security issues than Chinese in Zambia due to the higher crime rate in Angola (Li 2022).

[15] Interview with the managing director of Bank of China Zambia limited, Lusaka, 4 May 2019.

Strategies

Chinese companies operating in Zambia and Angola have over recent years formulated investment strategies that enable them to adapt more effectively to the local business environment. This section highlights some of these essential strategies.

The first strategy is centred around producing products customised to meet local demand. As previously mentioned, market potential is a crucial pull factor drawing Chinese companies to invest in Zambia and Angola. In order to capitalise on localised consumer demand, Chinese investors prioritise localised production when expanding their foothold in the African consumer market. A notable example is provided by Guangde International Group LDA's subsidiary, Fabrica dos Colchões, in Angola. Fabrica dos Colchões owns the only mattress factory in Angola, with an annual production capacity of 120,000 sheets. According to the CEO, the company's market share is currently 60 per cent, and it often reaches zero stock due to high demand. Guangde pursued a similar strategy in investing in battery production, catering to both Angola and other countries in Southern Africa. According to its senior manager, these investments were made after thorough market research.

The second strategy employed by various Chinese companies in Zambia and Angola involves tailoring their investment to available local resources. For instance, both African countries possess abundant natural resources that can be utilised in furniture production, including abundant supplies of teak, rosewood, mahogany, ebony, oak and walnut. These can be used to make unique, quality furniture that will appeal to local, regional and international markets. Reflective of this, we discovered during fieldwork that the biggest furniture-making companies in both countries—CNC Furniture Company in Zambia and Yewhing in Angola—are wholly Chinese-owned.

The third strategy involves adaptation, with many of the Chinese companies we interviewed putting in place measures to adjust to the host country's changing economic circumstances. This is particularly evident in the case of Angola. For example, the initial focus of Lucky Man Angola Developmento—established in Angola in 2003—was infrastructural building. However, since Angola entered a financial crisis in 2015, the group has attempted to transform its development strategy. In 2016, the group identified a 100,000 hectare site for an agricultural project,

then, the following year, invested over US$ 28 million to establish Angola's first fully automated cassava flour processing line. According to the group's senior manager, the decision to shift focus to agriculture was a strategic move:

> We observed that the 'oil-for-infrastructure' project can not be a long-term solution. During 2014–2015, we also observed the financial crisis in the country. To better survive in the Angolan market, we realised that we must adapt to the new environment. Our management team then decided to explore other options, and we saw that agriculture had great potential. However, we are aware that in this sector, patience is necessary to turn a profit.[16]

The manager's explanation resonates with Lee's (2018) research on Chinese engagement in Zambia's copper and construction industries. Lee argues that state-owned Chinese firms are characterised by 'profit optimisation', which entails satisfying multiple interests simultaneously. These interests include China's natural resource security and expanding the country's political influence in Africa, as well as profit-making and market expansion. This is in contrast to global private capital, where 'profit maximisation' is typically the sole objective.

Interaction with Local Suppliers

Previous research has identified various reasons potentially contributing to a low level of linkages between foreign investors and local suppliers. These include the poor quality and high costs of local suppliers, scarcity of local products, lack of a local network of specialised suppliers, cultural and language barriers between investors and suppliers and lower capacity and skill levels of host country suppliers (Wang and Zadek 2016; Tang 2019, 2021; Li et al. 2022). Our fieldwork observations and interviews in Zambia and Angola corroborate these findings. For instance, a Chinese investor who had been living in Zambia for two decades and is involved in producing mattresses informed us that she wished to purchase bed covers and a specific type of plastic bag from Zambia. Despite an extensive search, however, she had been unable to locate a local supplier capable of

[16] Interview with a senior manager, Luanda, 2019.

producing these items, forcing her company to import them from China instead.[17]

Previous studies also indicate that investor nationality can significantly influence the extent of linkage formation and spillover effects (Javorcik and Spatareanu 2011; Monastiriotis 2014). Here, our research indicates that, for a number of reasons, Chinese nationality is a crucial factor driving the limited interactions between investors and local firms in Zambia and Angola, indicating the potential for greater spillover effects.

Firstly, the choice of supplier made by Chinese investors is not merely an economic or business decision, but a nuanced choice that takes into consideration *guanxi* or longer-term benefits, as well as ease of doing business. Many of our interviewees explained that the Chinese community in Zambia and Angola is more or less an 'acquaintance society', where Chinese businesspeople know and support each other (Li et al. 2022). Hometown associations, along with other business and commerce associations, reveal the strong diaspora networks present within this 'acquaintance society' (Li and Shi 2020). When asked why Chinese suppliers were preferred over local ones (if there was a choice), interviewees would often explain that the Chinese suppliers were their *laoxiang* (老乡, someone from the same hometown), Chinese friends whom they drink with or recommended by someone influential from a specific hometown association. The consensus amongst many of our Chinese interviewees was that overseas Chinese should 'take good care of each other and support each other'. As the managing director of a mineral water factory explained: 'If all the suppliers (be it Zambian, white or Chinese) provide similar price, why don't we choose a Chinese who we have already known and do them a favour?'.[18]

Secondly, there is a relatively low level of trust between Chinese investors and local suppliers. Knack and Keefer (1997) have discussed the significance of trust in situations where goods and services are exchanged for payment. Many of the Chinese investors with whom we spoke, however, expressed mistrust in local suppliers and/or their products. In Angola, for instance, Chinese investors generally consider products made

[17] Interview with Ms. Zhai, Lusaka, 2019, 2 May 2019.

[18] Interview with Mr. Yu, managing director of Deep Foods Zambia Limited, Lusaka, 5 May 2019.

in Portugal to be of higher quality than those produced locally. Similarly, a manager of an agricultural company revealed he had more faith in chemicals from South Africa or the Netherlands than those made in Zambia. Additionally, several Chinese investors complained that their local suppliers did not deliver products on time.

Thirdly, some Chinese investors prefer Chinese suppliers due to the ease and efficiency of communication, with my previous study highlighting the significance of Chinese digital platforms and communication tools, particularly WeChat groups (Li 2022). This creates an uneven playing field, as local suppliers are excluded from these Chinese migrant/entrepreneur-only groups. Additionally, online enclaves are created amongst Chinese migrants, hindering linkage formation and interactions with local suppliers and wider local society (see Li 2022 and Li et al. 2022).

Finally, some Chinese companies, particularly those operating in multiple sectors, tend towards producing their own materials when they become strong enough. For example, in Zambia, we spoke with an investor whose business involves geo-tech services, project contracting, mining development, international trade and integrated services. In addition, the company is certified Class A in construction, housing and road earthworks by the Zambia Construction Committee. The investor explained that his company is capable of producing diesel oil, stones and other materials, allowing them to produce goods for their own use at significantly lower cost. The investor—also the managing director of the company—explained:

> The Chinese value self-reliance, and this principle can be applied to our operations as well. We have experienced significant losses in the past due to the unreliability of some of our local suppliers. Therefore, rather than depending on them, we should strive to rely on our own capabilities. To achieve this, we have taken steps to produce more materials to reduce our dependence on local suppliers.[19]

[19] Interview with the (former) managing director of Sinomine International Engineering, 30 April 2019.

Discussion and Conclusion

Having implemented a 'going out' policy in the early 2000s, numerous Chinese companies invested in Africa, going on to operate across the continent. Despite previous criticism that Chinese firms import labour from China, we found that these companies have become highly localised in Zambia, with over 90 per cent of jobs going to local workers. Moreover, none of the firms we interviewed confirmed the commonly held belief that Chinese firms prefer to hire their own nationals. In fact, we found that Chinese staff rarely exceed 10 per cent of the total workforce, a ratio that has continued to fall over recent years. These findings are consistent with other studies (see Sautman and Hairong 2009; Oya and Schaefer 2019). Many firms have even stated their desire to 'fire as many Chinese workers as possible and replace them with locals',[20] due to salaries for Chinese employees working overseas being much higher than those for local workers. It should be noted, however, that managerial and highly technical positions are still primarily held by Chinese workers. Nevertheless, during our research we did observe that some Chinese companies had made progress in hiring more local staff for these positions.

The investors we interviewed also emphasised their commitment to staying in Africa, for better or worse. Whilst a number of Chinese companies in the construction and trade sector have pulled out of Zambia and Angola in recent years due to their susceptibility to economic fluctuations, most Chinese investors in the agriculture/mining/manufacturing sectors have chosen to remain. Particularly noteworthy is that all the companies we spoke to in the two countries expressed no plans to leave despite worsening economic conditions, exacerbated by the COVID-19 pandemic and mounting debt pressures.

Although the profiles, motivations and strategies of Chinese investments in Zambia and Angola bear several similarities, there are also discernible differences. Compared to Zambia, the Chinese business sector in Angola has stronger 'enclave' characteristics. The majority of Chinese companies in Angola are located along the highway near Cidade Da China, the biggest Chinese trading centre (referred to by the Chinese as 'China town') in Angola. These Chinese companies simultaneously

[20] Interviews with multiple Chinese managers in Zambia and Angola, April and May 2019.

compete and cooperate with each other in the same supply chain—both horizontally and vertically. Selection of the site was also influenced by safety and security concerns in light of Luanda's high crime rates and social disorder. By contrast, the Chinese business sector in Zambia is more dispersed, with companies operating in various sectors and locations across the country. Whilst there are some clusters, they are not as concentrated as in Angola.

It is important to note that despite the lengthening duration of Chinese investment, there has not been a corresponding increase in linkages with local suppliers (the main focus of this book's analysis). Chinese companies mostly source basic products or materials from local firms (e.g., wood, stone, clay), which can be characterised as low technology intensity. In many cases, other basic products, such as glue and plastic covers, have to be imported from China, South Africa or Europe. This is not to say that Chinese investments lack potential in terms of generating more positive market spillover effects. In fact, we found that Chinese investments may be able to create new markets for local business. For example, Zambia Sugar Plc, Zambia's largest sugar manufacturing company, had never sold bagasse (sugarcane pulp) until Chinese firm Jihai Agriculture approached the company.[21]

The outstanding question is whether and how the Zambian and Angolan governments, along with their respective industrial policies, can play a more significant role in promoting linkages and facilitating spillovers. For instance, the Angolan government has established an impressive set of regulations, which includes a local content policy—referred to as 'Angolanisation' in the oil industry since 1957. As Teka (2011) and Corkin (2012) note, however, implementation of the policy has failed to achieve its intended objectives. If African economies are to fully reap the benefits of the Chinese presence in the continent, then policy implementation and the ability to create fundamental structural changes—rather than the capacity of state elites to control the negotiating process—should be treated as being at the core of African agency (Kragelund and Carmody 2016; de Carvalho et al. 2022).

[21] According to Mr. Wang, a senior manager of Jihai Agriculture, Zambia Sugar Plc initially refused to sell bagasse as the company as its managers were unsure how much they should sell and what the appropriate price might be. Interview with Jihai's manager Mr. Wang, Lusaka, 29 April 2019.

Acknowledgements The fieldwork of this research was jointly conducted with Dominik Kopiński, Andrzej Polus, Jaroslaw Jura, Paulo de Carvalho and the late professor Ian Taylor. Part of the materials used in this chapter have been published at Journal of Southern African Studies, see Li, H., Kopiński, D., and Taylor, I. (2022).

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CHAPTER 9

Chinese Manufacturing Companies in Zambia: Linkages vs. Enclaves

Wojciech Tycholiz

Introduction: Economic complexity and transformation

Current assumptions about the transformative role of Chinese investment seem insufficiently concerned with the historical industrial trajectory and path-dependency of African countries. These factors have not only determined the present industrial profiles of many of these countries—including the subject of this chapter, Zambia—but are likely to shape their economic structures going forward. This situation can be illustrated using the Economic Complexity Index (ECI) developed by Hidalgo et al. (2007), and Hidalgo and Hausmann (2009), which postulates that countries improve their ECI by accumulating productive capabilities, thereby shifting from low to higher complexity products. Countries with higher economic complexity are generally able to produce a more diverse array of products. Zambia's development trajectory has, however, followed

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D. Kopiński et al. (eds.), *The Political Economy of Chinese FDI and Spillover Effects in Africa*, International Political Economy Series,
https://doi.org/10.1007/978-3-031-38715-9_9

a path-dependency process, with its economic structure constructed around copper mining (Kragelund 2009). This, coupled with largely failed attempts to diversify the economy (Chitonge 2016), has meant the country has not achieved the level of economic complexity required for structural change.

Countries with more developed manufacturing sectors tend to have higher ECI ratings and are more developed—for instance, in 2021 Japan, Switzerland and Germany had an ECI rating of around 2.0, whilst Tanzania and Nigeria had ECI ratings of –1.09 and –1.53 respectively. With an ECI rating of –0.74, Zambia ranks 107 out of the 133 countries assessed, its economic complexity over recent years either stagnant or falling (OEC 2022) (see Fig. 9.1).

This chapter seeks to highlight this challenge through focusing on backward spillover effects attributable to interactions between foreign firms and their domestic suppliers. Not only is this 'the right place' to look for spillover effects (Javorcik 2004), it represents the most promising spillover channel in the African context, as it offers the highest potential for multiplier effects. Long ago, Markusen and Venables (1999) pointed out that foreign direct investment (FDI) can act as a catalyst for the development of local industry. Over time, this may boost

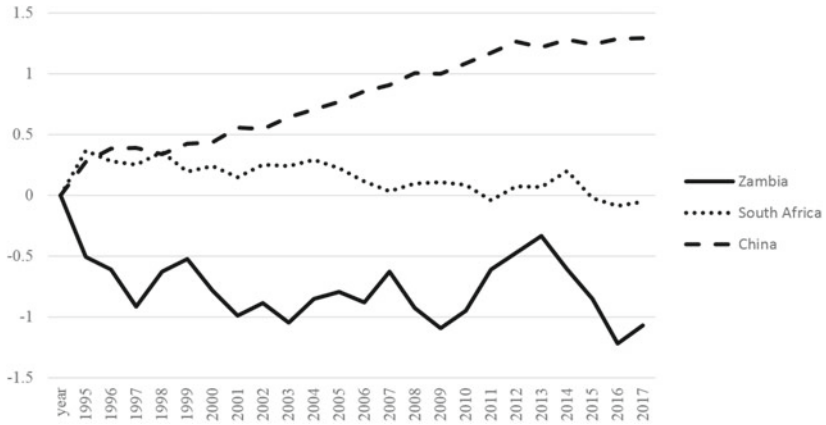

Fig. 9.1. Zambia's Economic Complexity Index (1995–2017) (*Source* Standard International Trade Classification (SITC), The Atlas of Economic Complexity 2021)

industrialisation, as evidenced in the case of Malaysia (Rasiah 1995). By contrast, the worker mobility channel explored by a number of studies (Görg and Strobl 2005; Auffray and Fu 2015) offers little hope for spillovers in Sub-Saharan Africa, due to the pay gap between foreign and local firms (Morrissey 2012) and limited worker mobility (Calabrese and Tang 2020). Given their relative distance from the technological frontier, African countries are understandably interested in benefitting from backward spillover effects. Nevertheless, guided by the literature (Morrissey 2012), and informed by our fieldwork in Zambia, we posit that linkages—the term credited to Albert Hirschman (1958) to denote relationships within industries—rather than spillover effects should be central to our analysis. Linkages are not only a prerequisite for spillover effects but hold the key to structural transformation in a low-income country such as Zambia. This, in fact, is precisely what Morrissey postulates when he says that 'linkages facilitate spillovers and provide benefits themselves, while learning associated with spillovers increases the benefits of linkages' (Morrissey 2012, p. 27).

Drawing on the case of the manufacturing sector in Greater Lusaka Area, we investigate the backward vertical and horizontal spillover effects of Chinese investments in Zambia. Towards this end, we start by evaluating existing linkages between Chinese investors and local Zambian companies, before going on to present the Zambian perspective on the linkage formation process and spillover effects from Chinese FDI.

Having thoroughly investigated the existing interactions between Chinese and local Zambian companies, we found barely any linkages between them. Instead of cooperating with local Zambian companies, Chinese firms tend to operate in manufacturing enclaves or bubbles. As a result, Chinese investments in Zambia translate to few (if any) spillover effects. Interestingly, the enclave character of operations is applicable not only to Chinese investors—during our second field visit to Zambia, we established that local non-indigenous manufacturing companies also tend to operate in manufacturing enclaves. Moving beyond providing evidence on weak linkage formation, in the second part of the chapter we offer insights into why interactions between Chinse investors and local companies so rarely occur. In our view, the enclave character of Chinese investments in Zambia's medium- to high-tech manufacturing sector is mainly driven by: (1) structural disarticulation of the local economy; (2) the small size of the local economy and (3) specific endogenous characteristics of the Chinese investors.

In our research, we focused on small and medium enterprises operating in non-FBT (food, beverages, tobacco) sub-sectors in Greater Lusaka Area (Table 9.1). In total, we conducted over 50 semi-structured deepened interviews with local manufacturing sector representatives, including Chinese and Zambian firms. The Zambian manufacturing companies were selected based on their business profile, including sub-sector and size (number of employees, total assets value, revenues). The selection process and methodological considerations concerning the Chinese companies are presented in Chapter 8.

Methodological Considerations and Constraints

The first important methodological consideration for our study was the correct identification of local inputs. When asked about the origin of inputs (local vs. imported), around half the respondents indicated they bought locally, with the remainder procuring inputs from abroad. However, a follow-up question digging into the origin of locally available inputs revealed that they were all, in fact, imported. A rule of thumb is that when procuring larger quantities, companies prefer to import inputs, mostly from South Africa. Conversely, if the transaction value is relatively small, companies prefer to purchase inputs from a local supplier, which, in turn, imports in bulk quantities. A good representation of this can be seen in the case of locally registered company MM Integrated Steel Mills Ltd., which was often referred to as a source of quality steel products for manufacturing companies operating in Zambia. As indicated by a representative of a trailer manufacturer, 'when we need bulk quantities of good quality steel we import from South Africa, for smaller orders we use a local supplier the MM Integrated Steel' (Interview with company no. 4, 2023). Although locally registered, MM Integrated Steel is, in fact, a multinational company operating in Tanzania, Democratic Republic of Congo, Mozambique, Malawi and Zambia. The company is part of Motisun Group, a privately owned diversified conglomerate based in Tanzania (founded by Subhash Motibhai Patel, a Hindu businessman).

Given the study's main objective was to identify linkages and spillover effects between Chinese foreign investors and local Zambian companies, another methodological prerequisite was correct identification of the two groups. Whilst at first glance this may appear a trivial issue, it turned out to be a major challenge. In particular, we had difficulties identifying local Zambian companies. Although theoretically and legally a Zambian

Table 9.1 Sector and sub-sector representation of the interviewed Zambian manufacturing companies

Company No	*Sector*	*Sub-sector*	*Top product*	*EE*
Company #1	Chemicals/Rubbers & Plastics	Plastics	Pipes	40
Company #2	Leather Fabrication	Leather Fabrication	Leather garments	167
Company #3	Fabricated Metal Products	Metal Fabrication & Engineering	Window frames & windows	60
Company #4	Fabricated Metal Products	Metal fabrication & engineering	Welded Mesh	22
Company #5	Chemicals/Rubbers & Plastics	Plastics	Pipes	36
Company #6	Fabricated Metal Products	Metal Fabrication	Iron cast	500
Company #7	Fabricated Metal Products	Metal Fabrication	Gear	22
Company #8	Fabricated Metal Products	Metal fabrication & engineering	Welded Mesh	52
Company #9	Chemicals/Rubbers & Plastics	Paints	Oxides	80
Company #10	Fabricated Metal Products	Metal Fabrication	Bronze Castings	30
Company #11	Chemicals/Rubbers & Plastics	Plastics	Joints	5
Company #12	Chemicals/Rubbers & Plastics	Plastics	Pipes	80
Company #13	Non-metallic Mineral Products	Cement	Cement	800
Company #14	Fabricated Metal Products	Metal Fabrication & Engineering	Window frames & windows	12
Company #15	Fabricated Metal Products	Metal Fabrication & Engineering	Garden equipment	80
Company #16	Fabricated Metal Products	Metal Fabrication & Engineering	Hammer mills	350
Company #17	Basic Metal Industries	Metal Fabrication and Engineering	Trailers	130
Company #18	Fabricated Metal Products	Metal fabrication & engineering	Welded Mesh/ Conforce	40
Company #19	Chemicals/Rubbers & Plastics	Plastics	PP Woven Sacks	350
Company #20	Paper & Paper Products	Paper & Printing	Paper boxes	30
Company #21	Fabricated Metal Products	Metal Fabriction	Roofing sheets	30

(continued)

Table 9.1 (continued)

Company No	*Sector*	*Sub-sector*	*Top product*	*EE*
Company #22	Non-metallic Mineral Products	Plastics	Containers	28
Company #23	Fabricated Metal Products	Leather Fabrication	Customised metal products	5
Company #24	Chemicals/Rubbers & Plastics	Metal Fabrication & Engineering	Varnishes	12
Company #25	Non-metallic Mineral Products	Metal fabrication & engineering	Pipes	120

Ee—Number of employees.
Source Author's contribution based on interviews and data from the Zambia Association of Manufacturers.

company is one formally registered in Zambia by a Zambian citizen (or a legal entity of Zambian origin), in practice such a definition—at least in case of Zambia's manufacturing sector—seems insufficiently precise. For instance, how should a locally registered company by a naturalised person (e.g. an ex-Chinese investor who arrived to Zambia in the 1990s, started a locally registered business and few years later became a Zambian citizen) be categorised? Although legally this is a local Zambian company, functionally and operationally it has more in common with Chinese investors, as it continues to operate within the *guanxi* network, the majority of its customers are Chinese and it has virtually no linkages with other local firms. In fact, the only difference between a 'local Zambian' company such as this and a Chinese investor is the fact that—at some point—the Chinese owner of the 'local Zambian' company became a Zambian citizen.

This problem is further complicated when we take into consideration subsequent generations descended from foreign nationals who moved to Zambia and took Zambian nationality. In our case study, this issue was particularly relevant to second-, third- and fourth-generation Zambian citizens of Indian descent. Although they were born and raised in Zambia (and consider themselves to be Zambians), the business management style, corporate culture, know-how and understanding of their technological manufacturing is on a par with companies from developed countries. Similar to Chinese companies, the manufacturing companies owned and run by those of Hindu descent tend to operate in bubbles or enclaves. We elaborate more on this problem later in the following section, where

we distinguish between two types of local manufacturing companies: indigenous and non-indigenous.

Zambia's Manufacturing Sector

As argued in previous chapters, the manufacturing sector is particularly important when it comes to the structural transformation of developing economies. The industrial sector, particularly medium- and high-tech manufacturing, tends to have stronger linkages with other sectors (agriculture, services) in the early stages of development. Manufacturing sector growth, therefore, creates momentum for growth across the entire economy. Despite being high on Zambia's development policy agenda, however, manufacturing sector expansion has been very limited. Current levels of industrial (under)development have their roots in the colonial economy, when Northern Rhodesia was exploited by and dependent on the British Empire's industrial strategy.

Manufacturing in Northern Rhodesi

During colonial times, Northern Rhodesia's economy was strongly dominated by and subordinated to the mining sector. By one account, in 1938, copper exports accounted for 86.5 per cent of the country's total export value, whilst the mining industry accounted for 69.3 per cent of the local economy's GDP (Baldwin 1966).

In fact, before the 1940s, Northern Rhodesia's manufacturing sector was virtually non-existent. Some written records indicate there was only a single manufacturing company—the Zambezi Sawmill in Livingstone, which provided timber for the railway industry—established in the country (Young 1973). Given that the official census data was incomplete (especially as it did not cover the deep interior), however, the number of manufacturing firms in early colonial times was likely much larger than this. According to Young (1973), in the 1930s about 20 per cent of European settlers were working in the manufacturing sector, although the vast majority were in companies providing inputs and services for the mining sector. Other components of a broader manufacturing sector, such as utility services (water and energy), were slowly added to the local economy over the course of the decade. Again, the utilities sector was centred around the mining industry, its main role being to provide a stable supply of water and electricity to the mines. According to a

1947 census, there were 107 manufacturing firms operating in Northern Rhodesia, mostly in mining processing, agriculture and forestry (Barber 1961). In 1954, the manufacturing sector accounted for just 4.7 per cent of GDP, employing about 19,000 people, or 7 per cent of the population. Until independence in 1964, the manufacturing sector's contribution to GDP consistently remained below 5 per cent, with the vast majority of this generated by metal fabrication and chemical processing—both by-products of the mining sector (Chitonge 2021, p. 51).

The key factors contributing to manufacturing's low share of the economy included the small size of the local market; lack of skilled labour; lack of interest by foreign investors in non-mining projects and prohibitive transportation costs impeding the importing of intermediate goods and exporting of finished products (Austin et al. 2017; Henry 1946).

Manufacturing in Zambia

In the first decade following independence, the manufacturing sector expanded rapidly, as reflected in its increasing share of GDP: from 5 per cent in the mid-1960s to close to 30 per cent in the early 1990s. This dynamic growth was catalysed mostly by state activities in the economy, including a rising number of state-owned and -run manufacturing companies (Lombe 2018). Zambia's industrial policy promoted linkage formation through increased use of local inputs, especially in the mining sector. In a sense, this arrangement was based on the premise of a ministry department (e.g. mining) procuring inputs and services from state-run manufacturing companies supervised by another ministry department. Although such mechanisms promoted linkage formation they also led to inefficiencies, meaning that over the longer term this state-led industrialisation strategy proved unsustainable. As one respondent put it, the 'manufacturing sector was primarily based upon the basis of state protection. It was not economically viable. It was unable to compete' (Interview with company no. 8, 2023).

Since hitting a peak of 27 per cent in 1993, the manufacturing sector's contribution to total output has decreased sharply, to 7.7 per cent in 2018 (Chitonge 2021, p. 162). The privatisation process, part of the broader liberalisation of Zambia's economy, acted to verify (or otherwise) the economic viability of previously state-led manufacturing businesses. Once privatised, most could not survive stiff foreign competition and shut down. The early 1990s transformation processes were particularly

hard for the medium- to high-tech manufacturing sub-sector companies that provided relatively complex goods for the mining industry. Most disappeared from the market, giving way to better quality, less costly imports. This tendency to substitute local inputs with imported ones translated into falling numbers, as well as reduced intensity, of intra- and inter-industry linkages (Fessehaie 2012).

According to the most recent available figures, in 2020, the manufacturing sector provided jobs for 252,075 people. Compared to the 166,143 people employed in 2005, this constitutes an increase of about 50 per cent (Simuchimba et al. 2020). Over the same period, however, Zambia's population increased from 11.56 million to 18.93 million, or by about 64 per cent. In other words, job creation in the (formal) manufacturing sector failed to keep pace with general population growth over the analysed period.

Since the early years of Zambia's independence, the manufacturing sector has been seen as a pivotal element in the country's economic transformation. Development of the manufacturing sector was supposed to reduce Zambia's dependence on imports from South Africa, and was envisaged as crucial to diversifying the economy away from a reliance on natural resources, whether in raw or semi-processed form. These objectives have not been achieved, with the country still heavily reliant on imported inputs and raw materials (Szirmai et al. 2002).

Moreover, the manufacturing sector in post-independence Zambia has been dominated by low-tech sub-sectors—mainly natural resource processing—with relatively low total factor productivity and low value addition. Since the early 1990s, the FBT manufacturing cluster has persistently accounted for two-fifths of manufacturing value addition (Chitonge 2021, p. 164). Meanwhile, one estimate suggests that medium- to high-tech manufacturing activities account for only 13 per cent of the sector's total output (Central Statistical Office 2014).

This is also reflected in low manufacturing value-added (MVA) per capita indicators, which point to a country's industrialisation level. Zambia's MVA per capita has not only been low compared to developed countries, but other African states–over the 1990–2018 period, Zambia's MVA per capita grew by a sluggish 15.8 per cent, representing growth of just 0.9 per cent per year. This suggests Zambia has not successfully shifted from low value-added to high value-added activities (Chitonge 2019).

Given its ability to act as a conduit for technological catch-up and broad-based improvements in productivity, the manufacturing sector remains a crucial sector when it comes to sustainable development. Unfortunately, in Zambia's case, this catalytic role has yet to materialise.

Non-FBT Manufacturing Sector in Zambia

Non-indigenous Zambian companies appear to dominate the Zambian non-FBT manufacturing sector: of the 25 local Zambian manufacturing companies we visited, only two were owned by indigenous Zambians. Here, *indigenous Zambian* refers to locally registered companies owned by black Zambians of local decent (i.e. several generations of ancestors who lived in Zambia). By contrast, *non-indigenous Zambian* refers to locally registered companies owned by Zambians of foreign descent.

In most cases, non-indigenous Zambian companies are family-owned small- or medium-sized enterprises run by second- or third-generation descendants of the founding investor. Founders of non-indigenous companies immigrated to Zambia between the 1930s and 1990s, registered their businesses locally and applied for Zambian citizenship. Subsequently, their descendants—born and brought up in Zambia—continued and often expanded (vertically and horizontally) these family businesses.

This differentiation between indigenous and non-indigenous companies is methodologically important for two main reasons. Firstly, it shows the dualism and fragmentation of Zambia' manufacturing sector: local indigenous manufacturing companies tend to be micro-companies (with less than ten employees), operate in the informal sector and focus on assembling relatively simple products such as crates, frames, furniture and clothing. By contrast, the local non-indigenous companies tend to operate in the formal economy, are relatively large (10 + employees) and well-organised and manufacture more complex products that rely on skilled labour (e.g. polymer products, double-glaze windows, agriculture machines).

Secondly, the managerial, operational and technological character of non-indigenous companies appears very different to their indigenous peers. In our sample, a common scenario was that non-indigenous owners and managers graduated from top business and engineering schools in Europe and America, and had international managerial experience and exposure to international markets. They were also up to date with the latest technological advancements. In fact, on a technological level they

could compete with Chinese and other foreign companies as equals. As a result, the business culture, technological know-how and *modus operandi* of their companies were closer to European and American family-owned manufacturing firms than Zambian indigenous companies.

This is not to say there are no Zambian indigenous companies capable of competing as equals with non-indigenous Zambian or foreign manufacturers. In our sample, three out of the 25 manufacturing firms were indigenous, competitive and quite successful enterprises. One, for example—a manufacturer of components and spare parts for mining equipment—was owned and run by an engineer educated and trained in Germany, who used to be head of the import substitution department of a foreign mining company in Zambia. The second indigenous local company, a manufacturer of PVC pipes, pipe joints and accessories, was formed as a result of a joint-venture buyout by local managers. Before the buyout, the company was run as a joint venture between Chinese investors and local managers (who had previous business exposure to international companies). The Chinese investors brought technology, know-how and capital, whilst the indigenous partners were responsible for business' marketing, sales and legal aspects. From the very beginning, however, the business model assumed an exit option for the Chinese investor. The local staff and managers were trained in pipe production and technology with the objective of taking over operations after about three years. Such joint ventures are, however, a rarity in Zambia.

When asked about other examples of foreign–local cooperation, none of the interviewed experts (including representatives of the Zambian ministries, the banking sector and the Zambia Association of Manufacturers) could point to successful Chinese–Zambian joint ventures. Similarly, when the owners/managers of the three above-mentioned indigenous Zambian companies (as well as interviewees from non-indigenous firms) were asked to name an example of an indigenous manufacturing company (excluding their own, when applicable), they all struggled to come up with a single example.

During an interview with the owner/manager of a company producing corrugated packaging, we asked if he had any local competitors. Without hesitation, he responded that 'all of my competitors are local companies'. After a follow-up question distinguishing between indigenous and non-indigenous companies, however, he added:

> If you put it that way, then there is no indigenous Zambian company in packaging business that I know of. There is a Lebanese company here, there is an Indian in Ndola, they are the second or third generation, but they all are from the outside. As for indigenous Zambian companies I don't have any competition … In 2010s there were like two or three companies in corrugation packaging, now it is around ten or twelve, but they are all from outside. (Interview with company no. 3, 2023)

Similarly, in Greater Lusaka Region there are about seven Zambian manufacturing companies specialising in polythene packaging and pipes, all of which are owned and run by second- or third-generation residents of Indian descent (Interview with company no. 6, 2023). Another source pointed out that 'around three-quarter of business that you see around here [in Lusaka] are run by Indians' (Interview with company no. 10, 2023). In fact, as mentioned earlier, our respondents struggled to name even one indigenous Zambian company operating in the non-FBT manufacturing sub-sector, leading us to the conclusion that it is dominated by non-indigenous companies.

It should be noted, however, that our sample was limited to manufacturing companies operating in Greater Lusaka Area. Nevertheless, when we asked the Zambia Association of Manufacturers representatives for a list of indigenous companies, they were only able to identify about ten firms (out of the association's over 320 members, which accounts for approximately 90 per cent of the country's total manufacturing production) as local indigenous companies (Zambia Association of Manufactures 2023).

Puzzled by this fact, we asked a series of a follow-up questions, including why the Zambian engineering sub-sector is dominated by non-indigenous companies. Here, most of our respondents lamented the considerable difference in entrepreneurial spirit they perceived between indigenous and non-indigenous companies, with one representative comment being, 'When there is money and there is business, there are also Indians' (Interview with company no. 5, 2023). Business discipline and entrepreneurial spirit has enabled non-indigenous companies to grow with the market. The major source of capital for virtually all the non-indigenous manufacturing companies we visited was retained earnings: 'Our business has grown from our own resources. It started in 1941 … and it has taken us many years to get where we are now' (Interview with company no. 9, 2023). The ability of non-indigenous manufacturing

business to identify niches and market momentums was also helpful when it came to expanding:

> Before 1990s my parents were in clothing and footwear. In the 1990s – when the world economy started to open – the market started to open up. We had a fair amount of funds and access to foreign exchange, that is when we decided that agriculture was the way forward. But we are not farmers, so for us the agriculture equipment was the way forward. The company has grown from that, together with the market. (Interview with company no. 9, 2023)

When asked why they believe indigenous Zambians lack the entrepreneurial spirit and motivation to run their own business, respondents identified the educational system and 'mentality' as root causes:

> Unfortunately, most of the indigenous people were brought up educationally to think in terms of looking for jobs. They did not have the history of going into business. The way they were educated in the school in colonial times, their aspiration, was to get a job. But that is why the government has encouraged – going to work in mines or going to work as teachers. Since colonial times they were presented with limited options, so after independence it takes time to get over this mentality. It is happening, but it is a very slow process. (Interview with company no. 9, 2023)

Thus, it is argued that 'the Zambian mindset' involves 'just working' and 'not thinking of anything else' in terms of a career path, with the most common scenario for an average Zambian person being graduation from university and then finding employment. A further perceived problem is the inability to spot business opportunities and seize them, as 'the educational system has not been developing creativity, critical thinking and money management' (Interview with company no. 10, 2023).

We also asked respondents about the possibility of spin-offs from their business—that is, when an indigenous employee, having gained experience and know-how, leaves the non-indigenous company and starts their own business. Our respondents unanimously agreed such a scenario is very unlikely:

> This is not an overnight business you can start. We struggled many times since 2010 when we started. It is not something easy like drill a bore

> hole, take the money and go. It is something like a long-term mission, you have to build a relationship, you have to be patient – it is an open secret, business needs time to grow. If you see the brand name on the boxes, you can go and approach those companies, there is no secret in it. If somebody has the muscle to start, they can start. (Interview with company no. 3, 2023)

Similar views were expressed by an indigenous Zambian machine engineer and entrepreneur, who set up a company in Lusaka in the early 1990s and provides spare machine parts to mining companies (mostly exporting to South Africa). In order 'to start something of your own, it takes a lot of sacrifice and patience—and most [indigenous Zambian] people do not have that patience. They would rather wait for the month end and get their salary' (Interview with company no. 19, 2023). He added that 'unfortunately, this is the case—the Zambian manufacturing sector is run by non-indigenous Zambians' (ibid.). Like the other respondents, he was unable to name a single indigenous Zambian company in the engineering manufacturing sub-sector.

Another respondent, a manufacturer of windows, windows frames, doors and kitchen furniture, pointed out that whilst there are manufacturing companies run by indigenous Zambians, they are concentrated in food processing sub-sectors, where they have a comparative advantage. He indicated that manufacturing complex products where high-level engineering skills are required is a challenge in Zambia:

> Making frames and windows require more knowledge and technology, we use our skills and expertise to produce it. We have the knowledge, and we know how to use it. Local indigenous companies are lacking on this, lacking on skilled labour. That is why there is more of them in food processing than in engineering … Maybe with time we will see more indigenous Zambians into engineering manufacturing. (Interview with company no. 12, 2023)

In sum, one of the most striking characteristics of Zambia's contemporary manufacturing sector is its fragmentation and dualism. Outside FBT sub-sectors—where the number of indigenous Zambian companies is arguably relatively high—the local manufacturing sector is seemingly dominated by non-indigenous companies.

Indigenous manufacturing companies tend to operate in the informal economy, producing simple products that have relatively low value

addition and require low technological complexity (e.g. crates, frames, tables and other kerb-side manufacturing products). By contrary, non-indigenous manufacturing companies operate in the formal economy, procure most of their raw materials and inputs abroad and do not believe that foreign investors—including the Chinese—have superior technology they could use as a comparative advantage. If anything, the Chinese investors use low pricing as their main market strategy to win customers. There are also very few (if any) linkages between non-indigenous local companies and Chinese investors.

Chinese Investors in Zambia: Linkages vs. Enclaves

The above is not to say that Chinese companies do not interact with Zambian companies at all. The interactions that do occur are not contractual in nature, however, and so do not result in long-term linkage formation. Rather, they are simple buyer–seller interactions, which do not involve technology or knowledge transfers. In the best-case scenario, the Chinese investors are returning customers, but this situation usually only arises for limited types of products that are difficult (i.e. costly) to import directly from China. As one interviewee pointed out, 'we do have a lot of Chinese customers for our fuel tanks, which are of good quality; they like the product and they often come back—that is the best feedback'. The main reason behind this is not, however, quality, but the price advantage of the local manufacturer: 'fuel tanks are bulky, not easy to transport, therefore we have a competitive advantage when producing them here in Zambia' (Interview with company no. 9, 2023).

Chinese Manufacturing Bubbles

All respondents highlighted that, aside from simple market transactions, they do not have any interactions with Chinese companies. From the Zambian perspective, Chinese investors appear to be into 'selling their own things' rather than establishing partnerships with locals (Interview with company no. 19, 2023). According to one respondent, the Chinese companies 'have created kind of a bubble that they operate in and it is very hard to break into that and very hard to have any real interaction' (Interview with company no. 6, 2023). This view was supported by a manufacturer of corrugated products:

> I had two or three Chinese customers, but they have been gone now. They went to other Chinese because they offered a lesser price. I lost a biscuit manufacturing company (a Chinese company), I lost a juice manufacturing company (a Chinese company again). I am not saying that only my Chinese customers are going. Everybody who is for low price has been leaving. (Interview with company no. 3, 2023)

A similar outflow of existing Chinese customers was recounted by another respondent, who stressed that this preference for working with other Chinese firms rather than local ones is universal across all sectors of the economy. In support of this view, he shared an example from his insurance business:

> There are only 24 insurance companies in Zambia, including one Chinese. It opened about 2–3 years ago. We have no Chinese clients anymore, they all went straight to the Chinese [insurer]. So it is not that there is no local products or services available. Local people are trying to get into them, but they feel more comfortable with their own. (Interview with company no. 6, 2023)

The local companies' views on their limited interactions with the Chinese are echoed by the Chinese investors themselves, who admit to very limited relationships with local firms (see Chapter 8 for more details). This lack of interaction between Chinese investors and local companies in contemporary Zambia in many ways resembles the lack of interaction that characterised relations between British companies and the Northern Rhodesian economy. Then as now, the character of the business relationship was not supportive of linkage formation, with foreign company activity instead resulting in the formation of enclaves.

Given that Chinese companies appear to operate in barely penetrable bubbles, the possibilities for linkage formation and, in turn, spillover effects are minimal. Interestingly, the enclave character of manufacturing activities can be observed not only amongst Chinese investors, but amongst non-indigenous manufacturing firms, which—like foreign investors—exhibit limited interactions with local indigenous companies.

The Enclave Industry

The enclave character of different economic activities has been subject to scientific research since at least the mid-twentieth century, when it was elaborated on by researchers from the structural dependency school of thought. From an early stage, development studies scholars observed that strong export revenues did not necessarily lead to coherent and sustained development. In fact, many developing countries appeared unable to realise gains from their exports (Cardoso and Faletto 1979; Singer 1950; Weisskoff and Wolff 1977). Instead of generating multiplier effects, the leading sectors (e.g. plantation or extractive mining), which had enclave-like characters, merely constituted 'domestic investment on the part of industrialized countries' (Singer 1950, p. 475).

From an economic geography point of view, an enclave can be defined as 'a physically, administratively, or legally bounded territory whose geography or morphology is intimately related to the following economic characteristics: dependence on one or a few larger firms; high specialization in one activity; and weak integration into the local economy, which is used primarily to access local factors of production' (Phelps et al. 2015, p. 120). Besides being physical, administrative and/or legal in nature, enclaves can be also functional. Rapid export revenue growth in the short- and medium term can lead to enclave-led growth generating positive net local economic impacts, mainly based on internal economies of scale. In the long term, however, such growth is unsustainable.

The mining town enclave represents a classic enclave industry development type, with mining multinationals operating 'company towns' where there are few or no backward and forward linkages. Rather than collaborating with local companies, the mining camp vertically integrates (internalises) the production process, offering scant knowledge and technological transfers beyond the camp itself (Phelps et al. 2015). Aside from labour, most forms of capital (predominantly technological and financial) are almost entirely imported. Whilst upper-level employees are imported, low-level unskilled direct employment is localised in areas close to the mining site. As labour is housed locally, it does induce some linkages, such as expenditure on consumer goods and services. However, international mining companies tend to internalise this induced linkage too, introducing tokens for employees to redeem at local shops or other amenities. The technological and cognitive distance between the mining company and local suppliers means knowledge and technology transfers

are reduced, as the mining company does not anticipate that any significant benefits will arise from cooperation (Atienza et al. 2012). Most of the produced outputs are exported either directly or via a second mining town (a commercial node), which links—through railways and ports—mining operations with the rest of the world economy (Garcés 2003).

This type of enclave offers, at best, temporary industrialisation coupled with the illusion of development. Although investment in mining generates considerable export revenue, contributes to GDP growth and the apparent urbanisation of extractive (primary and secondary) towns, it does not contribute to sustainable development. Once mining deposits are depleted, the camp becomes deserted. Given the weak forward and backward linkages with local companies, a high level of dependency on mining activities is not conducive to sustainable economic growth and development.

Another relevant and important strand of economic enclave literature deals with the national economy as a whole (Dietz 1985; Singer 1950; Weisskoff and Wolff 1977). Here, the entire nation constitutes an enclave, with the majority of benefits and multiplier effects accrued by individual multinational companies and/or their home economies, rather than locals in the host country. In this scenario, the likelihood of linkages spontaneously emerging is very low, as the main multiplier effects are generated in the investor's place of origin rather than the local economy (Singer 1950, p. 475). Similar to the company town, the export of resources stimulates little or no local processing or value addition, thereby leading to few if any spillovers to the local economy (Phelps et al. 2015).

Early on, dependency studies examined the enclave character of plantation farming and mining activities—production sites oriented at exploiting local resources, using basic processing to make the exporting process more efficient, with very limited local value addition. Later, 'modernised dependency' switched the spotlight to enclave industries, which, despite having more value-added locally, are still export-oriented and disarticulated from the local economy, with minimal domestic linkages.

In terms of the enclave character of today's manufacturing sector—at least in the case of Zambia—pockets of efficiency (non-indigenous Zambian companies manufacturing locally consumed goods) can be observed where productivity and value addition is relatively high, especially compared to informal manufacturing companies and local indigenous companies. These manufacturing enclaves are not, however, creating linkages, and thus remain disconnected from other sub-sectors, as was

the case with mining towns and plantations. Thus, the prospects of transforming Zambia's economy through the creation of linkages and spillover effects appear as distant as it was during colonial times.

When Weisskoff and Wolff (1977) examined the Puerto Rican economy, they hypothesised that 'transformation of the agricultural enclave of the late 1940s into a manufacturing enclave by the early 1960s has left Puerto Rico a series of unrelated, noninteracting, export-oriented activities which have no ties to the island other than a common labor force and generous tax exemption' (Weisskoff and Wolff 1977, p. 613). Our hypothesis differs in that we do not consider Zambia's manufacturing enclave to be export-oriented or characterised by unrelated activities. Rather, most of the country's manufacturing output is produced for the local market, meaning manufacturing activities are to a degree related to what is consumed by the local economy. Even so, the manufacturing sector is unable to create backward or forward linkages—whether with other local companies or Chinese investors—either within the sector or across the Zambian economy.

Our research identified three leading factors underlying Zambia's manufacturing enclaves: (1) structural economic disarticulation; (2) the small size of the local economy and (3) the specific characteristics of the Chinese investors drawn to the Zambian economy. These are explored further below.

Structural Economic Disarticulation

Structural disarticulation occurs when different parts of the economy are not complementary—in other words, they are not sufficiently connected (Huang 1995). In a structurally disarticulated economy, different sectors cannot rely on each other to produce/render the final product/service. By contrast, in a coherent economy, linkages amongst different sectors are strong, enabling the production of total outputs. For instance, under such a scenario the manufacturing sector procures most of its inputs from agriculture, forestry, fishery or other manufacturing companies, whilst the agriculture sector draws most of its inputs from manufacturing (fertilisers, machines) and services (financial, transportation). In a disarticulated economy, this chain of production is disrupted, with some key inputs not produced by the local economy—instead, they must be imported.

During the colonial era, production chains in colonial or periphery economies (such as Zambia) were incomplete, as vital stages were completed elsewhere (i.e. in the metropolis). According to Henry (1946), the industrial policy mandate of colonial rulers was not to develop a local manufacturing sector, as it was not in the interests of companies and of the British Empire exploiting local resources. The voices of local white settlers, who operated outside the mining industry and wanted to create more linkages in the local economy (mostly in agriculture and forestry), were too weak to have any material impact on the mining industry's dominance.

Lack of coherence (or disarticulation) can be inter- or intra-sectoral (or both). In the case of the inter-sectoral disarticulation, complementarity between different sectors is weak, leading to critical disruptions in production. For example, Zambia's local manufacturing sector is unable to deliver machines or fertilisers for the agriculture sector (most of which are imported from South Africa, the European Union or China).

In the case of the intra-sectoral disarticulation, companies are not coherently connected with other companies operating within their sector (but in different sub-sectors). For example, Zambian manufacturers of PVC (polyvinyl chloride—a type of plastic) pipes must procure most of their inputs from South Africa, as PVC is not produced locally. Similarly, window manufacturers source steel and glass from South Africa, Europe or Asia, as they are not available on the local market. Procuring inputs on local market has also been problematic for Chinese investors, leading them to import most of their inputs from China or South Africa (see Chapter 8).

Structural disarticulation has also a spatial dimension. In Zambia, this relates to the spatial design of the country's transportation infrastructure. As noted by Ake (1981), if one looks at transportation systems across Africa, the logic underlying their spatial design reflects the economic structure that drove their initial construction—in other words, exploitation targeting a single activity without connection to other activities in the area. Unfortunately, most of the colonial system's infrastructural legacies bestowed on Zambia persist to this day, negatively affecting economic cohesion.

In our view, intra-sectoral, inter-sectoral and spatial incoherence are the main contributory factors to manufacturing enclaves. Such enclaves do not enhance the flow of materials and products from primary sectors to secondary and tertiary sectors, let alone the transfer of knowledge and

technology from foreign investors to local firms. This phenomenon is clearly visible not only in the case of Chinese investors (who procure the majority of goods and materials they need from abroad) but in the case of non-indigenous Zambian manufacturing companies, which also procure inputs from abroad.

Small Size of the Local Economy

Development of inter-firm and inter-sector linkages depends on the scale of demand for certain products. In order to create external economies (e.g. linkages), industry structure, as well as the extent or 'size' of the market, is important (Chinitz 1961; Marshall 1932; Phelps 1992). Moreover, theory and empirical studies suggest that access to source materials required as inputs is closely related to a region's productivity level. These structural links between inputs and outputs connect producers with their suppliers. Most of the relevant empirical papers utilise data from the developed world, notably Europe, Japan, the UK and the USA, with very few focusing on developing countries. This should come as no surprise, since data availability and quality across Africa—Zambia included—is problematic at best. Nevertheless, our respondents seem to confirm what the theory and econometric-based empirical studies have shown.

Clearly, there is a certain level of demand for different types of manufacturing products in Zambia—otherwise it would not be economically viable to operate manufacturing businesses locally. In many cases, however, consumption (and production) levels are too small to generate sufficient economies of scales or economically justify the local production of certain inputs and raw materials. This is particularly relevant to intermediate goods produced by heavy industries and utilised as inputs by manufacturing firms. For example, the relatively vibrant polymer plastics and steel fences sub-sectors import virtually all their inputs and raw materials from South Africa. In 2021, Zambia imported US $387 million worth of plastics and plastic products (e.g. polypropylene, ethylene and vinyl chloride polymers), and US $434 million worth of iron and steel products (e.g. steel bars and rolled iron).

Respondents indicated there are over twenty companies in Zambia specialising in the manufacture of plastic pipes. Unsurprisingly, the production lines, including machines and tools, were imported (some from China). The manufacturers also import virtually all their raw materials (if not directly, then through local traders or wholesalers). Ethylene,

the major raw material for plastic pipes, is a by-product of oil processing. Due to local market size, it is not economically viable to produce it locally. Instead, as pointed out by a PVC pipe manufacturer who has been in the business for over 30 years: 'all of our raw materials are sourced internationally because there are no inputs in Zambia … the nearest petrochemical company is in South Africa' (Interview with company no. 14, 2023).

Amongst our sample, all the Chinese companies operating in Zambia imported most of their inputs (see Chapter 8 for details). Similarly, the non-indigenous Zambian companies also used imported inputs, as the required materials were unavailable on the local market or of insufficient quality. Inputs and raw materials such as steel, petrochemicals, glass and paper are almost entirely imported from South Africa, Dubai or China, either directly or indirectly (through a local trader). Local production of those inputs would require sufficient economies of scale but, given relatively weak domestic demand, it is simply not economically viable in many cases. As a result, the percentage of domestic inputs used—a key proxy for the level of backward linkages (Blalock and Gertler 2008; Javorcik 2004)—is very low not only for foreign investors but for local non-indigenous manufacturing firms.

In our sample, all 25 local companies admitted that the vast majority (over 95 per cent) of their raw materials and other inputs were imported (either directly or indirectly through a local trader). All referred to a lack of locally produced inputs as the main reason for not procuring them locally. In one instance, a manufacturer of box packing admitted that local inputs are available, but because of their poor quality he has imports from South Africa or Dubai (Interview with company no. 3, 2023). Another respondent indicated that quality steel products are not manufactured locally: 'when it is large quantities we import directly from South Africa, smaller quantities of steel we buy from a local trader' (Interview with company no. 4, 2023).

The problem of a limited domestic market is further exacerbated by the fact that Zambia is a landlocked country with poorly developed transport infrastructure. This factor contributed to a lack of development in secondary industry during colonial times, and has dominated the (lack of) development narrative ever since. Landlocked countries such as Zambia have relatively higher transportation costs, both for bringing in inputs and exporting finished products (Makgetla 1986, p. 408). Therefore, manufacturers located in, for example, South Africa have a cost advantage over

their Zambian peers. As a result, South Africa—the regional economic powerhouse—has been attracting most of the region's non-mining FDI.

In sum, Zambia's local economy appears too small to produce key intermediate goods (e.g. steel, plastics) for the manufacturing sector, especially given that companies from South Africa are capable of exporting their products to Zambia. As a result, both non-indigenous local companies and Chinese investors procure most of their inputs abroad.

Characteristics of Chinese Investors

Another factor we identified as an impediment to linkage formation is the characteristics of the Chinese investor deciding to do business in Zambia. As elaborated in Chapter 8, the Chinese firms investing in Africa are driven by a capitalist market logic—in other words, they are profit-maximising entities looking to utilise every available business opportunity, legal loophole and competitive advantage. They do not intentionally seek interactions with local Zambian companies, instead preferring to cooperate with other Chinese companies operating in the country.

Moreover, as in other countries and in their homeland, the Chinese diaspora in Zambia prefers to operate within a self-contained social network, where decisions are based on informal personal connections, long-term benefits and trust. As one respondent put it: 'They support their fellow brothers, they don't come to us local companies' (Interview with company no. 12, 2023).

The Chinese companies doing business in Zambia are primarily manufacturing medium–low and low technology goods. In most cases, production processes require limited skills and technological advancement. Even when technology plays a more significant role, the raw materials used are basic (e.g. water, sand, wood), offering little opportunity for transfers of advanced technology. Additionally, production appears to be largely self-contained within the Chinese firms. Naturally, these circumstances are not favourable to the fostering of strong connections between Chinese companies and local suppliers. After all, Chinese entrepreneurs come to Zambia and other African countries—instead of, say, to the UK—for a reason, with the availability of locally procured intermediate goods rarely playing a decisive role (Li et al. 2022).

The profit-maximising strategy pursued by Chinese companies is not about establishing contact with local peers with a view to transferring technology and knowledge. Such transfers occur only as externalities.

Given that Chinese entrepreneurs tend to operate within a Chinese social network, however, their interactions with local Zambian companies and people (and thus the externalities arising from such interactions) are very limited.

Conclusions

The discussion presented in this chapter has been premised on the argument that Chinese manufacturing companies operate in an enclave (or bubble) in Zambia, offering little to no interactions with local (indigenous and non-indigenous) companies. From the Zambian perspective, Chinese companies do not actively seek cooperation with their local peers—if they do engage in a relationship, it is casual and short term rather than a contractual long-term partnership. Their presence has not, therefore, generated spillover effects, as the existing body of theoretical knowledge suggests might be the case.

The biggest impact of Chinese companies on the local economy seems to have been channelled through the competition effect, with Chinese and local companies directly competing on the market. In reality, however, this competition has been between Chinese firms and local non-indigenous companies, which dominate non-FBT manufacturing sectors. The dualism of the local manufacturing sector revealed by this represents one of our study's major findings.

Local non-indigenous manufacturing companies share more commonalities with Chinese (and other foreign) firms than with Zambian indigenous businesses. They are well-organised and managed, use top-notch production technology and employ the latest know-how. They are also well integrated into global production networks and rely almost entirely on imported inputs and raw materials. Finally, similar to the Chinese investors, non-indigenous local companies create few and/or weak intra- and inter-sector linkages.

Our empirical evidence suggests the main reasons behind manufacturing enclave formation in Zambia are: (1) the structural disarticulation of Zambia's economy; (2) the small size of its economy and (3) the specific characteristics of the Chinese companies operating in Zambia. In analysing Zambia's structural disarticulation and the limited size of the local market, we have shown that Chinese investors are not the only ones importing raw materials and intermediate goods from abroad, with similar activities practiced by non-indigenous Zambian companies. All the

Zambian companies in our sample procured most (in many cases, over 95 per cent) of their inputs from abroad. The primary source of intermediate inputs is South Africa. Finally, the Chinse preference for *guanxi*-based cooperation has also been a factor in Chinese investors' disconnection from the local economy.

The Zambian case study presented in this chapter is not meant to be representative of the entire sub-continent. Rather, it illustrates that attracting FDI to a low-income country—Chinese FDI in particular—does not necessarily guarantee linkage formation, spillover effects or industry-led structural transformation. As Gallagher and Zarsky (2007, p. 101) put it, 'expecting FDI to automatically stimulate economic growth and transform industry—and designing policies accordingly—is more likely to generate enclaves than spillovers'. Sadly, the empirical evidence presented above supports this view.

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CHAPTER 10

Image of Chinese Investments and Long-Term Projects in African and Chinese Media

Kaja Kałużyńska and Jarosław Jura

Introduction

China's presence in Africa has increased dramatically over the past two decades. At first, China was warmly welcomed by the region's countries, with its image as fellow victim of Western colonialism and successful example of Third World country turned global superpower an important part of this success (Jura and Kałużyńska 2013). Over time, however, the increasing Chinese presence on the continent, as well as the country's activities there—including foreign direct investments (FDIs) and other

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D. Kopiński et al. (eds.), *The Political Economy of Chinese FDI and Spillover Effects in Africa*, International Political Economy Series,
https://doi.org/10.1007/978-3-031-38715-9_10

economic activities—began to be perceived and depicted in a less positive light (Jura, Kałużyńska and de Carvalho 2015).

Although China's economic presence has been portrayed as a significant factor in fostering African economic development, some have insisted that One Belt One Road (OBOR)-related infrastructure projects across the continent have actually resulted in more negative than positive effects (Pairault 2020). African countries are heavily indebted to China (Zajontz 2022), despite the often low-quality outputs—including rapidly declining roads and poor-quality infrastructural constructions—they have received (ref DK, AP, WT, JJ African Affairs) in return.

Two overarching questions arise. First, how are Chinese investments in Africa truly perceived in the region? And, second, has this followed the same downward trend seen in the overall image and perception of China and the Chinese in Africa (Jura, Kałużyńska and de Carvalho 2015)? As usual, opinions are divided. Hanusch (2012), for example, has stated that Chinese FDIs in Africa constitute an important, positive component of the country's image. Hanusch's work is supported by Morgan (2019), who claims that although the general perception of China in Africa has been getting worse, the main reasons behind this are related to small-scale investments and the local trade in low-quality goods. By contrast, China's large-scale investments, combined with its aid and loans, have provided it with a positive image. Seemingly at odds with this view, however, Shi and Seim (2021) describe the large 'reputation deficit' of Chinese companies operating in Zambia compared to other foreign investors.

A country or brand's media image quite often diverges from public perceptions of that same country or brand. Having studied African media's image of China and the Chinese for almost a decade, we still come across discrepancies between what is written in the media and what is said by local people. Nevertheless, media image does provide valuable information on official perceptions of phenomena—in this case, how elites regard the Chinese presence in Africa and the various investments flowing in. These elite perceptions in turn sway the general public, both through media content and direct political or socio-economic influence.

Although the perception and image of China in Africa has been a point of interest for numerous researchers in recent years (Nassanga and Makara 2016; Wekesa 2013), they have tended to focus on either small-scale media-based research or, in the case of quantitative projects, the results of Afrobarometer research or household surveys (Morgan 2019). An interesting attempt at applying data-mining techniques was made by Zhong

and Zhu (2020), who published a paper on the corporate social responsibility image of Chinese construction enterprises in Africa, as presented in US and UK news media. The final dataset on which their data-mining research technique was applied, however, consisted of only 33 media reports.

The previous chapters of this book have already dwelt on Chinese investments and issues related to spillover effects. Here, our focus is specifically on African media images of Chinese investments and long-term economic activities, with what we consider the most important Chinese 'image generator'—the official gazette of the Central Committee of the Chinese Communist Party—used to provide context. Based on the media content analysed, we assess the possible outcomes of these activities in terms of their social and economic impact on Zambia and Angola, and any spillover effects that might arise.

This chapter follows the approach to spillover effects presented in the previous part of this book—namely, we are not focused solely on vertical spillovers (Javorcik and Spatareanu 2005) in the context of local companies' productivity growth based on the backward linkages (Hirschman 1958). Given the many obstacles standing in the way of spillover effects in the Sino–African context, we instead seek any indicator of potential or existing spillover effects, whether vertical or horizontal (Javorcik and Spatareanu 2008). Moreover, driven by our opinion that the Western approach to defining and investigating spillover effects is overly Eurocentric, we extend the notion of such effects to include not only FDI, as usually described in the literature (Javorcik 2004), but all long-term Chinese economic activities. A significant proportion of Chinese economic activity in Africa consists of long-term contracts and does not differ significantly from FDI (ref to article JJ plus DK). Consider, for example, a contract in which the Chinese build farm infrastructure and train local workers to use modern agricultural techniques, equipment and machines. Whilst such an endeavour is clearly a project rather than an investment, it nevertheless contains strong potential for spillover effects. Not including it in the analysis would therefore constitute significant bias.

In the context of this approach, our focus is primarily on the differences between the declared and actual impacts of the Chinese presence in Zambia and Angola. As described in previous chapters, one of the main problems of Chinese investments (or broader economic activities in Africa) is their state-to-state, semi-political character. This not only creates potential obstacles to spillover creation, but puts the emphasis

on the declarative side of investments rather than their tangible, at least partially measurable, effects. Thus, investigating the image of Chinese investments and their effects illuminates how the existence and scope of spillover effects is perceived in Zambia, Angola and the wider continent.

Africa in China, China in Africa: Data-harvesting and Analytical Procedure

Given that we wanted to include as broad a scope of attitudes towards Chinese engagement in Zambia and Angola as possible, choosing which news sources to analyse represented one of our first and most difficult steps. The decision to include a particular news website in the database was motivated by ease of access to content, level of popularity amongst internet users in Zambia and Angola, political orientation (pro- or anti-governmental) and online evidence of a long-standing web presence. The latter factor was important in terms of obtaining longitudinal data, as many portals do not provide access to their archives or restrict access to recently posted news articles. Some outlets also closed down or limited their publishing activities over the course of the project. Moreover, the COVID-19 pandemic has significantly influenced the total number of articles related to China, mainly through the use of terms such as 'Chinese virus' or 'Chinese cities'.

The data-harvesting approach was based on the appearance of the keyword 'China' (which also includes other words using the same core) on the websites of the chosen news outlets. In order to harvest this content, we used Google searches and the search engines of the various websites. The resulting dataset contained more than 10,000 articles, though this then had to be refined, as a relatively high number of articles contained no mention of China, with the keyword appearing either in sections such as 'Check other news' or in comments posted by users of the website (particularly in the case of Angola, such comments often had no connection with the content of the article). The final dataset is presented in Table 10.1 below.

In the case of China, attempting to incorporate a broad spectrum of online news outlets was deemed a fruitless task, as the Chinese media are, by default, controlled and censored by the government. As such, the website for the *People's Daily* (*Renmin Ribao*), the official gazette of the Central Committee of the Chinese Communist Party, was chosen as the main Chinese publication source. *People's Daily*, both in its traditional

Table 10.1 Number of news containing China reference in Zambia and Angola by source

Source	*Total articles*	*Valid articles*
Angonoticias	1,225	333
Jornal de Angola	3,811	2894
Club K	82	70
Maka Angola	1,047	122
Novo Jornal	418	120
O Pais	518	178
Voa	168	244
Daily Mail	1,144	586
Lusaka Times	1,465	557
Observer	267	78
The Mast	106	104
Times of Zambia	343	118
Zambian Watchdog	320	229

and online versions, is a source of news for every journalist in China, as well as being officially responsible for cultivating China's image abroad (Parker 1991). Thus, the topics it covers represent—from the Chinese government's point of view—the most important issues of the day.

Given the lack of independent media in China, we also considered using various WeChat channels and groups, which have become a popular medium for following the news amongst both those living in the country and diaspora members across the world. In fact, they have become more popular than 'semi-traditional' media, such as news websites. Our decision not to pursue this avenue was motivated by several factors, foremost amongst them the necessity of obtaining group member consent for data collection and the fact that once a news article is posted it is hardly ever reread by the group's members. The final dataset for content generated directly by Chinese internet users was created using Baidu and Google searches for the keywords 'Zambia' (赞比亚) and 'Angola' (安哥拉), as well as—where possible—a website's internal search engine. In this way, we obtained a dataset of articles that referenced Zambia or Angola and could potentially be accessed by any interested internet user trying to obtain information about the two countries, published between January 2013—when the OBOR initiative started—and August 2022.

It is important to note the limitations of this study arising from restricted government openness (in China, Angola and Zambia) towards the media, as well as the attitudes of news outlets towards data archiving

and search engines. Moreover, in the analysed period, some sources limited their activity and content was removed from the internet or truncated. The remaining content nevertheless constitutes a dataset large enough to be at least partially representative. In addition, given the articles available online have remained there with the approval of editors or website owners, they serve as good examples of what a given outlet wishes to present on particular topics.

In the present research, we applied a set of categories and keywords obtained through a Mixed Integrative Heuristic Approach (Jura and Kałużyńska 2021) developed over the course of several other projects focused on Sino–African relationships and media content. Both the categorisation system and the assignment of keywords to particular categories were the result of a series of qualitative steps, based on a keyword-in-context approach applied to several thousand news articles written in English or Portuguese. This process, which involved each word that appeared in the database more than ten times being assigned either to a specific category or the exclusion list, resulted in a thematic dictionary—a very useful tool for textual data analysis focused on social, economic and political issues. Moreover, the size of the original language corpus and the resulting comprehensiveness of the dictionary allow for the translation of keywords into other languages without any analytic features being compromised, especially after proper lemmatisation is applied. This dictionary, originally created in Provalis Wordstat, is—after some technical changes—also applicable in other programmes. As such, it was applied to Chinese language content in MaxQDA, as well as, in its original version, more advanced analysis of the English and Portuguese content in Provalis QDA Miner and Wordstat.

The above set of categories was, for the purposes of this research, narrowed down to those connected to Chinese investment. As such, the dataset was automatically coded with thematic categories containing several hundred keywords, including their lemmatised versions. The additional categories *China, Zambia* and *Angola* were also included to help indicate articles specifically focused on Chinese activities in the chosen countries.

Next, the dataset was coded with an additional set of categories useful in basic sentiment analysis. Although automatic, keyword-based coding results can be misleading when it comes to sentiment analysis, in the case of this project we decided to apply our own sentiment categorisation/dictionary. This had already been tested, and underwent a series of

refinement procedures based on similar datasets, obtained mainly from the same African online media. Since the focus of this chapter is specifically on China's image in relation to investments and economic activity, only the most relevant sentiment categories were applied, both for negative and positive references.

Below, we present the results of our quantitative and qualitative analysis of the content produced in China, Angola and Zambia. This will hopefully shed light on how China's presence and Chinese investments are presented, as well as the context in which the topic is depicted in these countries, thereby making the chapter's final comparisons—between the portrayed media images and the true situations in Zambia and Angola—as clear and relevant as possible. The articles taken from Zambian and Angolan websites were analysed both in the context of the particular topics they covered and their positive or negative messages, whilst the content from China was used as a contextualisation tool.

China in Africa: Quantitative Analysis

The entire African dataset consisted of 10,843 articles published by Angolan (7,244) and Zambian (3,646) news websites between 2013 and 2022 containing or related to the keyword 'China'. To focus the data-mining and analytical process on the context of Chinese investments, a refinement process was conducted.

This process was based on the co-occurrence of category code *China* with either *Investments* or *Construction/Infrastructure*. Whilst the set of keywords assigned to the *Investments* category is self-explanatory in the context of the research, the latter category was chosen on the basis of both preliminary qualitative analysis of the media content and the results of field research in Angola and Zambia, which suggested that focusing purely on investment-related keywords might be misleading. As such, we made a decision to take into consideration those articles that mentioned construction (since it is often depicted in the context of long-term projects), agriculture and industry—all topics that co-appear with the *China* category, often in relation to Chinese loans. Thus, in applying our broader definition of spillover effects, their presence in news articles may indicate the emergence of such effects.

During the quantitative part of the analysis, we decided to focus on those texts that contained investment-related categories and *China* categories within a single sentence. This approach reduces possible bias,

Table 10.2 Percentage of articles related to investment and long-term projects containing mention of China by year

	2013	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*
Angola	3.4%	2.9%	4.5%	7.5%	9.7%	21.6%	11.9%	17.4%	12.6%	8.5%
Zambia	0.5%	3.9%	11.9%	11.7%	19.5%	37.3%	6.4%	2.3%	3.7%	2.7%

eliminating articles in which China is mentioned as a target for foreign investment, or in which it is compared to other countries investing in the region. This refined database consisted of 420 articles in Angolan sources directly mentioning Chinese investments and 558 in Zambian sources. A look at the percentage of articles in the two countries on investments and long-term projects (categories: *Investments, Agriculture, Construction/Infrastructure* and *Natural resources*) containing the *China* reference code is potentially instructive as to the importance of this topic in the African media.

As can be seen in Table 10.2, the greatest number of such articles (referring to Chinese economic activities that could be related to spillover effects) were published in the middle of the analysed period. At this stage, it can be assumed that this increased interest was related to the introduction of the OBOR initiative and was reflective of the overall increase in the number of Chinese investments in the region.

In Zambia, we can observe an abrupt decrease in interest in 2019 following the peak of the previous year. This change was probably related to the fact that 2019 this year was the final year preceding the drastic decrease in Chinese loans and foreign trade exchange, and the last year when the annual revenue of Chinese infrastructural projects increased (Jura 2021). The breakdown of Sino–Zambian relations, which was mainly due to the growing indebtedness of the Zambian economy, was further exacerbated by the COVID-19 pandemic, leading to a significant decline in the importance of Chinese investments as a media topic.

In Angola, 2018 is also the key year for discussions on the future of Chinese investments, with such debates beginning following the 2017 autumn elections and the change of presidency. Since 2017, the perception of China amongst Angolan elites, media and netizens has become increasingly negative (Jura 2021). Similarly, Chinese project revenues and foreign trade have decreased since 2017. As such, based on previous publications and qualitative analysis, it may be presumed that the 2018

peak was related to the change of approach towards China. Following this, and China's decreased presence in Angola, Chinese investment as a topic became—as in Zambia—less relevant.

Honing in on China's image in the two countries, the total number of articles harvested from Angolan sources is noticeably higher. This may due to stronger Chinese economic engagement with Angola and/or related to the larger size of the country's Chinese diaspora (before the breakdown in relations and the COVID-19 pandemic, this was estimated at several hundred thousand). The dataset harvested from Angolan news outlets originally consisted of more than 7,000 articles. Although less than 6% (420) of these articles directly addressed the topic of Chinese investments, of this sub-set 77.4% (325) also mentioned Angola, pointing to the fact that local Chinese economic activities draw far more attention than general investments carried out abroad by China. Turning to Zambia, of the 3,599 harvested articles, 563 (15.5%) directly addressed Chinese investments, with 85.8% of these also mentioning Zambia.

Next, we analysed the presence of particular economy-related themes in these articles, with the aim of revealing the importance of particular economic branches in the African media discourse on Chinese investments.

Figure 10.1 reveals construction/infrastructure and natural resources to be the main topics in Zambia's media discourse related to Chinese investments, whilst in Angola the most important issues are natural resources and industry-related topics. Investments per se are more often touched upon by Angolan outlets, but are an important reference point in both countries. The energy and telecommunication sectors do not appear to be particularly important topics in either country.

Although the positions of natural resources and construction/infrastructure seem self-explanatory, the apparent lack of media interest in telecoms is somewhat surprising given that Africa's telecommunications infrastructure—including in Zambia and Angola—is being developed by two Chinese companies (ZTE and Huawei). Regarding the preponderance of industry-related topics in the Angolan media, it may be presumed that these references mainly concern declarative aspects given that there are no significant Chinese industrial investments in Angola.

The above breakdown provides a useful outline of China's investment image in the two countries. To fill this in, however, we needed to investigate *how* China is depicted. In order to discover whether investment-related articles adhere to the assumed dichotomy of China's

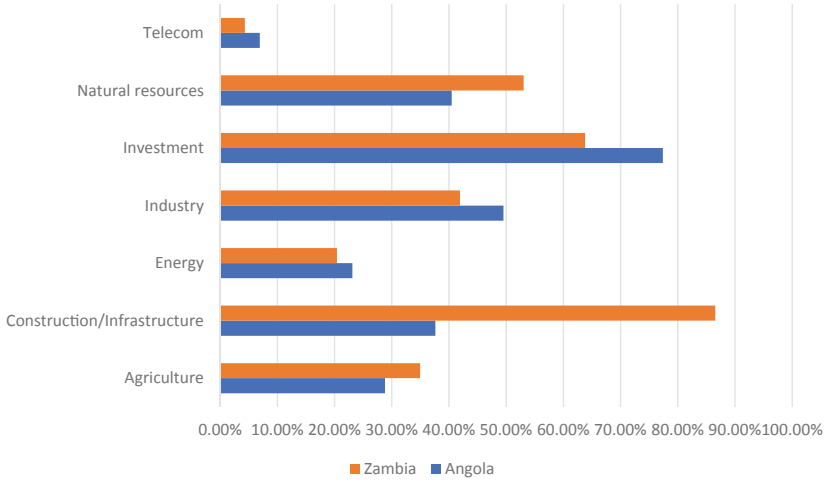

Fig. 10.1 Topics contained in news articles on Chinese investments in Zambian and Angolan sources

image (i.e. 'friend or foe'), a sentiment analysis was performed based on a dictionary of categories and keywords classed as inducing either 'positive' or 'negative' emotions.

We based the dictionary on one generated in previous research, using certain modifications. Keyword categories classified as 'positive' (such as *Friend*, *Success*, *Development*) have proven a good indicator of the general sentiment expressed by texts from Angolan and Zambian sources (Jura, Kałużyńska and de Carvalho 2018), whilst 'negative' categories are much more likely to generate biased results (Jura and Kałużyńska 2021). In the latter case, therefore, a sample of texts were reviewed using a keyword-in-context approach, with only keyword categories that truly indicated negative sentiments chosen for cluster analysis. Moreover, keyword categories that were less relevant in the context of investments, such as *Arms* or *Diseases,* were excluded from the dictionary. The result of this procedure is presented in Figs. 10.2 and 10.3—due to the significant differences in results for Angola and Zambia, the results are presented separately. Figure 10.2 indicates the sentiments, both positive and negative, most strongly connected with the issue of Chinese investments in Angola. It should be pointed out that the proximity plot was used as a

tool for indicating the most frequently co-occurring sentiments, without taking into consideration absolute values of the coefficient—due to the analytical approach used and focus on a single sentence, such values could be biased. Here, the most important conclusion is that Chinese investments are depicted in a positive way, with no negative category present in the proximity plot of the strongest sentiments. Whilst the co-occurrence of keywords categorised as *Development* is unsurprising in the context of investments, it is worth noting that *Safety, Cooperation* and *Support* also obtained very high scores. Moreover, Fig. 10.2 does not change significantly even after removing content published by *Jornal de Angola*, which, as an official government source, tends to focus on the positives of the Chinese presence in Angola.

As Fig. 10.3 shows, the results of the sentiment analysis look somewhat different when it comes to Zambian sources, the most obvious disparity being the number of categories that co-occur with Chinese investments: ten in Zambia compared to six in Angola. Zambian sources do not connect Chinese investments with protests, with the only negative category to appear on the proximity plot being *Fear*. There are, however, two contrasting contexts for *Fear* co-appearing with China. The first—which justifies treating this category as negative—is present in articles

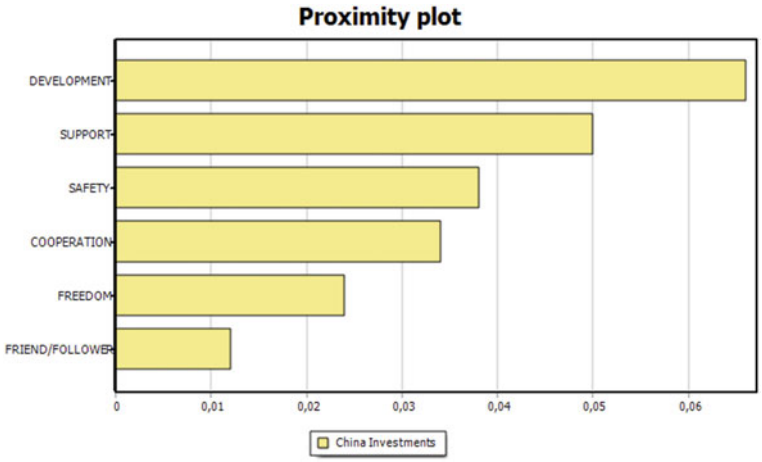

Fig. 10.2 Proximity plot of sentiments and China investments in Angolan news sources

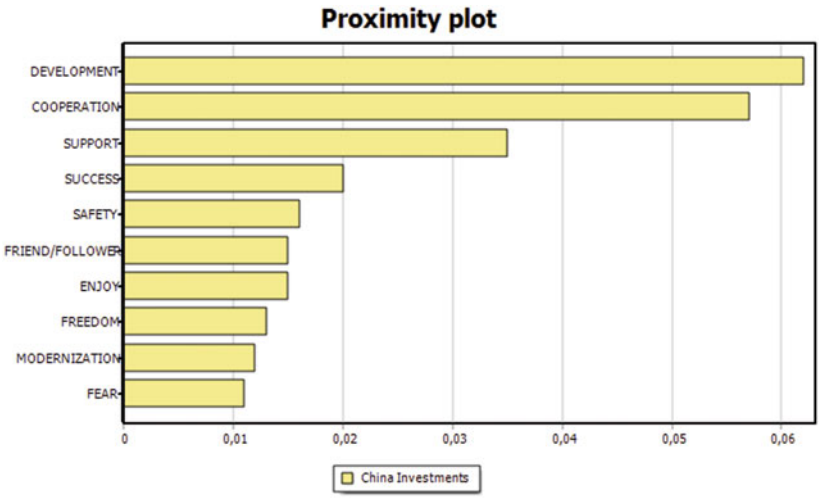

Fig. 10.3 Proximity plot of sentiments and China investments in Zambian news sources

by *Zambian Watchdog* and *Zambian Observer*, with one such example being: 'The question is; are there any national assets that the Chinese are taking over in Zambia? The answer is yes! This fear of Chinese taking over assets is real and it has gotten Zambians very worried' (*Zambian* Observer 2018). This depicts China as a potential (or already existing) danger to the country and its economy. The second context is more ambiguous, especially against a backdrop of a decreasing Chinese presence in Africa: 'Many feared that President Hichilema's administration was warming up too much and too quickly to the western powers at the expense of long held relations with China' (*Lusaka* Times 2022).

Another issue that arose in relation to the Zambian media coverage was the change to the proximity plot resulting from the removal of the most pro-Chinese source. Doing so led to an additional negative category—*Corruption*—appearing. *Corruption* co-occurs with Chinese investments in 52 articles (almost 10% of them), and directly, within a single sentence, in 12 cases, with the oldest such co-occurrence appearing in 2014 and the most recent in 2020. However, the cases touching on corruption are often focused on domestic policy or high-level corrupt politicians rather than China and its activities, with examples provided of non-corrupted

African countries whose policies should be followed in Zambia. The direct co-occurrences refer to corruption present in large-scale projects, such as major road renovation and construction, and the building of Lusaka International Airport.

China in Africa: Qualitative Analysis

Qualitative analysis is necessary to contextualise the results of the quantitative research above. As such, below we provide examples of the analysed articles and discuss their content. The results of our preliminary qualitative analysis indicated that the most interesting images of China's participation in investment-related activities were presented by *Jornal de Angola* and *Maka Angola* (in the case of Angola), and *Times of Zambia* and the *Zambian Watchdog* (in the case of Zambia). Although the analytical process initially focused on articles containing phrases directly related to Chinese investments, we decided to shift focus to consciously chosen sources and contexts, as we felt comparing the images presented by the most pro- and anti-government sources would provide the richest insights. Thus, from the whole pool of articles we chose the most interesting ones from the selected sources touching on the topic of Chinese investments in Africa. The qualitative analysis focused on articles in which the category *China* coincided with *Investment, Construction/ Infrastructure, Industry* or *Agriculture*, and, respectively, *Zambia* and *Angola*.

Although the total number of such articles was relatively high, most were coded as irrelevant, as (amongst other reasons) they only described Chinese investments in countries other than Zambia or Angola; only mentioned China's presence in the African market more generally; or only focused on loans in general, without providing specific examples. The remaining articles were categorised on the basis of whether they were related to the past or future; whether they adopted a negative or positive stance; and whether they consisted of declarations, descriptions or general opinions. Some of the analysed texts were also categorised as describing tangible, measurable effects (such as the completed construction of a bridge or production plant), or describing even very low-level spillover effects, such as the training of a specialised workforce or the emergence of new jobs for local people.

Angola

Given our methodological shift was partially inspired by the results of the *Jornal de Angola* content, this source is presented first. The topic of Chinese investments appeared fairly frequently in this pro-government outlet, with almost all such articles full of praise for the role played by Chinese loans and investments in Angola's development. Despite this, an interesting phenomenon can be observed in the content: whilst most articles depict the bright future arising from close cooperation between the two countries, hardly any provide examples of tangible results that can be ascribed to the Chinese presence or activities. Even articles that describe completed projects usually focus on the government and its successes rather than Chinese investments and their possible long-term benefits.

The first of these articles (*Jornal de Angola* 2013a) mentions the opening of a large commercial centre, AngoChi Shopping, which was not only supposed to create more than 500 jobs for Angolan youth on site, but, eventually, more than 50,000 vacancies across various sectors, including tourism and finance, indicating potential spillover effects arising from the necessity of training the workforce. A similar article was published nine years later (*Jornal de Angola* 2022a) in relation to the stone-laying ceremony for a new commercial centre. Although construction of the centre had only officially begun that day, it had supposedly already generated 'thousands of jobs'—both directly and indirectly—thanks to a $200 million investment. No further details were included, however, making it impossible to assess the likelihood of any developmental or spillover effects emerging.

Another article (*Jornal de Angola* 2014) focuses on a tangible impact provided by Chinese investments in Angola—specifically, a banana processing plant that was only made possible due to Chinese financing (it was not directly mentioned whether this was a loan or an investment), and which provides employment for 'thousands of workers', as well as facilitating banana-related economic activities across the region. This represents the most concrete description of a nongovernmental Chinese investment with measurable effects in Angolan sources. Although direct information on spillover was not mentioned, it may be presumed that such effects (both horizontal and vertical) could occur.

Several articles identified on the basis of the co-occurrence of *China* and *Construction* (see, for example, *Jornal de Angola* 2013b) contain information about new hospitals—either built by Chinese companies or

financed by inter-state Chinese loans—in Angola. Although such activities cannot be categorised as 'investments', they were nevertheless only made possible by the economic and industrial presence of China in Angola, and so could be considered as generating developmental effects. Moreover, the possibility of spillover effects arising from an increase in the skills of workers, as well as the technicians responsible for supplying and maintaining hospital equipment, cannot be eliminated. Once again, however, no such information was directly presented.

In the context of the broader focus of this book, it is instructive to look at those articles that suggest Chinese investments will have a significant impact on the development of Angola's economy. The operative word here is 'suggest', as most such articles are focused on the future and based on somewhat vague declarations. Over the period analysed, numerous articles about planned investments were published. Some described official government statements issued on the occasion of a new loan contract being signed, whilst others conveyed messages of long-lasting friendship and cooperation between Angola and China, especially those articles covering official meetings with representatives of China, including its foreign affairs minister, Wang Yi.

This series of declarative articles starts in 2013 with a piece on the signing of a memorandum with China Far East Investment Group to build a new botanical garden and zoo (*Jornal de Angola* 2013c). Although the cost is to be covered by Angola, the project is aimed at attracting Chinese investors to help build hotels and other elements of tourist infrastructure. Further articles in the ensuing period mention, amongst other subjects, general plans to attract Chinese investors and the statements of Chinese ambassadors to Angola.

Even the most recent articles, despite containing more information on Chinese investments, reply on quotes and figures provided by Chinese officials (including the Chinese ambassador). For example:

> in the last 20 years, China has helped build 28,000 kilometers of railways, 20,000 kilometers of roads. … Gong Tao stated that from 2018 to March 2021, 24 Chinese investment projects were registered, estimated at US$225 million. In Barra do Dande, Chinese companies invested, according to information provided by the ambassador, 50 million dollars for the transformation of ceramic products. … In Baía Farta, Benguela, 15 million dollars US were invested in a shipbuilding yard that has already

> been completed and is about to start working to support fishing activities, according to the ambassador. (*Jornal de Angola*, 2022b)

Such news undoubtedly creates a positive image of Chinese investments. Moreover, it suggests at least the possibility of spillover effects, as even if it is assumed some of the vacancies created have been or will be occupied by Chinese citizens, the technology introduced necessitates the training of Angolans, especially those working at the shipyard. Even so, the article has the appearance of text obtained from a Chinese press agency and published without too many changes.

The total number of *Jornal de Angola* articles presenting the Chinese presence in a negative light is very small. Despite some initiatives not being completed, others being of poor quality, and most not having any meaningful (perceived) positive influence on the Angolan economy, such topics do not appear to be of interest to *Jornal de Angola*.

What, though, does the same period look like in a contrasting media mirror? To answer this question, we analysed articles published by *Maka Angola*, the most anti-government news outlet in Angola. Perhaps unsurprisingly, the number of negative articles concerning the Chinese presence in Angola is noticeably larger. A closer look at these texts, however, reveals that the primary focus is not on China and the Chinese per se, but rather the Angolan government and its activities. Chinese construction companies are mentioned in articles describing the high level of corruption amongst military personnel (*Maka Angola* 2014) and the country's top officials, including the dos Santos family (*Maka Angola* 2017).

Amongst the most interesting of the selected articles is one (*Maka Angola* 2015) focusing on the tangible effects of Sinopec investments, but in an extremely negative context. Specifically, it centres on the Chinese government's investigation into the offshore oil exploration project, which—according to the article's author—turned out to be a financial catastrophe, largely due to incorrectly conducted evaluations. Also mentioned is the high level of corruption in Angola.

Another example of a catastrophic—at least from the point of view of local communities—Chinese investment concerns the agricultural sector (*Maka Angola* 2019). The relevant article focuses on the fact that in 2016 a Chinese company, Jiangzhou Agriculture, not only commenced operations before being granted all the necessary permissions, but failed to fulfil its duties towards the community, including renovations to a hospital

and a school. Many local farmers, having sold their land, worked for the Chinese company for very low salaries and felt exploited.

In general, *Maka Angola* does not mention Chinese investments or activities arising from Chinese loans as 'standalone' topics. Rather, China tends to be employed as a backdrop against which the sins of power-holders are spotlighted. Even the above examples, despite focusing on China, refer to the corruption of local- and national-level authorities.

Although the image of China and its investments is painted in totally different colours in *Jornal de Angola* and *Maka Angola*, both have one thing in common: real effects—whether spillover or otherwise—are almost totally absent from the discourse. Despite the copious declarations about cooperation, future effects or results in *Jornal de Angola*, rarely are the announced projects tangibly described at a later date. Similarly, *Maka Angola*, whilst believing that China and its loans/investments are part of the general malaise attributable to the government, largely refrains from detailing the specific results of investments.

Zambia

As with Angola, in Zambia we chose two sources to investigate qualitatively: *Times of Zambia* is pro-government, whilst *Zambian Watchdog* is dedicated to investigating the government's wrongdoings. Again, it is our assumption that selecting outlets at opposite ends of the political spectrum is beneficial to determining the full media image of Chinese investments and their perceived effects in Zambia.

Following the logic applied in the case of Angola, we begin with the analysis of the pro-government source. The overall number of news articles where Chinese investments co-occur with *Zambia* and are relevant to the investigated phenomenon is relatively low, constituting just over 10% (36 cases) of the entire *Times of Zambia* dataset.

The first of these articles, published in 2014 (*Times of Zambia* 2014a), mentions a Chinese–Zambian textile company that was forced to 'throw hundreds of workers to the street' due to pressure caused by large-scale cheap textile imports from China. These workers may, however, have gone on to be rehired by a new investor. In such a case, it may be assumed that at least some basic training was provided to them, with the presence of a Chinese investor potentially bringing about some long-term results.

Some articles focus on Chinese companies involved in construction projects, amongst them the Heroes National Stadium in Lusaka.

Although such news is usually full of declarations, there is one (*Times of Zambia* 2014b) that directly mentions that the main project is 100% complete, as well as the fact that managing the stadium going forward is as important as building it, necessitating that 'Chinese nationals trained their Zambian counterparts to properly manage the infrastructure'. Again, traditionally one could not classify the stadium—financed by the Zambian government—as having spillover effects. Nevertheless, we believe this particular project not only allowed for the creation of new, specialised positions requiring some transfer of basic skills, but in the long term provided a pathway for the emergence of new local businesses. At the least, the project may have increased the skills of local workers, which local construction companies could have drawn on in the future, thereby providing a horizontal spillover effect and enriching the local economy.

There is one article (*Times of Zambia* 2014c) that potentially serves as justification for assuming the importance of China-led construction projects—in this case, roads—to Zambia's economic development. As the author states:

> the move to connect provinces and provide shorter links and good roads to markets in the Link Zambia 8,000 road project was already yielding results as people could move their produce with ease and less costs even before the roads are fully upgraded. Jobs have also been created in the road sector, while the economy in places like Chama has improved tremendously. 'People now have buying power which has led to investors coming in to set up businesses,' said District Commissioner Josphat Lombe.

Transport possibilities have, until recently, been scarce in Zambia, putting tight limitations on local and provincial economies. Thus, investments in this area funded by Chinese loans (and to a large extent carried out by Chinese companies) should, despite not generating traditional spillover effects, lead to developmental effects for the local economy. Similar effects are claimed as being anticipated in the case of the construction or renovation of other infrastructure projects, such as Chiawa (*Times of Zambia* 2014d) or Kafue Gorge Lower Power Station (*Times of Zambia* 2015). Meanwhile, the Mwomboshi Dam in Chisamba District—a project carried out by Anhui Foreign Economic Construction Company—is reported as already having provided more than 400 local workers with jobs (*Times of Zambia* 2018), and is intended to serve more than 8,000 local farmers.

Amongst the small number of reported investments generating spillover effects in their traditional sense is a mushroom factory constructed and run by Jihai Agriculture Investment and Development Group. The factory is described in the *Times of Zambia* (2014e) as partially operational, with plans for it to become a large-scale production plant. The article asserts that:

> Jihai is ready to extend its knowledge and expertise to small scale farmers. The company has, for example, researched and developed cost effective methods and tools which small scale farmers can use to cultivate mushrooms at a small scale level. He said Jihai is ready to train and equip small scale farmers in cultivating mushroom which could be sold to boost both household income and food security.

This is a rare instance of a news article from our dataset that not only focuses on the tangible effects of Chinese investor activities in Africa, but emphasises the importance of such economic cooperation for Zambian economic development and knowledge transfers from China. A local expert quoted in the article also highlights the influence of the Chinese presence when it comes diversifying Zambia's economy, which is usually focused on mining.

In scrutinising the time distribution of *Times of Zambia* articles referring to Chinese economic activities, it is noteworthy that in the period 2019–2022 only four such texts were identified, of which just one mentions any tangible effects of China's presence in Zambia—namely, the production plant established by a Chinese investor that has since become the most important source of mill balls not only for Zambia but for neighbouring countries. In general, the *Times of Zambia* focuses more on declarations of a bright future and the possible impacts of Chinese investments and contracts granted to Chinese companies than measurable effects. Aside from the above examples, some articles make mention of China-constructed or China-financed roads, but only describe plans rather than past results.

Although the image presented by *Zambian Watchdog* differs from that of the *Times of Zambia*, the gulf is in fact not great. The main focus of the analysed *Zambian Watchdog* articles is on the connection between Chinese investments with Zambia's high levels of corruption, as well as the fact that senior Zambian officials have awarded construction projects to Chinese companies that have submitted much higher bids

than expected (*Zambian Watchdog* 2019a, 2019b). One article (*Zambian Watchdog* 2016) presents a pathology for the latter situation, namely the 'squeezing' of money from Chinese investors by the government, with the author stating that 'Over the past week, Siwo and Lungu have been visiting and demanding colossal sums of money from various Chinese investors and companies and threatening to cancel contracts that have already been agreed with the government of Zambia if the Chinese do not release the money'. Whilst it is difficult to determine the truth of these accusations, even gossip along these lines may have hampered the willingness of smaller Chinese investors to conduct business in Zambia, therefore diminishing the chances of spillover effects emerging.

Whilst the *Zambian Watchdog* articles provide some examples of tangible effects brought about by the Chinese presence, many of the statements are, once again, somewhat declarative. Those describing tangible effects mention, in an effort to attack the Zambian government, the poor quality of roads or other such problems—for instance, lack of power in the Zambia–China Economic and Trade Co-operation Zone causing hindrances for investors already present in the area (*Zambian Watchdog* 2014).

Even this anti-governmental source, however, makes mention of positive, tangible effects arising from the Chinese presence in an article focused around a letter by former finance minister Ngande Peter Mangande (*Zambian Watchdog* 2021) on the inauguration of Kafue Gorge Lower Power Station, built by ZESCO. Even here, the spotlight is not on China or the investment itself, but rather a domestic political fight between the government and the Patriotic Front party, which several years earlier opposed the visit of Chinese president Hu Jintao.

Africa in China

Although African media sources were chosen as the main source of data to be analysed, we decided to include Chinese media content in order to allow comparison of the image presented of relevant investments/initiatives in China itself with those presented in Angola and Zambia. A total of 1,081 articles mentioning Angola or Zambia published on the *People's Daily* website were collected during the data-harvesting stage. This dataset was automatically coded with keyword categories related to the most common issues concerning the Chinese economic presence in Africa. Zambia was mentioned in 624 articles and Angola 522, with both

countries appearing in some articles—usually those focused on Africa as a whole, events held on the continent or representatives of African countries in China.

Figure 10.4 shows the number of articles mentioning Zambia and Angola by year over the investigated period (since the dataset included only seven months of 2022, this year is excluded), thereby allowing us to determine whether the introduction/development of the OBOR initiative influenced the frequency of articles concerning the two countries.

The statistics presented in Fig. 10.4 reveal several peaks. Whilst mentions of both Zambia and Angola increased in 2015 and 2018, in 2020 it is only Zambia that is subject to a steep rise in the number of articles referencing the country. Overall, the data shows that interest in Zambia and Angola has decreased significantly in the last couple of years.

Most of the articles present Zambia and Angola in an economic context, mainly in relation to the world economy and referring to the activities of Chinese, international and African companies. Even so, not all were focused on investments or even widely defined economic issues, so we decided to refine the dataset down to the content most relevant to the research problem. As a next step, we therefore limited the articles included to those in which *Zambia* or *Angola* co-occurred with the

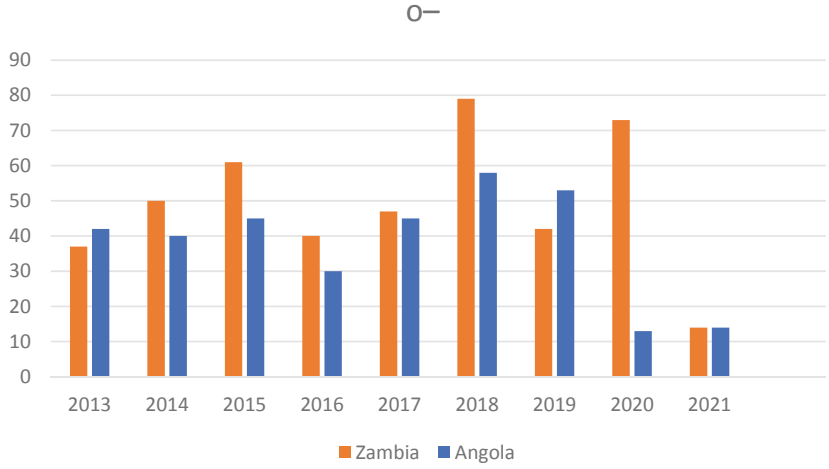

Fig. 10.4 Zambia and Angola in *People's Daily*, 2013–2021

categories applied to the African dataset (i.e. *Investments, Agriculture, Industry and Construction/Infrastructure*). The refined dataset consisted of 895 articles mentioning one or both countries. Figure 10.5 shows the distribution of particular topics within these articles.

The distribution of investment-related topics is similar for both Zambia and Angola, with *Agriculture*, *Investments* and *Industry* most frequently touched on in *People's Daily* content. What is notable, however, is that in contrast to their importance for African news outlets, both *Construction/Infrastructure* and *Natural resources/Mines* are much less common in the Chinese dataset. Whilst it is perhaps to be expected that the construction of transport infrastructure in Africa or the involvement of Chinese companies in large-scale construction projects may not be of great interest to Chinese readers, the relative paucity of references to natural resources—perceived as one of the key drivers of China's presence in Africa—is somewhat surprising. The only category that occurs with similar frequency in both the African and Chinese datasets is *Telecom*.

The distribution shown in Fig. 10.5 supports the argument that in the case of Chinese media, Africa-related articles mainly fulfil a propaganda-related function. As such, they focus primarily on the declarative aspects of the highlighted sectors, creating the impression that China is playing an

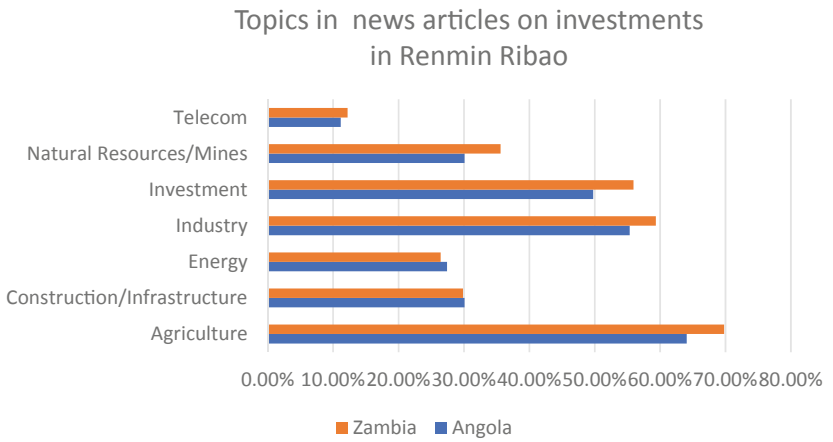

Fig. 10.5 Distribution of topics in investment-related articles in *People's Daily*

important role when it comes to investing in Africa, as well as modernising and developing the continent's agriculture and industry.

Having determined the quantitative characteristics of the analysed dataset, a basic qualitative analysis was conducted in order to determine the rhetoric used by Chinese official media in this context. In general, *People's Daily* focuses on every possible aspect of Chinese success in Africa, including in relation to investments, with articles consisting of declarations, praise and references to huge-scale projects without much further data being provided. China is described as the 'big brother', extending a hand to those in need, be it a recently flooded country, a country facing an Ebola epidemic, or a future partner that will be able to develop thanks to generous Chinese loans (*People's Daily* 2019a).

From the Chinese point of view, the OBOR initiative is presented as a source of spillover effects. One article (*People's Daily* 2019b), in summarising the first five years of the initiative, meticulously lists all the positive results. This involves providing specific data along with more general information on overwhelming successes across the world, including construction of the Benguela Railway in Angola. Another article (*People's Daily* 2022) mentions spillover effects and Zambia, but in a rather surprising way—namely, in the context of the China International Import Expo. Here, China is depicted as a place wishing to attract investors, including African ones, and as such is counting on the emergence of spillover effects.

Summary and Discussion

The overall media image of Chinese investments in Africa, as well as large-scale projects carried out by Chinese companies in the continent, is somewhat indistinct. African media outlets, both pro- and anti-government, tend not to focus on the tangible effects of Chinese investments. Where such details are present, they are usually depicted in relation to either the successes of the Zambian or Angolan governments (in pro-government media), or their failures, particularly in the context of alleged corruption (in anti-government media).

Declarative context is much more frequent, whether this be a memorandum on cooperation, future contracts, incentives for Chinese investors or vaguely described benefits that will supposedly result from the Chinese presence in Zambia/Angola. In this respect, the African countries' media outlets resemble China's *People's Daily*, which stresses the declarative

aspects of Chinese involvement in Africa, unsurprisingly casting an entirely positive light on such activities. Even more important, though, is the fact that the African media outlets sometimes rely on information provided by Chinese diplomatic representatives for their descriptions of Chinese investments.

At first sight, such an approach could be interpreted as indicating a lack of interest on the part of the African media outlets. There may, however, be a number of other factors at play, such as limited investigative funds for journalists (which is probably rather a minor issue), the lack of transparency associated with Chinese investments and projects in Africa and a degree of political pressure not to depict China overly negatively—or at least not to dig too deeply into China-related investments and projects (especially during the dos Santos premiership in Angola and under the Patriotic Front in Zambia). It should be stressed that it is generally quite difficult to gain access to Chinese investments and project sites due to Chinese isolationism and lack of transparency. This opacity is supported on the African side, where there is a desire not to reveal too much about particular contracts, mostly due to issues relating to potential allegations of corruption. Another relevant issue is that real Chinese FDI in Africa is, in fact, fairly limited. Whilst the China–Africa discourse frequently points to Chinese investments in Africa, our analysis shows that, in reality, such references often concern long-term infrastructure projects.

Based on the analysed material, it is also difficult to determine whether Chinese investments can be analysed within a friend-or-foe framework, as investments per se are barely mentioned. Whilst the overall image of Chinese investments is positive, it largely consists of declarative future plans. A broader look at China's media image in Angola and Zambia does, however, reveal a shift in perspective, with Chinese loans beginning to be perceived more as a burden for both countries than a means of supporting development. Again, though, despite China sometimes being depicted as trying to gain control over Africa's natural resources, the country itself is not held responsible for such issues—rather, the problem is presented as being greedy local politicians willing to sell off the wealth of their country for personal gain.

The number of references to projects carried out by Chinese companies, or local companies that have benefited from Chinese loans, is larger. In declarative terms, China is generally depicted as a friend,

supporting the economic development of the host nation, with any negative remarks—as in the case of investments—usually made in the context of local political problems.

In terms of the overall focus of this book, it is important to note that there are scarcely any mentions in the analysed articles indicating the existence or emergence of spillover effects. Even if we assume that the creation of vacancies for well-educated African youth, local farmers and workers is a possible indicator of future spillover effects, it remains difficult to find articles focused on this issue. In the context of spillover effects, the only meaningful aspect of the Chinese economic presence in Africa appears to be Chinese construction companies' engagement—financed by China—in transport and energy infrastructure, as such projects allow people from geographically distant communities to develop their businesses. In these cases, however, we cannot talk of spillover effects per se, but rather a form of developmental effect.

The question arises as to why real spillover effects are so rarely mentioned, despite the fact that in our analysis we have extended the scope of potential spillover agents to encompass both FDI and long-term contracts. One of the most obvious issues relates to the articles' lack of any detailed descriptions of Chinese investment and project results. Aside from the above-mentioned challenges (lack of transparency, lack of access to Chinese investments and projects sites, political pressure and lack of funds for proper investigation), the dearth of information about the indirect effects of various Chinese activities may be a reflection of the limited number of Chinese investments in Africa, the existing technological gap and the institutional and political obstacles to Chinese spillover effects detailed in Chapters 4 and 5. Moreover, the decreasing number of Chinese activities in these countries, as reflected in the analysed media, may eliminate any remaining spillover potential. This is related to the fact that Chinese modus operandi and technology tend to differ from their Western equivalents, whereby there is no drive to ensure the skills obtained passed to those in the host country are useful once the Chinese investment concludes or the Chinese company leaves.

In addition, the paucity of references to spillover effects in the media cannot be explained by the fact that journalists are unaware of the term—in our analysis, we did not search for occurrences of this word specifically, but rather sought the results of Chinese economic activities in the hope that some of them could be classified as spillover effects. The broad parameters of our media analysis reinforces our sad conclusion that not

only is there little that can be unearthed on spillover effects, but on *any* pro-developmental outputs of the Chinese presence in Africa, aside from the existence of specific infrastructure-related projects.

Our media content analysis offers useful data for triangulating related research results, offering support for the conclusions made in Chapters 4 and 5, and, indeed, the findings arrived at across the entire project—namely, that despite China's solid economic presence in Africa, especially in the construction sector, no significant spillover effects arising from its activities seem to be observable. Given the substantial withdrawal of Chinese activities in recent years, this leaves a rather sorry picture of the country's involvement, which was heralded as the dawn of a significant developmental push for Africa. This conclusion encompasses a significant proportion of Chinese infrastructural projects, with tangible results often falling away or becoming non-functional in a short space of time. The only area that seems to hold any significant potential for the future is the telecommunications sector, which—somewhat surprisingly—is not mentioned particularly often in the analysed media.

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Correction to: The Political Economy of Chinese FDI and Spillover Effects in Africa

Dominik Kopiński, Pádraig Carmody, and Ian Taylor

Correction to:
D. Kopiński et al. (eds.), *The Political Economy of Chinese FDI and Spillover Effects in Africa*, International Political Economy Series, https://doi.org/10.1007/978-3-031-38715-9

The original version of this book was inadvertently published without the funding information in the copyright page in the book front matter, which has been included now. The book has been updated with the changes.

The updated version of this book can be found at
https://doi.org/10.1007/978-3-031-38715-9

D. Kopiński et al. (eds.), *The Political Economy of Chinese FDI and Spillover Effects in Africa*, International Political Economy Series,
https://doi.org/10.1007/978-3-031-38715-9_11

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D. Kopiński et al. (eds.), *The Political Economy of Chinese FDI and Spillover Effects in Africa*, International Political Economy Series,
https://doi.org/10.1007/978-3-031-38715-9