CHAPTER 5

Eurocentrism, FDI and Spillovers: Conceptual and Methodological Challenges

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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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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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