

Beyond the China factor:

Challenges to backward linkages in the Mozambican construction sector

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Abstract China has become a significant contributor to closing Africa's infrastructural gap, but Chinese companies are repeatedly criticised for not involving local businesses in their operations, and for isolating themselves from the socio-economic environment. Can this be attributed to 'typical Chinese business practice'? This article employs linkage theory to examine the weak domestic backward linkages in Chinese-led construction projects in Mozambique. The analysis shows that while Chinese companies do not involve Mozambican businesses in their activities to any extent, this cannot be attributed solely to any 'Chinese business model'. It is a consequence of weak local industrial capabilities, fragile social infrastructure, and a liberal policy environment not conducive to the creation of domestic backward linkages in Chinese-led construction projects.

INTRODUCTION

China has become a significant contributor to closing Africa's infrastructural gap. Chinese contractors and lending institutions are involved in construction projects ranging from bridges, roads, and water systems, to 'prestige' projects like stadiums, conference halls and government buildings. As relatively little aid from Western donors and institutions has been

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channelled to construction, especially infrastructure, in recent decades¹ (CCS 2006; Vines 2007), African leaders have welcomed Chinese involvement. Such projects are often turn-key projects, where Chinese construction companies control and perform the actual work (Braütigam 2011), but Chinese companies have also come to dominate national tenders for construction work in several African countries (Chen *et al.* 2009).

Scholars have focussed on China's Africa policy more broadly (Pannell 2008), the entry strategies used by Chinese firms (Chen *et al.* 2009; Gu 2009), Chinese business models in Africa (Alden 2007; Broadman 2008), the linkage between the Chinese state and Chinese companies abroad (Kragelund 2009), and Chinese labour practices (HRW 2011). Local African factors are often downplayed in accounts of encounters between Chinese businesses and African localisations. As Chinese activities in Africa do not develop in isolation, I argue for a focus on how Chinese practices *play into* ongoing dynamics of development, cooperation, competition, inclusion and exclusion in the countries concerned.

According to the China-DAC Study Group (2011: 80), Chinese companies are taking a more 'permanent' market entry into Africa searching for long-term presence and development opportunities. As yet, however, this does not always seem to be happening (Corkin 2012; UNDP 2015). A major criticism of Chinese-led projects remains their poor integration into the local setting, creating detached 'islands of growth' (Wang & Flam 2007; Afrodad 2008; China-DAC 2010; Herbertson 2011; Mold 2012; Lin & Wang 2015). Can this be attributed to typical Chinese business practices? Here we need to move beyond a focus on 'Chinese factors', and investigate the complex nexus of factors that enable or constrain the creation of economic linkages between foreign firms and local businesses. This article will contribute to the debate by examining challenges to local linkage creation in Chinese-led construction work in the case of Mozambique. Drawing on global production networks and linkage theory, the analysis critically engages with features of the Mozambican host economy and broader policy space that affect the creation of local linkages.

While the immediate benefits of rapid infrastructure provision from China are evident, the long-term development potential is less clear. According to Morris, Kaplinsky and Kaplan (2012: 29–30), 'successful economic growth is inevitably an incremental (but not necessarily slow) unfolding of linkages between related economic activities'. Obviously, the benefits for broader economic development from any type of foreign investment will be greater, the more

local firms and the economy can learn from more advanced companies' technology, production processes, labour training, management and marketing skills (Morrissey 2012: 26). This indicates the importance of investigating how economic linkages unfold in the economy, and how to facilitate the creation of such linkages. The construction industry appears well-suited for fostering linkages with local businesses, given the considerable inputs required, and that each project is fixed in a specific location (Njoh 2000; Ofori 2003; Corkin 2012; Morris *et al.* 2012).

Mozambique is among the countries to which China exports construction services. Although Mozambique and China established formal diplomatic ties already in 1975, economic and commercial cooperation has increased particularly in the last decade (Alden *et al.* 2014). Successful coal and gas exploration seems to have made the Mozambican government more confident about approaching new types of investors, and it has come to rely on Chinese capital and skills, especially in infrastructure construction (*ibid.*). Over 30 Chinese construction companies have established themselves in Maputo, their competitive pricing making them important players in national and international tenders for construction work in Mozambique (Alden *et al.* 2014). In parallel, Mozambique has continued its relations with Western donors and International Financing Institutions (IFIs), which historically have exerted great influence on economic and political reforms (*ibid.*).

Mozambique has experienced impressive growth in recent decades, averaging some seven percent annually. However, the inclusiveness of this growth has been less impressive (Schou & Cardoso 2014: 1). Poverty reduction has stagnated, due partly to the absence of structural economic reform that could enable the workforce to transition from subsistence farming to modern industrial and service sectors (Jones & Tarp 2012). Economic development has become an urgent issue, as reflected in national development strategies. Mozambique's macro-economic strategies highlight broad-based development, focusing on support to small and medium-sized enterprises (SMEs), and the promotion of economic linkages in large foreign projects (GoM 2011). However, my fieldwork on three construction projects in Maputo shows that this is not necessarily translated into practice: economic linkages between Chinese main contractors and Mozambican SMEs remain few.

After discussing local linkage theory and how to explore determinants of backward linkage development, I present the methodology and cases. The Mozambican experience is then

analysed in light of the determinants of domestic backward linkages: ownership, capabilities, infrastructure, and policy.

The three cases explored here exemplify a range of Chinese-led construction projects in Mozambique. The first project is Chinese-financed and -constructed; the second is financed by a Western donor and built by a Chinese contractor; the third is a joint venture between a Chinese state-owned enterprise (SOE) and a Mozambican state development fund. In all three cases, experiences regarding local economic linkages are similar. Grounding the discussion in the geography of economic linkages enables my analysis to move beyond the explanatory factor of ‘Chinese business practices’. Further, the Mozambican case illustrates a set of broader development dilemmas facing many African countries in balancing long-term and short-term development priorities.

UNDERSTANDING LOCAL LINKAGES

Linkage theory is associated with the works of economic historian Albert Hirschman (1970, 1981), who saw successful economic growth as the unfolding of linkages between related economic activities, with development being accelerated by ‘investments in projects and industries with strong forward and backward linkage effects (Hirschman 1981: 63). He initially identified three sets of linkages: fiscal, consumption and production linkages. Production linkages were thought to create profitable market opportunities, in turn leading to the development of a more diversified economic structure in low-income economies.

Production linkages could be both forward and backward, but backward linkages were deemed more viable, as local economic actors were likely to be more familiar with the technology and production processes in backward linkages than with those associated with the more advanced processing of commodities in forward linkages.² In this article, I focus on backward production linkages, investigating Hirschman’s claim that ‘every nonprimary economic activity will induce attempts to supply through domestic production the inputs needed in that activity’ (1970: 100). Hirschman held that backward linkage effects provided ‘a special push factor’ for technical learning and industrial development (1981: 63), indicating that policymakers and planners should encourage firms to source needed intermediate products domestically instead of using international suppliers (Polenske & Sivitanides 1990).

Hirschman's ideas have become increasingly relevant through decades of intensifying economic globalisation, with greater outsourcing in multinational firms and the promotion of foreign direct investment (FDI)-led growth strategies in many developing countries, where the long-term goal is to make national industries globally competitive through the transfer of technology and knowhow. However, globalisation processes have also made it possible to extend backward linkages beyond national borders or even continents: production supplies need not be sourced domestically, in turn reducing the relative contribution to the national sector in question (Mlinga & Wells 2002). For domestic firms to benefit from foreign company activity, they must find ways of getting into the production networks – not always easy when lead firms can source goods and services from outside. As Peter Dicken explains, if the predominant mode of organising production is through global production networks (GPNs), 'it is very difficult indeed for local firms/economies to prosper outside them [GPNs]. Being there – as an insider – is virtually a prerequisite for development' (2011: 448). For domestic firms to become 'insiders', production networks must be accessible for local economic actors, with lead firms strategically coupled³ to the economy in question (Coe & Yeung 2015). Without a strategic coupling process, regional development remains 'a moot point' (Coe *et al.* 2004: 474). With this in mind, I introduce the semantic concretisation of *domestic* backward linkages.

The construction sector may hold great potential for creating economic linkages that spur local economic activity and create employment opportunities: 'The development and expansion of a country's construction industry is a key component of its early industrialization experience' (Zhang & Gutman 2015: 5). With its many linkages with other sectors in the value chain, the industry is seen as the cornerstone of structural change in developing economies (Wells 1986; Ofori 1990, 2000; World Bank 2004). Much of the value added consists of intermediate inputs from other sectors of the economy, as with building materials and service industries (Polenske & Sivitanides 1990; Crosthwaite 2000; Lean 2001). It is also normal procedure for large construction companies to divide services among various contractors, to avoid having to be the sole investor in all the resources required (Lopes 2007; Jerónimo 2014; Maugeri *et al.* 2015). Drawing on the study of managerial knowledge spillovers in the construction sector by Auffray and Fu (2015: 292), I operationalise 'backward linkages' to refer to domestic employees, subcontractors, and suppliers.

Morris *et al.* (2012) hypothesise four specific contextual determinants regarding the development of backward linkage that guide the analysis in this article: ownership, infrastructure, capabilities and policy. *The ownership* aspect concerns the origin of ownership and place of incorporation of the lead firms and their suppliers, the nationality of foreign firms, as well as firm-specific attributes. The place of origin may influence the firm's time-horizon, its attitudes towards risk, and expectations of the host government. Some foreign firms may have guidance or support from home governments that encourage or discourage the development of domestic backward linkages, or specific pressures for Corporate Social Responsibility standards (Morris *et al.* 2012).

Infrastructure is understood broadly to include physical infrastructure (roads, railways, telecommunication, utilities) as well as social infrastructure (efficiency and cost of the administrative and regulatory regime supporting the productive sector). The characteristics of supporting infrastructure are crucial to any economic activity – for lead firms as well as their subcontractors and suppliers. As two of the three cases investigated here are defined as projects in (physical) infrastructure, my focus is primarily on social infrastructure.

Third is the question of *local or domestic capabilities*, where each individual industry requires a set of skills and technological knowledge. To develop and enhance domestic backward linkages, domestic companies and labour must develop skills and enhance technological knowledge in line with the requirements of lead firms. And if local staff is to fill skilled and managerial positions, investments must be made in local education and training. National institutions are particularly important for developing domestic capabilities that can keep up with technology innovation.

Policy is the fourth factor determining the development of domestic backward linkages noted by Morris *et al.* (2012). While much of the literature on local linkages pays great attention to how firm strategies and market capabilities influence the creation of local linkages (Alfaro & Rodríguez-Clare 2004; Chen *et al.* 2009), policy is often downplayed. This may be due to criticisms of state interventions in markets following World Bank policy prescriptions, where multilateral and bilateral donors have generally not put industrial policy on the agenda for advice and recommendation. Still, the state should be recognised as a central actor in developing domestic backward linkages, partly because linkages are crucial in determining

patterns of economic change and growth, and partly because linkages require coordination of various harmonising investments (Castel-Branco 2001).

According to Morris *et al.* (2012), attempts to regulate backward linkages in foreign-led projects have often been poorly monitored in many African countries. This can be linked to discussions of state capacity, meaning ‘the ability of states to plan and execute policies, and to enforce laws cleanly and transparently’ (Fukuyama 2004: 22). Moreover, policies – industrial policy in particular – ‘are shaped by incentives arising from the imperatives of the ruling elites to remain in power and thus build and maintain political support’ (Whitfield & Buur 2014: 127). Hence, officials charged with designing and implementing industrial policy must be familiar with the targeted industry and trusted by the ruling elites, while simultaneously able to mediate between the political and economic objectives of the ruling elite (Whitfield & Buur 2014). Lastly, the policy aspect must be understood in relation to policy space, meaning the many networks, agreements and constraints that influence how national government can formulate policies for industry and trade.

Using these above determinants to explore domestic backward linkage development (or lack thereof) in the Mozambican construction industry makes it possible to explain the complex set of issues involved regarding the connections between foreign-company activity and the national economic sector. The ownership aspect will capture what can be attributed to ‘Chinese business practices’, whereas the other three aspects relate more directly to the Mozambican context. These three are often ignored in analyses of China–African cooperation, leading to disproportionate criticism of Chinese activities.

METHODS AND CASES

The analysis in this article is based on qualitative data collected during fieldwork in Maputo, May to September 2013, with additional data collected from October 2014 to January 2015.⁴ Data were collected from three Chinese-led construction projects ongoing at the time of fieldwork. By focusing on three projects, each representing a distinct form of China–Mozambican cooperation, I sought to elicit the implications of financing structures for certain business strategies and project features that could influence domestic backward linkages. This

was a purposive sampling, with cases selected because ‘they offer useful manifestations of the phenomenon of interest’ (Patton 2002: 40).

My data material consists of 41 qualitative interviews and extensive observational data from the three construction sites. Interviews were conducted Mozambican workers, Chinese and Mozambican company administration, Chinese engineers, consultant companies, the business association for the construction industry, the national trade union for construction workers, and high-ranking officials from various ministries and governmental bodies involved. Informants were selected on the basis of their expertise in and connection with the three projects. All interview transcripts, interview notes, and observational notes were organised and coded in the NVivo software for qualitative analysis. Secondary sources on the local construction industry, political strategies and the Mozambican political economy complement the interview data in the analysis.

The first case (*the road project*) is a roadworks project financed by a USD 315 million non-concessional loan from the China Export-Import (ExIm) Bank. The project involves 74 kilometres of road, including six bridges; the main contractor is Chinese SOE that won the contract through a closed tender organised through the ExIm Bank. This project represents a type of infrastructural lending quite common in Chinese–African cooperation in the sector. Foster *et al.* (2009), for instance, note that the Exim Bank accounted for 92% of Chinese finance commitments for infrastructure in Africa, 2001–2007. On the Mozambican side, a SOE was established to function as project owner. The Chinese contractor did not use subcontractors, but said that if they were to use subcontractors at a later stage, these would be South African (interview, Chinese Head of Project and Coordinator, 19.06.13). Only the most basic supplies were locally sourced: sand, some cement and fuel. Cement was also produced directly onsite. More advanced equipment was Chinese (excavators, trucks, spare parts, tubes of a specific quality), or South African (tubes, excavators, trucks) (interview, Chinese engineer, head of construction, 22.08.13). The main domestic backward linkage created was through employment, some 540 local workers out of a total of approx. 600. These local workers generally held low-skilled positions, often as casual labourers on short-term contracts (for analysis of the workplace, see Wethal 2017b).

The second project involves the expansion and rehabilitation of the urban water system (*the water project*). The project, with USD 40 million in financing from the French Development

Agency (AFD), is executed by three Chinese SOEs (one is in focus here). A Mozambican state investment fund for water supply, under the control of the Ministry of Public Works, functioned as project owner, and a US company served as technical consultant. This project represents another trend in Chinese involvement in African construction, where Chinese companies increasingly win international tenders for construction work on the continent. The Chinese contractor used one local subcontractor for cutting tubes and asphalt work, tasks the company regarded as outside their core activities (interview, Mozambican subcontractor, 30.05.13). Also here, only basic elements like sand, stone, and cement were bought locally; certain types of cement, PVC pipes, iron pipes, fittings, and pumps were imported from South Africa. Only iron pipes of a specific quality were imported from China (interview, Chinese head of engineers, 27.05 and 13.06.13). The supervising consultant (interview 19.06.13) mentioned that if they were to use more subcontractors, they would be South African, because of low technical capacity in local companies (interview, Consultant Company 19.06.13). Regarding local employment, the water project resembles the road project, with local workers filling low-skilled positions, often doing casual work. The approximately 150 Chinese employees held managerial and technical positions.

The third project (*the housing project*) has involved the construction of 5000 homes, intended to provide affordable housing for the (lower) middle class. The main contractor was a joint venture between a Chinese SOE and a Mozambican development fund under the control of the Ministry of Public Works, together forming a private company. It is financed by an investment of USD 440 million, where Chinese SOE holds 85% and the Mozambican development fund for real estate 15%. According to Braütigam and Xiaoyang (2011), the formation of joint ventures is becoming an important feature of China–Africa cooperation and China’s official approach to Africa. This joint venture formed the administrative structure; actual construction work was undertaken by four subcontractors – three Chinese and one Mozambican (of Paraguayan origin, operating in Mozambique since 1989). Mozambican supplies included sand, stones, bricks, cement, buckets, and plaster; tiles, sanitary ware, doors, windows, showers and other interior fittings were imported from China, as were helmets, jackets and boots for the workers (interview, Consultant Company, 05.06.13). The subcontractors had some decision-making power concerning supplies for the building structure, such as bricks and plaster, but all interiors were determined by the joint-venture company. This was explained by the fact that the houses were to be identical, and it was

cheaper to import from China (interview, CEO, 10.06.13). This joint venture had both Chinese and Mozambican employees in high-skilled and administrative positions, unlike the two other projects – perhaps indicating the establishment of joint ventures as a viable way of facilitating knowledge-sharing between foreign and local companies. Domestic employment with the subcontractors resembled the other projects, with 450–500 local Mozambican workers in low-skilled positions, out of 550–600 workers in total.

CHALLENGES TO LINKAGE DEVELOPMENT – THE MOZAMBIKAN EXPERIENCE

The Mozambican National Development Strategy envisions the construction industry as a dynamic construction sector with strong links to local economic agents, facilitating access to decent housing for the Mozambican population while also creating jobs and business opportunities for local contractors and suppliers of building materials, serving as a catalyst for transformation and industrialization of the Mozambican economy (translated from Maugeri *et al.* 2015: xi). However, this is a far cry from how Chinese-led construction projects are currently implemented in Mozambique:

The Chinese come here, develop large projects, and leave nothing with us. So that is the challenge we have. We need to learn and the only way we will learn is by doing. (Interview, Ministry of Public Works, 25.07.13, in Wethal 2017a)

Apart from the extensive provision of employment opportunities, economic linkages between Chinese and national companies remain few. Why is it so difficult to create domestic backward linkages from Chinese-led construction projects in Mozambique? To what extent can this be attributed to a Chinese business model? I explore these questions through the concepts of *ownership*, *infrastructure*, *local capabilities* and *policy* (Morris *et al.* 2012).

The ownership aspect

Whether lead firms are foreign or nationally owned may have important consequences for linkage development. In general, nationally owned firms are seen as being more embedded in the local economy, in turn stimulating more extensive local economic linkages (Dicken 2011; Morris *et al.* 2012). However, in the Mozambican construction sector, foreign companies – Chinese in particular – tend to win national and international tenders. A representative of a

US consultant company (interview 19.06.13) cited the example of a project tender in Maputo of the 19 contractors participating, 11 were Chinese, two were Korean, and the remainder European. Domestic companies are rarely involved in the bids, so Chinese companies compete with traditionally strong South African and Portuguese companies (Alden *et al.* 2014). To understand challenges to linkages between Chinese and domestic companies in Mozambique, we need to explore how Chinese companies enter the Mozambican market.

They do this in two specific ways. The first involves bilateral relations, where China offers a complete project, from financing to the actual construction, on terms favourable to the Mozambican government. From the Chinese perspective, this modality is preferable, given Africa's history with cash expenditures: the method of disbursing funds through specific projects neutralises the possibility of graft and corruption. Moreover, the money will stay within the Chinese system and ensure that aid-financed projects under the purview of the Chinese government, especially regarding the contract-tendering process (Davies *et al.* 2008). Many of these loan packages in construction come through China ExIm Bank, which is fully owned by the Chinese government. Its loans are designed to: 1) 'fund manufacturing projects, infrastructure construction projects and social welfare projects in the borrowing country, which can generate promising economic returns or good social benefits, and 2) finance the procurement of Chinese mechanical, electronic products, complete sets of equipment, technology and service and other goods by the borrowing country (Corkin 2013: 64–66). Such funding should be understood as tied, which in turn does not stimulate local supply-chain development or domestic backward linkages.

A second mode of entry relates mainly to competitive pressure in the Chinese construction sector, and support provided to Chinese businesses for globalising their activities. Chinese foreign investments gained momentum after the Chinese government formalised the 'Going Out' policy in 2001, encouraging Chinese companies to establish themselves abroad and compete globally. This policy package included a reduction in bureaucratic procedures, to make Chinese producers more foreign investment friendly, with tax incentives, subsidies, and access to loans credit and support from state institutions (Kragelund 2009). Mozambique is among the developing markets where Chinese companies have found it lucrative to establish themselves. Morris *et al.* (2012) found that Chinese companies entering African markets without attachment to specific Chinese-funded projects would tend to be more embedded in

the local economy, but only very subtle differences emerge in the cases examined here. The lack of local integration was generally understood as ‘business as usual’ for Chinese contractors, and was seldom contested:

Normally, the Chinese do not outsource, they are not used to sub-contracting. They can use certain services, but usually they do everything, I don’t remember, at least now, any Chinese company that had done subcontracting, local subcontracting. The only subcontracting I have seen was in 2006, but that was to a South African company to dig some ditches... (Interview, Mozambican state investment fund, *water project*, 02.07.13)

Morris *et al.* (2012) found that Chinese (and Indian) lead firms were more reluctant to outsource activities outside their core competences, in comparison with South African and other ‘northern’ lead firms. Chinese interviewees claimed that the nature of the work did not require extensive outsourcing, as the company had the capacity to execute the entire project. Moreover, this made it easier to control costs. Cost is relevant here: price remains a major competitive factor for many Chinese firms, and Chinese control of the main service and supply chains is seen as an important element in their ability to keep prices competitive:

Particularly in the case of some contracts, Chinese companies operate with very low prices because they work with materials that can easily be brought from their country. These are Chinese companies; they know the Chinese market very well, because the largest factories, many of which are their own, are in China. (Interview, Mozambican state investment fund, *water project*, 02.07.13)

In light of the price element, Chinese firms could become ‘less eager to localise their labour’ (Corkin 2012: 476) and enter into partnerships with domestic firms. Even in the *housing project*, and given that joint ventures create certain expectations of stronger local integration (Amendolagine *et al.* 2013), the motivation behind this business structure was to keep costs down. The choice of partnering with a state development fund as the minority partner was justified by the need to have a local associate that could minimise costs and facilitate bureaucratic procedures. The use of Chinese subcontractors was also motivated by low costs, as Chinese companies were thought to be able to meet any type of budget (interview, CEO, *housing project*, 10.06.13). However, as noted by Braütigam (2008), having a governmental body rather than a local entrepreneur as economic partner in joint ventures could limit the potential for knowledge and skills transfer to local firms.

Representatives from the business association for contractors characterised the organisation within Chinese businesses as very closed and isolated from society (interview 14.05.13). This description fits the organisational structure of the Chinese businesses working on the three projects examined here, where closed-off areas outside main centres housed all the Chinese managers and workers, where they socialised and enjoyed separate cooking facilities and health services. According to Morris *et al.* (2012), one consequence of expatriate groupings in remote areas abroad is that the managers have little or no knowledge of the local economy. That complicates the creation of domestic backward linkage creation, as such relations require a certain level of trust. This aspect might be further exacerbated by general communication difficulties. In the projects examined here, language and cultural differences were seen as major challenge, and many of the people involved in project execution had no common language to communicate in. This point is supported by Amendolagine *et al.* (2013), who found that higher language and cultural barriers could be a plausible partial explanation for the lower impacts of backward linkages from Chinese investments in Africa.

However, this does not necessarily mean that non-Chinese foreign companies create more domestic backward linkages. Despite efforts to reduce tied aid OECD-DAC donors since the mid-1990s (Knack *et al.* 2013), most ODA contracts still go to donor country firms (Ellmers 2011; Mawdsley 2012). Moreover, multinational companies tend to create follower suppliers, whereby lead suppliers locate their supply operations near those of lead firms with whom they already have network relations (Morris *et al.* 2012). Supply becomes ‘local’ – but not from locally owned firms. Apparently, other foreign firms in Mozambique also import most their supplies (see discussion below) or use their own established supply chains, and I was warned against seeing this as ‘typically Chinese’:

... It’s important to remember that everyone does this. Not just China, but Portugal, South Africa, Brazil. When one realises that the other side does not have the faintest idea what they are doing, they will try to exploit it. The Chinese are just a manifestation of this. (Interview, former Mozambican government official, 01.08.13).

As noted by Krause and Kaufman (2011), the impressive growth that Mozambique has experienced since the mid-1990s can be attributed mainly to massive inflows of FDI in capital-intensive mega-projects with few linkages to the local economy. Even with Mozal, Mozambique’s first mega-project in 1998 and the largest foreign investment at the time,⁵ the broader development effects have been disappointing. The results of the tailored programme

for developing economic linkages with domestic companies were modest (Krause & Kaufman 2011), and most suppliers and subcontractors have still been South African (Castel-Branco 2008). An assessment conducted by APRM (2009, in Krause & Kaufman 2011: 52), established that Mozal remains ‘an isolated economic enclave that uses large quantities of scarce resources without returning revenue or jobs to the economy’.

Chinese businesses do have certain attitudes towards subcontracting and supplying that challenge the development of domestic backward linkages. These attitudes relate mainly to motivations for entering the Mozambican market (e.g. ExIm Bank funding), sources of competitiveness, and organisational structure. However, it is not necessarily some ‘Chinese business model’ that is the main challenge to creating domestic backward linkages, as other foreign companies also use follow-suppliers in their operations and have been active in the local construction sector since long before China’s ‘Going Out’ strategy. Ownership is only one of several aspects influencing the development of linkages.

Capabilities in the Mozambican construction sector

The creation of domestic backward linkages from foreign projects is heavily dependent on the local context. Local firms must be able to absorb spillover effects and face competition; viable production and supply capacity must exist; and adequately skilled workers must be provided (Kragelund 2009). If the local economy is to reap the benefits of the culture of outsourcing in the construction industry, the necessary resources (like labour, materials, machinery and technology) must meet high standards and be readily available (Maugeri *et al.* 2015). That is generally not the case with the Mozambican construction sector. Many Chinese firms rely on supplies from China:

I would say that 90% of their equipment is Chinese, yes... The equipment of the workers, the uniforms are Chinese, the boots are also Chinese – but we do have a bucket that we managed to find with a Mozambican contractor (Interview, consultant company, *housing project*, 05.06.13)

The extensive use of Chinese supply sources was most evident in the *housing project* and the *road project*. This is in line with Gu (2009: 582): ‘the absence of local networks of specialised supplies or, where they do exist, the high cost and often poor quality of goods means that many Chinese firms simply turn to the reliable, tried and tested, and cost-competitive established suppliers back in China’ (see also Chong 2014). In the *water project*, the financier

(AFD) had tried to maximise local supplying by prohibiting imports from China. Sourcing from South Africa was allowed, as this was considered a developing country: thus, most supplies were brought from there. Moreover, when iron pipes of the specified quality were unavailable regionally, the Chinese company was exempted from the initial prohibition, and imported these from China (interview, Chinese head of engineers, *water project*, 27.05.13). This shows that the mode of financing and requirements on sourcing can have an effect on sourcing patterns, although not always benefiting the local market in Mozambique. As to the Mozambican sector, the Chinese companies did not know which local companies they could use or trust as suppliers. Transportation was too slow: and when goods and services from local companies were tested, these often lacked the capacity and technical standards to meet demands as to quality, quantity, and deadlines, making it too risky to depend on local companies (interview, Chinese head of engineers, *water project*, 27.05.13). The Chinese project coordinator regretted that they could not involve more domestic companies, but this had proved too difficult and time-consuming (interview, *road project*, 19.06.13).

In both the *road project* and the *water project*, the Chinese administration and consultants noted that they preferred using South African subcontractors (Interview, Chinese Head of Project and Coordinator, 19.06.13, interview, Consultant Company 19.06.13). Such, competition from South African goods and services in the Mozambican market is nothing new, nor is it connected to Chinese companies. Ever since its economy started liberalising in the early 1990s, South Africa has provided goods and services that have been generally ‘cheaper, of better quality, enjoyed a better reputation and were delivered more reliably and with better customer services’ than Mozambican equivalents (Castel-Branco 2014: 29).

The Mozambican construction sector is divided between large foreign firms, on the one hand, and domestic SMEs on the other. As put by a Mozambican NGO (interview 11.11.14) regarding the construction industry: ‘In Mozambique, we have the international – the Portuguese, the Chinese companies – who participate in “Champions League”, and then we have the national contractors who are in the “Moçambola” [national football division]’. In Maputo province, most construction companies and producers of construction materials remain small or micro-sized. They suffer from low credibility, lack of skilled workers, technology and certification, and limited sources of credit (Lopes 2007; Maugeri *et al.* 2015).

The shortcomings of domestic companies are well understood by key stakeholders, who acknowledge the lack of appropriate skills, and access to capital and equipment. Also lacking is practical experience with modern construction methods and technologies, given the dominance of foreign companies in the industry (interview, business association for contractors, 14.05.13). The lack of appropriate skills applies also to the workforce, with a shortage of professional workers at technical and administrative levels (Lopes 2007). This makes it challenging for the government to push for local content beyond low-skilled positions (interviews, Ministry of Labour, 14.08.13, and Ministry of Public Works, 25.07.13). For instance, the Mozambican subcontractor in the *housing project* employed Paraguayan technical workers and engineers as supervisors for Mozambican local workers (interview, Mozambican subcontractor, 10.06.13).

Small and medium-sized domestic companies have been unable to meet the growing demand from the construction sector in the country, which in turn has resulted in lead firms filling the gaps with imports (Maugeri *et al.* 2015). The business association for contractors (interview, 14.05.13) confirmed that many construction materials must be imported from South Africa or Portugal, because they are unavailable in the Mozambican market. A 2009 World Bank report confirms this: about 90% of the construction material for high-end construction must be imported. The difference between Chinese-led projects and others is not necessarily that more material is imported – only that more is imported from China.

Interestingly, whereas imports of iron- and steel-based products continue to increase, imports of cement are declining. Maugeri *et al.* (2015) explain this with the establishment of Cimento Nacional in 2011, a cement producer headquartered in Dubai, and an increase in the capacity of Cimento de Mocambique, a subsidiary of a Portuguese company that has dominated the Mozambican cement market since independence in 1975. Media reports also indicate that smaller private Chinese companies will seek to establish themselves as producers of construction supplies in Mozambique as a consequence of Chinese penetration of the Mozambican construction market.⁶ This is backed up by studies of other African countries: for example Corkin (2012: 478) found that Chinese companies and entrepreneurs in Angola were working in parallel to larger Chinese companies, providing ‘complementary action’ to projects – goods and services required from larger contractors working on Chinese-financed projects. Morris *et al.* (2012) report similar findings. Hence, while some have predicted that

labour practices and market strategies of Chinese companies may alter as they establish themselves in Africa with long-term perspectives (Li Anshan 2007; Gu 2009), the Chinese control of supply chains could indicate that, even if chains gradually become more locally embedded, that will not necessarily benefit domestic companies. However, as evident from the Mozambican construction sector, this is not something typically Chinese: it is more that Chinese firms, like other international actors, recognise the economic potential in filling gaps in the Mozambican sector for construction material.

Social Infrastructure

The low capabilities in the domestic construction sector are to a large extent connected to weak social infrastructures. Supporting social infrastructure involves efficiency and cost of the administrative and regulatory regime (Morris *et al.* 2012). Over 90% of construction companies in the Maputo region are in the informal sector – under the radar of formal rules and regulations, and without the accompanying societal infrastructure. Further, excessively tedious bureaucratic procedures related to state ownership of land in Mozambique make access to land difficult in urban areas, boosting the informal sector (Maugeri *et al.* 2015).

One of the major aspects highlighted by my informants highlighted was the lack of demand (interviews, business association for construction 14.05.13, Mozambican construction company 17.12.13). As construction projects in Mozambique have mushroomed, the ‘lack of demand’ is related to the fact that foreign companies have been the main beneficiaries of this development. Several informants also mentioned that domestic companies must depend on private contacts in order to get work (Mozambican construction company, 17.12.13; Mozambican subcontractor, *water project*, 30.05.13). According to Hanlon and Mosse (2010), those companies that have successfully linked up with foreign companies have been a few, large, and with close links to the Mozambican political elite. Hanson *et al.* (2014) report that much of the market for domestic backward linkages in Mozambique, in the form of local content, has been captured by the economic and political elite. This is further supported by Castel-Branco (2014; 27), who holds that economic growth in Mozambique has come about through an alliance between the Mozambican state, large domestic capital and multinational capital. SMEs are considered insignificant to the elite, and not prioritised concerning linkage development (Buur 2014).

A second aspect highlighted by my informants was the limited access to equipment and credit. Maugeri *et al.* (2015) report that access to finance has remained a major challenge, despite the growing number of operators in the financial sector. This affects the technical capacity of domestic firms: a 2010 survey of the Mozambican Industrial Association (in Maugeri *et al.* 2015) showed that more than 62% of domestic companies had not upgraded their technology significantly since the 1990s, and machinery was often more than 20 years old.

Understanding policy and policy space in Mozambique

As noted by Mold (2012: 239), ‘the relevant question is no longer whether governments should promote investment in infrastructure to underpin development but rather how the projects are selected and designed and how are they to be financed and executed’. Several interlinked political scales influence the disappointing outcomes as to domestic backward linkages. Policies aimed at maximising gains from foreign-company activity should seek:

- (1) to affect potential investors to invest (to influence the decision process of TNCs as well as to exercise selectivity vis-a-vis TNCs);
- (2) to affect already established firms (to facilitate their upgrading by intervening in resource allocation and thereby enhance potential positive spillovers);
- or (3) to affect the response of domestic firms (to ensure that domestic firms can capture the spillover effects of TNCs). (Kragelund 2009: 481)

The Mozambican government has focussed on the first of these points – how best to attract investments – but not necessarily how to guide these investments or build domestic capacity to absorb the spillover effects. ‘The government follows an open policy regarding foreign trade that eases foreign investment and prioritizes free trade over the promotion of local manufacturing and processing’ (Krause & Kaufman 2011: 10). Mozambique has adopted unusually strong legal commitments to open its economy to foreign investment. The 1992 Constitution gives foreigners the right to invest on the entire territory and in all economic sectors, except those reserved for public ownership (UNCTAD 2012: 37). This is reflected in economic management, where the prevalent ideology has been that the government should not interfere with business decisions (Castel-Branco 2001, 2011). Certain political and economic practices promoted by the government tend to reflect the interests of large multinational or domestic capital, and have mostly involved incentives and facilitation of capital accumulation (Castel-Branco 2011). Domestic companies face sharp competition, with scant policy support: ‘What is happening is that our legislation allows the entry of anyone... [And] on the other

hand you don't have the support of the national bank ...You are weak, you are weak' (interview, Mozambican construction company, 17.12.13).

The Mozambican experience shows the trade-off between long-term and short-term development goals, and the perception that these cannot be pursued mutually. The complex development goals of Mozambique's strategies are transformed into simple development outcomes due to impatience as to results of visible 'development'. Efficient and cheap infrastructure is framed as 'development', whereas local content and capacity building are seen as obstacles to rapid delivery. When clients insist on quick delivery and low-cost projects, there are no legal constraints that force construction companies to show local social responsibility (Zawdie & Murray 2013). When key Mozambican stakeholders highlight speed, efficiency, and competitive pricing as main elements explaining Chinese success in the construction industry (interviews, Mozambican project owner, *road project*, 20.06.13; Ministry of Public Works, 27.07.13; Ministry of Finance, 29.08.13), they are seen as incompatible with long-term goals of knowledge spillovers and local capacity-building in the construction sector. Chinese contractors are largely left to develop projects and manage value chains as they see fit.

USAID (2013) holds that the dialogue on industrial policy has been unclear and uncoordinated in Mozambique, with little attention to local content or backward linkages.⁷ There is a contradiction within the Poverty Reduction Strategy Paper: the construction industry is held to play a crucial role in the country's industrialisation process and in developing micro-, small and medium-sized enterprises, but the specific measures actually reconceptualise the construction industry into an arena for promoting temporary low-cost jobs (GoM 2011). However, debate about industrial policies has started to emerge in Mozambique, particularly in the form of local content regulations.⁸ In the construction industry, the business association for contractors cooperated with the Ministry of Public Works in formulating a draft local content policy that would guarantee that 20–30% of contracts awarded to foreign companies should go to local businesses (interview, business association for contractors, 14.05.13). It was hoped that this would motivate the government to be bolder in negotiations with foreign companies, including Chinese:

That's why we want the 20% [of contracts granted local businesses], maybe it will encourage the government to feel comfortable about its ability to do something. Because if they keep

saying that ‘my students are in primary school’ [meaning not good enough], they will never move on from there... The big problem is here, in the politics. The Chinese are not the guilty ones – the Chinese contractors just exploit what is available. (Interview, business association for contractors, 14.05.13)

This informant is convinced that the main challenge for the Mozambican construction industry results from weak policies surrounding the sector. The Chinese are good at taking advantage of the liberal policy environment, but cannot be blamed for the weak support of local industry. To a large extent, the informant feels that the state is ignoring the interests of domestic companies, while facilitating the entry of anything foreign. Maugeri *et al.* (2015: 34) identify similar problems, finding that the state lacks ‘financial, material, and human resources, which in turn make it unequipped for rapid changes in the industry landscape’. Governmental bodies lack information on which companies operate in the country, in turn making it difficult to design effective industrial policies (Schou & Cardoso 2014). Moreover, the business association is considered as being distanced from decisionmaking centres, which ‘reduces the chances for fruitful intervention’ (Maugeri *et al.* 2015, 35) – further challenged by strong networks of political and economic elites (Krause & Kaufman 2011).

Additionally, while debate on local content is welcome, the discussion on domestic capabilities shows that regulations on local content have no effect if local capacity is non-existent. In Mozambique as elsewhere (see e.g. Kragelund 2009 on Zambia), strong liberalisation of the economy without building up domestic productive capacity make it extremely difficult for local producers to link up with foreign investors. Given the state of local capabilities, policies that require lead firms to give preference to local suppliers if they can compete on the basis of quality, price and availability will have no effect. According to Lopes (2007), the government has been more concerned with costs in the construction sector than with the medium- and long-term consequences of lack of professional capacity. Although education has been a continued focus of donors and the Mozambican government, these efforts have mainly targeted primary and secondary school enrolment (*ibid.*). The government has supported mid-level or higher education institutions that offer studies in business and management, but the weak investment in teachers has led some to doubt the competency of graduates (Maugeri *et al.* 2015). The benefits of low-skilled positions in terms of economic development are limited in the long run:

Until today the theory exists that these projects bring benefits because they employ people, even today ... how many people, what people, and for how long? Cheap, illiterate labour – and only for the assembly period. (Interview, Mozambican construction company, 17.12.13)

The Mozambican policy environment must also be understood in relation to wider policy spaces. According to Keet (2010: 24), during Africa's 'development era' in the 1960s and '70s, foreign investors were commonly required to include 'significant undertakings that would increase the "gains" or improve the effects of such investment in the host countries, and minimise or reduce the costs or negative effects'. This could include requirements as to reinvestment of profit within host economies, backward linkages, training/maintenance and technology transfers, and requirements for local employment and skills transfers. Domestic support to 'infant industries' and various external trade strategies and national tariff policies were introduced in parallel. However, the promotion of liberal policies and structural adjustment through IFIs and bilateral donors changed the conditions under which African countries could promote industrialisation, and displaced many of these development instruments. According to Morrissey (2012: 30–31), 'the fact that organizations such as the World Bank (and donors more generally) did not advocate industrial policy diminished the importance of such policy issues on the domestic agenda. For sub-Saharan African countries, this is one of the reasons why they failed to develop the domestic capacity to benefit from FDI.' For decades, international institutions and major donors have promoted neoliberal economic policies in Mozambique, and the state has allowed the 'Washington Consensus' to direct much economic and political reform (Alden *et al.* 2014). Selective industrial policies have not been promoted, as economic development has been understood as 'being basically about macroeconomic stability, liberalisation, privatisation, and lowering the costs of transactions through Doing-Business-style reforms' (Krause & Kaufman 2011: 26).

Membership in organisations like the World Trade Organization (WTO) has further restricted governments in favouring local materials, suppliers, contractors or consultants, even for generating local employment (Lewis 2007). Kragelund (2010: 208) notes: 'the agreements covered by the World Trade Organization (WTO) have made it difficult for African countries to pursue their own (protectionist) trade, industrial and investment policies.' In the construction sector, projects have increases in size, placing them beyond the reach of domestic companies and consultants that previously could benefit from minor government procurements in construction services (Lewis 2007). These factors are crucial for

understanding China–Mozambique economic relations today. The ways in which Chinese companies are allowed to operate, how they have penetrated the Mozambican construction market and come to dominate value chains, must be recognised as the legacy of decades of liberalisation policies pushed by the IFIs and bilateral donors, rather than any Chinese business model as such (Kragelund 2009). While scholars debate whether China’s growing role as a development partner has opened or will open policy space for developing countries tied into conditionality frameworks with Western donors (Oya 2006, 2008, Cheru & Obi 2010, Harman & Brown 2013), Chinese business-driven win–win strategies appear to benefit from decades of liberalisation, not challenge them.

CONCLUSIONS

The only [benefit] is that you’ll have a beautiful airport. Now, safe or not, I don’t know, but you will see the beautiful marble. That is what you want.
(interview, Mozambican construction company, 17.12.13).

Chinese-led projects have been heavily criticised for the lack of local integration and the weak domestic backward linkages created. Should Chinese engagement on the African continent lead to Chinese companies displacing domestic companies, ‘African countries will not be able to industrialize and diversify their economies, and Africa will be further entrenched in its traditional role as supplier of raw materials to other economies; in this latest phase to China’ (Keet 2010: 27). Genuine win–win cooperation cannot be achieved unless African countries make concerted efforts to counter highly uneven levels of development and greatly differing capacities to benefit from such interactions and cooperation (China-DAC Study Group 2011). The cases explored in this article have shown such negative effects, with weak domestic backward linkages in Chinese-led construction projects in Mozambique.

However, analyses of Chinese activity in Africa often deliver partial conclusions, where ‘the China factor’ is exaggerated in explaining the absence of domestic backward linkages. Projects funded by China ExIm Bank link project execution to Chinese goods and services – but the results regarding domestic backward linkages are only slightly better in the other two projects, so ExIm Bank requirements as such cannot explain the absence of domestic backward linkages. As this analysis has shown, Chinese companies involve Mozambican businesses in their activities only to 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. Chinese businesses are not alone here, but since they dominate the Mozambican market, criticism is directed primarily at them. The fact is that Chinese businesses are displacing other foreign firms, not domestic ones.

The Mozambican experience shows the tension between long-term development goals like local content and transfer of skills and technology to the local construction industry, and short-term measures to address infrastructural needs. The competitive pricing, high speed, and efficiency that Mozambican stakeholders highlight as the competitive advantages of Chinese firms are not compatible with domestic backward linkages today. Industrial policies that stimulate backward linkages require longer-term perspectives on industrial growth, long downplayed in Mozambique's development strategies. This reflects the legacy of decades of liberalisation policies in Africa, driven by Western donors and IFIs. The analytical focus needs to move beyond Chinese business practices *per se*, and acknowledge the role played by African governments in concluding deals and defining development needs. Further, Mozambique's experience must be understood in light of the larger neoliberal structures that shape the policy space available to the country's policymakers.

The Mozambican government has not been particularly active in promoting domestic backward linkages in Chinese-led construction projects. The government needs to prioritise industrial policy, preparing and implementing long-term development strategies that can diversify the economy and boost the skills and capacities of domestic firms. Mozambique should draw lessons from other African countries, to understand the potentials and pitfalls in local content requirements and other industrial policies. Successful policies need a combined focus on technical training of local workers and firms, support-mechanisms for local firms, as well as clear requirements on employment, and skill and technology transfers in foreign firms.

The analytical framework for exploring determinants of domestic backward linkage creation – ownership, infrastructure, local capabilities and policy – can help to explain the complex set of issues that affect the emergence of domestic backward linkages. The ownership aspect can be influential, but analyses must not start and end there. The China–Africa literature has offered skewed and unfair depictions of Chinese activity in African countries. To explain why African economies struggle to industrialise and diversify,

analyses need to move beyond the ‘China factor’, and strive to understand the contextual and historical factors influencing the economic and political climate in African host economies.

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NOTES

- ¹ It should be noted that infrastructure is now back on mainstream development agenda, but suffers from a general backlog of investments.
- ² Forward linkage effects are defined as how ‘every activity that does not by its nature cater exclusively to final demands, will induce attempts to utilize its outputs as inputs in some new activities’ (Hirschman 1970, 100). Thus, different actors would attempt to benefit from economic activity in a given area.
- ³ Strategic coupling refers to the process where regional/local assets are successfully complemented with global production systems (Coe et al. 2004).
- ⁴ I am grateful to research assistant Sergio António Cossa who assisted me in the process of data collection in Mozambique.
- ⁵ Mozal is owned by BHP-Billiton (66 percent), the South African Industrial Development Corporation (20 percent), Mitsubishi (12 percent) and the GOM (2 percent) (Krause and Kaufman 2011, 48).
- ⁶ See e.g. <http://china.aiddata.org/projects/21250> (accessed 29.02.16) or <http://www.trademarksa.org/news/mozambique-produce-4-million-tons-cement-2013> (accessed 05.01.16).
- ⁷ In relation to oil and gas, debates on local content and local preference have materialised in the petroleum law of 2014, see Clifford Chance 2014.
- ⁸ <http://allafrica.com/stories/201510010117.html> (accessed 29.02.16).