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Abstract

Purpose – This paper aims to understand the role resources-for-infrastructure (R4I) swaps play in internationalisation strategies, thereby contributing to a modern theory of the multinational enterprises (MNEs) based on experiences of rising power firms. Since 2004, the Chinese Government; state-owned policy banks; and oil, mining and construction corporations have used a relatively unique form of internationalisation through complex, large-scale R4I swaps in Africa.

Design/methodology/approach – This paper uses a resource bundling perspective and political economy lens to analyse complex entry decisions and success, as well as the failure of R4I swaps. The paper is based on a comparative analysis of published case studies of R4I swaps in seven African countries complemented by field research by the first author.

Findings – The findings show that, under very specific circumstances, R4I swaps can be considered as a successful internationalisation strategy. R4I swaps enable Chinese MNEs to build and maintain relationships with non-market elites that control access to natural resources and infrastructure contracts.

Research limitations/implications – The sample of cases, although representing all relevant R4I-swaps, is too small to come for more quantitative conclusions on success/failure factors.

Practical implications – R4I swaps are a very unlikely model for Western MNEs, as they lack the necessary country-specific competitive advantages and institutional mechanisms.

Originality/value – To the authors' knowledge, this is the first comprehensive study of all relevant Chinese R4I swaps in Africa and contains original data from fieldwork in Ghana and D.R. Congo.

Keywords Africa, Resource bundling, Emerging market multinationals, Chinese MNEs, R4I swaps, Resource-based investment

Paper type Research paper

1. Introduction

The Chinese Government; state-owned policy banks; and oil, mining and construction corporations are engaged in complex, large-scale resources-for-infrastructure (R4I) swaps in several African countries like Angola, D.R. Congo, Ghana and Zimbabwe. An R4I swap can be characterised as the exchange of natural resources for infrastructure.

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The export revenues of natural resources like oil or copper are used as collateral for a loan to finance infrastructure development. The first major complex R4I swap materialised in 2004 in Angola. A $2 billion loan from the China Exim Bank was used to finance the reconstruction of infrastructure damaged by the civil war. The export revenue of 10,000 barrels of oil per day for 17 years was used to repay the loan. In accordance with the loan agreement, 70 per cent of public tenders for the infrastructure projects was awarded to Chinese construction corporations. R4I swaps are part of the combined resource-seeking and market-entry strategies of Chinese multinational enterprises (MNEs) in the extractive and construction industries in Africa. They are used by Chinese MNEs to enter these industries dominated by Western MNEs. The R4I swaps are also part of the Chinese foreign policy to enhance economic security by securing access to natural resources in other countries that are characterised by weak institutions. The Chinese state strongly supports the swaps through diplomatic activities and its influence over the policy banks that finance the internationalisation strategies of MNEs. R4I swaps are an eye-catching and relative unique feature of Chinese engagement in the extractive and construction industries in Africa. It has become one of the most distinctive characteristics of Beijing's engagement with Africa in the present decade (Alves, 2010). Chinese engagement with Africa is characterised as the exchange of natural resources for infrastructure (van Wyk, 2011; Brautigam, 2011).

This paper concentrates on the role R4I swaps play in the natural resource strategies of the Chinese state and MNEs. It seeks to understand what type of non-traditional competitive advantage a R4I swap could provide for Chinese MNEs *vis-à-vis* their Western counterparts. This exercise, thereby, contributes to elaborate the relevant components of a modern theory of the MNE that is not only based on the experience of mature market multinationals but also on the new realities of a world economy in which emerging market multinationals are rapidly growing in relevance. Does an understanding of the practice of R4I swaps require a new theory of the MNE? In the debate on the so-called "emerging market multinationals", it has been argued that a new theory is not really necessary, only the inclusion of a quicker pace of internationalisation (so-called springboarding) (Luo and Tung, 2007; Rugman, 2010). If this argument is correct, it should also apply to the R4I swaps. This paper posits that the R4I swaps of Chinese firms in Africa represent support for the argument that Emerging Market Multinationals – in particular those originating in BRIC countries (Brazil, Russia, India and China) – require a much more political economic approach to internationalisation than has become usual in mainstream IB studies. To support this argument, we first cover the debate on emerging market multinationals and the need for a new approach which combines host and home effects, interaction with market and non-market actors over time to explain for the success and failure of these firms. In theoretical reasoning, this approach is increasingly referred to as "resource bundling" (Hennart, 2009; Verbeke, 2013), but empirical research is yet missing. We propose to explore the relevance of this theoretical lens at the actual level at which resource bundling materialises for Chinese industries, i.e. at the contract level of R4I swaps. These R4I swaps date back to the 1970s, but have, in the twenty-first century, received an own version in the Chinese practice of resource-backed loans.

The paper documents all major R4I swaps between 2001 and 2011, in which Chinese investors and African recipients were involved. The total sum under negotiation of these swaps was around US$50 billion. Some of these swaps can be considered successes,

some of them were failures. Failed attempts to establish R4I swaps appeared with countries like Nigeria, Guinea and Zimbabwe. The inclusion of failed R4I helps to avoid a positive selection bias in the analysis and also should help in linking the findings to a more balanced theoretical framework. The failures show the limitations and weaknesses of the R4I swaps as a resource-seeking and entry strategy in the extractive industries. The explanation of the failures, perhaps more than that of the successes, illustrates the importance of a political economic (bundling) approach towards the internationalisation of Chinese multinationals. It should help assess what challenge the new mode of entry chosen by Chinese multinationals – in which home as well as host factors, resource-based as well as institutional factors play a role – poses for developed nations multinationals. The functioning of an R4I swap is elaborated in detail. This allows a better understanding of the complexity involved and the roles played by key actors on the Chinese and African sides.

We argue that, under certain circumstances, R4I swaps provide Chinese MNEs with a strong, non-traditional competitive advantage. This is based on a combination of country-specific advantages that are only available to state-owned MNEs. But this competitive advantage is contingent upon timing and contextual factors in the host country such as the risk of sovereign default and election schemes, which remain difficult to assess and address.

2. Propositions for a resource bundling perspective

International business (IB) research is concerned with "What determines the international success and failure of firms?" (Peng, 2004). An influential way of looking at this question has been to consider whether country-specific advantages (CSAs) or firm-specific competitive advantages (FSAs) determine the success or failure of MNEs (Rugman, 2010). In case FSAs prevail, the country of origin or destination can be considered a context or control variable and the interaction with other market actors the prime focus of attention. MNEs in this vision create efficiency across borders by "internalising" market failure induced by government interventions (through trade and investment barriers). In case CSAs prevail, the interface with non-market actors becomes more important to consider. The first line of reasoning tends to be prescriptive – searching for an optimal degree of multi-nationality or a universal set of characteristics of multinationals. The second line of reasoning tends to be more descriptive in trying to understand whether the outcome of complex international interaction process creates optimal outcomes for society. The former line of argument prevailed in mainstream IB research and often ignores the role of governments and societal groups by arguing that FSAs are leading. The latter line of argument is adopted by international political economist (IPE) and tends to underestimate the role of companies by arguing that CSAs are leading. Until recently, the two scientific disciplines operated in relative isolation without real interaction. The recent emergence of a number of high-profile emerging market MNEs, however, has not only triggered considerable debate on how to understand and appraise this new phenomenon but has also stimulated, in particular, IB scholars to become more interested (again) in the political economic perspective on the success and failure of MNEs (van Tulder, 2010). Those scholars that reiterated that there was "nothing new" could primarily be found in the FSA camp (Rugman, 2010; Narula, 2012). Those scholars that argued that emerging market multinationals were fundamentally different from developed market

multinationals founded their argument primarily in the importance of CSAs, but have remained relatively marginal (Mathews, 2002; Sauvant *et al.*, 2010). A third stream of scholars emerged, however, that tried to integrate both approaches (IB and IPE). We will focus on this literature in particular to identify the most important dimensions of an integrated (modern) approach to MNEs in general and MNEs from big emerging countries like China in particular.

First, ownership has received renewed attention. The obvious observation that many of the new multinationals were not only big but also either state- or family-owned companies, drew more attention to different ownership advantages of leading emerging market multinationals as opposed to leading developed country MNEs that were largely private equity based (Mathews, 2002; Luo and Tung, 2007; Buckley *et al.*, 2007; Li, 2007; Narula, 2012). Ownership is a particularly political and institutional concept.

Second, the pace of internationalisation – and its consequences – has become more relevant. Many have stressed that the pace with which emerging market multinationals internationalise is faster than that of traditional MNEs. The term "springboarding" was introduced (Luo and Tung, 2007) to characterise the nature of internationalisation. This strategy was also accompanied by a high-risk, aggressive and "boom-and-bust" or radical nature, while targeting many customers in many foreign markets at once, in a strategy of entrepreneurial venturing (Yiu *et al.*, 2007). The pace of internationalisation is strongly influenced by political circumstances as well, like liberalisation of (host as well as home) markets or subsidy policies.

Third, home-specific circumstances have been included in the analysis. Because emerging market MNEs do not (yet) have real firm-specific competitive advantages like cutting-edge technologies or management skills, global brands and scale, their competitiveness tends to rely on (home) country-specific competitive advantages like cheap labour and capital (Dunning *et al.*, 2008). These home country advantages, on the other hand, can only really be exploited through the development of firm-specific capabilities, like:

- insight into customer needs;
- ultra-low cost production;
- frugal innovation;
- operational excellence in adverse environments;
- privileged access to resources and markets; and
- traditional first-mover advantages (Ramamurti, 2012).

Fourth, the relative distance between home and host country started to receive renewed relevance. Emerging market multinationals have focused on other developing countries, often in the same region. Dunning *et al.* (2008) suggested a number of additional differences that were partly related to this distance variable: forms of entry (alliances), a different motivation (asset augmentation) and, in particular, a more active role of home governments. In particular, with regard to this discussion, it has been suggested that the general study of "emerging market multinationals" is too broad. Specific attention should be given to BRIC multinationals which – due to a combination of a large home market with a strong home government that also has a different position in international relations – create a quite specific condition under which internationalisation and its impact on economic development materialises (van Tulder, 2010). In other words: there

is reason for more specialised studies for "rising power firms" (Sinkovics *et al.*, 2014a, 2014b).

A multi-layered and multi-stakeholder approach as proposed by Ramamurti (2012) seems particularly appropriate to describe and assess the success and failure of MNEs from big and powerful emerging markets like China. A specific exploratory (case) study on how this materialises in the case of R4I swaps seems a good format to approach complex questions in which IB and political economics approaches can be integrated. This study can have consequences for at least three types of discussion in the extant literature.

2.1 A new approach to entry decisions

In the classical "mode of entry", discourse firms can chose between two alternatives: wholly owned subsidiaries or joint ventures. Most of the management literature in this domain (Slangen and van Tulder, 2009) argue that the choice for either alternative is a function of either the cultural or the institutional "distance" between the home and the host country of the MNE. This perspective leaves aside the interaction between the home and the host country, for instance, through the intervention of governments or the creation of bilateral/multilateral treaties that affect the nature and shape of investments. An upgrade of Vernon's (1977) "obsolescing bargain" approach seems an appropriate means of including not only the negotiation relationship with the home country government at the level of the firm but also between the home and host country government (van Tulder, 2010) and with various agencies within the home (and host) government. Wang *et al.* (2012) showed the relevance of a layered approach in understanding home country involvement. The support of various government agencies had a strong and distinct effect on the type (resource seeking vs market seeking) and location of Chinese outward investment. Chinese MNEs, therefore, present a separate and highly instructive research agenda in which political and economic factors play an equally important role. Political factors are not merely external institutions and are not linked to the national level of analysis alone. Economic factors are not just firm specific and related to internalisation and learning, they are increasingly becoming prone to strategic and geo-political considerations in which escape motives may be equally important, as firms become a function of the national policy agenda of emerging world powers. The success and failure of Chinese MNEs can and must be explained by a combination of firm- and policy-specific factors (and their interaction), next to the more traditional factors:

P1. The nature of the relationship between home country and host country governments influences the nature of the relationship between MNEs and host country and the success or failure of the entry strategy.

2.2 The nature of the contract

A combination of internationalisation motives is often difficult to address in IB research certainly if the level of analysis is either the firm or the country. Some studies (Yamin and Sinkovics, 2009) have pointed at the paradoxical relationship between foreign direct investment (FDI), infrastructure and development. But with R4I swaps, we introduce the contract as the level of analysis for which we can be sure that they combine two important motives from the side of the investors – resource seeking and market seeking – with a more direct eye on the proclaimed impact on economic development.

There remain many other arguments from the perspective of the investor to engage in R4I swaps that can be considered instrumental to these two motives. Depending on the nature of the contract, R4I swaps can actually function as an agency of constraint in lowering the risk of corruption (Brautigam, 2011; Shaxson, 2009). R4I swaps are considered to limit the possibilities for rent-seeking behaviour. It can be expected that this process is strengthened in case swaps are single-purpose, which implies that they present a smaller risk for the investors and are easier to manage:

P2. The success of R4I swaps depends on the size and the purpose (single, multi-purpose) of the contract: the more complex the contract, the greater the chance of failure.

2.3 Resource bundling and the integration of non-market actors

The classical discussion on whether FSAs or CSAs prevail can be overcome. It has been increasingly acknowledged that complementary resources are needed by the MNEs from domestic and foreign actors, market and non-market participants, to make the exploitation of their own FSAs feasible and potentially profitable. This idea refers to the concept of "resource bundling", which has recently become the core of modern IB theory (Hennart, 2009; Verbeke, 2013). This implies that the boundary between the MNEs' FSAs and location advantages as the source of complementary resources in host markets becomes somewhat blurred. Indeed, if some of the location advantages leading to international expansion are actually not freely accessible, but access is controlled by host country actors (e.g. closed distribution networks, local monopolies, governments and other non-market actors such as non-governmental organisations), then the challenge for the MNE is to craft "bundling" processes, including relationships with a variety of non-market actors, to allow (and to leverage) the deployment and exploitation of the firms' extant FSAs (Verbeke *et al.*, 2013). The challenge facing MNEs in most cases is that the requisite resources provided by non-market actors cannot be simply purchased on an efficient, open market but require access to government, with access being typically unevenly distributed across the firms that need it. A political economic perspective on resource bundling would include the role of non-market elites in the host country, as bargaining dynamics in the extractive and construction industries inevitably involve politics (Yergin, 1991). Business success in the extractive industries depends on maintaining a stable and productive relationship with top political leadership in control of the institutional structures that govern the access to the natural resources and earning a "license to operate" (Kraemer and Van Tulder, 2012) *vis-à-vis* host communities. It is expected that unstable relations with non-market elites in the host country, as a result of a change in elites, has a strong effect on success and failure of internationalisation strategies. In IB literature, changes in elites are rarely taken into account, or are considered through a macro-economic lens like changes in "corruption perception" or "administrative quality". Most of the time, longitudinal research is scarce, so changes are rarely documented:

P3. The successful exploitation of a firm's specific ownership advantages (in the case of Chinese companies: state-ownership) depends on its ability to craft bundling processes with market as well as non-market actors in the host market.

P4. The more unstable the relations with non-market elites in host country situation are, the less chance of success of an R4I swap.

The following discussion of R4I swaps is based on a comparative analysis of all known and published case studies of R4I swaps in Angola, D.R. Congo, Gabon, Ghana and Nigeria (Alves, 2010; Brautigam, 2009a, 2009b; Corkin, 2011; Dittgen, 2011; Global Witness, 2011; Hensengerth, 2011; Jansson, 2011; Matti, 2010, Mthembu-Salter, 2012, Shaxson, 2009; Vines *et al.*, 2009) complemented by new case studies based on field research by the first author in D.R. Congo in April 2011 and Ghana in May 2012.

3. R4I swap as a particular mode of entry

The choice for an R4I swap as a mode of entry in the extractive and construction industries in Africa is influenced by China's own historical experiences, China's strategic interests in Africa, the preference of host countries for R4I swaps and bargaining dynamics. First, we will look at the historical roots of R4I swaps. The Chinese Government and companies are familiar with the concept of an R4I swap because it was the way Sino-Japanese trade relations were structured in the 1970s. Second, R4I swaps are contextualised within China's expanding engagement in Africa. An R4I swap explicitly links two strategic interests of China in Africa:

(1) access to energy and natural resources; and

(2) expansion of export markets of its goods and services.

Third, the analysis shows the preference of host countries for R4I swaps. African Governments pushed the Chinese Government to include infrastructure financing and construction as part of natural resource deals because infrastructure development was a key element of their political strategies. Fourth, we will describe the bargaining dynamics of and direct involvement of political leadership in R4I swaps.

3.1 Historical roots

China's ability to engage in R4I swaps is deeply rooted in its own historical experiences. The basic idea of exchanging natural resources for economic infrastructure was developed in the framework of Sino-Japanese trade relations in the 1970s. At that time, China was a poor, resource-rich country lacking industrial technology and infrastructure. In contrast, Japan was a rich, industrialised resource-poor country, highly dependent on imports for its energy supply. China was keen to import Japanese know-how, machinery and complete plants. It had vast coal reserves and crude oil from the Daqing field, ready for export. In February 1978, the governments of Japan and China concluded a long-term trade agreement with the aim to facilitate the barter of coal and crude oil for industrial technology, machinery and plants (Panda, 1983). The total export value under the trade agreement for the period between 1978 and 1985 was US$10 billion for each country. The trade agreement was a huge success and provided a blueprint for a significant proportion of the fast growing Sino-Japanese trade in the decades to follow. The trade agreement enabled China to use its abundance of natural resources to gain access to capital goods it most needed at the time. The Sino-Japanese trade deal primarily involved governments and was not accompanied by major flows of FDI due to protective Chinese investment policies. In the early 1980s, Japanese MNEs in the resource industries and in infrastructure did not play a direct role in China. The R4I swap is based on comparable principles, with China changing sides, but now also with the direct involvement of enterprises that engage in direct investment in the recipient country. In current Sino-African relations, China offers to finance and build

infrastructure projects like dams, hydropower stations, roads and railways in return for a reliable and affordable supply of natural resources from Africa.

The R4I swap also originates from the well-established practice of resource-backed loans. International bank consortia commonly use resource-backed loans for developing countries with weak credit ratings. For instance, prior to the 2004 US$2 billion R4I swap with China, Angola has used its oil to secure credit lines from Portugal, Brazil and Spain (Vines *et al.*, 2009).

In an R4I swap, future revenues of resource exports are used as collateral for the loan. The collateralisation reduces the financial risk and therefore the cost of the loan. The type of resource-backed loans used by the Chinese so-called "policy banks" in R4I swaps are linked to infrastructure investment in the borrowing country. A distinctive feature of the loans is that they are tied to the procurement of goods and services supplied by Chinese firms that are becoming active in the recipient country. The financial technique of an R4I swap is similar to a resource-backed loan. However, as we shall see, the sheer magnitude and complexity of R4I swaps set them apart from the conventional resource-backed loans.

3.2 China's expanding engagement in Africa

China's direct economic presence in Africa has increased dramatically since the turn of the century – after the Chinese Government in 2001 allowed a specific group of domestic firms to expand abroad through FDI. China's trade with Africa has grown from US$10 billion in 2000 to US$114 billion in 2010, making China the largest single-country trading partner of Africa (The Information Office of the State Council, 2010). Official Chinese statistics estimate that between 2003 and 2010, 4.8 per cent of all Chinese outward FDI (OFDI) was directed to Africa (Ministry of Commerce Beijing, 2010). The American Heritage Foundation estimates, however, that Africa's share of total Chinese OFDI is much higher (138 per cent) because some of the OFDI that finally ends up in Africa is routed through Hong Kong or the Cayman and Virgin Islands and, therefore, "hidden" in the statistics (The Economist, 2011). The higher share is the most likely, as China's strategic interest in Africa is threefold:

(1) access to energy and natural resources;

(2) expansion of export markets for its goods and services; and

(3) the gain of political support (Brautigam, 2009a; Yin and Vaschetto, 2011).

Chinese natural resource policy aims to secure a reliable and affordable supply of energy, metals and mineral ores. China needs these natural resources to fuel its economic development. Africa plays an important role in this global strategy. In 2010, Africa accounted for 32 per cent of China's worldwide oil imports, with Angola and Sudan among its main suppliers (Jiang and Sinton, 2011). Only the dependency on Middle East oil (44 per cent) is bigger. For some mineral ores, Africa's share in China's worldwide imports is even higher. Africa supplies 80 per cent of Chinese worldwide imports of cobalt ores and 43 per cent of manganese ores (Jiang, 2009).

Large-scale, state-owned MNEs dominate the economic engagement with Africa. Their expansion has been facilitated for the greater part by lines of credit from two policy banks: China Exim Bank and China Development Bank. These banks play an important role in the domestic networks (quanxi) of collaborating actors and are strongly influenced by the five-year strategic plans of the Chinese Government.

Their involvement is witness of the importance of the home-base factor in the internationalisation strategies of major Chinese mining and infrastructure companies.

Influenced by a dominant and protected position in their home base and joined by a network of supportive institutions (banks, bilateral investment treaties, regional agreements) has facilitated the rise of Chinese MNEs to become major players in the natural resource sector in Africa in a very short period of time (Alden and Alves, 2009). Before 1995, Western MNEs dominated the African oil and mining sectors. Chinese MNEs were almost completely absent in Africa. This changed with the acquisition by China National Petroleum Corporation (CNPC) of a 40 per cent stake in the Greater Nile Petroleum Operating Company (GNPOC) in Sudan in 1996 (Large, 2008) and the acquisition of the Chambishi copper mines in Zambia by the China Nonferrous Metal Mining Group (CNMC) in 1997 (Haglund, 2008).

Nowadays, the three largest Chinese state-owed oil companies, China National Petroleum Corporation (CNPC), China Petroleum & Chemical Corporation (Sinopec) and China National Offshore Oil Corporation (CNOOC) have acquired significant stakes in the African oil and gas industries, not uncommonly via joint ventures with Western oil companies. CNOOC recently acquired a US$2.9 billion stake in Uganda's oil reserves in partnership with British Tullow Oil and French Total. In 2009, Sinopec bought Swiss-based Addax Oil for US$7.3 billion and acquired oil exploration and production sites in Nigeria, Gabon and Cameroon. In 2004, CNPC won the tender for four oil blocks in Nigeria. It further has oil interests in Chad, Equatorial Guinea, Niger and Sudan.

Chinese construction MNEs have greatly expanded their activities in Africa, supported by bank loans. In total, 35 African countries were engaged in infrastructure finance deals with China in 2008 (World Bank, 2009). The total volume of China Exim Bank loans to projects in Sub-Saharan Africa between 2001 and 2010 amounted to US$67.2 billion. This exceeded the loan volume of the World Bank of US$54.7 billion (Reuters, 2011). As a result, Chinese banks have become Africa's most important external financier of infrastructure, providing about two-thirds of its new spending since 2007 (EIC, 2012). Chinese construction MNEs have benefited from the increased infrastructure financing by Chinese banks because most loans are tied to procurement of Chinese goods and services. Obviously, this greatly facilitated the entry of Chinese MNEs in the African construction market. However, Chinese construction MNEs have also been successful in competitive bidding for infrastructure contracts. Chinese companies win about a quarter of all World Bank funded infrastructure contracts on the continent and about half of all African Development Bank contracts (EIC, 2012). According to some estimates, 49 per cent of all contracts executed by Chinese construction companies in Africa are won through international competitive bidding; 40 per cent of contracts are won through closed bidding between Chinese companies only, facilitated by concessional loans and grants from the Chinese Government (Chen quoted in Corkin, 2011). As a result, the revenues from contracted projects and service exports increased from US$2.8 billion in 2003 to US$28.4 billion in 2009 (Brautigam, 2012). R4I swaps are a modest part of the financial instruments used by the Chinese banks in Africa. The China Exim Bank financed over 300 projects in Africa from 1995 onwards and only ten of these loans involved R4I swaps (Brautigam, 2009b).

3.3 Preference of host countries for R4I-swaps

A critique of the greater involvement of Chinese MNEs in Africa, generally tends to stress the idea that all deals primarily represent the Chinese interests and have been framed accordingly. But with regard to R4I deals, African Governments themselves pushed the Chinese Government to include infrastructure financing and construction as part of the natural resource deals because infrastructure development was a key element of their political strategies (further elaborated in Section 5). In the case of D.R. Congo, the Chinese construction company CREC was initially only interested in a standard mining project. However, the Congolese Government, inspired by the Angolan model, insisted that an infrastructure component would be added to the mining project. The Congolese Government had unsuccessfully tried to access finance for its major public works Les Cinq Chantiers from traditional donors and IMF and World Bank (Jansson, 2011). The Chinese companies and Government were quick and able to respond to the suggestion to include infrastructure financing and construction in the natural resource deals.

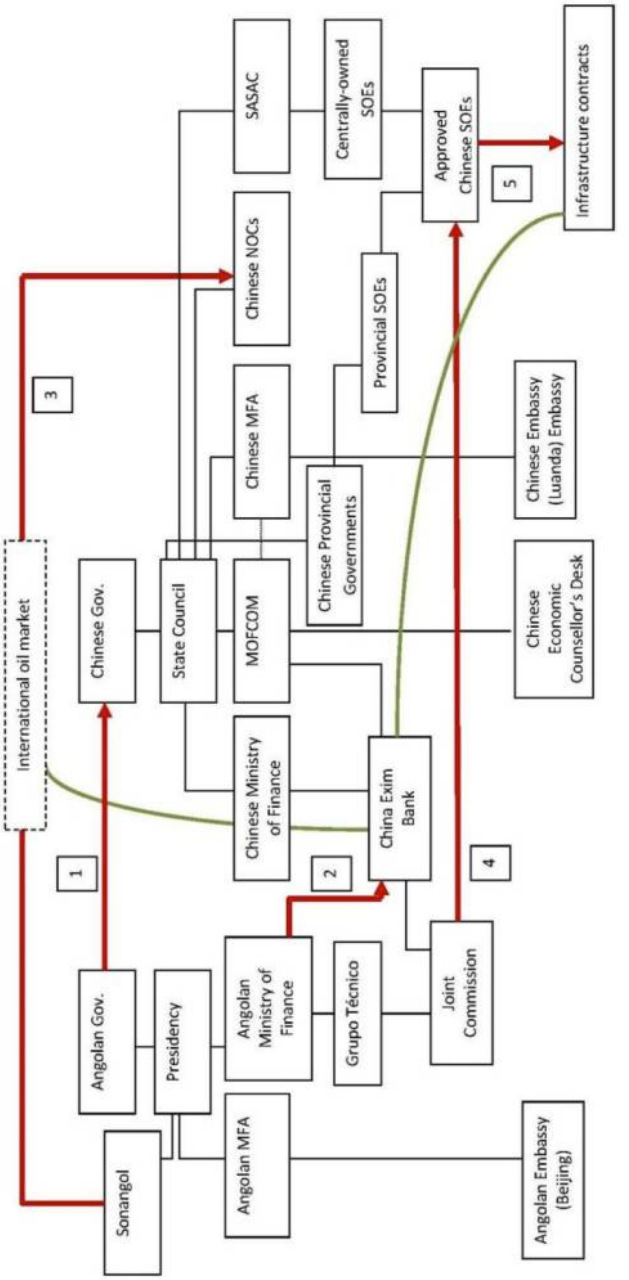
3.4 Bargaining dynamics

The influence of the home and host country governments on R4I swap as a mode of entry can be explained by looking at the chain of decision-making in the case of China Exim Bank loans for Angola. The actors, key decisions and flow of finance are presented in Figure 1. It shows how different layers of domestic and international Chinese parties are involved in a deal with host country actors and the extent to which home-based interactions prevail in otherwise overseas deals.

The framework agreement, first, is negotiated between the governments of Angola and China (line no. 1). This negotiation involves the top political leadership in both countries. Given the framework agreement, the terms and conditions of a line of credit are negotiated between the Angolan ministry of Finance and the China Exim Bank (line no. 2). The loan is secured by a long-term oil supply contract between the state-owned Angolan oil company Sonagol and a Chinese National Oil Company (NOC) (line no. 3). The contracts for the infrastructure projects, financed by the Exim bank loan, are awarded by a joint commission with representatives from the Grupo Tecnico of the Angolan Ministry of Finance and China Exim Bank. The contracts are awarded to Chinese companies, pre-selected and approved by the Chinese Government (line nos. 4 and 5). The China Exim Bank pays the construction companies, after approval of the joint commission (line no. 7). The revenues of the oil sales by Sonagol are placed in an escrow account and used to repay the loan (line no. 8).

The chain of decision-making shows the direct involvement of top political leadership in the negotiation of the R4I swap and the subsequent implementation. The presidents of Angola, Gabon, Nigeria, D.R. Congo and Ghana discussed the R4I swaps during official visits to China or when high-level Chinese delegations visited their countries. Close political allies of the president, not seldom bypassing formal mandates of ministers and parliament, undertook the negotiations. In the cases of Angola, D.R. Congo and Ghana, a special office was created, directly under the presidency, to manage the R4I swap.

In conclusion, the choice for R4I swap as a mode of entry can only be understood in the broader framework of historical experiences, strategic interests and strategies and direct interventions of home and host governments. At the home side, a "layered"



Notes: The red lines indicate the key decisions involved in the R4I swap; the green lines indicate the flow of finance

Source: Corkin (2011)

Figure 1.
Decision-making chain of R4I swap in Angola

involvement of different government agencies can be observed which is primarily based on resource-seeking motives (Wang *et al.*, 2012).

4. The contractual nature of a R4I swap

R4I swaps are used by Chinese MNEs to lower the financial risk of doing business in resource-rich countries with weak institutions and low credit ratings. Financial risk includes non-payment after completion of infrastructure works, corruption and embezzlement. A key feature of a R4I is that financial flows are completely managed on the Chinese side. There is no money transferred from the China Exim Bank to the ministry of Finance of the host country. The Exim bank uses the line of credit to pay the contractors in China and receives payments from NOCs through an escrow account. Brautigam (2011) and Shaxson (2009) argue that the likelihood of embezzlement of public funds destined for infrastructure projects would have been much higher if management of financial flows would have been left to public officials in countries perceived to be highly corrupt. This argument is difficult to validate because of it counterfactual nature and the obvious secrecy that surrounds rent-seeking behaviour. No doubt, the core of the argument is correct. Large-scale embezzlement solely *by African officials* of funds provided by Chinese banks for infrastructure projects is not possible, simply because they do not have direct access to these funds.

In the 2001-2011 period, 14 R4I swaps were initiated and negotiated (Table I) for a total value of US$50,366 million.

The total value of nine successful swaps amount to US$20,568 million. The total sum under negotiation for the five failed R4I swaps was US$29,798 million. We can distinguish two types of R4I swaps: single and multi-purpose swaps. The single-purpose swap involves the construction of a large-scale, turn-key energy project (thermal power plant and dam) by a Chinese construction company financed by the Chinese Exim Bank through a resource-backed loan. The loan is secured by long-term sales agreements of oil or cocoa. There are four single-purpose R4I swaps: El Gaili power plant in Sudan, Imboulou dam in Congo Brazzaville, Bui dam in Ghana and National Defence College in Zimbabwe.

The multi-purpose swap involves the construction of a wide range of infrastructure projects in transport (railways, roads), education (schools), health (hospitals), energy (power plants), agriculture and water. The infrastructure projects are financed by a line of credit of the Chinese Exim or Development Bank, generally on non-concessional terms and conditions. The loan is tied to the purchase of Chinese goods and services. For example, in the case of the 2004 Angolan oil-backed loan, 70 per cent of the US$2 billion was contracted out to Chinese construction companies. There are ten multi-purpose R41 swaps: three in Angola (2004, 2005, 2009), two in Zimbabwe (2006, 2009) one each in Nigeria (2005), Gabon (2006), Guinea (2006), D.R. Congo (2007) and Ghana (2011).

Either compensatory trade or ownership stakes in mining secures the loan. With compensatory trade, the future revenues of oil or mineral exports are used to repay the loan. In some cases, compensatory trade involves long-term oil supply contracts with Chinese oil companies. There are nine R4I swaps with compensatory trade: four single-purpose and five multi-purpose R4I swaps. With an ownership stake, Chinese companies enter into a joint venture with local and mostly state-owned mining companies to develop and operate an iron ore (Gabon) or copper mine (D.R. Congo). Part of the revenues of the mining operation is used to repay the infrastructure loan. In 2007,

Table I.
Resource for infrastructure swaps in Africa, 2001-2011

No.	Country and year of commitment	Project description	Characteristics[a]	Initiator[b] Role ext; actors	Loan in US$	Terms interest/grace/repayment rate in period in years % in years			Conditions resource used to additional agreements secure the loan	
1	Sudan, 2001	Construction of El Gaili Power Plant	+ S − CT	−	128 million	−	−	−	Oil	
2	Congo Brazzaville, 2001	Congo River Dam: Imboulou	+ S − CT	−	280 million	−	−	−	Oil	
3	Angola, 2004 Extension in 2007	Reconstruction of damaged infrastructure	+ M − CT	Angola Protest IMF	2 billion 500 million for 2007 extension	1-1.5% over LIBOR	3-5	15-17	10,000 barrels oil per day for 17 years	70% of public tenders will be awarded to Chinese companies
4	Nigeria, 2005	Construction of power plants, railways and roads	− M − CT	Nigeria	298 million − 20 billion	The US$298 million extension of Papalanto power plant was discussed; It was to be secured by purchase of 30,000 barrels of crude oil per day; In total, US$20 billion worth of oil-backed loans for infrastructure projects was discussed; A report in 2009 concludes that the oil-for-infrastructure scheme has failed because, on the Nigerian side, there were hidden political agendas and no follow-up mechanisms to enforce the deals				
5	Gabon, 2006 renegotiated in 2007	Belinga iron ore mine and construction of infrastructure	− M − OS	Gabon	2.2 billion	Several newspapers have reported that China National Machinery & Equipment Import & Export Corp., known as CMEC, lost the Belinga concession in early-2012 following concerns whether CMEC would be able to deliver				
6	Guinea, 2006	Construction of Souapiti Dam	− M − OS	Guinea	1 billion	A resource-for-infrastructure swap was discussed to finance the construction of the dam and development of bauxite mine; China Exim Bank declined to finance the Souapiti Dam construction because of political instability and inadequate financial guarantees				
7	Zimbabwe, 2006	Construction of three thermal power plants and chrome mine	− M − CT	−	1.3 billion	A memory of understanding was signed to finance three power plants with chrome export revenues; Reports in 2010 indicate that the agreement did not materialise				
8	Angola, 2007	Construction of schools, hospitals and investment in energy and water	+ M − CT	Angola	2 billion	1.25% over LIBOR	3	18	Oil	Conditions attached to Chinese exports were relaxed, and local content rules were tightened compared to 2004 loan
9	Ghana, 2007	Construction of Bui Dam	+ S − CT[b]	−	292 million 270 million	1% over LIBOR 2%	5 5	17 17	Cocoa sales agreement for 40,000 Mt for 17 years	
10	DR Congo, 2007 renegotiated in 2008/2009	Development of cobalt and copper mines and construction of infrastructure	+ M − OS	DR Congo Re-negotiation after pressure from IMF	3 billion 3 billion	4.4%	−	25	Repayment by mining Joint Venture Sicomines (Chinese companies 68% ownership) Concession: 10.6 million tonnes copper; 626 619 tonnes cobalt	One in five workers can be Chinese 12% of the work has to be subcontracted to Congolese companies

(*continued*)

Table I.

No.	Country and year of commitment	Project description	Characteristics[a]	Initiator[b] Role ext; actors	Loan in US$	Terms interest/grace/repayment rate in period in years	%	in years	Conditions resource used to additional agreements secure the loan	
11	Angola, 2009	Construction of roads, energy, agriculture, schools, hospitals	+ M − CT	Angola	6 billion	1.5% over LIBOR	5	17	Oil	
12	Zimbabwe, 2009	Development of Platinum mine	− M − OS	Zimbabwe	5 billion	A memory of understanding was signed to swap 50% equity in US$40 billion platinum concession for a US$5 billion concessional credit line; In 2011, a credit line limited to US$3 billion is still under discussion				
13	Zimbabwe, 2011	Construction of National Defence College	+ S − OS	Zimbabwe	98 million	2%	7	20	Diamonds from Maranga mine	If there is any change of laws or government policies in Zimbabwe making it difficult for either party to perform its obligations, China could declare all the sums payable immediately
14	Ghana, 2011	Infrastructure for oil extraction and mining and agriculture	+ M − CT	Ghana − Positive assessment WB + IMF	1.5 billion 1.5 billion	2.95 2.85% (over 6 month LIBOR)	5 5	15 15	13,000 barrels of oil per day for 15.5 years	A minimum of 60% is required to be paid to Chinese contractors
	Total				50,366 million					

Notes: [a]Characteristics: + = successful swap; − = unsuccessful swap; S = single-purpose swap; M = multi-purpose swap; CT = swap with compensatory trade; OS = swap with ownership stake; [b]initiator: the country that initiated the R4I swaps; role of external actors: involvement of IMF or World Bank in negotiations

Source: Authors

a US$9 billion R4I- swap was struck between D.R. Congo and China. It was the largest of its kind, and the deal was worth more than the Congolese state budget in that year (Global Witness, 2011). A Sino-Congolese mining joint venture, *Sino-Congolais des Mines* (Sicomines) was created and awarded mining concessions for 10 million tonnes of copper and 600.000 tonnes of cobalt. The Chinese parties in the joint venture Sicomines are two of the world's largest construction companies China Railway Engineering Corporation (railways) and Sinohydro (dams) and a smaller mining company Zhejiang Huayou Cobalt. The Chinese stake in Sicomines is 68 per cent. Congolese state-owned mining company Gécamines holds the other 32 per cent. In return for the mining concessions, the China Exim Bank pledged to provide US$9 billion finance for the construction of roads, railways, hospitals and dams and for mining operations. The Exim Bank loans are tied to the procurement of at least 88 per cent of Chinese goods and services.

There are five R4I swaps with ownership stake: one single-purpose and four multi-purpose R4I swaps. Table II shows the number and value of successful and failed R4I swaps in relation to its characteristics: single- versus multi-purpose and compensatory versus ownership stake. In terms of numbers, the picture is very clear. Single-purpose R4I swaps (four out of four) and swaps with compensatory trade (seven out of nine) are more successful than multi-purpose (five out of ten) and ownership stake (two out of five) swaps.

However, the picture is more nuanced when the value of successful and failed R4I swaps is taken into account. The value of all single-purpose swaps is only 5 per cent of the value of all successful swaps, while the value of a small number of failed swaps with compensatory trade make up the lion's share of failure (72 per cent). A case study shows that R4I swaps create a stepping-stone for further internationalisation. Only after the first R4I swap in 2004 was struck did Chinese construction companies enter the Angolan market. Furthermore, the vast majority of infrastructure projects executed by Chinese construction companies are financed through Chinese bank loans. This means that Chinese companies did not venture outside of the low-risk environment of the R4I swap (Corkin, 2011).

R4I swaps were in almost in all cases controversial. But there was arguably more controversy on international than national level. An analysis of media coverage in D.R. Congo shows that the vast majority of domestic newspaper articles and comments were positive of the R4I swap (Grosskurt and Konijn, 2012). The criticism has not had much impact on the R4I swaps yet. However, the criticism may eventually increase the risk of reputational damage for the Chinese Government and MNEs and provoke a reaction. The criticism may be summarised as follows.

R4I swap characteristics	No.	Value (million)	Success	Value	Failure	Value
Single-purpose	4	1,068	4	1,068	–	–
Multi-purpose	10	49,298	5	19,500	5	29,798
Total	14	50,366	9	20,568	5	29,798
Compensatory trade	9	36,068	7	14,470	2	21,598
Ownership stake	5	14,298	2	6,098	3	8,200
Total		50,366		20,568		29,798

Table II. Success and failure in relation to R4I swap characteristics

4.1 Lack of transparency

There is very little public information available about R4I swaps. The negotiations take place behind closed doors. The parties to the negotiations disclose little information about the terms and conditions of the loan. When asked about the R4I swaps, the parties on the Chinese and African sides decline to answer. This lack of transparency, however, is comparable to any other major investment deal in a country: the exact extent of the tax holiday agreed upon, wage negotiations and the like often only get revealed after the actual decision was taken.

4.2 Doubts if it is a fair deal

Closely related to the first point are the concerns that R4I swaps are skewed in favour of the Chinese parties. The Sicomines deal sparked national and international controversy. There was criticism that the deal was skewed in favour of the Chinese parties. The mining concessions were believed to be worth much more than US$9 billion. A mining expert commissioned by Global Witness estimated the value of the mining concessions between US$40 and 120 billion (Global Witness, 2011).

The lack of information applies *a fortiori* to the financial details of the R4I swaps. Only the interest rate and grace and repayment periods are publicly known. The pricing of the oil in off-take agreements and minerals in mining concessions is not known. The lack of information has led to accusations that the value of the traded oil and mining concessions is much larger than the loan amount and that the natural resources are squandered. However, there are indications that the oil or minerals are sold at world market prices (Global Witness, 2011; IMF, 2011). This has an obvious advantage, when world market prices are high, less oil or minerals are needed to repay the loan. When world market prices are low, the downside becomes clear, more oil and minerals are needed to repay the loan.

In a similar fashion, there has been criticism on the lack of clarity with regard to the cost of infrastructure projects. Given the absence of a transparent process of competitive bidding, concerns are raised if the borrowing country gets value for its money. The lack of competitive bidding is also related to a vital gap in the institutional set-up of most African countries: the existence of well-developed competition policies and agencies.

4.3 Potential conflict of interest

In case of mining concessions, a potential conflict of interest occurs when the Chinese seller and buyer of minerals is the same MNE or when both MNEs are controlled by the Chinese state. In the D.R. Congo case, two major construction companies own almost 68 per cent of the mining joint venture Sicomines. In the most likely case that the two companies buy copper and cobalt from Sicomines, they will prefer low prices, while the interest of the joint venture is to sell at the highest possible price. The potential conflict of interest may result in lower profitability of Sicomines and less revenues for the Congolese state-owned mining company.

There is an additional risk of transfer pricing between subsidiaries of the construction companies, as practised by MNEs to minimise taxation in host or home country (Global Witness, 2011).

4.4 Concerns about fraud and corruption

R4I swaps have not been free of accusations of embezzlement and corruption, although not all accusations are backed up by hard evidence. In 2005, Asia-Africa Confidential

reported accusations of corrupt use by Angolan officials of the US$2 billion credit line. Apparently, the loan was to be used as political slush fund in the run up to the 2006 election and for prestige projects. After the accusations became public, president Dos Santos sacked cabinet secretary Antonio van Dunem who was responsible for managing the credit line.

On 13 August 2011, The Economist reported on the questionable role of the privately owned, Hong Kong-based China International Fund (also called "China-Sonagol" or "Queensway syndicate") in oil-for-infrastructure swaps between China and Angola. China International Fund (CIF) is characterised as a little-known, opaque and unaccountable business syndicate well-connected to the Angolan political elite. It has a highly complex corporate structure that includes 60 interlocking companies in 7 countries including tax havens like the Virgin and Cayman Islands. These complex offshore structures are used by African elites to personally benefit from the R4I swaps, according to Global Witness analyst Judith Poultney.

Most of the infrastructure projects undertaken by CIF in Angola ran into trouble in 2007. Work on three railway projects, a new international airport and 200,000 units of social housing came to a halt, allegedly due to miscalculation of operating costs and disbursement problems. In Ghana, a member of the opposition party accused the government to transfer part of a signature bonus of US$30 million into private pockets. In D.R. Congo, a parliamentary commission questioned the payment of US$23 million by Gecamines to a company on the British Virgin Islands, related to the signature bonus of US$100 million received by Gecamines.

4.5 Weak links with local economy

Research on R4I swaps in Angola shows that Chinese construction companies have very weak linkages with the local economy (Corkin, 2011). Chinese companies involved in R4I swaps in Angola largely bring in their own materials, equipment and workforce. It is estimated that less than 5 per cent of all materials are locally sourced. Some Chinese companies have set up their own brick factories to ensure stable supply of building materials. The companies therefore score very low in terms of generating local employment and sub-contracting to local construction companies. The weak linkages are partly explained by the nature of the China Exim Bank loan agreement that stipulates that at least 70 per cent of procurement of goods and services needs to come from China. However, domestic factors also play an important role. Local construction market in Angola lacks the capacity to supply the necessary materials and skilled labour. The Angolan Government is not willing to promote local content development as this is perceived to slow work down.

5. R4I swap as a resource bundling strategy

An R4I swap enables state-owned Chinese MNEs to benefit from two key country-specific competitive advantages that they have access to: large-scale, low-cost capital through policy banks and the employment of a high percentage of low-cost domestic labour force by construction companies. In a R4I swap, these key country-specific competitive advantages are integrated into a comprehensive package. In addition, from the list of Ramamurti's FSA's (Section 2), two of these capabilities relate to R4I swaps. The first, operational excellence in adverse environments, clearly applies to Chinese MNEs involved in R4I swaps. One of the major R4I swap is with D.R.

Congo, one of the most difficult business environments in the world. To illustrate, D.R. Congo ranks 178 out of 183 economies on the World Bank (2012) "Doing Business" list (World Bank, 2012). The second, privileged access to resources and markets, applies to both the natural resource and construction companies. They are mostly state-owned companies with privileged access to credit and political contacts.

Developing relations with non-market elites in host countries plays a crucial role in resource bundling strategies of Chinese MNEs. The governance of natural resources in many resource-rich African countries suffers from "neopatrimonial" politics, which undermine economic rationality in favour of rentier ambitions of an elite (Mkandawire in Ha-Joon Chang 2012). The political and economic elites dominate extractive industries and control the institutional structures that govern the access to natural resources. The rents from resource extraction play a key role in financing neopatrimonial politics and maintaining political power.

R4I swaps need to be contextualised within the political economy in which they are embedded. The key features of the political economy context are.

5.1 Infrastructure development is top priority

The construction of transport, communication and energy infrastructure was the top priority of the African Governments involved in R4I swaps. The overall lack of infrastructure development in Africa is enormous. According to some estimates, the cost of addressing Africa's infrastructure needs (the "infrastructure gap") amount to US$93 billion per year (World Bank, 2009). For some countries like Angola and D.R. Congo, the situation was worse as long periods of internal conflict had destroyed even the little infrastructure that existed. In short, reconstruction of the basic infrastructure prevailed over other development needs.

5.2 Access to external finance is limited

The possibilities of African Governments to access large-scale external finance for infrastructure development were limited. Although most of the infrastructure cost is domestically financed, there exists a funding gap of US$31 billion per year (World Bank, 2009). The traditional donors involved in Africa's infrastructure (EU, USA and World Bank) were not willing to fill the gap. Based on OECD statistics, the EU and its member countries allocate approximately US$1 billion per year for infrastructure works for the whole of Sub-Saharan Africa (EIC, 2012). Obviously, the infrastructure funding gap varies significantly between countries. The infrastructure needs of Angola and D.R. Congo, for instance, were especially high. The R4I swap with D.R. Congo would more than double the existing road and railway infrastructure (Global Witness, 2011).

5.3 Strained relations with international financial institutions

Most of the governments involved in R4I swaps had at that time strained relations with international financial institutions and the IMF in particular. The R4I swap with Angola in 2004 is famous in this regard. Negotiations with the IMF on a new credit facility had collapsed because the Angolan Government did not want to comply with IMF conditions. The IMF insisted on increased transparency, a macro-economic stabilisation policy and lowering inflation, which implied cutting public expenditure. As a consequence Angola's reconstruction program would have to wait until macro-economic indicators improved (Corkin, 2011). Angolan president Dos Santos turned to China, as these conditions were unacceptable for Angola. The US$2 billion

loan facility from China provided Angola with a welcome and timely alternative for the IMF credit.

In the case of D.R. Congo, the IMF successfully pushed for a renegotiation of the deal, arguing that the non-concessional loan was too big for Congo and that the government guarantee would increase D.R. Congo's external debt to an unsustainable height. After a personal visit by then IMF director Strauss-Kahn in May 2009, President Kabila agreed to lower the loan to US$6 billion. In return, D.R. Congo re-entered the IMF programme in October 2009 and was granted HPIC debt relief in July 2010 (Jansson, 2011).

5.4 Key element in political strategy

The success of R4I swaps became a key element in the political strategies of incumbent elites. Because of their size, R4I swaps were a visible part of the state-led push in building roads, railways and buildings amongst other public works. In election times, the new public works were heralded as major achievements of the ruling political party. It is seen and used by political elites to legitimise their exercise of power.

In the case of D.R. Congo, the R4I swap was a crucial element in President Kabila's economic and political strategy (Jansson, 2011). He had won the 2006 presidential elections on the promise to rebuild war-torn D.R. Congo, *les Cinq Chantiers* (the five public works). His re-election in 2011 depended on his capacity to deliver these public works. Western donors were not willing to finance them as D.R. Congo failed to comply with IMF conditions. Therefore, President Kabila had to look for other sources to finance his reconstruction program. The Sicomines deal was a timely and much welcomed opportunity for President Kabila to finance his election promises.

5.5 Opportunity for rent-seeking behaviour

Generally, oil and mining concessions and large-scale and high-cost infrastructure projects offer opportunities for rent-seeking behaviour. The risk of rent-seeking behaviour may be particularly high for R4I swaps, as they are implemented in countries that score low to very low on the corruption perception index, as composed by Transparency International, with the possible exception of Ghana[1].

The same neo-patrimonial politics also present considerable risks for Chinese MNEs. This is illustrated by the relative large number of R4I swaps that were negotiated, but ultimately failed. In the case of Nigeria, R4I swaps were negotiated during the last years of the presidency of Obasanjo (1999-2007). President Obasanjo was reportedly "fed up" with the major Western oil companies that were not willing to invest in refineries or other infrastructure outside their core business of oil extraction. President Obasanjo invited Chinese and other Asian oil companies to engage in strategic deals, which included major infrastructure projects. The R4I swap with China initially included the construction of Kaduna refinery, Lagos-Kano railway and a hydro-electric complex at Mambilla. At that time, president Obasanjo sought to change the Nigerian constitution to allow for his re-election after two four-year terms. Some scholars argue that Obasanjo needed considerable funds to "persuade" the political class to support the desired constitutional change and that big infrastructure would "provide" these funds (Vines *et al.*, 2009). The plan failed and President Yar'Adua took office in May 2007. The new president immediately commissioned an investigation into the way oil blocks had been awarded during the Obasanjo presidency. The investigation committee strongly

criticised the R4I swaps for lack of transparency and non-performance on infrastructure commitments. There was widespread suspicion that the R4I swaps were designed to serve personal and political interests (of the previous president) and not developmental ones. As a consequence, the R4I swaps were cancelled and some oil blocks were taken away from Sinopec.

The case of the failed R4I swap in Gabon is very similar to the Nigerian one. Late President Omar Bongo Ondimba initiated the Belinga iron ore project in 2007 and called it the Gabonese deal of the century. However, when his son Ali Bongo was elected into power in 2009, he promised to review the contract with CMEC, China Machinery Engineering Corporation and, as a consequence, the R4I swaps were stopped in its tracks. Political instability and inadequate financial guarantees were reportedly the main reasons for the Chinese Exim Bank to withdraw from negotiations with the Guinean Government on the US$1 billion Souapiti Dam.

This analysis shows that an R4I swap may be seen as a particular response to neo-patrimonial politics that characterise the governance of natural resources in some resource-rich countries. The R4I swaps enable such productive relationships and facilitate the entry of Chinese oil, mining and construction companies in African industries and markets. The Chinese capacity to deliver a R4I swap rests on the institutional mechanisms that govern state-business relations in China and enable a high level of political and economic coordination. The institutional mechanisms are partly shaped by China's own historical experiences with R4I swaps with Japan in the 1970 and 1980s, as we have argued earlier.

The examples of failed R4I swaps also show the vulnerability of R4I swaps to major political changes in the host country. The R4I swaps are seen as a political project of incumbent elites and an instrument of neopatrimonial politics. When Presidents Obsanjo or Omar Bongo were replaced, the political support for the R4I swaps quickly evaporated. The examples also show the vulnerability of R4I swaps being used for personal and political motives. Oil and mining concessions and large-scale and high-cost infrastructure projects offer opportunities for high commission payments. These payments obviously limit the profitability and eventually the viability of R4I swaps for Chinese MNEs.

6. Conclusions

This paper had two interrelated objectives:

(1) to provide a solid description of relevant political and economic characteristics of all R4I swaps struck between Chinese Multinational enterprises and African host government; and

(2) to explore whether a number of propositions that can be derived from a more "bundled" approach to IB – in which the relationships between multiple stakeholders are included – can provide a more sophisticated lens for explaining the success and failure of (emerging market) multinationals.

In Section 2, we formulated four propositions that have been used as a means to come to a more structured description of the 14 cases. All propositions were to varying extents accepted.

The nature of the relationship between home country and host country governments indeed influences the nature of the relationship between MNEs and host country and the

success or failure of the entry strategy (*P1*). The case studies demonstrate how home and host country governments influenced the choice for R4I swaps as a mode of entry. The governments were actively involved in negotiating a framework agreement for the R4I swap, motivated by their strategic interests, in the case of China; access to energy and natural resources and expansion of export markets and, in the case of African governments, political benefits in the form of infrastructure development. This "marriage of convenience" between home and host governments is a crucial factor explaining the success of R4I swaps. China's historical experience with R4I swaps is an additional explanatory factor.

There are also clear indications that the success of R4I swaps depends on the size and the purpose (single- and multi-purpose) of the contract (*P2*). The more complex the contract becomes, the greater the chance of failure. All R4I swaps were negotiated with or implemented in countries perceived to be highly corrupt and with very difficult business environments (with the possible exception of Ghana). In this context, it is obviously difficult to manage financial risk even in the case of R4I swaps where financial flows are exclusively managed on the Chinese side. The analysis of the 14 R4I swaps confirms that the smaller and less complex single-purpose swaps were far more successful than the large-scale, complex multi-purpose swaps. In addition, the number of successful swaps with compensatory trade was much higher than swaps with ownership stake. This supports the proposition because reaching a trade agreement is much less complex than setting up a joint venture and awarding a mining concession.

A more complex understanding is required for assessing the successful exploitation of a firm's specific ownership advantages (in the case of Chinese companies: state-ownership) as an ability to craft bundling processes with market, as well as non-market actors in the host market (*P3*). The case studies show the crucial importance of building and maintaining relationships with non-market elites in host countries that control access to natural resources and infrastructure contracts. By linking natural resources to infrastructure, an R4I swap enabled Chinese MNEs to respond to the political needs of non-market elites that were confronted with an enormous infrastructure gap, while access to external finance was limited and relations with traditional donors and international financial institutions strained.

It was easier to show that the more unstable the relations with non-market elites in host country situation were, the bleaker the chance of success for an R4I swap turned out to become. The analysis of failed R4I swaps points to ruptures in the relation with non-market elites as the key factor explaining failure. The ruptures were either caused by changes in elites or (perceived) attempts by non-market elites to manipulate R4I swaps for personal or political gain. The dependence of Chinese MNEs on their relationship with non-market elites, to access the extractive and construction industries in Africa, turned into a critical weakness in politically unstable countries.

So we showed that, under very specific circumstances, R4I swaps can be considered as a successful internationalisation strategy of Chinese MNEs. These circumstances are best understood by using a political-economy (IPE) lens, as discussed in Section 2. The R4I swaps have enabled a quick and dramatic entry of Chinese MNEs in some of Africa's construction and extractive sectors, previously dominated by Western MNEs. The R4I swap harnesses the well-known country-specific competitive advantages of cheap, large-scale capital and labour but, above all, fits well into the political economy of the host country. R4I swaps are conducive to building productive relationships with incumbent elites that govern the access to extractive and construction industries

because they deliver key political benefits in the shape of infrastructure projects. R4I swaps are a very unlikely model for Western MNEs in the extractive and construction sectors because these MNEs do not have the same country-specific competitive advantages and lack the institutional mechanisms to adequately manage the multi-layered and multi-stakeholder dynamic of a R4I swap, as discussed in Section 5.

7. Limitations and further research

This study contains a number of limitations that give room for further research. The sample of cases – although representing all relevant projects – nevertheless remains too small to come to more quantitative conclusions on the success and failure conditions for this type of swaps. This study chose a comparative angle, but a more in-depth case study design would enable to go into the exact bargaining dynamics of each case and consequently be better able to distinguish the influence of specific factors in more detail. A further dissecting of the otherwise "bundled resources" could be the result. Case studies on the bargaining dynamics can thereby focus on internal, as well as external, processes and distinguish in much more detail how "primary" and "secondary" stakeholders are involved. This would not only further contribute to the resource-based view of the firm, but also enable the application of stakeholder theory to the actual operations of the firm. Further research can also contribute to normative theory on CSR, in which the local embeddedness of multinational enterprises as well as their corporate citizenship approach can be elaborated (Kraemer and van Tulder, 2012). Whether this applies primarily to extractive industries or includes other industries as well, presents an interesting area for further research. In another direction, this research has shown the relevance of studying entry decisions at the level of the individual contract (the swap). This opens a whole new research area in which (social) contract theory and transaction cost thinking can be applied to understand better the appropriateness of the chosen contractual approach for sustainable development. This study has also found that timing is of great importance for the success and failure of particular entry strategies. This reiterates the findings of Lam *et al.* (2013) that, after the financial crisis in 2008, firms suffered from the so-called "sovereign risks", the risk that a host government will default on its payment obligations by unilaterally repudiating its foreign obligations. According to them, sovereign risks have gradually become a more salient problem in the location choices of Chinese firms Lam *et al.* (2013), p. 35). Detailed text analyses of the actual contracts – provided researchers can get access to this type information – should also enable further research on the historical conditions under which previous swaps were settled and provide input for more detailed conditions under which future swaps can be formulated.

Note

1. The Index ranks countries based on how corrupt their public sector is perceived to be. The score indicates the perceived level of public sector corruption on a scale of 0-10, where 0 means that a country is perceived as highly corrupt and 10 means that a country is perceived as very clean. In 2011, the country scores on R4I relevant parties on the corruption perception index were: Ghana (rank: 69; score 3,9); China (75,3.6); Gabon (100;3); Nigeria (143; 2,4); Congo Brazzaville (154; 2.2); Zimbabwe (154; 2.2); Angola (168; 2); D.R. Congo (168; 2); and Sudan (177; 1.6); Source: 2011 Corruption Perception Index, by Transparency International, available at: http://cpi.transparency.org/cpi2011/ (accessed 31 August 2012).

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