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**The Geopolitics of South-South Infrastructure Development:
Chinese-financed energy projects in the global South**

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The Geopolitics of South-South Infrastructure Development: Chinese-financed energy projects in the global South

Abstract

Debates around infrastructure tend to focus on the global North yet in the global South demand for infrastructure is huge and we see new and emergent actors engaged in finance and construction; China being preeminent among them. China's interests in the global South have grown apace over the past decade, especially in terms of accessing resources and securing infrastructure deals. The role of Chinese banks and State-Owned Enterprises (SOEs) in financing and building the projects reveals a blurring between geopolitical and commercial interests and processes. The paper situates China's entry into the global South as part of a geopolitics that is simultaneously geoeconomic and interrogates these issues through case studies of Chinese-backed projects in Ghana and Cambodia. These projects are spatially and politically complex with China adopting a range of financing models – often including an element of resource swaps – in which bank finance is critical and marks the Chinese as different to western financiers. These international deals are secured at the political elite level and so by-pass established forms of national governance and accountability in the recipient countries, while the turnkey construction projects remain locally enclaved. The cases also show that wider developmental benefits are limited with 'ordinary' citizens – especially those in the rural areas - gaining relatively little from these major energy projects and the benefits accruing to urban-based elites.

Keywords: China, development, economic development, finance/financialisation, infrastructure, politics, urbanisation and developing countries

INTRODUCTION: INFRASTRUCTURAL FOREIGN POLICY

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5 May 2013 saw the commissioning of Ghana's Bui hydroelectric dam which had been
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7 built by a Chinese company using a loan from one of China's state banks. At the
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9 ceremony, the Chinese Ambassador said the 'power station and many other Chinese
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11 aided projects are the vivid reflections of the long-lasting friendship between our two
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13 peoples' (Gong, 2013). Expressions of 'friendship' between 'two peoples' reflects
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15 shifts in the global economy wherein the official discourses of both Chinese leaders
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17 and their Southern counterparts are of 'win-win' partnerships and a new era of
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19 'South-South' cooperation. Bound up in these ideas of cooperation is a revitalized
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21 interest in infrastructure and the 'hardware' of development as opposed to the
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23 'software' of development that many western aid agencies pushed as part of the 'post-
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25 Washington' consensus.
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31 China has emerged as a major infrastructure financier in the global South (McKinsey,
32
33 2017) and this global realignment of Southern interests opens up important questions
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35 about the modalities of this financing and the placing of such projects in the space
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37 economy of global South countries. Our paper focuses on Chinese-backed energy
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39 projects in two countries – a gas processing plant in Ghana and a hydroelectric dam in
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41 Cambodia¹ – which reflect different dynamics of how Chinese geopolitical and
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43 geoeconomic interests interface with domestic politics in low- and middle-income
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45 countries (LMICs).
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54 ¹ The paper draws on two ESRC-funded research projects; *China Goes Global: A comparative study of*
55 *Chinese hydropower dams in Africa and Asia* (Ref: ES/J01320X/1) and *Chinese national oil companies*
56 *and the economic development of African oil producers* (Ref: ES/M004066/1).
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3 In studying urban infrastructure financing much of the focus has been on the global
4 North where novel public-private finance initiatives are being devised (O'Neill, 2018)
5 yet relatively little has been written on global South infrastructure financing in which
6 the actors, mechanisms, and political relations are markedly different. In the context
7 of urban infrastructure in the global North, literature has focused on rescaling and
8 restructuring the local state (Ashton *et al*, 2016; Torrance, 2008) whereby global
9 capital flows play into local circuits of economic and political power, and urban
10 governments become increasingly entrepreneurial. Where we depart from these
11 accounts is not to focus on the local state *per se* where the urban infrastructure is
12 being built, but to examine China's external projection of state power in enabling
13 infrastructure financing and construction.
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29 The paper asks how is China's geoeconomic and geopolitical power projected via
30 infrastructure projects, through what territorial forms does this occur, and what role
31 does elite agency in recipient states play in shaping the outcomes? We start by
32 arguing that China's geopolitical ambitions are also geoeconomic and that the
33 country's hybrid state/private enterprises are ideally suited for infrastructure
34 initiatives which combine state-backed finance with relatively closed tendering of
35 construction contracts. Second, these geoeconomic initiatives operate through
36 complex territorialisations that enfold both state and non-state spaces. The contracting
37 and financing of these infrastructure projects are brokered between state elites and
38 are, to a large extent, enclaved spatially and institutionally. Despite this apparent
39 enclaving these projects also transcend scales through various material and social
40 networks, including diplomacy, supply chains, and transmission lines. These networks
41 link non-urban sites of energy production with urban sites of consumption which
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3 blurs the distinction between urban/non-urban spaces. Third, the geographies of these
4 initiatives are not solely driven by Chinese interests since they interface with ‘host’
5 countries. The interaction between Chinese state-backed actors and the agency of
6 Southern political elites shapes how infrastructure is financed, funded, and utilized
7 which are ultimately questions of ‘who benefits?’
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15 The next section expands on these three theoretical claims around geoeconomics,
16 territory and agency. Then we examine China’s internationalization and the
17 institutions through which this happens. Next we look at the broad patterns of demand
18 for infrastructure investment in LMICs before turning to two case studies to unpack
19 the territorial dynamics of major infrastructure projects in Ghana and Cambodia and
20 the role of domestic political agency.
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31 **THEORISING INFRASTRUCTURE FINANCING IN THE GLOBAL SOUTH**

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33 These concerns with South-South infrastructure projects build on a broader
34 recognition that geopolitics is also simultaneously geoeconomic, but in the case of
35 China this takes a particular form based on hybrid state-market enterprises. These
36 projects generate specific forms of territory that are simultaneously localized and
37 transnationalised, while domestic political agency shapes how benefits are distributed.
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46 Geoeconomics

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48 Cowen and Smith (2009) argue that the geoeconomic ‘recasts rather than replaces
49 geopolitical calculation’ (p.25). Through US hegemony and a market logic they
50 argue, ‘geoeconomics has come to provide a new disciplining architecture replacing
51 the geopolitical mechanisms of colonial administration...(in which)...The acquisition
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3 or control of territory is not at all irrelevant, but is a tactical option rather than a
4 strategic necessity' (p.40 & 42). Specifically, '(T)he rise of geoeconomics does not
5 necessarily mean that boundaries and territories become less important, but their strict
6 national articulation may' (p.43). With fixed investments in things like power plants,
7 oil wells, and dams territorial control is still a necessity rather than a 'tactical' option,
8 and requires the 'host' state to grant access rights. This accessibility issue necessarily
9 requires an analysis of the political agency of these countries given that this is
10 fundamentally about distributing the costs and benefits of such investments.
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22 Such rethinking of the geopolitical has largely been used to examine security issues
23 and border-making in the aftermath of 9/11 so while it focuses on Southern actors it is
24 only as they relate to a Euro-American power axis and has not been used to analyse
25 new 'South-South' engagements. With regards to China's geoeconomic strategy Bach
26 (2016) described it as having an 'infrastructural foreign policy' in which
27 infrastructure is a major export product and 'the visibility of Chinese infrastructure
28 financing is central to its global image'. Not only has China lead in setting up new
29 multilateral development banks, but the 'Belt and Road' initiative devised under Xi
30 Jinping is an ambitious programme, which official discourses claim will eventually
31 connect 60 countries through infrastructural initiatives (PWC, 2016).
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46 Territory

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48 In the cases of energy infrastructure that we examine, the control of territory is
49 increasingly through enclaves (Mohan, 2013). Speaking of resource extraction in
50 Africa, Ferguson (2005: 378) argued 'this economic investment has been concentrated
51 in secured enclaves, often with little or no economic benefit to the wider society'.
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3 According to Ferguson, these projects are ring-fenced in terms of how the finance is
4 allocated right through to production compounds. However, enclaves are much
5 'leakier' than Ferguson envisages and these infrastructure projects are simultaneously
6 locally enclaved, but also connected to national level political processes of access and
7 rent extraction, as well as being transnationalised through diplomacy, financing, and
8 supply chains.
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18 An important aspect of this complex territorialisation is the relationship between
19 enclaved infrastructure projects in non-urban areas and their connections to urban
20 areas. These connections derive from the fact consumption of energy in global South
21 cities is based on networks of infrastructure linking to non-urban spaces of production
22 (Mavhunga, 2013). Urban infrastructure necessarily enrolls nominally 'rural' or, in
23 the case of off-shore oil and gas, maritime spaces (Appel, 2012). This reflects
24 Brenner's (2013: 167) idea of 'extended urbanization' involving the
25 'operationalization of places, territories and landscapes, often located far beyond the
26 dense population centers, to support the everyday activities and socioeconomic
27 dynamics of urban life'. These infrastructure networks, such as processing plants,
28 pipelines or cables traverse rural spaces to reach urban areas which often entails
29 dispossession of rural populations.
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46 Agency

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48 Such networked territories require sovereign states to provide the necessary 'social
49 infrastructure' wherein ruling elites create the conditions for the international mobility
50 of capital, which requires granting access to resources and land. Elsewhere (Mohan
51 and Lampert, 2013) we have argued that the agency of actors in those countries where
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3 the Chinese invest can shape and channel the nature and uses of this investment.
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5 While political agency lies in both state and non-state actors and is exercised in
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7 official and unofficial ways (Hagmann and Peclard, 2010), here we are concerned
8
9 primarily with ruling elite coalitions and the ways in which inward investment is
10
11 negotiated, contested, and deployed. In terms of the enactment of this agency by
12
13 Southern states Carmody *et al* (2009) observe in the context of China-Zambia
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15 relations that it is ‘based on an (il)liberal bargain between domestic and Chinese
16
17 political elites’ (p. 225). These political elites are not simply stooges of international
18
19 capital but use their agency to strike bargains, which may well favour the Chinese, but
20
21 equally can be used to further domestic agendas. For example, Large (2009)
22
23 documents how the Sudanese government used Chinese oil investments to bolster its
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25 regional geopolitical ambitions. In our case studies, domestic political actors reveal
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27 keenness to accept Chinese investment and loans and that the negotiations around
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29 them reveal contending visions of development.
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35 **CHINA’S MERCANTILIST GEOECONOMICS**

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37 Given that geoeconomic control plays a critical role in China’s foreign policy we
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39 argue that China’s international infrastructure projects defy a simple statist logic since
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41 there are commercial considerations playing into them. The model is more a
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43 mercantilist one where the Chinese state supports commercial ventures without
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45 necessarily steering them.
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50 China’s internationalisation

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52 In understanding China’s expansionary logic, the country’s ‘state-orchestrated market
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54 capitalism’ (Ayers, 2013) has produced consistently high growth for two decades, but
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3 energy security is required to sustain this growth. Over the past two decades, China's
4 oil consumption has risen an average of 5-6% per annum (Collins, 2016) and in 2017
5 it became the world's largest importer of crude oil (EIA, 2018). This need for China
6 to look beyond its borders for sources of energy and other natural resources resulted
7 in the 'Going Out' strategy whereby from the late 1990s China encouraged outward
8 investment and international trade. As a spatial fix it was, in part, necessary in sectors
9 where the Chinese market was relatively saturated, such as dam building (McNally *et*
10 *al*, 2009), or where domestic sources of energy were diminishing. This aggressive
11 internationalisation strategy was enabled by huge foreign exchange reserves and was
12 given a fillip after the 2008 global financial crisis when western sources of credit
13 declined while Chinese banks were relatively untouched (Matthews and Motta, 2015).
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29 Commercial engagements have thus come to play a central role in China's
30 internationalisation strategy. The international business literature identifies four main
31 motives for outward Foreign Direct Investment (FDI); resource-seeking (e.g.
32 commodities), market-seeking (e.g. markets for sales), cost-reducing (e.g. low labour
33 costs) and asset-augmentation (e.g. access to new technology) (Dunning and Lundan,
34 2008). In China's case the first two predominate and are tied to a diplomatic agenda
35 that bundles resource-seeking FDI (e.g. energy, minerals) with market-seeking FDI
36 (e.g. infrastructure contracts) through complex packages which may include an
37 element of aid (Power *et al*, 2012). While the types of contracts adopted by Chinese
38 firms vary, the most relevant here are 'EPC' (Engineering, Procurement and
39 Construction) contracts that circumscribe the obligations of the contractors and
40 contrast with longer-term commitments through 'BOT' (Build, Operate and Transfer)
41 contracts increasingly used in Public-Private Partnerships (OECD, 2014). On the
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3 Chinese side, in addition to the National Oil Companies (NOCs) and engineering
4 SOEs there is a range of ministries with varying degrees of involvement in the project
5 cycle of an overseas infrastructure project (IRN, 2012), with the Ministry of
6 Commerce (MOFCOM) playing the lead role.
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13 The literature on infrastructure financing in developed economies discusses how the
14 financiers and projects have effectively taken politics out of the discussion (Ashton *et*
15 *al*, 2016). In China's engagements with LMICs it practices a public discourse of 'non-
16 interference', which refers to the respect China has for their sovereignty. This is used
17 as something of a brand insofar as the Chinese deploy this discourse to distance
18 themselves from the negative interference practiced by western states over decades.
19
20 However, the power relations between China and these 'partners' are rarely even and
21 while espousing a lack of political interference China attaches commercial conditions
22 to its loans. An upshot of this approach to lending is that consideration of labour
23 rights, environmental standards, and local content can be overlooked although things
24 are changing. For example, environmental and social impact assessments (ESIAs)
25 were not obligatory for Chinese-funded projects which became problematic
26 (Grimsditch, 2012; Validakis, 2014). Some banks and contractors increasingly do
27 now carry out ESIA, not least because infrastructure financing often enrolls non-
28 Chinese financiers who insist on such assessments (AIIB, 2016). For example, in mid-
29 2008 ExIm Bank issued 'Guidance for the Environmental and Social Impact
30 Assessment of Chinese Export and Import Bank's Loan Projects' which require an
31 ESIA both prior to and after project completion. Likewise, many Chinese firms do not
32 recognize labour unions, though they do formally abide by local laws so whether
33 these are honoured comes down to local mobilization and willingness to regulate
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8 Chinese Financing 9

10 As Aglietta and Bai (2013: 5) note ‘Finance is a tool of political power that China can
11 use in protecting its domestic economy, in securing its supply lines, and in acquiring
12 critical technology’. Access to credit is one of the key ways that China has entered the
13 infrastructure construction market, and this particularly Asian mode of financing
14 distinguishes Chinese investments from those undertaken by Western construction
15 companies. As Brautigam (2010: 180) notes ‘In the pattern followed by Japan, Korea
16 and Taiwan, the Chinese use bank finance far more than stock markets to provide
17 capital to their companies. This allows for the guiding hand of government to provide
18 an extra boost to companies’ overseas efforts’. This ‘guiding hand’ refers to the
19 hybridity of both China’s state/private entities and its geopolitical/geoeconomic
20 strategies.
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36 The involvement of state-owned banks over private or multilateral banks promotes an
37 alternative financing model that may be beneficial for developing economies, because
38 a ‘different capital risk model is being constructed that is calculated differently to
39 traditional (western) investors...capital is invested in a manner that is arguably more
40 suited to the long-term development needs of developing economies and does not
41 chase a short term return on investment’ (Davies, 2010: 11). This approach has a
42 higher tolerance to risk because of its political underpinning by the Chinese state. For
43 example, concessional loans have a long maturity (typically 20 years) with a grace
44 period of up to 7 years where no interest is paid. The interest rates are subsidised and
45 underwritten by MOFCOM which allows the banks to lend at lower rates but are
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3 effectively reimbursed by the Chinese state. Such financing is used in energy and
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5 extractive industries where long lead times exist for commercialisation and where off-
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7 taker agreements - an agreement between a producer and a buyer to buy/sell a certain
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9 amount of the future production - can be put in place to ensure repayment over a long
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11 period. However, the case studies we examine suggest that Davies' claim that this is
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13 necessarily 'more suited' to local needs begs the question of whose local needs are
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15 being met.
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20 Most important for financing are the policy banks (Downs, 2011), notably China
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22 ExIm Bank and China Development Bank (CDB) with the former focusing on
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24 infrastructure development in Africa and the latter driven more by commercial
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26 imperatives (Sanderson and Forsythe, 2013).. While the banks are not directly under
27
28 the control of the Chinese Communist Party it can and does influence them if there is
29
30 a strategic objective to pursue. In terms of loan allocation, there is evidence that
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32 China has departed radically from IMF/World Bank and WTO dictates over capital
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34 controls with state policies and cadres' practices having channelled foreign corporate
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36 investments to selected industries, regions and 'special economic zones'. ExIm Bank
37
38 is a government export credit agency which finances the overseas operations of
39
40 Chinese businesses via loans to foreign buyers who want to purchase Chinese-made
41
42 goods. The bank is responsible for loans for infrastructure which are generally,
43
44 although not always, regarded as partly concessional. Africa is the focus of ExIm's
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46 dealings, with more than 80% of its loans going to resource rich African countries, the
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48 resources acting as collateral for the loans. Most widely publicized has been the so-
49
50 called 'Angola mode' (Power *et al*, 2012) which is an oil for infrastructure deal that
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52 was first pioneered in Angola, though has existed among non-Chinese lenders and in
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3 other countries beforehand. A condition of these loans is that the infrastructure is
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5 constructed by a Chinese SOE so that while the nominal client or beneficiary is the
6
7 local government, most of the money never leaves China and simply passes from
8
9 bank to engineering SOE. As such the wider linkages for recipient countries may be
10
11 limited because the Chinese contractor uses predominantly Chinese supply chains, but
12
13 on the other hand the model reduces the risk of corruption within the beneficiary state
14
15 and, crucially, speeds through the delivery of the infrastructure which is why Chinese
16
17 involvement is generally well-received in the global South (Corkin, 2013). Hence, the
18
19 Bank is not merely developmental, but also creates a market for Chinese goods and
20
21 services. The CDB has focused its international lending on Latin America and Africa.
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23 The bank is fully owned by the Chinese government which implicitly guarantees its
24
25 debt, enabling it to provide lower interest rates and longer-term loans than other
26
27 Chinese banks (Kamal and Gallagher, 2016).
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33 **SOUTH-SOUTH INFRASTRUCTURE DEVELOPMENT**

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35 According to McKinsey (2016) between 2016 to 2030, the world needs to invest
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37 about 3.8% of GDP in economic infrastructure merely to support expected growth
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39 rates. Within this, emerging economies account for around 60% of need. Across Asia
40
41 the Asian Development Bank (2017) calculates between \$22 trillion and \$26 trillion
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43 of infrastructure investment is needed from 2016 to 2030. The African Development
44
45 Bank (2017) estimates the infrastructure need of Sub-Saharan Africa exceeds \$93
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47 billion annually over the next 10 years, while less than half of Africa's infrastructure
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49 needs are being met. By contrast China spends more on infrastructure than North
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51 America and Western Europe combined (McKinsey, 2016) and the Chinese account
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53 for about 6% of African infrastructure financing and their contribution now outstrips
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3 that of the World Bank. Earlier we noted that the main vehicles for China's
4 internationalization have been banks and SOEs, but it would be wrong to portray this
5 is as orchestrated by China since Southern states are active in brokering these deals
6 and Chinese SOEs are responding to demand in these markets. Our knowledge of
7 these complex geoeconomic processes is still quite black-boxed and understanding
8 them is best achieved through case studies, to which we now turn.
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18 Data for our case studies was collected through two projects; one examined large
19 Chinese-backed dams in LMICs (focusing on Ghana, Nigeria, Cambodia, and
20 Malaysia) and the other China's engagement with African oil producers (focusing on
21 Ghana, Nigeria, and Sudan). As distinct research projects, they did not share a
22 methodology but both broadly adopted a value chain approach which tracked through
23 from the motives of Chinese actors to the mechanisms for engaging in LMICs, and on
24 to the outcomes for local development. Both projects took a case study approach of
25 particular infrastructure deals and then 'process traced' these over time, though data
26 on the details of loan agreements and contracts was partial. Data collection was
27 largely qualitative in interviewing key-decision makers on the Chinese and LMIC
28 sides, local NGOs, and project-affected communities.
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44 The two cases from these research projects reflect different dynamics between
45 geoeconomics, territory and domestic agency. Despite very different political systems
46 both cases demonstrate the power of China's finance and relative weakness of
47 recipient states as well as how rural communities are affected by energy production
48 for urban areas. Yet they reveal differences, with Ghana's elite contesting the ways in
49 which oil could be collateralized to secure Chinese finance while the repayment plans
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3 were affected by changing oil prices against which the loans were guaranteed.
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5 Cambodia is strategically important for China in the SE Asia region with close ties
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7 between Chinese and Cambodian elites. This meant the loan negotiations were
8
9 untransparent and decisions were forced through against due diligence processes.
10

11 12 13 China in Ghana's energy projects

14
15 The case of Ghana's Atuabo gas processing plant demonstrates China's geoeconomic
16
17 power in offering large resource-backed bank loans tied to the use of Chinese
18
19 construction firms. It also reveals how the gas plant connected the enclaved space of
20
21 offshore oil production to the land and so displaced rural producers in order to create
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23 a facility that generated electricity for Ghana's cities. This loan also revealed elite
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25 agency in contesting how the benefits from investment would be distributed while the
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27 changing oil price undermined the terms of China's loan although it has been the
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29 Ghanaian government that suffered most from this shift in the loan terms.
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35 China has engaged in Ghana's energy infrastructure in a number of ways, notably the
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37 hydroelectric dam at Bui, which we discussed at the start, and the gas processing
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39 plant. The gas processing plant was financed by the CDB and built by the Chinese
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41 NOC, Sinopec, in Ghana's Western Region between 2011 and 2015. The plant treats
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43 raw gas from the offshore Jubilee Field in order to produce fuel grade gas for the
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45 Aboadze power station. The plan is to boost Ghana's electricity supply by 1,000
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47 megawatts and produce valuable by-products such as liquefied gas and condensate.
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50 Ghana's oil was discovered offshore in 2007 and since production started in 2010, the
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52 Jubilee Field has produced an average of 100,000 barrels per day which is divided
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54 across 17 contract areas. Since the Jubilee Field came into operation two new fields
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3 are being developed; the Tweneboa-Enyenra-Ntomme (TEN) operated by Tullow and
4 Sankofa operated by ENI. These two additional discoveries come with associated gas
5 and Ghana is expected to get between 90-180 million standard cubic feet per day
6 (mmscfd) from Jubilee and TEN, and 150-180 mmscfd from Sankofa. For a country
7 dependent on oil imports and a massively over-stretched energy infrastructure the oil
8 find was great news (Mohan *et al*, 2018) and on the back of it the Government of
9 Ghana began negotiations with Asian governments for some sort of oil for
10 infrastructure deal. In September 2010, the Chinese offered the Ghana Government a
11 \$3 billion Master Facility Agreement (MFA) on a non-concessional basis through the
12 CDB (Hardus, 2017). This loan facility was dedicated to the Western Corridor Gas
13 Infrastructure Development Project² and was split into two equal tranches of \$1.5
14 billion each with slightly different terms, as set out in Table 1. The geoeconomic logic
15 of this loan was to use China's foreign exchange for productive purposes and
16 hopefully yield a return, to gain access to Ghana's oil, and create a market for Chinese
17 oil engineering firms; with the latter possibly competing for other opportunities in
18 Ghana's hydrocarbon sector (Moreira, 2013). The loan arrangement is not unlike the
19 Angola mode, whereby repayment is through UNIPEC, a wholly-owned subsidiary to
20 Sinopec, which acquired an off-taker agreement to lift 13,000 barrels of crude oil
21 daily for fifteen-and-a-half years to repay the loan. Sinopec secured the contract to
22 construct the gas infrastructure under a \$750 million subsidiary agreement.
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55 ² Initially 12 projects, primarily infrastructure, were identified and confirmed for financing under the MFA.
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3 Territorially, the pipeline bringing gas onshore and onwards into the electricity grid
4 reveals the interconnectedness of infrastructures and how a quintessentially enclaved
5 facility, the offshore rig, links to material and political processes (Appel, 2012) in
6 both fixed state territories (electricity production and sales, tax revenue, etc.) but also
7 in transnational networks (Chinese oil companies and supply chains, Chinese banks,
8 etc.). Yet the benefits of this electricity infrastructure are not evenly shared. Ghana's
9 electrification, as with patterns across Africa, shows a major urban bias with 85% of
10 urban households having access to electricity, compared to 40% of rural households
11 (Kemausuor and Ackom, 2017). The gas plant and the pipeline, in particular, affected
12 farmers. Our interviews showed some received scant compensation for crops, though
13 many did not, and none received compensation for the land that was taken: "I have
14 not seen anything....they even took their farmlands and promised compensations were
15 not paid" (Anokyi village, Oct 2016); "our farms that harbors the pipeline, we have
16 not received any money for compensation" (Asem Nda village, Oct 2016); "We felt
17 cheated and took the matter to court but got to no avail" (Mampong, Nov 2016).
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37 In terms of political agency the loan became entangled with domestic Ghanaian
38 politics. In Ghana, there are two main parties that vie for elections and have held
39 power since the return to multi-party democracy in 1992. They are the National
40 Democratic Congress (NDC) which professes to be social democratic and the more
41 market oriented New Patriotic Party (NPP) although the ideological divisions between
42 them are not huge (Whitfield, 2011). John Mahama, the then Vice-President (later
43 President) of the NDC, spoke of the MFA deal:
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3 “China has emerged as a significant source of credit to Africa, traditionally
4 our partners have been the World Bank and IMF...The process of accessing
5 World Bank and IMF credit has been unfortunately quite tiresome and comes
6 with a lot of strings...we find it easier to go to the BRIC countries”
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11 (Bloomberg, 2012)
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16 Regarding the absence of ‘strings’, Chen (2016: 2) notes the EPC contract offered to
17 Sinopec ‘provided the Ghanaians with an easy all-inclusive deal that obviated the
18 need to conduct laborious and independent stages of tendering and financing
19 negotiations’. Yet the deal was seen to be one-sided with UNIPEC getting assured
20 supplies yet no commitments were asked of the Chinese partners, and in line with
21 most other Chinese loans 60% of inputs (see Table 1) come from China which goes
22 against Ghana’s Local Content law.
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33 The loan agreement and the collateralization of oil became the focus of political
34 contestation. Shortly after oil was discovered the Ghana government began drafting
35 new oil and gas legislation, notably the Petroleum Revenue Management Act
36 (PRMA), which sought to establish how oil revenues would be used for national
37 development. When it came to the design of the PRMA, the NDC favoured immediate
38 use of oil rents to finance development as opposed to saving for the future. Clause 5
39 of the Petroleum Revenue Management Bill – the draft submitted to Parliament for
40 approval - prohibited the use of the Petroleum Holding Fund³ as ‘collateral for debts,
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52 ³ The Petroleum Holding Fund (PHF) is an account at the Bank of Ghana, which serves as
53 the initial repository of all petroleum payments due to the state. It is disbursed first to the
54 national oil company to finance its operations and then to the Consolidated Fund to support
55 the national budget. Thirdly, it is disbursed to the Ghana Petroleum Funds (Heritage and
56 Stabilisation Funds) for purposes of savings and investments (PIAC, 2017).
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3 guarantees, commitments or other liabilities of any other entities'. Once the bill
4 reached Parliament, an NDC MP proposed an amendment to allow for
5 collateralisation, which received overwhelming support from ruling NDC MPs, and
6 the debate followed strict party lines centering on the links between infrastructure and
7 development. NDC MPs pointed to infrastructural deficits as justification for the need
8 to collateralise oil resources, characterizing opponents as 'anti-development agents'.
9 The NPP opposed collateralisation, seeing it as 'nothing more than eating your dinner
10 and lunch at breakfast time' (Hansard, 9 December 2010, Col 2820). Eventually, the
11 NPP opposition softened their stance by not arguing against collateralisation *per se*,
12 but rather the extent of it, which became passed into law. Such behavior by the NDC
13 was less about a vision for development and more about the short-term need to secure
14 an election victory.
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30 This short-termism was also reflected in the NDC's decision to use the oil for
31 infrastructure loan to help develop Ghana's domestic gas industry. As one official
32 argued:
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37 'The initial thought was the producers of the gas [Jubilee Partners] to
38 commercialise it. But the [NDC] government negotiated during the plan of
39 development that they wanted to be given first right of refusal on utilizing it
40 [the gas]' (Interview, Senior Ghana Gas Official, July 2014).
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48 The NPP later revealed that the World Bank was also willing to offer a concessional
49 loan for developing the gas infrastructure. However, the NDC wanted the financing
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3 agreed within 6 months which was an impossible timetable for the World Bank but
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5 feasible under China's MFA. This rushing through of oil contracts and associated
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7 infrastructure deals is a key feature of Ghana's politics where gains are sought during
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9 an incumbent regime in an attempt to win fiercely contested elections (Mohan *et al*,
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11 2018).
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16 One upshot of using oil as collateral has been the rise in national debt, which rose
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18 sharply under the NDC from \$5 billion to over \$10 billion such that the debt to GDP
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20 ratio doubled from around 35% in 2009 to 70% in 2014. The dangers of using oil as
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22 collateral were revealed over the summer of 2014 when it was announced that only
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24 half of the \$3 billion loan would be used, and of the 12 projects only 2 were
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26 implemented – the gas plant and an ICT project. The issue was the price of oil that
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28 was agreed to re-pay the loan. Not only had the Government of Ghana paid high
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30 commitment fees (see Table 1), but the Ghanaians were working on a fixed rate of
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32 \$100/barrel for the repayment. The Chinese pushed for \$85/barrel – a \$15/barrel
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34 reduction - at a time when oil prices were about to slide precipitously. This change
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36 made the re-payment schedule even more onerous and the Government of Ghana
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38 estimated it would pay \$6.4 billion for the \$3 billion loan. In August 2014 President
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40 Mahama visited Beijing to renegotiate though the Chinese remained intransigent and
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42 the unspent \$2 billion of the loan was cancelled⁴.
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48 Ghana's engagement with the Chinese around energy infrastructure shows that
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50 China's geoeconomic agenda concerned accessing oil through oil-backed
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54 ⁴ In 2016 the negotiations were re-opened by the, now, ruling NPP but this time potentially
55 using gas sales to finance the loan. The additional finance, if agreed, would be around \$500
56 million for 3 projects agreed under the original MFA and \$1.9 billion to build additional
57 infrastructure so that Liquefied Natural Gas can be exported.
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3 infrastructure loans while ensuring construction contracts came to its NOCs. The gas
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5 plant brought the enclaved oil production facility onto the Ghana's land-based
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7 territory and with it dispossessed rural farmers in the name of the national good
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9 whereas electricity flows mainly to urban centres. While Ghanaian elites exercised
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11 some agency, the intense inter-party rivalry undermined the stability needed for long-
12
13 term planning around major infrastructure projects. The changing oil price and the
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15 collapse of the original loan showed that the commercial conditions attached to such
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17 loans means that China remained relatively insulated from the risk of non-payment
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19 while the Ghanaian Government was left with limited infrastructure and residual debt.
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24 Cambodia's Kamchay Dam

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26 The second case of infrastructure financing is the Kamchay Dam in Cambodia, which
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28 was the country's first large hydropower dam. The dam is located on the Kamchay
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30 River in Bokor National Park and was built between 2007 and 2011 by the Chinese
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32 SOE Sinohydro and funded by a loan from the China ExIm Bank. This case
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34 demonstrates the entwining of China's geopolitical and geoeconomic power in the
35
36 S.E. Asia region with Cambodia an important ally and so recipient of major loans.
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38 However, the loan is commercial and structured around a long-term concession to
39
40 supply urban Cambodians with electricity. It also demonstrates that where domestic
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42 elites are drawn into such bargains with powerful international actors they largely
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44 ignore due process or the needs of project-affected communities.
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50 Given the wars that were fought between the late 1960s and early 1990s Cambodia's
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52 infrastructure is comparatively underdeveloped with energy a priority. The Kamchay
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54 Dam has a generating capacity of 193MW and its annual output is 498GWh (NGO
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3 Forum, 2013). Given that around 40-50% of Cambodia's electricity is imported the
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5 government was keen to attract investment into the energy sector and the Chinese are
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7 one of the country's leading investors. The Kamchay Dam is the highest profile of 6
8
9 Chinese backed dam projects in Cambodia and was negotiated at the top political
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11 level which reflects a growing geopolitical alliance between the two countries, and
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13 subsequently affected a range of regulatory issues. A key factor in the geopolitics of
14
15 China's aid and investment strategies is a recipient country's support for its 'One
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17 China' policy which relates to China's territorial claims over Taiwan. Countries that
18
19 recognize China's claims are more likely to receive investment (Sun, 2014).
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21 According to one NGO respondent such calculi were at play in the Kamchay Dam:
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26 China also provided 600 million dollars because at that time the government
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28 announced its support of the One China Policy...when Samdech Hun Sen, the
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30 Prime Minister of Cambodia, announced the support of Chinese policy, China
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32 also supported finance to the Cambodian government....So, this dam is very
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34 high profile even before it arrived in our country, those who are under the
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36 power or under the hierarchical level did not have the right to oppose
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38 (Interview, February 2014).
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44 In addition, as ASEAN chair in 2012, the Cambodian government strongly supported
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46 China in its claims over the Spratly Islands in the South China Sea which also resulted
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48 in new investment projects (Interview with foreign diplomat, July 2013). As one
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50 Sinohydro representative outlined (Interview, Oct 2013) China and Cambodia are
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52 'good neighbours' and Cambodia 'gives preferential treatment to the Chinese'
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54 compared to the US and others. The ramifications of this elite level brokerage are
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3 clear; that political opposition would not be tolerated and this filtered down to all
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5 levels of the Kamchay Dam's governance with little or no consultation with local
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7 authorities or dam-affected communities. Such deals allowed Hun Sen to develop
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9 infrastructure without the levels of transparency and conditionality that Western
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11 donors would have insisted upon, thereby obviating the need for any governance
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13 reforms that could have challenged his power base (Burgos and Sophal, 2010).
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18 In terms of financing, the dam is a Sinohydro-ExIm Bank project, similar to many
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20 Chinese overseas dams. Sinohydro is the world's largest dam builder and also
21
22 prepared to build more controversial dams having cut its teeth on major dam projects
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24 in China (McNally *et al*, 2009). As noted earlier, ExIm funds major infrastructure
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26 projects and has worked closely with Sinohydro across the global South including
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28 Lao, Benin, DRC, Gabon, Ghana, Sudan and Ecuador (IRN, 2012). The dam cost an
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30 estimated US\$280 million and was part of a US\$600 million aid, trade and investment
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32 package to Cambodia. The dam is based on a commercial loan that has to be re-paid
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34 at 6% interest. The Kamchay Dam was a BOT contract, which is relatively new for
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36 the Chinese who have tended to simply act as EPC contractors. The lease period is 44
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38 years, after which the dam will be transferred from Sinohydro to the Cambodian
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40 government. Cambodia's National Assembly voted to provide a guarantee to
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42 Sinohydro whereby compensation would be paid by the Cambodian government if the
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44 project faced difficulties or under-performs. Some law-makers rejected the guarantee
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46 package because they had not actually seen the terms of the contract while the 44-year
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48 lease is much longer than similar arrangements that are normally 25-30 years and
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50 which will benefit the Chinese in terms of long-term profits. Although Sinohydro and
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52 the energy off-taker, Electricité Du Cambodge, will not reveal the price of electricity
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3 they negotiated there are suggestions that Kamchay's electricity is more expensive
4 than imported sources from Vietnam, which compounds suspicions that the deal was
5 more about cementing political relations between China and Cambodia than
6 promoting access to cheaper electricity.
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13 Following Brenner's idea of 'extended urbanization' the electricity produced is
14 almost solely used to satisfy the energy demand of the capital, Phnom Penh, with
15 rural electrification largely confined to district capitals. According to a representative
16 of Sinohydro (Interview, Oct 2013), Kamchay supplies all its energy to Phnom Penh
17 which amounts to 40% of the city's daytime electricity supply and 80% of its
18 nighttime supply. The corollary of this, as our field research showed, is that dam-
19 affected communities have not benefitted in terms of energy access. Communities
20 close to the dam receive electricity from Vietnam at unaffordable rates, as shown by
21 the following quotes: "The price of electricity and the connection to the grid is very
22 expensive" (interview Tvi Khan Cheung village). In a different village, it was
23 observed "The electricity we use is from Vietnam... It is not good because it is low
24 power and we cannot use it at night" (Interview, Moat Pream village). While
25 electricity became more affordable following dam construction, reducing from 1800
26 to 920 Riel per kWh, this is still too high and many people do not have the money to
27 connect to the grid, which requires a fee of US\$160 per household.
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48 The Bokor National Park, where the Kamchay Dam is located, is an extension of the
49 Cardamom Mountains. 2,015 ha of protected forest were lost due to the flooding for
50 the reservoir and a total area of 2,291 ha was destroyed (Grimsditch, 2012). As the
51 dam was located in a national park, no resettlement was required, because there were
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3 no villages located upstream of the dam. However, the flooded area was mixed
4 bamboo forest, which provided raw materials for basket-making, rattan and wild
5 fruits, which contributed to the livelihoods of the poorer families located downstream.
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7 Our research (Siciliano *et al*, 2016) showed the livelihoods of these villagers was
8 negatively affected by the dam and that no compensation was paid. Crucially, the
9 driving of the project by top levels of the Cambodian leadership resulted in due
10 process often being sacrificed in pursuit of project completion. For example, by
11 Cambodian law, development projects such as dams are required to have an ESIA in
12 place and require approval by the Ministry of Industry, Mines and Energy before
13 construction begins and consultation with all stakeholders is required. However, for
14 the Kamchay Dam, the full ESIA was approved only after the commencement of dam
15 construction while consultation before and after construction was ad-hoc (Interview,
16 NGO representative, October 2013); a pattern seen in Ghana's Bui Dam which was
17 also built by Sinohydro (Hensengerth, 2011). Given the characteristics of the BOT
18 contract the Kamchay case illustrates failure in the political will of the national
19 government with regard to ensuring that the dam developer fulfills its commitments
20 for environmental and social impact mitigation. A weak state is likely to be most in
21 need of the more accessible development finance and technical assistance available
22 for the types of infrastructure projects that China offers, and less resistant to the
23 geopolitical power of a regional hegemon.
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48 **CONCLUSION**

49
50 Studies of urban infrastructure finance have largely focused on the evolving
51 entrepreneurship of city and regional governance actors in attracting inward
52 investment (Ashton *et al*, 2016) as well as being confined to cases from the global
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3 North (though exceptions include Harvey and Knox 2015; Goodfellow, 2017). With
4 the growth of China as an infrastructure financier and builder in the global South we
5 are seeing Chinese banks and firms constructing deals that blur the line between
6 geopolitics and, what Cowen and Smith (2009) term, the geoeconomic. These ‘South-
7 South’ infrastructure deals enable Chinese mercantilism by tying bank lending to the
8 use of China’s SOEs that are seeking new markets. The paper sought to analyse how
9 these geoeconomic interests shape infrastructure deals in the global South, how these
10 projects are territorialized, and what role domestic political agency plays in shaping
11 both the outcome of these projects. It did this through case studies of infrastructure
12 projects which displayed different dynamics around the interplay of geoeconomics,
13 territory and political agency.
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29 The cases show that China’s infrastructure projects in LMICs are both geopolitical
30 and geoeconomic with the underlying rationale to access markets and resources for
31 maintaining the robustness of China’s economy. The framework loan packages in
32 both Ghana and Cambodia are outlets for China’s foreign exchange reserves and are
33 ‘tied’ to the use of Chinese SOEs for construction. This packaging of finance and
34 construction allowed for quick disbursement of funds which both the Chinese and the
35 recipients prefer and enables them to out-manoeuvre more ‘traditional’ lenders like
36 the World Bank who, as we saw in the Ghana case, were prepared to fund the gas
37 processing plant. Geoeconomically the outcomes might be described as ‘win, win,
38 win’ for the Chinese, because their loans are repaid, in the case of Ghana (and other
39 resource-backed loans) they gain access to the oil, and the engineering SOEs secure
40 contracts for overseas projects where China’s domestic market is saturated. Despite
41 these geoeconomic interests there are still geopolitical agendas at play, notably the
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3 role China plays as a regional hegemon in South East Asia, as well as recipient
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5 countries' support for the One China Policy.
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9 Territorially, the infrastructure projects are spatially quite enclaved, yet these spaces
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11 of company operation are linked in complex ways to national and transnational actors,
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13 which defy a state-based logic. The gas infrastructure in Ghana was an EPC contract
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15 with high levels of Chinese inputs which undermine efforts to boost the local content
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17 of inward investment projects (Ovadia, 2016). The gas plant acts as a conduit between
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19 offshore hydrocarbon production, involving international and Ghanaian oil
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21 companies, and domestic electricity markets. The current proposal to extend the
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23 original Chinese loan against future gas sales for liquefaction and export further
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25 complicates these connections. The Kamchay Dam was a BOT contract which secures
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27 an operating concession for 44 years and thus guarantees a stable revenue stream for
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29 the Chinese operator, free from competition.
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35 While geoeconomic relations need not be territorialized (Sassen, 2017), with fixed
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37 infrastructures some control of territory is a necessity – rather than a ‘tactical option’
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39 in Cowen and Smith’s terms – which entails displacement of local populations. The
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41 paper showed that in both projects, which are located in rural areas, the electricity
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43 they generated largely supplied urban areas, which cements spatial inequalities
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45 despite the recipient state’s rhetoric of increasing access to affordable power. In
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47 Ghana, farmers’ land was lost to make way for pipelines and in Cambodia forest users
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49 were negatively impacted by the dam’s inundation. While these infrastructure projects
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51 are brokered bilaterally between political elites wherein global South actors do have
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53 agency, such agency is constrained. The official discourse of both sides serves to
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3 depoliticize these relations by framing them as ‘co-operation’ yet the conditions set
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5 by China, such as loan repayment terms and content requirements, favour the
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7 Chinese. The risks for both sides from resource-backed loans was evident in the
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9 Ghana case where the falling oil price precipitated the Chinese cancelling 2/3 of the
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11 loan which hurt the Ghana Government more than it did CDB. In terms of repayment
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13 of the loan for the Kamchay Dam the BOT lease is one of the first of its kind entered
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15 into by China and its long duration certainly seems to favour the Chinese financiers
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17 and engineering SOEs.
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23 The attractiveness of Chinese infrastructure financing to the ruling regimes in the
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25 global South, which may be vulnerable to rival factions, is that the financing and
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27 construction occur quickly which can bolster their legitimacy, but equally the projects
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29 are implemented without significant scrutiny or regulation. This lack of accountability
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31 is evident throughout multiple levels and stages of the project cycle; from
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33 international compliance, through to Parliamentary oversight, the conducting of
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35 ESIAAs, public consultation, and the monitoring of adherence to domestic law. The
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37 upshot is that despite the differences between Cambodia’s constitutional monarchy
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39 and Ghana’s clientelist democracy both countries’ engagement with China served to
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41 entrench elites and deny wider political debate. It is this flexibility on the part of
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43 multinational capital to both engage with the state on one hand and abstract itself
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45 from local responsibilities on the other that makes it so powerful. And in this the
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47 Chinese firms are no different from other large multinationals operating in the global
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49 South.
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Table 1 – The MFA Loan

	Structure
Facility amount	Tranche A: \$1.5 billion Tranche B: \$1.5 billion
Repayment period	Tranche A: 15 years Tranche B: 10 years
Drawdown period	Tranche A: 5 years Tranche B: 3 years
Repayment terms	Principal and interest every 6 months
Interest rate	Tranche A: 6 month LIBOR + 2.95% per annum (3.38% per annum as of Aug 2011) Tranche B: 6 month LIBOR + 2.85% per annum (3.29% per annum as of Aug 2011)
Exposure fee	0.25% of the loan
Commitment fee	1.0% per annum on the undrawn balance of the loan
Content requirement	60% of any project costs funded by a CDB loan should be implemented by Chinese contractors
Other requirements	Maintaining a debt service account that contains a cover at least 1.5 times each repayment at all times. 15% government counterpart funding for every project before loan disbursement

Source: Chen, 2016