Literature Review on China's Global Finance

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Project Paper

China's Development Finance, Growth Models and Sustainable Development in Recipient Countries 2020–2021

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Overview

China plays a substantive role in the Global South, where its dominance of material power through astute use of development financing has enabled it to become the leading trading partner and a significant investor in the developing world. China's cooperation may be developmental, but it is not primarily based on official development aid (Bräutigam, 2011).[1] Like that of emerging donors, China has brought diversity in various aspects of development cooperation, from strategic priorities to regional and sectoral focus.[2] Chinese aid is channelled largely to countries with poor governance, high poverty rates, or close diplomatic ties with China. Moreover, countries in the Global South are increasingly evaluating China's expanding security interests and soft power provisions in recent years. Understanding how dynamics in this relationship impact recipient countries, what strategies China employs when allocating development assistance and the extent to which recipient countries achieve their objectives when it comes to negotiation with providers will be of interest to economic, political, and development geographers.

This paper describes a literature review on China's aid to developing countries, particularly countries in the Global South. It provides a summary of the available literature, looking in particular at:

- What is the Global South countries' position, including current economic position, strategic development needs, and a recipient perspective of Chinese aid?
- What is China's strategic development models for Global South countries involving strategies featuring broader social objectives?
- What is the effect of China's aid?

Global South Countries

The term *Global South* refers broadly to the regions of Latin America and the Caribbean, Asia, Africa, and the Pacific; most (though not all) low income and often politically and culturally marginalised. Over the past two decades, the South's leading countries (e.g., Brazil, China, India, and South Africa) demonstrated rapid development in a wide range of contexts. Dramatic improvements have been made to reduce absolute poverty levels from 1.8 billion in 1990 to 1.4 billion in 2005, led primarily by India and China (United Nations, 2009). This has been possible because of the combined impact of rapid GDP growth and the South's rising share in global trade and investment. In 2007, developing countries of the South recorded per capita income grew faster than the Organisation for Economic Cooperation and Development (OECD) average of 2.75% (The World Bank, 2020). India and China have sustained average growth four times faster than the OECD countries in the present decade. The South's contribution to world trade growth reached about 50% in the 2000s (Owoko, 2018). Over the same period, the rapid expansion of foreign direct investment (FDI) from firms in the Global South has grown

[1] In fact, China's official finance is broader than the development assistance programs conducted by the Development Assistance Committee (DAC) donors. It contains grants, interest-free loans and concessional loans; the first two are funded by China's state finances, while the Export-Import (EXIM) Bank of China funds the third. Many of these programs fall below the grant element of at least 25% that characterises foreign aid programs of other nations and also have requirements that goods purchased should be at least 50% of Chinese origin.

[2] China has provided grants to less developed countries since 1949, with programs in Africa beginning in the 1950s. However, in spite of when China initiated aid-like activities, it is their recent effects that we consider to be *emergent*.

significantly, from around US$110 billion in 2005 to US$381 billion in 2017, and now constitute almost 30% of global FDI outflows (Owoko, 2018).

The South's remarkable growth is further reinforced by cooperation between developing countries, characterised as *South-South Cooperation* (SSC). Between 1980 and 2011, South-South trade as a share of world merchandise trade rose from 8.1% to 26.7%, with growth particularly remarkable in the 2000s (Owoko, 2018). Sub-Saharan Africa (SSA) has become a major new source and destination for South-South trade. Between 1992 and 2011, China's trade with SSA rose from US$1 billion to more than US$140 billion (Malik, 2013). South-South investment has shown similar dynamism, with most investments in countries in the same region, often to neighbours and countries with shared languages. The largest outward investment is from China, with an investment stock of US$1.2 trillion (Campante and Chor, 2012). Increasingly, multinational enterprises, especially from India, Brazil, and South Africa, are also stretching beyond their borders in greater numbers and leaving their mark in Africa, Asia, and Latin America.

SSC's intensification has also been manifested under the broad rubric of technical and economic development assistance for development projects, particularly in the infrastructure and production sectors like agriculture and industry. Unlike in the case of North-South cooperation, development assistance between South-South countries involves assistance with trade, loans, technology sharing and direct investments, and do not necessarily characterise as flows out of international development assistance (ODA) commitments. While Brazil, India and China are the crucial providers of development assistance, the rise of China and its growing presence and engagement with the Global South has been a key catalyst of the emergence of SSC (Bräutigam, 2009; Dreher and Fuchs, 2015). China is investing US$1 billion (Malik, 2013) and more annually on assistance to fellow developing countries. Besides, the China-led Belt and Road Initiative (BRI), announced in 2013, provides additional finance sources in both Asia and Africa.[3] In this sense, the proponents of foreign aid pose a positive view of China's ties with developing countries. Others have conversely criticised China's rising power as it uses aid to obtain natural resources extraction rights. However, the Chinese government rejects the claim that its aid program is designed to secure access to other countries natural resources (State Council, 2011). Thus, there remains a key question of whether emerging donors like China can establish a new paradigm that moves beyond the pursuit of national interest and focuses on the recipient's development needs. This is discussed in the following section.

Recipient need

Foreign aid advocates suggest that aid's marginal effectiveness is highest when there is the greatest need (Collier and Dollar, 2002). It can be expected that new donors like China may better understand recipient needs, given its own experience of what helped it develop. Highlighting the importance of needs-based allocation, the State Council (2011) claims that China plays a positive role in improving people's living conditions and economic development of recipient countries. China's commitment to providing development aid is further reflected in a recent white paper aiming to expand its support towards recipient countries' economic development (State Council, 2021). However, studies on development assistance provided by China lack rigorous empirical analysis. A study by Dreher and Fuchs (2015) shows that China indeed favours countries with low per-capita income, which seems to confirm China's concern in recipients' need (see also Dreher et al., 2018). However, the bias is towards

[3] The initiative is conceptualised through the creation of two modern-day *Silk Roads*: the land-based *Silk Road* Economic Belt and the sea-based 21st-Century Maritime *Silk Road* that will stretch across Asia towards Europe.

smaller countries, which appears to be surprising at first, but can be explained by the fact that it is cheaper to buy *policy concessions* from smaller countries (see also Dreher et al., 2011). Moreover, China's focus on infrastructure projects might meet development needs, which the World Bank and most bilateral donors stopped funding decades ago (Bräutigam, 2009). Dollar (2016), for example, explains that improved water and sanitation support health outcomes, and that cognitive development and access to electricity are necessary both in the home, and in industry and commerce.

A needs-based allocation of Chinese aid may also be reflected in China playing an increasingly important role in health and education (Martorano et al., 2020; Guillon and Mathonnat, 2020), disaster relief (UNDP, 2015), and post-conflict resolution (Biggeri and Sanfilippo, 2009). Chinese engagement in the education sector, to a certain extent, is guided by recipient needs. China has built several hundred primary schools, provided vocational training (including teacher training and Chinese-language instructions), primarily in Africa and Asia (Reilly, 2015). In a similar vein, the recipient country's health status influences China's allocation of aid. Zhao et al. (2018), for example, find that Chinese medical teams are sent to countries with poor health human resources and anti-malaria centres are established in countries with high malaria burden. Since 2000, China has been one of the top five largest humanitarian aid providers among non-DAC donors (UNDP, 2015). It mainly provides relief materials, food, cash, rescue and medical teams, and post-disaster reconstruction and capacity building for disaster prevention. From 2004 onwards, China's humanitarian aid has dramatically increased, mainly through multilateral channels. Apart from that, agricultural development is another priority; Chinese development finance in Africa increasingly includes agribusiness, contract farming, technology demonstration, and training (Scoones et al., 2016).

Others, however, emphasise that Chinese aid is unrelated to the need in recipient countries. Recent qualitative (Naím, 2007; Tull, 2006; Taylor, 2007a; Taylor, 2007b) and quantitative (Berthélemy, 2011; Biggeri and Sanfilippo, 2009; Mourao, 2018; Amighini et al., 2013; Sanfilippo, 2010; Guillon and Mathonnat, 2020; Regilme and Hodzi, 2021) evidence suggest that Chinese aid is instead determined by a nation's economic and political interests. Moreover, with the shrinking of natural resources at home, China has looked at the resource-rich developing world in order to sustain its domestic economic growth and stability (Alden, 2005; Guillon and Mathonnat, 2020). Dreher and Fuchs (2015) contradict these claims and suggest that China's allocation of aid seems mostly independent of recipient countries' endowment with natural resources. Dreher et al. (2018) explain that part of this discrepancy is attributable to disagreements over what is being counted (ODA or other official flows). China usually does not target ODA based on natural resource endowments.

A different strand of study shows that Chinese aid flows disproportionately to African leaders' birth regions and not necessarily to the areas of greatest need within countries (Dreher et al., 2019b). Still, many recipients emphasise that China is a potential alternative to bilateral or multilateral donors since China does not pay attention to local politics and the quality of policies and institutions in recipient countries (State Council, 2011). However, it can be expected that in the absence of any conditionality, Chinese aid will weaken democracy, governance, and human rights. In turn, this deteriorates prospects of development and can put immense pressure on social and environmental standards (Shinn, 2015) and increase corruption (Isaksson and Kotsadam, 2018; Brazys et al., 2017). Note that the Chinese Ministry of Commerce is the head agency in the provision of bilateral aid (Pehnelt, 2007). This clearly indicates the paramount importance of commercial motives (Lammers, 2007). For example, China's health-specific aid has been considered its commercial policy tool since Chinese pharmaceutical firms have supplied their products to expand domestic companies' market share, primarily in Africa (Zhao et al., 2018; Guillon and Mathonnat, 2019).

Moreover, China uses aid to improve business opportunities. For example, Chinese government loans are *tied*, in the sense that borrowers must purchase Chinese goods and services. This subsidy from Beijing helps Chinese enterprises to compete for market share with foreign firms. There is also mixed evidence that Chinese aid flows target countries with poorer governance but are of high economic importance, so that a donor can expect significant economic returns (Dreher and Fuchs, 2015; Dreher et al., 2018; Guillon and Mathonnat, 2020). China rather reinforces good governance and accountability when there is political space to do so (Taylor, 2012).

Recipient perspective of Chinese aid

Since 2000, infrastructure aid of total development assistance has dropped significantly. In response, some low- and middle-countries have adopted a deliberate and systematic strategy to welcome new donors to secure additional resource to finance development. It appears that because of the neglect of economics infrastructure by traditional donors, among other factors (e.g., dissatisfaction with governance and human rights issues), emerging donors are seen as an alternative source to meet this objective (Greenhill et al., 2016). Unlike traditional donors, China, on the contrary, is primarily concentrated on infrastructure development in developing countries and it accounts for 34% of all aid to infrastructure in SSA, higher than other multilateral and bilateral donors (Chen, 2013). At the same time, developing countries believe that working with emerging donors, particularly China, will increase their capacity in self-development. However, proponents of foreign aid suggest that aid transfers may lead to capital flight, violate domestic and international labour standards, and undermine growth due to heavy transaction costs associated with donor-recipient coordination in developing countries where political institutions are relatively weak or corrupt (Kragelund, 2008). Others note that China is interested in financing highly visible projects and programs (e.g., cultural centres, government buildings and stadiums) that offer limited or transitory economic benefits (Will, 2012). Previous studies have also found that foreign aid might influence government spending, the level of tax revenue and borrowing behaviour (Morrissey, 2012; Kilama, 2016). Therefore, it is crucial to understand the implications of Chinese aid from the recipient perspective.

Global South countries value China's support; particularly, the respective governments appreciate the flexibility and fast disbursement of Chinese assistance. A recent study by Eichenauer et al. (2021) also notes that China's growing economic activities in developing countries do not weaken average attitude towards China in spite of the widespread criticism. However, respective countries are critical of Chinese global finance in some contexts. Recipient governments, for example, often find that managing China's complex loan and grants procedures, simply for recording and budget purposes, is a huge challenge, and its financing lacks transparency in the negotiation process (Schmaljohann and Prizzon, 2015). Moreover, China seems to be more focused on inputs (e.g., building roads or rails, hydropower plants, or donation of health kits) than actual outcomes in terms of spillover effects (e.g., poverty reduction, environmental degradation) for the local economy (Schmaljohann and Prizzon, 2015).

Chinese development assistance also may actively *hinder* economic reform (Brazys and Vadlamannati, 2020). The absence of institutional conditionality (e.g., governance reform, corporate social responsibility, environmental and social protection responsibilities, and debt-sustainability issues) makes Chinese aid attractive to recipient countries' leaders who believe institutional reforms might undermine their domestic bases of support. Recent studies also find that Chinese aid is fungible (Strange et al., 2017b). Cash grants, or other forms of public budgetary support, may enable governments to function without raising revenue from domestic sources. That suggests Chinese aid is likely to undermine local tax and revenue efforts. Moreover, Chinese aid can promote rent-seeking in various government functions, especially in those states that already have histories of rent-seeking norms (Choi and Storr, 2019). Such wasteful activities can induce dependency.

Further, there is evidence that Chinese firms, especially in Africa, often violate domestic and international labour standards (HRW, 2011) and offer lower wages than the national wages or other foreign firms (Baah and Jauch, 2009; Xiaoyang, 2016; Lee, 2017; HRW, 2011; Coniglio et al., 2015). However, there is also evidence pointing to higher or similar wages in Chinese firms in some contexts. A recent survey in the Eastern Industrial Zone in Ethiopia noted that average wages among Chinese firms in the zone may be lower, but they are far above the national average in the formal sector (Fei, 2018). In addition, in some cases wages may be lower, but this is compensated for by job stability (Lee, 2017). Chinese firms also opt to pay higher wage premiums to attract higher-quality workers, as observed in some firms in Ethiopia's industrial zones. Besides, labour unions contribute to wage equalisation among foreign firms in the same sector, as observed in South Africa (Huang and Ren, 2013). Turning to working conditions, Chinese investors have a reputation of labour abuses in terms of long working hours, lack of written contracts, and casualisations and resistance to unionisation (Lee, 2017; Jenkins, 2019; Rounds and Huang, 2017; Sun et al., 2017; Dubinsky, 2021). Context also matters in terms of the prevailing policy and communications barrier that Chinese firms encounter in recipient countries (Fei, 2018; Xiaoyang, 2016).

Besides, Chinese aid allocation is mainly driven by Chinese stakeholders' motivations rather than by recipients' needs. Previous work has also noted that China's development assistance in the form of cash budgetary grants is relatively infrequent (Bräutigam, 2009). Instead, Chinese development efforts tend to come through projects and in-kind contributions, often related to commercial endeavours and tied to Chinese suppliers (Dreher et al., 2018). Consequently, many governments want to better align development partners' assistance with their priorities, improve the division of labour and increase the use of local systems to better manage and lead the country's development process. More recently, there is an increasingly heated debate among African decision-makers and within African societies, about how to make use of a historic opportunity to set an *African Agenda* and build an *African Consensus*. There is now a common awareness that African governments need to better identify their individual and collective needs, and then engage with emerging donors like China to ensure that projects are mutually beneficial.

China's Strategic Development Models for the Global South

Numerous observers criticise development aid financed by Western donors, as it acts to undermine local state capacity development. In this sense, critics often point to China's radically different aid model. Contrary to the Western approach, the Chinese aid model arguably is more effective in achieving its development goals through policies that stimulate growth, including infrastructural improvement, educational investment, and technical support. The model offers a centralised state bureaucracy and a liberal economic policy framework for promoting the development of underdeveloped states, the Global South in particular. That leaves potential observers of the development aid model to figure out multiple variants of the Chinese aid model.

One China Policy

Since the mid-1950s, China rewards countries with aid that abide by the *One China Policy*, that is, recipient countries do not recognise Taipei's government and have established diplomatic relations with

China. Adherence to *One China Policy* has been described as a necessary condition to benefit from Chinese aid. Indeed, a recent work by Dreher et al. (2018) on Africa during the 2000–2012 period show that China provides less official financing to countries that establish diplomatic ties to the government in Taipei (see also Broich, 2017; Bräutigam, 2009; Zhang and Smith, 2017). China's long-standing relationships with many African countries are based on this diplomatic tie, limiting Taiwan's efforts to become an influential player in Africa. As of today, only two African countries have diplomatic relations with Taiwan, namely Burkina Faso and Swaziland. However, Johnston et al. (2015) report that commercial flows are less likely affected by this foreign policy issue.

Japanese aid model – Going Out strategy

Since its economic reforms in 1978, China paved the way for the *Going Out* strategy. Based on the Japanese model of aid, China linked foreign aid with trade and investment. More specifically, China began to use aid to promote trade and investment. In 1992, China piloted foreign aid joint ventures that combined aid with trade and investment (Huang and Liu, 2013) and formally introduced them as a mode of cooperation in the mid-1990s, together with concessional loans channelled through the Exim Bank. In the aftermath of the Asian Financial Crisis of 1997, *Going Out* was formalised as a policy in 1999. In the aftermath of the Global Financial Crisis of 2008, slower growth in China underlined the need to utilise Chinese aid to serve its economic interests. Consequently, since 2011, the Chinese aid program has been guided by commercial interests and investment, which are less concessional forms of official support. Dreher et al. (2018) echo this point using the Chinese Official Finance to Africa dataset over the 2000–2014 period. Presently, China's 28 strategic sectors have cultivated over 160 flagship multinational enterprises that benefit from commercial contracts via foreign aid projects, notably in Africa (Matthews et al., 2016). Investment is focused on profitable enterprises, aimed at sectors of *mutual* national economic security concern, such as food, energy and minerals.

South-South cooperation

China is uniquely positioned as a developing country to offer valuable development insights to shape appropriate and effective aid policies in fellow developing states. The first white paper on China's foreign aid (State Council, 2011) stipulates the SSC notion that one developing country helps another developing country, reflecting what is held to be a *Win-Win* development equation. Under the SSC flag, Chinese foreign aid is attractive based on China's own economic development experiences. SSC is based on five major principles: (i) to help recipient countries build up their self-development capacity; (ii) to impose no political conditions; (iii) to adhere to equality, mutual benefit, and joint development; (iv) to provide aid realistically, while responding to needs in the best possible manner; and (v) to keep pace with the times, and pay attention to reform and innovation. Aid is thus not altruistic, but rather a crucial strand of Chinese soft power. Dreher et al. (2011) even generalise that a quest for energy security, enlarged trading opportunities and new economic partnerships are common to emerging donors like China. China, however, respects the national interest of recipient countries when providing development assistance.

Trilateral cooperation

Trilateral cooperation refers to cooperation between a traditional donor (OECD-DAC donors and multilateral development agencies), and an emerging donor (emerging economies such as China and India) and a recipient country (Fordelone, 2013). It differs from bilateral aid that involves two states, as multilateral aid involves three or more states (or states of different types of relations) and specific institutional arrangement such as an independent secretariat (Stahl, 2012). The concept of Trilateral Cooperation emerged from multilateral agencies such as United Nations Development Program

(UNDP) and OECD. It has gained momentum after the 2011 Buzan conference on aid effectiveness and the adoption of the 2030 Agenda for Sustainable Development Goals.

There are substantial differences between China and traditional donors in terms of aid policy and practice. Still, some bilateral donor agencies desire to work strategically with China (or with other emerging donors) in implementing aid projects in other developing countries. This is justified both by the belief that countries such as China possess certain strengths, relevant experiences and have policies and instruments available to support development efforts in other countries. In this sense, traditional bilateral donors may provide funding or technical expertise, while China can provide experience and skills from their development efforts. Furthermore, this scheme is also motivated by a keen interest in *influencing* the aid policies of China's growing superpower.

Despite vast differences, trilateral cooperation between China, and multilateral aid agencies (e.g., UNDP) and Western bilateral donor agencies (USA, UK) is growing steadily (Zhang, 2017). There are now numerous trilateral cooperation projects with Chinese participation in the Global South, notably in Africa. These projects cover a range of areas including agriculture, water supply, environmental protection, and technical training. Interestingly, although the Pacific is not a focus of Chinese aid, it has been a testing ground for China's trilateral cooperation. The China-Australia-Papua New Guinea malaria control project and the China-New Zealand-Cook Islands water supply project are China's first two trilateral projects in the region (Zhang, 2017).

However, trilateral cooperation is still in the early stage of implementation and remains a small part of China's overall aid programme. Most of China's trilateral aid projects are small in scale and technically focused, probably highlighting Beijing's risk aversion towards such cooperation. Obstacles to China's trilateral aid cooperation remain. Whether and how China and traditional donors can overcome the obstacles and conduct more Trilateral Cooperation deserves more research in the future.

Authoritarian development model and non-interference

The contemporary aid strategy may be characterised along the democracy-autocracy dimension because of the emergence of new authoritarian powers, such as China, Russia, and several Arab countries. Democratic donors mainly target their aid flows towards democratic recipient countries, whereas autocratic donors are interested in supporting authoritarian regimes to prevent democracy (Bader, 2015). State-initiative programs and one-party autocracy play a significant role to stimulate China's economic growth, especially in the aftermath of the Global Financial Crisis.

Although some autocratic governments admire the success of the Chinese aid model, other states raise questions about human-rights records (Bader, 2015). China tends to enhance the survival of autocratic leaders during trade exports from authoritarian nations, while no evidence exists on the nature of Chinese *autocracy promotion* in activities like arms trade, aid projects or economic cooperation (Bader, 2015). The Chinese position on such matters can be explained by the principle of non-interference in recipient states' internal affairs irrespective of the regime type. This contrasts starkly with the West's paternalistic embrace of the *Washington Consensus*, whereby aid is contingent on recipient nations agreeing to capitalist free-market principles and democratic reforms, especially good governance and human rights. China, on the contrary, might be more interested to engage with those governments that respond to Chinese domestic interests and abide by the *One China Policy*.

Some scholars still argue that China might be biased towards autocratic regimes relative to democratic ones, as authoritarian leaders face less accountability to their citizens and enjoy more discretion when implementing a donor's preferred policies. This becomes apparent when the Chinese government has repeatedly blocked or softened the United Nations Security Council (UNSC) resolutions targeted at other autocrats (Kleine-Ahlbrandt and Small, 2008). This suggests that, in a globalised world, China formally realises non-interference in the domestic affairs of sovereign governments, while it is more willing to negotiate and mediate between the two competing ends.

Need-based model

Local needs and priorities often influence the Chinese foreign aid model. It is one of the reasons that Chinese aid tends to emphasise infrastructure projects that are mostly requested by the developing country government (Reilly, 2015; Guillon and Mathonnat, 2020). For example, China's investment in the African infrastructure sector remained stable at around US$5 billion per year in the period from 2005 to 2009 and increased almost 80% to US$9 billion in 2010 (Strange et al., 2017a).

Impact of China's Aid

The country allocation of Chinese aid provides important information on aid effectiveness. Most work focuses predominantly on the economic and political aspects of China's aid (e.g., investments and trade); however, the geographical, environmental, and social implications of Chinese engagement is increasingly important. The 2005 Paris Declaration on Aid Effectiveness emphasised that aid should support ownership, harmonisation, alignment, results, and mutual accountability.[4]

Economic and political issues

It has been argued that emerging donors encourage poor policies, violate labour standards, and increase recipient countries' debt burden. Manning (2006) discusses the possible risk that loans from emerging donors to developing countries may prejudice their debt situation and waste resources on unproductive investments. The availability of loans from China, for example, has been viewed as threatening concerted efforts to improve debt sustainability in poor African countries. In the absence of adequate donor coordination, Chinese aid would increase the administrative burden on recipient governments. Critics also condemn Chinese investors that crowd out local employment by bringing their own labourers (Bräutigam, 2009; Sargent and Matthews, 2009; Jenkins et al., 2008; Jenkins, 2012). On the other hand, China's aid positively affects recipient countries' economic growth (Woods, 2008; Dreher et al., 2021; Berthélemy, 2011). Dreher et al. (2021) find that, on average, Chinese official development assistance boosts the economic growth by about 0.7% in recipient countries. Notably, in Africa, economic growth improves trade expansion and increases both export volumes and public revenues. Since the mid-1990s, most African recipients achieved an average GDP growth rate of more than 4%, and grew steadily from 2000 through 2009 (OECD, 2008).

China's trade expansion enables Africa to improve its terms of trade by increasing the demand for African exports, particularly in its natural resource goods, and secondly to reduce its domestic inflation with cheap Chinese manufactured products (Alden, 2007). Moreover, He (2013) finds that imports from China had significant positive impacts on SSA countries' exports in all chosen sectors. Still, many countries in the African continent face considerable trade imbalances with China. Furthermore, China's absolute advantage in labour costs and resources can put Africa's local industries under immense

[4] That is, national leadership articulates the need for specific projects, fewer bureaucratic procedures to minimise burden on recipients, focus on delivering aid quickly and at low cost, and mutual respect of sovereignty.

pressure. A similar argument also holds for Latin America (Jenkins, 2012; Jenkins et al., 2008; Sargent and Matthews, 2009). In contrast, recent studies on the effectiveness of Chinese aid show that Chinese infrastructure projects reduce trade costs (Maliszewska and Van Der Mensbrugghe, 2019; Yang et al., 2020), enhance total factor productivity (Yang et al., 2020), and diminish income inequality at the sub-national level in low- and middle-income countries (Bluhm et al., 2018).

Turning to political aspects of Chinese aid, some observers attempt to understand the effects of Chinese activities on the autocratic regime. It can be expected that the rise of an influential autocratic donor like China will likely target its aid flows towards authoritarian recipient countries or to countries that will probably care about maintaining or consolidating existing authoritarian regimes. However, a contribution by Bader (2015) concludes that Chinese bilateral interactions have little effect on the longevity of autocratic regimes. Broich (2017) also finds that Chinese development finance does not systematically target more authoritarian countries, notably African countries.

Another strand of literature explores the effect of Chinese aid on local corruption and conflict. For example, Isaksson and Kotsadam (2018) find a positive relationship between Chinese aid and local corruption (see also Brazys et al., 2017). Beijing refutes these accusations and states that Chinese aid and investment projects are vulnerable to corruption because they are usually tied to the purchase of goods and services from Chinese firms, thus limiting the amount of cash that respective governments can directly access (Yongzheng and Nkunde, 2012). Others note that Chinese aid tends to reduce conflict, notably in SSA countries (Gehring et al., 2018).

Social and environmental sectors

Even though China is very active in both the health and education sectors (King, 2010; King, 2014; Shajalal et al., 2017; Bräutigam, 2009), there is only scant evidence that Chinese aid affects social development outcomes. China's engagement in both sectors includes the provision of infrastructure (Grépin et al., 2014; Will, 2012; Dubinsky, 2021) and the transfer of skills and knowledge, including training cooperation and providing foreigners with scholarships to study in China. Moreover, Chinese Medical Teams' long-term deployment has been a core component of Chinese health assistance to African nations (King, 2010; King, 2014; Shajalal et al., 2017). A more recent study by Martorano et al. (2020) finds that Chinese aid successfully targets recipient countries' social development goals. For example, households in areas receiving Chinese aid projects tend to stay in school longer and experience a reduction in child mortality.

The other strand of literature focuses on the environmental impact of Chinese aid, as Chinese investors have little experience with green policies at home. China's environmental record at home and in recipient countries has been debated in recent years (Peh and Eyal, 2010). Over the last three decades, China's rapid economic development has led to significant environmental pollution, with China being the highest emitter of carbon dioxide contributing to global warming (Shinn, 2015). Against this background, China is taking steps by reallocating some of its highest pollutant industries (e.g., steel, glass, leather, and cement industries) to Africa, Latin America, Eastern Europe and other parts of Asia (Roberts, 2014). Chinese tanneries have already raised concerns by dumping waste into the river and causing harm to livestock industries (Shinn, 2015). Moreover, Chinese companies in Africa contributed to the depletion of the marine resource base and have caused the loss of biodiversity and the abuse of forest communities' rights. In recent years, Chinese investment in the energy sector in Africa has caused potentially adverse environmental impacts. In Latin America, Chinese finance leads to heavy ecological destruction. Chinese demand for Latin American natural resources has placed a severe strain on water supplies, and increased deforestation and greenhouse gas emissions in the region (Ray et al., 2015). However, Latin American internal policies—environmental, economic, and social—are the real drivers of the region's economic trajectory. BenYishay et al. (2016) echo this point, noting that when domestic ecosystems are appropriately protected, and internal environmental governance plays a crucial role to avoid negative externalities, Chinese-funded infrastructure projects need not lead to widespread environmental damage.

Geographical issues

A recent study by Dreher et al. (2019a) shows that Chinese aid conveys positive economic development effects at the district-level and province-level across 47 African countries. However, political bias in the subnational distribution of Chinese aid does not substantially undermine local development outcomes. This echoes Dreher et al. (2019b) findings for Africa that Chinese aid disproportionately benefits politically privileged regions when political leaders face upcoming elections and when electoral competitiveness is high, but not at the expense of socio-economic outcomes in desired locations.

References

Alden C (2005) Red Star, Black Gold. *Review of African Political Economy* 32(104/105): 415-419.

Alden C (2007) *China in Africa: partner, competitor or hegemon?* London & New York: Zed Books.

Amighini AA, Rabellotti R and Sanfilippo M (2013) Do Chinese state-owned and private enterprises differ in their internationalization strategies? *China Economic Review* 27: 312-325.

Baah AY and Jauch H (2009) Chinese investments in Africa : a labour perspective Accra, Ghana: African Labour Research Network.

Bader J (2015) China, Autocratic Patron? An Empirical Investigation of China as a Factor in Autocratic Survival. *International Studies Quarterly* 59(1): 23-33.

BenYishay A, Bradley P, Runfola D, et al. (2016) Forest Cover Impacts of Chinese Development Projects in Ecologically Sensitive Areas. AidData Working Paper #32, Williamsburg, VA: AidData at William & Mary.

Berthélemy JC (2011) China's engagement and aid effectiveness in Africa. *China and Africa: An emerging partnership for development*. 71-90.

Biggeri M and Sanfilippo M (2009) Understanding China's move into Africa: an empirical analysis. *Journal of Chinese Economic and Business Studies* 7(1): 31-54.

Bluhm R, Dreher A, Fuchs A, et al. (2018) Connective Financing: Chinese Infrastructure Projects and the Diffusion of Economic Activity in Developing Countries. AidData Working Paper No. 64, Williamsburg, VA: AidData.

Bräutigam D (2009) *The Dragon's Gift: The Real Story of China in Africa.* New York: Oxford University Press.

Bräutigam D (2011) Aid 'With Chinese Characteristics': Chinese Foreign Aid and Development Finance Meet the OECD-DAC Aid Regime. *Journal of International Development* 23(5): 752-764.

Brazys S, Elkink JA and Kelly G (2017) Bad neighbors? How co-located Chinese and World Bank development projects impact local corruption in Tanzania. *The Review of International Organizations* 12(2): 227-253.

Brazys S and Vadlamannati KC (2020) Aid curse with Chinese characteristics? Chinese development flows and economic reforms. *Public Choice*. DOI: 10.1007/s11127-020-00836-z. 1.

Broich T (2017) Do authoritarian regimes receive more Chinese development finance than democratic ones? Empirical evidence for Africa. *China Economic Review* 46: 180-207.

Campante FR and Chor D (2012) Why Was the Arab World Poised for Revolution? Schooling, Economic Opportunities, and the Arab Spring. *Journal of Economic Perspectives* 26(2): 167-188.

Chen C (2013) South-South Co-operation in Infrastructure in Sub-Saharan Africa. *Working paper for ECOSOC, United Nations*.

Choi SG and Storr VH (2019) A culture of rent seeking. *Public Choice* 181(1): 101-126.

Collier P and Dollar D (2002) Aid allocation and poverty reduction. *European Economic Review* 46(8): 1475-1500.

Coniglio ND, Prota F and Seric A (2015) Foreign Direct Investment, Employment and Wages in Sub-Saharan Africa. *Journal of International Development* 27(7): 1243-1266.

Dollar D (2016) *Chinese engagement with Africa: From natural resources to human resources.* Washington D.C.: The Brookings Institution.

Dreher A and Fuchs A (2015) Rogue aid? An empirical analysis of China's aid allocation. *Canadian Journal of Economics/Revue canadienne d'économique* 48(3): 988-1023.

Dreher A, Fuchs A, Hodler R, et al. (2019a) Political bias and the economic impact of Chinese aid. In: VOX EU: CEPR Policy Research. Available at: https://voxeu.org/article/political-bias-and-economic-impact-chinese-aid (accessed on 4 March 2020).

Dreher A, Fuchs A, Hodler R, et al. (2019b) African leaders and the geography of China's foreign assistance. *Journal of Development Economics* 140: 44-71.

Dreher A, Fuchs A, Parks B, et al. (2018) Apples and Dragon Fruits: The Determinants of Aid and Other Forms of State Financing from China to Africa. *International Studies Quarterly* 62(1): 182-194.

Dreher A, Fuchs A, Parks BC, et al. (2021) Aid, China, and Growth: Evidence from a New Global Development Finance Dataset. *American Economic Journal: Economic Policy* 13(3): 1-40.

Dreher A, Nunnenkamp P and Thiele R (2011) Are 'New' Donors Different? Comparing the Allocation of Bilateral Aid Between nonDAC and DAC Donor Countries. *World Development* 39(11): 1950-1968.

Dubinsky I (2021) China's Stadium Diplomacy in Africa. *Journal of Global Sport Management*. DOI: 10.1080/24704067.2021.1885101. 1-19.

Eichenauer VZ, Fuchs A and Brückner L (2021) The effects of trade, aid, and investment on China's image in Latin America. *Journal of Comparative Economics* 49(2): 483-498.

Fei D (2018) Work, Employment, and Training Through Africa-China Cooperation Zones: Evidence from the Eastern Industrial Zone in Ethiopia. China Africa Research Initiative, School of Advanced International Studies. Working Paper No. 2018/19, Washington, D.C.: Johns Hopkins University.

Fordelone YT (2013) Triangular cooperation: What's the literature telling us? , Paris: OECD. https://www.oecd.org/dac/dac-global-relations/OECD%20Triangluar%20Co-operation%20Literature%20Review%20June%202013.pdf

Gehring K, Wong MHL and Kaplan LC (2018) Aid and conflict at the subnational level – Evidence from World Bank and Chinese development projects in Africa. Discussion Paper Series No. 657, November 2018: University of Heidelberg.

Greenhill R, Prizzon A and Rogerson A (2016) The age of choice: developing countries in the new aid landscape. *The Fragmentation of Aid*. Springer, pp.137-151.

Grépin KA, Fan VY, Shen GC, et al. (2014) China's role as a global health donor in Africa: what can we learn from studying under reported resource flows? *Globalization and Health* 10(1): 84.

Guillon M and Mathonnat J (2019) Is there a strategy in China's health official development assistance to African countries? *Revue d'economie politique* 129(4): 619-660.

Guillon M and Mathonnat J (2020) What can we learn on Chinese aid allocation motivations from available data? A sectorial analysis of Chinese aid to African countries. *China Economic Review* 60: 101265.

He Y (2013) Does China's trade expansion help African development? — an empirical estimation. *China Economic Review* 26: 28-38.

Huang m and Liu H (2013) Economic motives and economic interests of Chinese foreign aid. *International Economic Cooperation*.(4): 62–67.

Huang M and Ren P (2013) A study on the employment effect of Chinese investment in South Africa. Discussion Paper: Centre for Chinese Studies, Stellenbosch University. http://www.sun.ac.za/ccs

Human Rights Watch (2011) Zambia: Workers Detail Abuse in Chinese-owned Mines.

Isaksson A-S and Kotsadam A (2018) Chinese aid and local corruption. *Journal of Public Economics* 159: 146-159.

Jenkins R (2012) Latin America and China—a new dependency? *Third World Quarterly* 33(7): 1337-1358.

Jenkins R (2019) *How China is Reshaping the Global Economy. Development Impacts in Africa and Latin America.* Oxford University Press.

Jenkins R, Peters ED and Moreira MM (2008) The Impact of China on Latin America and the Caribbean. *World Development* 36(2): 235-253.

Johnston LA, Morgan SL and Wang Y (2015) The Gravity of China's African Export Promise. *The World Economy* 38(6): 913-934.

Kilama EG (2016) The influence of China and emerging donors aid allocation: A recipient perspective. *China Economic Review* 38: 76-91.

King K (2010) China's cooperation in education and training with Kenya: A different model? *International Journal of Educational Development* 30(5): 488-496.

King K (2014) China's Higher Education Engagement with Africa: A different Partnership and Cooperation Model. *Education, learning, training: critical issues for development*. 151-173.

Kleine-Ahlbrandt S and Small A (2008) China's New Dictatorship Diplomacy. *Foreign Affairs* 87: 38–56.

Kragelund P (2008) The Return of Non-DAC Donors to Africa: New Prospects for African Development? *Development Policy Review* 26(5): 555-584.

Lammers E (2007) *How will the Beijing Consensus benefit Africa?* Available at: https://www.thebrokeronline.eu/how-will-the-beijing-consensus-benefit-africa/.

Lee CK (2017) *The Specter of Global China: Politics, Labor, and Foreign Investment in Africa.* Chicago University Press.

Malik K (2013) Human Development Report 2013. United Nations Development Programme. New York: UNDP.

Maliszewska M and Van Der Mensbrugghe D (2019) The Belt and Road Initiative : Economic, Poverty and Environmental Impacts Policy Research working paper WPS 8814, Washington, D.C.: World Bank

Group. http://documents.worldbank.org/curated/en/126471554923176405/The-Belt-and-Road-Initiative-Economic-Poverty-and-Environmental-Impacts

Manning R (2006) Will 'Emerging Donors' Change the Face of International Co-operation? *Development Policy Review* 24(4): 371-385.

Martorano B, Metzger L and Sanfilippo M (2020) Chinese development assistance and household welfare in Sub-Saharan Africa. *World Development* 129: 104909.

Matthews R, Ping X and Ling L (2016) Learning From China's Foreign Aid Model. In: The Diplomat. Available at: https://thediplomat.com/2016/08/learning-from-chinas-foreign-aid-model/ (accessed 10 March, 2021).

Morrissey O (2012) Aid and government fiscal behaviour: What does the evidence say? WIDER Working paper 2012/01.

Mourao PR (2018) What is China seeking from Africa? An analysis of the economic and political determinants of Chinese Outward Foreign Direct Investment based on Stochastic Frontier Models. *China Economic Review* 48: 258-268.

Naím M (2007) Missing Links: Rogue Aid. *Foreign Policy*.(159): 96-95.

OECD (2008) African development report. Development Centre Studies. Paris: OECD.

Owoko D (2018) Forging a path beyond a border: The global south. United Nations Conference on Trade and Development. New York: UNCTAD.

Peh S-HK and Eyal J (2010) Unveiling China's impact on African environment. *Energy Policy* 38(8): 4729-4730.

Pehnelt G (2007) The Political Economy of China's Aid Policy in Africa. Friedrich-Schiller-University Jena. https://EconPapers.repec.org/RePEc:jrp:jrpwrp:2007-051

Ray R, Gallagher KP, Lopez A, et al. (2015) China in Latin America: Lessons for South-South Cooperation and Sustainable Development. Boston University: Global Economic Governance Initiative. https://www.bu.edu/pardeeschool/files/2015/04/Working-Group-Final-Report-Pages1.pdf

Regilme JSSF and Hodzi O (2021) Comparing US and Chinese Foreign Aid in the Era of Rising Powers. *The International Spectator* 56(2): 114-131.

Reilly J (2015) The role of China as an education aid donor. Paper commissioned for the EFA Global Monitoring Report 2015, Education for All 2000-2015: Achievements and challenges, UNESCO.

Roberts D (2014) *China's Plan to Export Pollution*. Available at: https://www.bloomberg.com/news/articles/2014-11-27/chinas-pollution-solution-move-factories-abroad (accessed Accessed on 4 March 2020).

Rounds Z and Huang H (2017) We are not so different: A comparative study of employment relations at Chinese and American firms in Kenya. China Africa Research Initiative, School of Advanced International Studies. Working Paper No. 2017/10, Washington, DC.: Johns Hopkins University.

Sanfilippo M (2010) Chinese FDI to Africa: What Is the Nexus with Foreign Economic Cooperation? *African Development Review* 22(s1): 599-614.

Sargent J and Matthews L (2009) China versus Mexico in the Global EPZ Industry: Maquiladoras, FDI Quality, and Plant Mortality. *World Development* 37(6): 1069-1082.

Schmaljohann M and Prizzon A (2015) Age of Choice: How Partner Countries Are Managing the New Development Assistance Landscape—The Cases of F iji, P apua N ew G uinea, T imor-L este and V anuatu. *Asia & the Pacific Policy Studies* 2(3): 643-651.

Scoones I, Amanor K, Favareto A, et al. (2016) A New Politics of Development Cooperation? Chinese and Brazilian Engagements in African Agriculture. *World Development* 81: 1-12.

Shajalal M, Xu J, Jing J, et al. (2017) China's engagement with development assistance for health in Africa. *Global Health Research and Policy* 2(1): 24.

Shinn DH (2015) The Environmental Imact of China's Investment in Africa. *Cornell International Law Journal* 49(1): Article 2.

Stahl AK (2012) Trilateral development cooperation between the European Union, China and Africa: What prospects for South Africa? , Stellenbosch: Centre for Chinese Studies, Stellenbosch University.

State Council (2011) China's Foreign Aid. People's Republic of China, Beijing: Information Office of the State Council.

State Council (2021) China's International Development Cooperation in the New Era. Beijing, China: Xinhua/Information Office of the State Council. http://www.scio.gov.cn/zfbps/32832/Document/1696685/1696685.htm

Strange A, Mengfan C, Brooke R, et al. (2017a) Tracking Underreported Financial Flows (TUFF) Methodology, Version 1.3. Williamsburg, VA: AidData.

Strange AM, Dreher A, Fuchs A, et al. (2017b) Tracking Underreported Financial Flows: China's Development Finance and the Aid–Conflict Nexus Revisited. *Journal of Conflict Resolution* 61(5): 935-963.

Sun IY, Jayaram K and Kassiri O (2017) *Dance of the Lions and Dragons: How are Africa and China Engaging, and how Will the Partnership Evolve?* : McKinsey Global Institute.

Taylor I (2007a) Governance in Africa and Sino-African Relations: Contradictions or Confluence? *Politics* 27(3): 139-146.

Taylor I (2007b) Sino-African Relations and the Problem of Human Rights. *African Affairs* 107(426): 63-87.

Taylor I (2012) India's rise in Africa. *International Affairs (Royal Institute of International Affairs 1944-)* 88(4): 779-798.

The World Bank (2020) The World Bank Open Data. Washington D.C.: The World Bank. https://data.worldbank.org/

Tull DM (2006) China's Engagement in Africa: Scope, Significance and Consequences. *The Journal of Modern African Studies* 44(3): 459-479.

UNDP (2015) China's humanitarian aid. Issues Brief. https://www.cn.undp.org/content/china/en/home/library/south-south-cooperation/issue-brief--china-s-humanitarian-aid.html

United Nations (2009) Millennium Development Goals Report. United Nations.

Will R (2012) China's Stadium Diplomacy. *World Policy Journal* 29(2): 36-43.

Woods N (2008) Whose Aid? Whose Influence? China, Emerging Donors and the Silent Revolution in Development Assistance. *International Affairs (Royal Institute of International Affairs 1944-)* 84(6): 1205-1221.

Xiaoyang T (2016) Does Chinese employment benefit Africans? Investigating Chinese enterprises and their operations in Africa. *African Studies Quarterly* 16(3-4): 107-128.

Yang G, Huang X, Huang J, et al. (2020) Assessment of the effects of infrastructure investment under the belt and road initiative. *China Economic Review* 60: 101418.

Yongzheng Y and Nkunde M (2012) BRICs' Philosophies for Development Financing and their Implications for LICs. IMF Working Paper WP/12/74, Washing D.C.: International Monetary Fund. https://www.imf.org/en/Publications/WP/Issues/2016/12/31/BRICs-Philosophies-for-Development-Financing-and-their-Implications-for-LICs-25770

Zhang D (2017) Why cooperate with others? Demystifying China's trilateral aid cooperation. *The Pacific Review* 30(5): 750-768.

Zhang D and Smith G (2017) China's foreign aid system: structure, agencies, and identities. *Third World Quarterly* 38(10): 2330-2346.

Zhao Y, Kennedy K and Tang K (2018) Factors influencing the allocation of China's development assistance for health. *Journal of global health* 8(2): 020502-020502.