From loan-financed to privatised infrastructure? Tracing China's turn towards public-private partnerships in Africa

Van Wieringen, Kjeld; Zajontz, Tim

Research Article

GIGA | Journal of Current Chinese Affairs

Journal of Current Chinese Affairs
2023, Vol. 52(3) 434–463

DOI: 10.1177/18681026231188140
journals.sagepub.com/home/cca
Sage

From Loan-Financed to Privatised Infrastructure? Tracing China's Turn Towards Public–Private Partnerships in Africa

Kjeld van Wieringen[1] **and Tim Zajontz**[2,3]

Abstract

Waning debt sustainability has challenged the debt-financed, infrastructure-led global expansion of Chinese capital. This article traces the gradual shift in the financial governance of the Belt and Road Initiative towards public–private partnerships (PPPs). We first document China's domestic PPP experience and its failure to check the unsustainable indebtedness of sub-national governments. We then conceptualise China's "turn" towards PPPs in Africa as an attempt at "metagoverning" its current growth model. Analysing official Chinese sources, we discern dominant Chinese narratives that present PPPs as panaceas for African debt problems. However, Chinese risk perceptions and empirical examples, such as the Nairobi Expressway, the Tanzania–Zambia Railway, and the Congolese Kolwezi–Kasumbalesa toll road, reveal that China's experimentation with PPPs in Africa engenders new challenges, including popular contestation, controversies over financial terms and corruption. Furthermore, contrary to the official Chinese narrative, profit imperatives behind PPP investments and potential financial complications that were widespread in China's domestic PPP experience risk adding to the financial burdens of African governments and populations.

[1]European Parliamentary Research Service, European Parliament Brussels, Brussels, Belgium
[2]Institute of Political Science, TUD Dresden University of Technology, Dresden, Germany
[3]Centre for International and Comparative Politics, Department of Political Science, Stellenbosch University, Stellenbosch, South Africa

Corresponding Author:
Tim Zajontz, Institute of Political Science, Chair for International Politics, TUD Dresden University of Technology, Dresden, Germany.
Email: post@tim-zajontz.de

Manuscript received 29 August 2021; accepted 7 June 2023

Keywords
Public–private partnerships (PPPs), infrastructure, Belt and Road Initiative, debt

Introduction

In September 2022, the *Wall Street Journal* ran a story titled “China reins in its Belt and Road Program, $1 Trillion Later” (Wei, 2022). Alluding to a growing amount of non-performing loans for Belt and Road projects, the author suggested that “[a]fter nearly a decade of pressing Chinese banks to be generous with loans, Chinese policy makers are discussing a more conservative program, dubbed Belt and Road 2.0 in internal discussions, that would more rigorously evaluate new projects for financing” (Wei, 2022). The value of projects with the “Belt and Road” label on it was estimated to have reached USD 838 billion by the end of 2021 (Kynge, 2023) . An overwhelming share of these is loan-financed, which has turned China into the world’s largest bilateral creditor, holding 57 per cent of low-income countries’ bilateral debt in 2020 (Gardner et al., 2020: 2). Financial sustainability concerns related to Belt and Road Initiative (BRI) projects mounted long before COVID-19 and Putin’s war against Ukraine have multiplied fiscal distress in low-income countries. Since 2017, the Chinese government has put in place more stringent regulations regarding outward investments and overseas loans (Carmody et al., 2022a). Globally, new loans from China Exim Bank and China Development Bank reportedly dropped from USD 75 billion in 2016 to just USD 4 billion in 2019 (Wheatley and Kynge, 2020). This policy shift could not avert growing volumes of non-performing loans. While in 2010 only 5 per cent of Chinese overseas loans were held by countries considered to be in financial distress, this percentage grew to nearly 60 per cent in 2022 (Wei, 2022). Chinese banks had to renegotiate loans worth USD 52 billion in 2020 and 2021, a steep increase from USD 16 billion in the two years preceding the pandemic (Kynge, 2023).

Chinese-owned sovereign debt has become subject to global geopolitical contestation. Both the European Union (EU) and the United States (US) government have announced their own global connectivity initiatives, the Global Gateway and Build Back Better World (B3W), thereby explicitly promising transparent and sustainable infrastructure financing. Throughout 2022, the label B3W has given way to Partnership for Global Infrastructure and Investment. In November 2021, at the margins of COP26 in Glasgow, US President Biden promoted the B3W with the words: “Being transparent about how we’re financing our projects, we offer positive alternatives to debt–to debt traps and corruption. We can hold entire countries back if we don’t do that. Transparency is critically important” (quoted in Zajontz, 2022a). While scholars agree that there is no evidence of the Chinese government intentionally “entrapping” BRI countries in unsustainable debt (see Bräutigam, 2020a; Carmody, 2020), there are concerns about political and economic repercussions of sovereign debt distress in several African countries, notably new waves of austerity and privatisation (see Zajontz, 2022b).

Carmody and Wainwright (2022) identify geopolitical risks related to potential asset seizures that might compromise the sovereignty of debtor countries. Thus far, Chinese lenders have refrained from asset seizures and have instead opted for rescheduling unsustainable debt and forgiving symbolic amounts of zero-interest debt on an ad hoc basis. However, this can still mean that China bears significant geopolitical leverage over countries that are heavily indebted to Chinese banks (see Dreher et al., 2018; Naughton, 2020). As we pointed out elsewhere, "[j]ust like capital, debt is a social relation marked by asymmetrical material relations and power differentials between debtor and lender" (Zajontz, 2022b: 176). A statement by then-Chinese foreign minister, Wang Yi, on his visit to Kinshasa in January 2021, during which China agreed to cancel maturing, zero-interest debt worth about USD 28 million, is indicative of how (geo)political and financial matters intertwine, as Yi "believe[d] that the Congolese side will continue to give China understanding and support on issues involving China's core interests" (quoted in Nyabiage, 2021). Other research has been concerned with the specificities of Chinese loans (see Gelpern et al., 2021), how Chinese banks renegotiate overseas debt (see Gardner et al., 2020) and how Chinese lenders act in multilateral debt restructuring fora, such as the Debt Service Suspension Initiative and the Common Framework for Debt Treatments, which were set up by the International Monetary Fund (IMF) and the World Bank to negotiate debt restructuring for distressed debtors on a multilateral basis (see Bagwandeen et al., 2023; Lippolis and Verhoeven, 2022).

This article sheds light on gradual changes in the financial governance of China's BRI, which have received much less scholarly attention: as overseas lending has become increasingly economically risky and politically costly for Beijing, the Chinese government has stepped up efforts in fostering investments in overseas infrastructure public–private partnerships (PPPs) as an alternative to loan-financed projects. This article explores this trend with a particular focus on the African continent and provides a systematic analysis of Chinese government narratives surrounding China's "turn" towards PPPs in Africa, based on official sources and Chinese research on the matter, and embedded in a critical global political economy framework. We show that just as with other economic policies that were first implemented within China and then globalised (see Carmody et al., 2020: 80, 202), Beijing's active promotion of overseas PPPs follows domestic experimentation with PPPs, which has aimed at curbing unsustainable (local) government debts. By shifting towards project finance and equity investment in African infrastructure markets, the Chinese government now tries to address previous failures in the financial governance of the BRI in order to keep up demand for its globally mobilised infrastructure and construction firms. Promoting and facilitating PPPs in Africa aims at stabilising "China's infrastructural fix in Africa," and the "moving out" of Chinese surplus capacities into African infrastructure markets (Zajontz, 2022b). Gonzalez-Vicente postulates that

> It would not be far-fetched to argue that China has contributed more than any other country in recent years to champion PPPs and expand the market frontier into new horizons. Seen under this light, the Chinese model presents nothing but one of the latest permutations of the neoliberal business-centric, market-enabling rationale, albeit inevitably one with "Chinese characteristics." (Gonzalez-Vicente, 2019: 509)

To some of these characteristics, we shall turn now.

PPPs With Chinese Characteristics

The World Bank defines a PPP as a "long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility and remuneration is linked to performance" (World Bank, n.d.). Compared to traditional modes of public procurement in the infrastructure sector, notably Engineering-Procurement-Construction (EPC) contracts, PPPs establish a longer-term and more comprehensive contractual relationship between a private corporation and a public entity. Thereby PPPs differ with regard to the extent of private sector participation in and/or ownership of an asset or entity, as well as regarding different services (e.g. design, financing, construction, operation, management, and tolling) that can be subject of a PPP contract. Moreover, PPPs vary in terms of their contract duration, with management contracts commonly lasting no longer than ten years, whereas more comprehensive PPP arrangements, such as build–operate–transfer (BOT) contracts usually last anything between fifteen and fifty years. PPPs furthermore differ in the ways the private party is compensated, which can – widely categorised – either follow the "user-pays principle," occur through contractually agreed fixed payments by the public entity (so-called "availability PPPs") or a combination of the two (Yescombe and Farquharson, 2018: 17).

In China, the term PPP is usually translated into *zhengfu he shehui ziben hezuo* (政府和社会资本合作), which literally means "government and social capital cooperation" (Jin and Rial, 2016: 10). Social capital entails private firms and state-owned enterprises (SOEs), which have secured a dominant position in China's PPP market thanks to their long-term experience in delivering infrastructure, their privileged access to loan finance and their ability to resort to their government connections in case of a dispute with a contracting authority (Jin and Rial, 2016). Overseas, Chinese SOEs have become important "state-capital hybrids" in global (infrastructure) markets which "increasingly emulate the practices and organizational goals of comparable private-sector entities, adopt the techniques of modern finance, resort to mixed ownership, and extend their operations across geographic space" (Alami and Dixon, 2022: 305). Yet, investments (in PPPs) from these firms remain characterised by higher degrees of state authority over corporate decisions compared to their ("Western") private counterparts, as the burgeoning literature on state capitalism underlines (see Alami et al., 2021; Alami and Dixon, 2022). While Chinese SOEs have gained a significant degree of operational autonomy following their corporatisation, they generally adhere to grand political directives from the Chinese Communist Party (CCP) (see Jones and Hameiri, 2021: 12, 23–24; Stone et al., 2022). Their dominant role as "private" partners in PPPs is hence a key peculiarity of Chinese PPPs – at home and abroad – and reflective of the changing role of SOEs in contemporary Chinese state capitalism (see Alami et al., 2021; Breslin, 2021: Chapter 4).

Another term that is frequently used in official Chinese discourse and equally refers to a form of PPP is "investment, construction and management integration" (投建营一体化, *toujianying yitihua*). It refers to a particularly comprehensive form of public–private cooperation whereby the "private" contract party – in many cases an SOE – is involved in all stages of a project's life cycle (see Ruan et al., 2021). The Chinese model of investment, construction, and management integration is thus most akin to design–build–finance–operate PPPs, which entail project design, financing, construction, operation, and, in certain cases, tolling of an asset (see Yescombe and Farquharson, 2018: 13). Additionally, though, this model intends Chinese "spill-over" investments beyond specific infrastructure projects (Ruan et al., 2021).

China's "turn" towards PPPs in overseas markets, curiously itself a result of the CCP's dirigisme under the aegis of Xi Jinping (see Breslin, 2021: 80), constitutes a rapprochement with neoliberal policy consensus and market mechanisms in the global economy (see Schindler et al., 2023). Considering the capital intensity of large-scale infrastructure projects, PPPs have, since the debt crises of the 1980s, been promoted by Western governments, international financial institutions (IFIs), and the private sector as a solution to lighten the financial burden for public authorities in the provision of public services and goods. To meet infrastructural needs that are usually strongly determined by global market demands, PPPs are often considered to be without any alternative. "The high cost of public debts, public budgetary constraints and the increasing demand for transport services have left many governments with no option than to leverage the private sector's expertise and finance through Public–Private Partnership (PPP) approach" (Osei-Kyei and Chan, 2016: 170–171). Consequently, development banks, think tanks, consultancies, and governments have advocated PPPs as the "vanguard vehicle" to attract private investment into infrastructure (Hildyard, 2016: 31). They are also seen as central to Africa's post-pandemic recovery and a crucial means to boost foreign investment on the continent (see Kabanda, 2021).

This article scrutinises China's turn towards infrastructure PPPs in Africa based on an analysis of Chinese government communications, as well as on Chinese studies on PPPs, complemented by other secondary literature. The article first recounts China's domestic experimentation with PPPs and reveals contradictions that have arisen in China's domestic market with ramifications for their global applicability. In the second part, we conceptualise China's turn towards PPPs in Africa's infrastructure sectors as a form of metagovernance, which is aimed at stabilising China's contemporary growth model. The third part documents the recent rise of PPPs in Sino–African relations and provides a snapshot of ongoing Chinese PPP investments in Africa. We then document dominant official Chinese narratives that have, in line with neoliberal policy consensus and discourse, portrayed PPPs as an adequate solution for African debt problems. Lastly, drawing again on official statements and Chinese studies, we document Chinese risk perceptions vis-a-vis PPPs in Africa and show that they have been strongly informed by China's domestic experiences with PPPs. We also problematise several governance challenges that Sino–African public–private encounters have faced. The article concludes that PPPs as a means of metagoverning the BRI engender new contradictions and risks to cause popular contestations in African host countries, just like Chinese loans have in the past.

Methodology

We draw on a combination of primary and secondary data. The former included a systematic textual analysis of over 100 publicly accessible official Chinese communications and policy documents on Chinese responses to sovereign debt, as well as on China's PPP approach in Africa. The sources included statements and documents from the Ministries of Foreign Affairs (MFA) and Commerce (MOFCOM), government agencies including the public procurement service, banks such as China Exim Bank, Chinese embassies in Africa, and multilateral fora, such as the Forum for China–Africa Cooperation (FOCAC) and the BRI Forum. Relevant sources on PPPs in Africa were sampled using different combinations of the search terms "非洲" (Africa), "PPP" (the same abbreviation is usually used in Chinese sources), as well as "债务可持续" (*zhaiwu kechixu,* debt sustainability) for the sources related to the debt–PPP nexus. Government website extensions, such as "gov.cn," as well as time delimitations, were used in each search to filter official sources since 2010. The sample period (2010–2020) allowed us to gain insights into a central analytical concern of this article, viz. the emergence of official narratives on PPPs as alternative financial instruments in the context of the BRI (announced in 2013) and the most recent wave of debt sustainability challenges (as opposed to debt crises of the first decade of the twenty-first century) experienced in several African countries (which accelerated in the mid-2010s). Relevant information from the Chinese sources was extracted, manually translated and summarised, organised chronologically and by type of source, and coded for recurring themes before being synthesised into the narratives presented in the third part of this paper. The information visualised in the map of select Chinese PPPs (Figure 2) is based on the fifty Chinese foreign investment country reports that MOFCOM issued in 2020 for African countries. As such, the map provides a current snapshot in time depicting PPPs with Chinese participation across a number of sectors, without any pretence to offer an exhaustive overview, an endeavour that appears Sisyphean in the absence of publicly available systematic data on the matter. Information from official sources was – where available – triangulated with secondary literature and media sources, including African and Chinese media outlets (as listed in Supplemental Annex 1).

China's Domestic PPP Experience and its Contradictions

China started to experiment with PPPs domestically early into the reform era, with the fifteen-year BOT contract for the Shenzen Shajiao B power plant, commisioned in

1987, often cited as China's first-ever PPP (Cheng et al., 2016). Cheng et al. (2016) have periodised the gradual emergence of PPPs in the Chinese economy, suggesting that there was an "exploration phase" (1984–2002) during which PPPs occurred mostly in transport, energy, water, and waste management, and most investors were foreign firms. The project delivery method most commonly adopted then was the BOT model. Yet, these projects were seldomly labelled as PPPs in China but were variously referred to as "project financing," "concessions," "BOT," or "social capital in infrastructure" (Jin and Rial, 2016: 7 n.6). Uneven distributions of risks and lengthy and costly procurement procedures prevented PPPs from taking off on a large scale before 2002 (Cheng et al., 2016; see also Jin and Rial, 2016: 7). A key development causing an acceleration in the rollout of PPPs was the endorsement of market mechanisms for infrastructure development, approved by the Sixteenth National Congress of the CCP in 2002. Following the central government's backing of PPPs, the MOFCOM issued several guidelines on their application. According to Cheng et al. (2016: 1247), this second phase (2003–2008) marked a "stable expansion" of PPPs, accelerated by a heightened political demand for infrastructure in the lead-up to the 2008 Olympic Games in Beijing. Besides private investors, SOEs increasingly invested in PPPs during this second phase, while the share of foreign investment in PPPs dropped significantly. Public procurement and bidding processes were streamlined and contract templates standardised, resulting in cost reductions and faster project preparation cycles.

The 2007–2008 North-Atlantic Financial Crisis (NAFC) and its global economic repercussions decelerated the growth of China's PPP market. Beijing's massive stimulus package (扩大内需十项措施, *kuoda neixu shi xiang cuoshi*) worth some USD 586 billion saw huge sums of public finance flowing into infrastructure (see Liu et al., 2018; Sum, 2019). At least temporarily, this influx of public funds diminished local governments' need to turn to the private sector to build infrastructure. As Breslin (2021: 89) puts it, the central government was "telling the banks to overturn their previous policy of caution and lend China out of a potential recession" by compensating for the sharp decline in exports with public investments. Cheng et al. (2016: 1247) find that the central government's response to the NAFC caused a third phase (2009–2013) in China's PPP experimentation, which they describe as "development with fluctuations." China's PPP market became dominated by SOEs, which enjoyed easy access to public finance and were preferred project partners for both sub-national governments and banks. Consequently, a "China-specific PPP model" (Cheng et al., 2016: 1247) emerged, which is characterised by the extensive cooperation between local governments, banks, and SOEs in the delivery of public services and infrastructures. The third phase also saw a diversification of PPP financing (beyond traditional loans), in line with the gradual – though controlled – liberalisation of Chinese financial markets (Cheng et al., 2016). China's post-NAFC public investments accelerated the mushrooming of so-called local government finance vehicles (LGFVs) (Lee, 2021; Sum, 2019). A 2011 People's Bank of China investigation on public indebtedness found more than 10,000 LGFVs at various levels of sub-national governance (Breslin, 2021: 252). Through these special purpose vehicles – described in an IMF report as a "specific form of unregulated PPPs" – sub-national governments, in cooperation with SOEs and banks, circumvented budgetary constraints to develop ever more infrastructure (Jin and Rial, 2016: 7). Loans and bonds held by these LGFVs further drove up the off-budget liabilities of local governments, with so-called "hidden debt" estimated to have reached CNY 45 trillion (USD 7 trillion) by the end of 2020, equivalent to 44 per cent of China's gross domestic product (Lee, 2021).

To check excesses of this kind, China's PPP market has in recent years seen more intervention by the central government. Cheng et al. (2016: 1247) discern an ongoing fourth phase which they call the "new boom," marked by strong central government endorsement of "private" investment in infrastructure, paired with regulatory attempts to improve the governance of PPPs. In 2014, the Ministry of Finance (MOF) established a facilitating PPP Center. Between 2014 and 2016, the central government issued more than forty regulations and guidelines aimed at standardising procedures and ensuring the financial sustainability of sub-national governments. The directives included mandatory value-for-money evaluations to ensure that PPPs are only entered if they are more cost-efficient than traditional modes of procurement. Furthermore, fiscal affordability assessments were introduced. Budgetary expenditures for PPPs must now not exceed 10 per cent of local government budgets (Jin and Rial, 2016; Xiong et al., 2020; Zhang et al., 2019). Following the active facilitation of PPPs by the Chinese central government, Chinese government services registered 14,424 PPP projects in 2017, with a total worth of approximately USD 2.8 trillion (Wang et al., 2019). Data by Cheng et al (2016: 1245) suggests that the highest proportion of PPPs can be found in Eastern China (48.8 per cent), followed by Central China (22.2 per cent), Western China (24.1 per cent), and Northeast China (4.9 per cent). The leading sector is water (54.6 per cent), followed by municipal facilities (such as waste management and heating supply; 26.5 per cent) and transportation (15.3 per cent).

The recent surge in PPPs in China has had various unintended consequences and has been associated with additional financial and economic risks and governance challenges, such as uncertainties related to long repayment cycles, misallocations of public resources, and the extraction of public funds by corporations and long-term costs for public authorities (Liang and Hu, 2018). PPPs have generally been considered by the Chinese central government as a solution for alleviating financial pressure and mitigating debt risks for sub-national governments, allowing them to proceed with public works and infrastructure development despite tight public budgets (Wang et al., 2019). Yet, contrary to political intent, the run of Chinese local and provincial governments on PPPs has exacerbated chronic over-spending (Yu et al., 2018; Liang and Hu, 2018). A 2018 report released by the MOF on the financial capacity of PPPs (PPP项目财政承受能力汇总分析报告, PPP *xiangmu caizheng chengshou nengli huizong fenxi baogao*) found that the 6400 PPPs covered by the report incurred on-budget annual expenditures of around CNY 9.9 trillion between 2015 and 2045 – or CNY 319.4 billion per annum (*China Banking News*, 2018).

Long-term costs arising from PPPs have become problematic for contracting authorities. Liang and Hu (2018: 377) find that many PPPs "include spurious forms of financing such as minimum guaranteed return, repurchasing or equity-disguised debt.” Around 80 per cent of PPPs in China contain so-called minimum-revenue clauses which compel governments to compensate investors in case of limited returns. Such long-term liabilities can render PPPs more costly for local governments than direct borrowing (Zhao et al., 2018). Another aspect that casts into doubt whether PPPs are a long-term solution for China’s (sub-national) government debts is the fact that they often only shift debt pressure from one part of the state to another. Chinese authorities have confirmed that a great majority of “private” investments in PPPs are still emanating from SOEs (Yu et al., 2018: 3). As noted above, the “public–private” label in Chinese PPPs often takes on a distinct meaning.

Unfair risk allocations between public and private partners have frequently caused contractual disputes, breaches of contracts, and early terminations of PPPs. At the core of such disputes are often economic “miscalculations” (Osei-Kyei et al., 2018). An IMF working paper on the regulation of Chinese LGFVs and PPPs warns of possible long-term financial risks:

> It is a common misunderstanding in many countries that PPPs can reduce government spending needs and government debt. In fact, ceteris paribus, PPPs only change the timing of government cash flows, not the total net present value (NPV) of government spending over the lifetime of the project. PPPs also largely change the form of government liabilities from bank loans or T-bonds to other forms (e.g. commitments to pay the private partner). Because the time frame of the budget or medium-term fiscal framework is much shorter than that of PPPs, governments tend to have a bias in favor of PPPs over traditional government procurement. PPPs may or may not be more efficient than traditional government procurement. Therefore, Value for Money (VfM) should be checked to determine if a project is more suitable for PPPs or traditional government procurement. (Jin and Rial, 2016: 9–10)

In November 2017, the Chinese finance ministry published a notice on its website in which it expressed concerns that local governments were using PPPs and LGFVs as “disguised channels” to take on more debt (*Reuters, 2017*). The ministry directed provincial governments to terminate “unqualified” PPPs, notably those that had failed to conduct due return-on-investment evaluations and fiscal stress tests, showed poor project progress, lacked transparency, exceeded fiscal spending limits, or provided unlawful debt guarantees (*Reuters, 2017*). In the sequel, local governments cancelled 40 per cent of an estimated 14,000 projects (Zhang et al., 2019: 2). The finance ministry also tightened rules for the approval of new PPPs, ruling out projects that were not considered as providing public infrastructures or services, such as commercial real estate developments (*Reuters, 2017*). In August 2021, the MOF announced it would work with the Ministry of Justice to finalise a national PPP law “as soon as possible” (Lee, 2021). At the time of writing, such streamlined legislation was still pending.

Crucially, the massive chronic indebtedness of sub-national governments cannot be resolved through prudent regulation alone, as it is a result of contradictions in China’s "high-investment development model" (Pettis, 2022). As one observer described the internal contradictions in China's infrastructure boom:

> Beijing has tried to better regulate local government debt, but its efforts have not been wholly successful, largely due to the pressure on regional authorities to achieve economic growth, which is often fuelled by infrastructure spending that does not immediately generate returns. (Lee, 2021)

Contradictions have also arisen following China's massive loan-debt investments in African infrastructure markets, which Beijing now attempts to remedy by turning towards PPPs as a supposedly "debtless" funding alternative.

The End of the Sino–African Infrastructure Boom? Attempts at Metagoverning China's Spatial Fix

From 2000 onwards, China embarked on its "Going Out" (走出去, *zouchuqu*) strategy through which Chinese SOEs, including infrastructure contractors, fanned out across the world. Pledges for credit lines and investments announced at FOCAC summits, a platform for Sino–African cooperation established that same year, increased significantly from USD 5 billion in 2006 to USD 60 billion in 2015 and 2018 (Eisenman and Heginbotham, 2020). Throughout the 2010s, Sino–African cooperation in the infrastructure sector massively increased in reaction to economic repercussions from the NAFC on China's domestic economy. The crisis posed a challenge to China's growth model and the CCP's "performance legitimacy" (Sum, 2019; Taylor and Zajontz, 2020). To compensate for weakening exports, Chinese policymakers reacted with a massive stimulus package, much of which was channelled into the infrastructure sector. Massive oversupply of material, general overaccumulation, and a widespread bubble, especially in China's real estate, construction, and infrastructure sectors, developed as a result (Jones and Zeng, 2019; Sum, 2019).

The globalisation of Chinese infrastructure and construction firms, since 2013 further fostered by the BRI, can thus be understood as a spatiotemporal fix, a concept coined by David Harvey (2003:115) to describe the recurring need within capitalism to remedy overaccumulation crises by spatially expanding accumulation regimes and by investing surplus capital into projects with long gestation times. China's current spatial fix has aimed at "moving out" surplus capacities in China's domestic economy into overseas infrastructure projects (see Carmody et al., 2022b; Carmody and Wainwright, 2022; Gonzalez-Vicente, 2019; Zajontz, 2022c). This move was facilitated by a massive increase in overseas lending by Chinese policy banks, causing a "convenient conjuncture" between China's surplus capital and Africa's often-invoked infrastructure financing gap (Zajontz, 2022c: 16). This has afforded dominant market positions to Chinese firms in Africa's infrastructure and construction sectors, which were estimated to have won about half of all international EPC contracts in "sub-Saharan Africa" in

2017 (Zajontz, 2022c). Infrastructure projects simultaneously opened up new markets for Chinese goods and provided access to African resources (Taylor and Zajontz, 2020; Were, 2018).

Understood as a spatiotemporal fix, the BRI "is hypercomplex and requires constant experimentation and repair work with no guarantee of success" (Jessop and Sum, 2018: 477), particularly given the diffuse constellations of Chinese and non-Chinese actors involved and their different interests. The "experimentation and repair work" that Jessop and Sum (2018) refer to can be conceptualised as concrete manifestations of "metagovernance." The latter can be described as the governance of governance aimed at mitigating governance failures that arise from existing modes of coordination and exchange through institutional changes and parameter alterations to the general structures (Jessop, 2016: 169). Debt sustainability issues related to the decade-long extensive disbursal of loans and export credits by Chinese policy banks in Africa have amounted to a governance failure in China's spatiotemporal fix which the Chinese government has actively tried to "metagovern" for a number of years.

In the latter half of the 2010s, debt sustainability became an issue in African countries such as Djibouti, Ethiopia, Kenya, and Zambia, which had all borrowed extensively from Chinese policy banks (and other creditors) for large-scale infrastructure projects (see Carmody et al., 2022b). Following mounting public controversies in Africa and beyond over China's alleged "debt trap diplomacy" (see Bräutigam, 2020a; Zajontz, 2022b), debt sustainability became a major concern for Chinese policymakers who intervened by restricting loans from its state-owned banks. Total new Chinese lending to Africa consequently fell by 93 per cent between 2016 and 2020 (Carmody et al., 2022a; see Figure 1).

While, as we document below, the promotion of PPPs across Africa (and elsewhere) has become a central means in metagoverning the BRI, only limited scholarly attention has been paid to the discourses and ramifications of this emerging adjustment in the financial governance of Sino–African cooperation in the infrastructure sector. Alden and Jiang observed:

> a new trend among Chinese companies that are involved in the infrastructure and power sectors (where the majority of African sovereign debts to China are located) is to change their role from contractors on the previously dominant EPC model to operators and investors on the BOT/ BOOT model. […] If equity investment, regarded by China as the future direction for financing in Africa, could gradually overtake traditional loans as one of the main financing methods […], this may help alleviate the dilemma posed by the combination of the need for infrastructure development and deepening debt difficulties. (Alden and Jiang, 2019: 647, 648)

Others have equally suggested that PPPs could help resurrect sustainable sovereign debt levels in Africa. In the finance industry, some consider the PPP model a potential new paradigm for Chinese investments in Africa (see Cuthbert, 2018). Bräutigam (2020b) likewise suggested that "we should be encouraging more of them. Equity investments are a smart way for countries to finance the operation of badly needed infrastructure, while also helping repay loans."

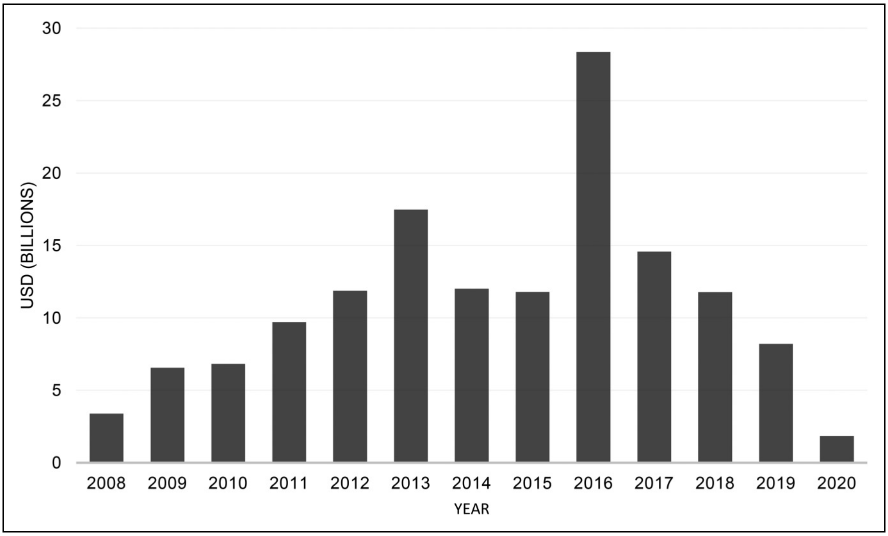

Figure 1. New Chinese Loans Signed by African States.
Source: Carmody et al. (2022a: 9); CC BY-NC 4.0; based on data from Boston University Global Development Policy Center (2022).

On the contrary, some have problematised the risk of mounting off-budget, long-term liabilities arising from PPPs (see Zajontz, 2022c). Even Uganda's country director of the IMF, one of the staunchest promoters of PPPs since the 1980s, declared to be "very uneasy when we talk about PPPs in terms of debt instruments" (Karpowicz, quoted in Barigaba, 2021). There have also been wider concerns that sovereign debt distress could result in a new wave of privatisations, with detrimental socio-economic effects, as costs for profit-driven infrastructure development are usually handed down to ordinary citizens who then have to pay for formerly public services (Zajontz, 2022b). At the same time, as a means to metagovern China's contemporary spatial fix, PPPs are meant to secure demand for Chinese contractors in times of unsustainable sovereign debt levels in various parts of the world. In the African context, the Chinese government has thus increasingly promoted PPPs as a fiscally sustainable alternative to debt finance.

Sino–African PPPs: "Win–Win" 2.0?

China's "turn" towards PPPs in Africa can be discerned in high-level communications, including presidential and ministerial speeches, international summit declarations, ministerial policy documents, and embassy reports. Early during his presidency, Xi Jinping started to actively promote PPPs in Africa, for instance, during his 2013 Tanzania visit when he discussed with his counterpart Jakaya Kikwete possible Chinese investments in the East African country, including PPPs (MOFCOM, 2013). PPPs as a mode of project implementation in Africa have since become frequently referred to by the Chinese top leadership. At the 2018 FOCAC summit in Beijing, President Xi proposed "eight major initiatives" to be implemented in cooperation with African countries. The first initiative is mainly an encouragement for Chinese corporations to increase investments in Africa. The second initiative concerned the integration of investment, construction, and management, or "investment–construction–operation" in the official translation, by Chinese corporations building African infrastructure (*Xinhua*, 2018). The other priorities being trade facilitation, green development, fostering local talent, health cooperation, people-to-people or cultural exchange, and security cooperation. In November 2019, during the second annual "Global PPP50 Forum" hosted by Beijing University, the MOF, referring back to Xi Jinping's eight major initiatives, confirmed that its promotion of Chinese corporate investment, construction, and management integration for African infrastructure development indeed referred to PPPs (Chinese Public Procurement Service, 2019).

Besides statements by top officials, the annual reports on "China International Project Contracting" (中国对外承包工程发展报告, *zhongguo duiwai chengbao gongcheng fazhan baogao*) by the MOFCOM equally demonstrate the growing importance of PPPs in Chinese foreign economic policy. The 2017–2018 report mentioned the term "PPP" twenty-nine times. It called for PPPs in the fields of power, transport, and natural resources, as well as for research on challenges for PPPs in African markets. It also mentions the eagerness of various African governments to attract PPP projects (MOFCOM, 2018). The 2018–2019 report mentions "PPP" thirty-five times. It also stresses the need, due to severe debt distress, for Chinese contractors to engage the Mozambican government to solicit alternative funding models in the form of PPPs. Opportunities for PPPs are also indicated for other African countries. However, the Africa section of the report concludes that the widespread use of PPP in Africa remains difficult due to political, economic, and security risks, which need to be well assessed to determine the feasibility of projects (MOFCOM, 2019: 39, 45). The 2019–2020 report mentions "PPP" eighty times. It discerns an improving investment climate across Africa, cites promising new PPP laws passed in recent years and encourages investors to successively invest in larger infrastructure PPPs. The report lists three prospects for Africa: Firstly that COVID-19 is likely to have severe economic consequences in Africa. Secondly that Africa requires foreign private investments in infrastructure, as traditional loan financing could not satisfy existing demand. And thirdly that Chinese contractors should expect growing Western competition in the African market (MOFCOM, 2020b). Indeed, China's turn towards PPPs in Africa is likely to be increasingly affected by intensifying geopolitical competition with other external actors, notably the EU and the US, which have recently pledged billions in investments on the continent under the umbrella of their own connectivity initiatives (see Zajontz, 2022a).

The Chinese government has also used multilateral fora to actively promote PPPs. In December 2015, heads of state and ministers from fifty African countries attended the FOCAC summit in Johannesburg. The Johannesburg Action Plan, an output from the summit, explicitly called on Chinese firms and financial institutions to engage in infrastructure PPPs in Africa (FOCAC, 2015). One of the main objectives of the China Overseas Infrastructure Development and Investment Corporation, which opened its Africa headquarters in Johannesburg in 2017, is the facilitation of PPPs (Zajontz, 2022c). The 2019 BRI Forum "encourage[d] third-market, tripartite cooperation and Public Private Partnership (PPP) cooperation" (BRI Forum, 2019: para. 29). In September 2019, at the Fifth Africa Investment Forum in Brazzaville, the chairman of the China–Africa Development Fund, Yang Baohua, stressed that the PPP model was developing momentum (*Xinhua*, 2019).

Chinese embassies in Africa, particularly their commercial offices, have become important actors in facilitating PPPs between Chinese firms and host governments. Commercial attachés in Chinese embassies across Africa outnumber their US counterparts in the region by around fifteen to one (Eisenman and Heginbotham, 2020: 296). PPPs became regular items in the public relations of Chinese embassies in Africa as of the mid-2010s. The embassy in Morocco announced in 2014 that Chinese corporations were actively exploring investment models in the country, including PPPs (MOFCOM, 2014). In November 2014, the embassy in Ghana organised a seminar on "Chinese corporations joining Ghana's PPP projects," bringing together Ghanaian officials and Chinese company representatives (MOFCOM, 2014b). The embassy in Ivory Coast reported that in September 2015, the China Communications Construction Company's director-general met with Ivory Coast's president to express its readiness to invest in PPP projects (MOFCOM, 2015). Various Chinese embassies have monitored developments in local PPP legislation and policies in African countries since 2015 (see MOFCOM, 2015b, 2015c; MFA, 2017). In September 2018, the Chinese embassy in Windhoek cautioned that Chinese investors exploring possibilities for PPPs in Namibia should first consider Namibia's stringent labour laws (MOFCOM, 2018b).

The above efforts to promote investments in PPPs in African infrastructure markets have resulted in a growing number of such projects. Figure 2 shows a number of PPPs with Chinese participation in Africa. The map shows projects that were mentioned in the fifty Chinese foreign investment country reports (对外投资合作国别指南, *duiwai touzi hezuo guobie zhinan*) that were released by the MOFCOM in 2020 for African countries, complemented with information from other official and media sources. The map does not pretend to provide an exhaustive overview but rather offers a snapshot of projects that were concluded or underway at the time of writing and, thus, gives indications as to what sectors are concerned by China's turn towards PPPs in Africa. Unsurprisingly, transport infrastructure features prominently in the Chinese PPP portfolio in Africa, with Chinese firms having invested in the construction of sea ports, such as Nigeria's Lekki port and Kribi port in Cameroon. Both of these projects include operational concessions of forty-five and twenty-five years, respectively. In Djibouti, China Merchants Port Holdings, a subsidiary of China Merchants Group, acquired a 23.5 per cent stake in the port of Djibouti and signed a thirty-year BOT contract for a USD 590 million port expansion project, the Doraleh Multipurpose Port (Bagwandeen, 2021; Barton, 2021).

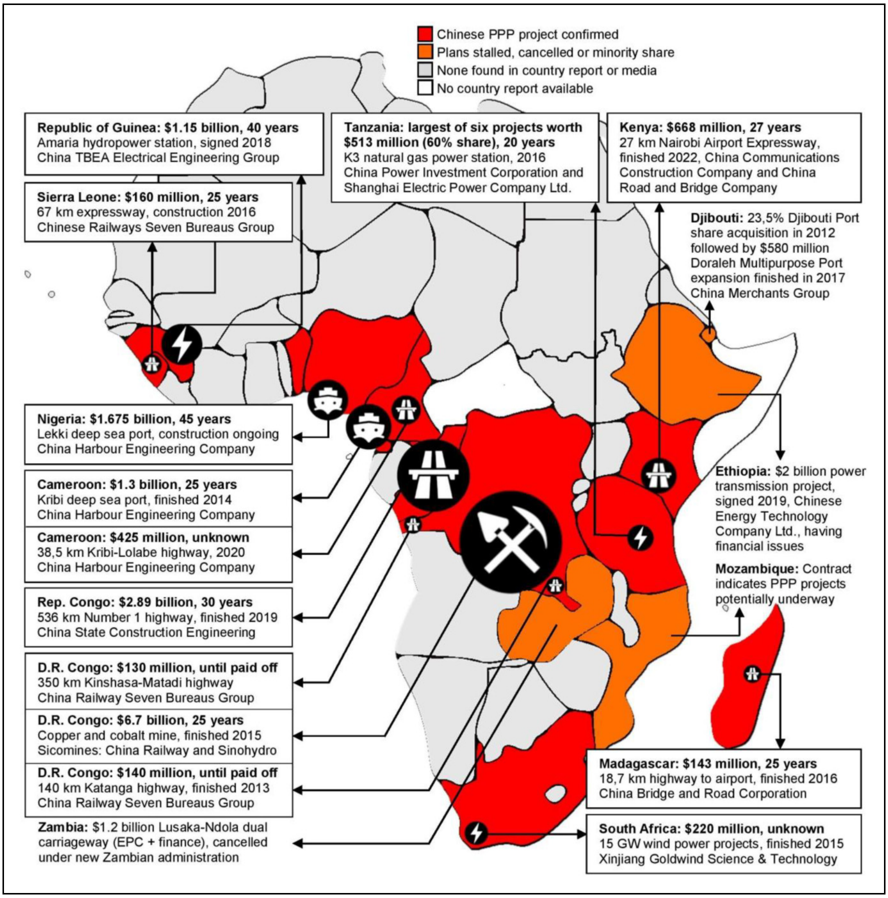

Figure 2. Selection of Public–Private Partnership (PPP) Projects With Chinese Participation in Africa.

Source: Authors' own depiction, based on 2020 foreign investment cooperation country guide reports for African countries, published by the Ministry of Commerce (MOFCOM), and various African and Chinese media articles and public sources (as listed in Supplemental Annex 1).

As Zajontz (2022c) has shown in the Zambian and Zhou (2022) in the Ugandan case, road projects have become a particularly important "public–private testing ground" for Chinese firms in Africa. As Figure 2 shows, Chinese firms have in recent years also gotten involved in road PPPs in Sierra Leone, the Democratic Republic of Congo (DRC), Madagascar, and Kenya. The road sector appears to be particularly suitable for PPPs for several reasons. First, market demand remains high, as Africa continues to trail behind in global comparison when it comes to paved road density (OECD, 2018: Chapter 1). Secondly, Chinese civil engineering firms have built up immense capacities and are widely mobilised in African markets following two decades of surging road construction financed by IFIs or Chinese policy banks (Zajontz, 2022c). Thirdly, economic risks of road construction PPPs are – relatively speaking – low, as feasibility and internal rates of return are generally easier to assess compared to more complex markets such as electricity. At the same time, the profit rates of road PPPs are usually high. In 2014, annual returns of toll roads in so-called developing countries ranged between 8 and 26 per cent (Hildyard, 2016: 48–49).

Corresponding with Africa's growing energy needs (not least for the 600 million Africans who do not have access to grid electricity), another key sector for Sino–African PPPs is energy, as the projects in Ethiopia, Guinea, and Tanzania, depicted in Figure 2, exemplify. As global demand and competition for (renewable) energy, including for the energy-intensive production of hydrogen, will continue to grow, it is likely that African energy markets will attract more Chinese investments in PPPs. Yet, in the economically sensitive energy sector, foreign investments are often scrutinised particularly closely. China's MOFCOM, for instance, reported that a second large Chinese PPP energy project in Tanzania, the so-called "K4 natural gas power station," had to be halted because the Tanzanian government decided to ban foreign equity investment in its energy sector (MOFCOM, 2020).

The Supposed Panacea for African Debt Problems

References to PPPs in official Chinese sources have significantly increased, as debt sustainability started to become an issue in several BRI countries in the second half of the 2010s. Henceforth, official Chinese calls to foster PPPs in Africa frequently occurred in Chinese government communications, which simultaneously concerned the issue of debt sustainability. In August 2016, the MOF through the Public Procurement Service Information Platform (中国政府购买服务信息平台, *zhongguo zhengfu goumai fuwu xinxi pingtai*) released a communication on the "international PPP model" which elaborated on how the facilitation of Chinese investments in PPPs overseas aligns with China's Going Out strategy and how PPPs could help to improve the debt sustainability of host countries (Chinese Public Procurement Service, 2016). This was the first official Chinese source (from our sample going back to the year 2010) that mentions the PPP model in relation to African debt sustainability. According to this document, the participation of Chinese investors in overseas infrastructure PPPs would serve a dual purpose: it would not adversely affect the host countries' debt sustainability, while simultaneously raising the efficiency of Chinese foreign investments. It furthermore proposes to "develop the PPP model as leverage to effectively expand the political economic influence of Chinese foreign investment" as well as to diversify overseas investment portfolios for Chinese private sector capital (Chinese Public Procurement Service, 2016).

The pronouncement is insightful, as it – as early as 2016 – documents the strategic goal of a gradual reorientation of Chinese overseas economic activities. PPPs are described as suitable vehicles to facilitate longer-term investments of Chinese firms abroad that can increase local productive capacities in host countries, thereby effectively countering common (Western) criticism of the supposedly extractivist nature of Chinese foreign investments with limited value being added in overseas markets. Accordingly, the document states that PPPs are a means to transform the country's "Going Out" policy: after years of subsidised global market expansion, Chinese firms – through PPPs – could now diversify their investments and, thereby, help host countries to overcome debt bottlenecks (Chinese Public Procurement Service, 2016). Such reasoning in Chinese government documents underscores that "PPPs [have] become increasingly integrated into Chinese accumulation strategies in Africa and serve as an outlet for equity investment" (Zajontz, 2022c: 24).

Various Chinese state actors have in recent years subscribed to the dominant narrative that PPPs provide a solution to high levels of sovereign debt in Africa. At the July 2018 FOCAC Think Tank Forum in Beijing, assistant foreign affairs minister, Chen Shaodong, encouraged Chinese corporations to explore public–private investment models in Africa to alleviate local debt burdens, a proposition that was reiterated by the vice-president of China Exim Bank, Xie Ping, at the same event (MFA, 2018b, 2018c). The narrative was echoed by an MFA spokesperson during a press conference in 2018 (State Council Information Office, 2018).

Chinese embassies across Africa became important protagonists in disseminating this narrative across Africa. In an article posted by the MFA in 2018 in at least eight mainstream Nigerian media outlets, the Chinese ambassador in Nigeria refuted popular claims that Chinese finance would raise African debt to unsustainable levels and encouraged Chinese foreign direct investment and experimentation with PPPs, as a way to relieve African debt pressures (MFA, 2018). In October 2020, Gambian newspapers published an article by the Chinese ambassador with the title "China actively assists Africa with debt issues" promoting "debtless" investment cooperation such as PPP to further advance Sino–African cooperation (MFA, 2020). The same month the Chinese ambassador to South Africa hosted an online discussion with the South African Institute of International Affairs where he stressed both China's commitment to the goal of African debt sustainability and the BRI's support for Chinese corporate investment, construction, and management integration for African infrastructure development (MFA, 2020b). Such statements show that by the end of the 2010s, the Chinese government had firmly established a narrative that proposes Chinese direct investments, and PPPs in particular, as a solution to African debt problems.

Chinese official narratives on PPPs echo a belief that is widespread among scholars and policymakers alike that PPPs are a cost-saving alternative for public authorities. However, China's own PPP experience has shown that PPPs can incur significant long-term costs for public contracting authorities, despite official emphases to the contrary. In his book *Licensed Larceny,* Hildyard (2016: 39) warns of "burgeoning off-balance-sheet liabilities that countries have incurred through PPPs, storing up debt crises for future generations." A World Bank study on debt sustainability risks for BRI countries cautions that PPPs commonly imply long-term refinancing obligations for indebted governments and potentially include terms on the liquidation of assets at a loss if such obligations are not met (Bandiera and Tsiropoulos, 2019: 30–31). Hence, the extent to which PPPs can help to ameliorate unsustainable sovereign debt levels in African countries remains questionable and ultimately dependent on their terms and conditions, as well as on the governance context in which they are negotiated and implemented.

Risky Business? Chinese Risk Perceptions and the Intricacies of PPP Governance

In line with the central government's active promotion of Chinese investments in PPPs overseas, Chinese researchers and analysts have assessed challenges and opportunities for Chinese investors in Africa. Some of their studies read more like recommendations for action for Chinese firms that operate in Africa than like rigorous and independent scholarly research. Hence, they must be seen as part and parcel of wider Chinese efforts at metagoverning the BRI. Huo et al. (2018) evaluate the risk and success factors of 552 PPPs in Africa. Their study suggests that functioning rule of law, bureaucratic effectiveness, strong anti-corruption controls, and government support for private sector development are all conducive to the readiness of private corporations to take on more risk in the context of PPPs, but that Western-style democracy, on the contrary, correlated with lower willingness to take on economic risks (Huo et al., 2018). Zhu (2017) reviews developments in African PPP legislation and expresses optimism about the proliferation of the PPP model at regional and continental scales of governance in Africa as well as about the promotion of PPPs under the BRI. The author encourages Chinese contractors to seize opportunities offered by the renaissance of PPPs in Africa. In a short briefing that focuses on the potential of Africa's railway sector for PPPs with Chinese participation, Liu (2020) lists some general operational risks to be considered for Chinese companies operating abroad, such as differences in environment and culture, avoiding conflict with local workers, and protecting company assets.

Wu and colleagues' (2014) study offers a comprehensive insight into Chinese risk perceptions regarding PPPs in Africa. Referring to political instability and investment insecurities, the authors emphasise the need to integrate the interests of the investing corporation with that of the host government and institutions so that public entities have a stake in the project's success. Furthermore, corporations should ensure good relations with the local population, and make the host governments provide special military and police protection to Chinese assets and personnel. In addition, the authors recommend hiring sufficient high-quality private security. Wu et al. (2014) furthermore suggest that Chinese corporations should outsource the collection of user fees to relevant African government agencies to prevent conflict with the local population, which might contest paying directly for basic public services.

Wu et al. (2014) problematise the economic risks of PPPs due to their typically long contract periods and caution that certain projects might not meet investors' profit expectations. The study advises Chinese corporations to demand sovereign guarantees from host governments to secure investments as well as government-backed minimum-revenue clauses and compensations to ensure the profitability of projects. While such terms are common in PPP contracts, they are the ones that commonly incur the "burgeoning off-balance-sheet liabilities" that Hildyard (2016: 39) refers to. This potentially contradicts the declared goal of financially more sustainable infrastructure development in Africa that, as shown above, is constantly expressed in official statements. This relates to the concern that PPPs may incur similar fiscal risks and burdens for African public entities as they did for Chinese sub-national governments. The IMF's country representative to Uganda, Izabela Karpowicz, cautioned that debt-distressed governments could misconstrue PPPs "as an instrument to hide debt and put it on somebody else's balance sheet" (quoted in Barigaba, 2021).

The risk perceptions above are shared by Chinese policymakers and government agencies. The assistant chief of the foreign investment department of the Chinese National Development and Reform Commission, Zhang Zhangzhi, cautioned that, apart from the profitability of potential PPP projects, interested corporations must duly consider local political, legal, and financial context factors (*Xinhua*, 2019). In November 2019, such concerns were also expressed by China's PPP Center which released a report advising Chinese corporations investing in Africa on a range of compliance risks, for instance, related to potential legal penalties, restrictions on foreign investment in sensitive sectors, and difficulties with local legal pluralism, scams, and complicated property rights. Corporations would be able to mitigate part of such financial risks through Sinosure insurance (Guo et al., 2019).

Despite China's own domestic experiences in this respect, Chinese official sources spare to mention possible (financial) risks for African contracting authorities. Yet, the extent to which Sino–African PPPs will deliver "win–win" results for both Chinese investors and African governments highly depends on prudent cost–benefit analyses and "the capacity of African governments to negotiate beneficial terms" (Zajontz, 2022c: 179). This includes balanced public–private financial risk-sharing, prudent public procurement and PPP laws (and adherence to the same), sound feasibility studies, and thorough value-for-money evaluations. The negotiations of Chinese investment in the Tanzania–Zambia Railway (TAZARA) have shown significant strategic learning on the part of the Tanzanian and Zambian governments. Informed by previous unsuccessful railway privatisations in both countries, the governments rejected the terms of a thirty-year Rehabilitate–Operate–Transfer PPP proposed by a Chinese consortium in 2016. Unsurprisingly, the parties disagreed not least on the financial terms, as the Chinese investors expected the shareholding governments to take on all outstanding debts of the company (about USD 800 million) and demanded far-reaching tax exemptions (Zajontz, 2022d). The shareholding governments have since asked the Chinese SOEs involved to conduct another feasibility study as a basis for a renewed proposal.

Wider governance concerns are equally decisive for the performance of Sino–African PPPs. Political risks associated with PPPs include popular protests by negatively affected citizens, such as in cases of forced resettlement (Bandiera and Tsiropoulos, 2019: 31). Nairobi's new expressway, a 27 km elevated highway hoped to ease traffic congestion in Kenya's capital, exemplifies political risks for Chinese investments in PPPs. The road was built under a thirty-year BOT contract by China Road and Bridge Corporation (CRBC) and is operated by Moja Expressway, a CRBC subsidiary, which also collects tolls for another twenty-seven years. Controversies arose because more than one acre of Nairobi's Uhuru Park was sacrificed for the expressway (Kimari, 2021). Amnesty International Kenya estimated that up to 40,000 residents of the Mukuru Kwa Njenga settlement were affected by the demolition of schools, businesses and 13,000 homes to make space for a feeder road to the new expressway (Ram, 2021). Moreover, the construction (temporarily) affected traders and commuters adversely and damaged the existing road, which is still used by many. The toll fees that motorists now have to pay caused further popular resentment against the project, often exacerbating anti-Chinese resentment. In mid-2022, toll fees had to be increased "to cushion the Chinese firm from exchange losses in the wake of the weakening Kenya shilling" (Aloo, 2022). The case of the Nairobi Expressway exemplifies that PPPs with Chinese participation are not necessarily seen by host populations as yielding "win–win" results, revealing political costs for Chinese actors, as anticipated by Wu et al. (2014).

As Bandiera and Tsiropoulos's (2019: 31–35) World Bank report shows, further governance challenges for Sino–African PPPs may arise from poor project selection, non-transparent procurement practices, poor valuation and organisation, corruption, and fraud. Such concerns are not unfounded. A major corruption scandal has been revealed in the context of road PPPs related to the Chinese Sicomines investment deal in the DRC. In 2008, the Congolese government under Joseph Kabila agreed with a Chinese consortium on an infrastructure-for-resources deal over infrastructure investments to the tune of USD 3 billion and a copper and cobalt mega-project worth USD 3.2 billion (see Landry, 2018). Based on the agreement, PPPs were set up for the upgrade of key commercial roads. The main export route for Congo's mining exports between Kolwezi and the Zambian border, for example, was rehabilitated by China Railway Engineering Corporation (CREC) and maintained and tolled by the firm *Société de Gestion Routière du Congo*, a joint venture between firms associated with the Kabila family and CREC which sold its stakes in 2015. USD 757 million in tolls were collected on that road between 2010 and 2020. However, according to a report by the DRC's inspector general of finance, only USD 50 million were spent on maintenance between April 2015 and end-2020. A consortium of non-governmental organisations and global media outlets has since revealed various misappropriations of funds and irregular payments in the context of this project (Clowes and Kavanagh, 2022; see also *The Sentry*, 2021).

These cases show that the Chinese turn towards overseas PPPs is not an "easy fix" to China's spatial fix but rather engenders new contradictions and governance challenges. A World Bank study concludes that most BRI countries need better PPP regulatory frameworks and warns that poor PPP governance is associated with high debt vulnerability (Bandiera and Tsiropoulos, 2019: 33–35). The latter would be the exact opposite of what official Chinese narratives on Sino–African PPPs promise.

Conclusion

Debt sustainability issues in countries along the BRI have posed the hitherto biggest challenge to the debt-financed, infrastructure-led global expansion of Chinese capital which had become a key ingredient of China's contemporary growth model. A growing body of literature is now concerned with the political repercussions of China's role as the world's biggest bilateral creditor and focuses on how the Chinese government and the country's banks are currently renegotiating debts bilaterally and in multilateral fora. This article traced a shift in the financial governance of the BRI which has received less scholarly attention so far, namely China's active promotion of PPPs in overseas infrastructure markets. We conceptualised China's gradual "turn" from loan finance towards PPP investments as an attempt at "metagoverning" failures in China's contemporary spatial fix. The latter has – for the longest time – "moved out" Chinese surplus capital and material, not least by means of massive sovereign loan-financed infrastructure projects overseas. As overseas lending has become increasingly economically risky and politically costly, the Chinese government has identified overseas PPPs as a suitable instrument to keep up demand for Chinese infrastructure and construction firms, which have built up huge capacities across Africa (and elsewhere), as well as to "effectively expand the political economic influence of Chinese foreign investment" (Chinese Public Procurement Service, 2016). Growing Chinese equity investment in African infrastructure PPPs will lastingly expand the long-term control, operational involvement, and financial stakes of Chinese firms in the assets and markets concerned. This will in turn entail a growing Chinese security footprint on the continent to secure such investments.

As is often the case in Chinese economic policy-making, the domestic arena role-modelled for the international realm. The Chinese central government, as of 2013, started to promote (and regulate) PPPs domestically with the declared, though thus far unmet, goal to curb the unsustainable accumulation of debts on the part of China's sub-national governments, most of it incurred for infrastructure development. As part of President Xi Jinping's efforts to further globalise Chinese capital accumulation, epitomised by the BRI, Beijing has started to encourage and incentivise Chinese investments in PPPs overseas. As we have documented in the African context, these efforts were significantly stepped up when debt sustainability concerns mounted in several BRI countries. Our analysis of official Chinese government sources has shown that the Chinese state has, since 2016, consolidated a firm narrative which portrays PPPs as an adequate solution for African debt problems. This narrative is in line with neoliberal policy consensus and discourse, notwithstanding the peculiarity of Chinese "private" investors, many of which are "state-capital hybrids" (Alami and Dixon, 2022) in the form of SOEs. PPPs have since been promoted by Chinese top officials, in multilateral fora, such as FOCAC and the BRI Forum, and by Chinese embassies across Africa as a supposedly "debtless" alternative to loan-financed infrastructure.

However, this article has shown that China's turn towards PPPs in Africa has engendered new contradictions and governance challenges. In line with Chinese risk perceptions, corruption and rent-seeking behaviours have compromised – and damaged the reputation of – certain Chinese investments in infrastructure PPPs, as documented irregularities and alleged corruption in the context of Congo's "mining highway" exemplify. The Nairobi Expressway – and the tolling it entails – proves that privatisations are often contested and, thus, can incur significant political costs and fuel anti-Chinese sentiments. The distribution of economic costs, risks, and benefits between Chinese investors and African authorities bears further potential for controversies, as the protracted negotiations about a PPP for the rehabilitation of the TAZARA have revealed. The extent to which Sino–African PPPs will deliver "win–win" results for Chinese investors and African governments alike depends not least on political and regulatory context factors in host countries, such as the adherence to PPP and procurement laws, sound feasibility studies, thorough value-for-money evaluations, as well as on negotiation capacities and legal resources on the part of African governments.

There are yet more fundamental politico-economic contradictions that loom in the context of China's recent turn towards infrastructure PPPs in Africa. China's own domestic PPP experience has shown that PPPs do not necessarily release pressure from public budgets but, in contrast, can incur significant off-budget, long-term liabilities for contracting authorities. There is a risk that indebted African governments rush into PPPs, which might cost them and their populations dear. Ultimately, long-term costs for profit-driven infrastructure PPPs are handed down to ordinary citizens who will have to pay for formerly public services either indirectly (through taxation and/or austerity measures) or directly through user fees. The ongoing global infrastructure race, which will further intensify with the emergence of competing connectivity initiatives, such as the EU's Global Gateway and the US-led Partnership for Global Infrastructure and Investment, incentivises African governments to keep up the pace of infrastructure development. As debt finance is no longer an option for many African governments, PPPs are now promoted – by Chinese and other actors – as a viable alternative. However, Hall (2015: 7) rightly cautions that PPPs often serve as "an accounting trick, a way round the government's own constraints on public borrowing. This remains the overwhelming attraction for governments and international institutions." In the concrete case of Sino–African PPPs, the combination of keen Chinese (over)supply-side interests in PPPs and the hegemonic status that "infrastructure-led development" (Schindler and Kanai, 2021) has reached across Africa might eventually debunk official Chinese narratives, as well as neoliberal policy consensus, that portrays PPPs as panaceas for Africa's debt problems. Financial risks for African governments, arising from long-term liabilities and state guarantees for PPPs, are particularly high where growth in productive, revenue-generating sectors fails to materialise – not an unlikely scenario in the current global economic climate. Future "metagovernance" in Global China's growth model therefore seems inevitable.

Acknowledgements

The authors want to thank the anonymous reviewers for their helpful comments and suggestions. They would also like to thank the journal's editorial team, notably Petra Brandt, Georg Strüver, Sinan Chu and Kerry Brown, as well as the copy-editing and production staff for their work. Kjeld van Wieringen thanks Professor Jonathan Holslag for his encouragement and his comments on an early draft of this paper. The remaining errors and omissions are the authors' sole responsibility.

Author contributions

The authors have contributed to the article in equal parts, with Kjeld van Wieringen having been responsible for the analysis of Chinese sources and Tim Zajontz for their theoretical interpretation and contextualisation.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. This work has been written in a personal capacity and any views expressed do not represent an official position of the European Parliament.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

ORCID iDs

Kjeld van Wieringen https://orcid.org/0000-0002-7327-8180
Tim Zajontz https://orcid.org/0000-0002-7868-9640

Supplemental Material

Supplemental material for this article is available online.

References

Alami, Ilias, and Adam D. Dixon (2022) 'Expropriation of capitalist by state capitalist': organizational change and the centralization of capital as state property. *Economic Geography* 98(4): 303–326.

Alami, Ilias, Adam D. Dixon, and Emma Mawdsley (2021) State capitalism and the new global D/development regime. *Antipode* 53(5): 1294–1318.

Alden, Chris, and Lu Jiang (2019) Brave new world: debt, industrialization and security in China–Africa relations. *International Affairs* 95(3): 641–657.

Aloo, Herald (2022) Kenya: Will the costly Nairobi Expressway ease gridlock? *The Africa Report*, 25 May. Available at: https://www.theafricareport.com/206676/kenya-will-the-costly-nairobi-expressway-ease-gridlock. (accessed 18 January 2023)

Bagwandeen, Mandira (2021) China merchants group exporting its Shekou model of port-industrial development to Africa. *China Global South Project*, 4 November. Available at: https://chinaglobalsouth.com/analysis/china-merchants-group-exporting-its-shekou-model-of-port-industrial-development-to-africa/ (accessed 18 September 2022).

Bagwandeen, Mandira, Christopher Edyegu, and Oscar Otele (2023) African agency, COVID-19 and debt renegotiations with China. *South African Journal of International Affairs* 30(1): 1–27.

Bandiera, Luca, and Vasileios Tsiropoulos (2019) Framework to assess debt sustainability and fiscal risks under the belt and road initiative. *World Bank Group*. Available at: http://documents.worldbank.org/curated/en/723671560782662349/A-Framework-to-Assess-Debt-Sustainability-and-Fiscal-Risks-under-the-Belt-and-Road-Initiative. (accessed 22 June 2022)

Barigaba, Julius (2021) Kenya in debt distress, as all EA economies facing risks too. *The East African*, 18–24 September, pp. 4–5.

Barton, Benjamin (2021) Agency and autonomy in the maritime silk road initiative: an examination of Djibouti's Doraleh container terminal disputes. *The Chinese Journal of International Politics* 14(3): 353–380.

Boston University Global Development Policy Center (2022) Chinese loans to Africa database. Available at: http://bu.edu/gdp/chinese-loans-to-africa-database (accessed 23 February 2023).

Bräutigam, Deborah (2020b) Chinese debt relief: fact and fiction. *The Diplomat*. Available at: https://thediplomat.com/2020/04/chinese-debt-relief-fact-and-fiction/ (accessed 12 January 2023).
Bräutigam, Deborah (2020a) A critical look at Chinese 'debt-trap diplomacy': the rise of a meme. *Area Development and Policy* 50(1): 1–14.
Breslin, Shaun (2021) *China Risen? Studying Chinese Global Power*. Bristol: Bristol University Press.
BRI Forum (2019) Joint communique of the leaders' roundtable of the 2nd Belt and Road Forum for International Cooperation. Available at: http://www.beltandroadforum.org/english/n100/2019/0427/c36-1311.html (accessed 26 May 2023).
Carmody, Pádraig (2020) Dependence not debt-trap diplomacy. *Area Development and Policy* 50(1): 23–31.
Carmody, Pádraig, Peter Kragelund, and Ricardo Reboredo (2020) *Africa's Shadow Rise: China and the Mirage of African Economic Development*. London: Zed Books.
Carmody, Pádraig, Ian Taylor, and Tim Zajontz (2022b) China's spatial fix and 'debt diplomacy' in Africa: constraining belt or road to economic transformation? *Canadian Journal of African Studies* 56(1): 55–77.
Carmody, Pádraig, and Joel Wainwright (2022) Contradiction and restructuring in the belt and road initiative: reflections on China's pause in the 'Go World'. *Third World Quarterly* 43(12): 2830–2851.
Carmody, Pádraig, Tim Zajontz, and Ricardo Reboredo (2022a) From 'debt diplomacy' to donorship? China's changing role in global development. *Global Political Economy* 1(2): 198–217.
Cheng, Zhe, Yongjian Ke, Jing Lin, et al. (2016) Spatio-temporal dynamics of public–private partnership projects in China. *International Journal of Project Management* 34(7): 1242–1251.
China Banking News (2018) Long-term PPP expenditures deemed hidden local government debt. 8 August. Available at: https://www.chinabankingnews.com/2018/08/08/long-term-ppp-expenditures-deemed-hidden-local-government-debt/ (accessed 16 December 2022).
Chinese Public Procurement Service 中国政府采购网 (2016) 海外工程承包如何升级国际PPP模式 [How to upgrade the international PPP model through overseas project contracting]. 10 August. Available at: http://www.ccgp.gov.cn/ppp/gj/201608/t20160810_7164349.htm (accessed 14 February 2021).
Chinese Public Procurement Service 中国政府采购网 (2019) 楼继伟：根植中国土壤，推动PPP行稳致远 [Lou Jiwei: rooted in the soil of China, to promote the steady development of PPP]. 27 November. Available at: http://www.ccgp.gov.cn/ppp/zx/zy/201911/t20191127_13429484.htm (accessed 27 February 2021).
Clowes, William, and Michael Kavanagh (2022) China built Congo a toll road that led straight to the ruling family. *Bloomberg*, 3 February. Available at: https://www.bloomberg.com/news/features/2022-02-03/congo-s-kabila-family-made-millions-off-toll-road-built-by-china (accessed 6 January 2023).
Cuthbert, Neil (2018) Public private partnerships – the new paradigm for Chinese companies for funding Africa infrastructure project? *China International Contractors Association (CHINCA) Annual Forum Macau* 2018, 26 July. Available at: https://www.jdsupra.com/legalnews/public-private-partnerships-the-new-31836/ (accessed 11 April 2021).
Dreher, Axel, Andreas Fuchs, Brad Parks, 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.

Eisenman, Joshua, and Eric Heginbotham (2020) China's relations with Africa, Latin America, and the Middle East. In David Shambaugh (ed.) *China & the World.* Oxford: Oxford University Press, pp. 291–312.

Forum on China–Africa Cooperation (FOCAC) (2015) The Forum on China–Africa Cooperation Johannesburg Action Plan (2016–2018). 25 December. Available at: http://www.focac.org/eng/zywx_1/zywj/t1327961.htm (accessed 4 April 2021).

Gardner, Alysha, Joyce Lin, Scott Morris, et al. (2020) Bargaining with Beijing: a tale of two borrowers. *Center for Global Development*, November 18. Available at: https://www.cgdev.org/publication/bargaining-beijing-tale-two-borrowers (accessed 10 December 2022).

Gelpern, Anna, Sebastian Horn, Scott Morris, et al. (2021) How China lends: a rare look into 100 debt contracts with foreign government. *Aid Data*, 15 November. Available at: https://www.aiddata.org/how-china-lends (accessed 11 May 2023).

Gonzalez-Vicente, Ruben (2019) Make development great again? Accumulation regimes, spaces of sovereign exception and the elite development paradigm of China's Belt and Road initiative. *Business and Politics* 21(4): 487–513.

Guo, Hongyu 郭红玉, Manlin Liu 刘曼琳, and Ke Wang 王可 (2019) 郭红玉：一带一路背景下中国企业对非投资合规风险防范研究 [Guo Hongyu: research on the compliance risk prevention of non-investment by Chinese enterprises in the background of One Belt and One Road]. *China Public Private Partnerships Center*, 20 November. Available at: https://www.cpppc.org/PPPsj/334.jhtml (accessed 10 April 2021).

Hall, David (2015) *Why Public–Private Partnerships Don't Work: The Many Advantages of the Public Alternative*. Greenwich: Public Services International Research Unit.

Harvey, David, 2003. *The New Imperialism*. Oxford: Oxford University Press.

Hildyard, Nicholas (2016) *Licenced Larceny: Infrastructure, Financial Extraction and the Global South*. Manchester: Manchester University Press.

Huo, Weidong 霍伟东, Ruoyu Chen 陈若愚, and Xingyun Li 李行云 (2018) 制度质量、多边金融机构支持与 PPP 项目成效 – 来自非洲 PPP 项目数据的经验证据 [Institutional quality, support from multilateral financial institutions, and effectiveness of PPP projects – empirical evidence from data on PPP projects in Africa]. 经济与管理研究 [*Research on Economics and Management*] 39(3): 52–64.

Jessop, Bob (2016) *The State: Past, Present, Future*. Cambridge: Polity Press.

Jessop, Bob, and Ngai-Ling Sum (2018) Geopolitics: putting geopolitics in its place in cultural political economy. *Environment and Planning A: Economy and Space* 50(2): 474–478.

Jin, Hiu, and Isabel Rial (2016) Regulating Local Government Financing Vehicles and Public-Private Partnerships in China. IMF Working Paper 16/187.

Jones, Lee, and Shara Hameiri (2021) *Fractured China: How State Transformation Is Shaping China's Rise*. Cambridge: Cambridge University Press.

Jones, Lee, and Jinghan Zeng (2019) Understanding China's 'Belt and Road Initiative': beyond 'grand strategy' to a state transformation analysis. *Third World Quarterly* 40(8): 1415–1439.

Kabanda, Umar (2021) Why does public–private partnership matter in Africa's post-Covid recovery? *European University Institute*, 20 December. Available at: https://euideas.eui.eu/2021/12/20/why-does-public-private-partnership-matter-in-africas-post-covid-recovery/ (accessed 21 January 2023).

Kimari, Wangui (2021) 'Under construction': everyday anxieties and the proliferating social meanings of China in Kenya. *Africa* 91(1): 135–152.

Kynge, James (2023) China grants billions in bailouts as Belt and Road Initiative falters. *Financial Times*, 28 March 2023. Available at: https://www.ft.com/content/9b2cb53f-e6f0-479e-bb94-a2e0c8680e88. (accessed 4 April 2023)

Landry, David (2018) The risks and rewards of resource-for-infrastructure deals: lessons from the Congo's Sicomines agreement. *Resources Policy* 58: 165–174.

Lee, Amanda (2021) Is China's local government debt a concern and what role do LGFVs play in infrastructure spending? *South China Morning Post*, 2 November. Available at: https://www.scmp.com/economy/china-economy/article/3154549/chinas-local-government-debt-concern-and-what-role-do-lgfvs (accessed 14 September 2022).

Liang, Qingxue, and Hao Hu (2018) Study on identification of spurious public–private partnership projects in China. *IEEE Transactions on Engineering Management IEEE Transactions on Engineering Management* 67(2): 376–384.

Lippolis, Nicolas, and Harry Verhoeven (2022) Politics by default: China and the global governance of African debt. *Survival* 64(3): 153–178.

Liu, Lin 刘 琳 (2020) 中国铁路的发展走向—以PPP模式运作非洲铁路项目的风险分析 [Development trend of China Railway – risk analysis of African railway projects operated by PPP model]. 经济与商务 [*Economics and Business*] 2020(7): 287–288.

Liu, Qigui, Xiaofei Pan, and Gary Gang Tian (2018) To what extent did the economic stimulus package influence bank lending and corporate investment decisions? Evidence from China. *Journal of Banking and Finance* 86: 177–193.

MFA (Ministry of Foreign Affairs) 中华人民共和国外交部 (2017) 博茨瓦纳政府拟对第11个国家发展计划中的部分项目采用PPP模式 [The Government of Botswana intends to adopt the PPP model for some projects in the 11th National Development Plan]. 17 March. Available at: https://www.mfa.gov.cn/ce/cebw/chn/jjswczc/t1446675.htm (accessed 13 March 2021).

MFA (Ministry of Foreign Affairs) 中华人民共和国外交部 (2018) 驻尼日利亚大使周平剑发表署名文章驳斥所谓中国融资增加非洲国家债务论 [Chinese Ambassador to Nigeria Zhou Pingjian has published a signed article refuting claims that Chinese financing is increasing African countries' debt]. 12 March. Available at: https://www.fmprc.gov.cn/web/dszlsjt_673036/t1541673.shtml (accessed 15 February 2021).

MFA (Ministry of Foreign Affairs) 中华人民共和国外交部 (2020) 驻冈比亚大使马建春在冈报纸发表署名文章宣介中国积极支持非洲国家解决债务问题 [Chinese Ambassador to the Gambia Ma Jianchun published a signed article in the Gambian newspaper announcing China's active support for African countries to solve debt problems]. 29 October. Available at: https://www.fmprc.gov.cn/web/dszlsjt_673036/t1827378.shtml (accessed 18 February 2021).

MFA (Ministry of Foreign Affairs) 中华人民共和国外交部 (2018b) 中非智库论坛 - 谢平：各方应共同努力促进非洲债务可持续性 [China–Africa Think Tank Forum – Xie Ping: all parties should work together to promote debt sustainability in Africa]. 6 July. Available at: https://www.fmprc.gov.cn/zfltfh2018/chn/pthd/t1576150.htm (accessed 15 February 2021).

MFA (Ministry of Foreign Affairs) 中华人民共和国外交部 (2018c) 外交部部长助理陈晓东在中非智库论坛第七届会议开幕式上的讲话 [Remarks by assistant foreign minister Chen Xiaodong at the opening ceremony of the 7th Session of the China–Africa Think Tank Forum]. 4 July. Available at: https://www.fmprc.gov.cn/web/ziliao_674904/zyjh_674906/t1573906.shtml (accessed 7 March 2021).

MFA (Ministry of Foreign Affairs) 中华人民共和国外交部 (2020b) 把握发展新维度，打造中非合作新高度 – 陈晓东大使在中非发展新维度：贸易、基础设施和第四次工业革命视频研讨会上的主旨发言 [Seize the new dimensions of development and raise China–Africa cooperation to new heights – keynote speech by Ambassador Chen Xiaodong at the video seminar on new dimensions of China–Africa development: trade, infrastructure and the fourth industrial revolution]. 14 October. Available at: https://www.mfa.gov.cn/web/zwbd_673032/gzhd_673042/t1823725.shtml (accessed 18 February 2021).

MOFCOM (Ministry of Commerce) 中华人民共和国商务部 (2013) 习近平到访前，坦桑尼亚为中国与非洲关系辩护 [Before Xi Jinping's visit, Tanzania defended China's relations with Africa]. 19 March, Available at: http://tz.mofcom.gov.cn/article/jmxw/201303/20130300059973.shtml (accessed 6 March 2021).

MOFCOM (Ministry of Commerce) 中华人民共和国商务部 (2014) 摩洛哥 – 中国企业进入欧洲和非洲的桥 [Morocco – a bridge for Chinese enterprises to enter Europe and Africa]. 4 June. Available at: http://ma.mofcom.gov.cn/article/about/greeting/201406/20140600612801.shtml (accessed 6 March 2021).

MOFCOM (Ministry of Commerce) 中华人民共和国商务部 (2015) 科特迪瓦总统瓦塔拉会见中国交建代表团一行 [Cote d 'Ivoire President Alassane Ouattara met with the delegation of China construction]. 10 July. Available at: http://ci.mofcom.gov.cn/article/zxhz/tzwl/201507/20150701062270.shtml (accessed 7 March 2021).

MOFCOM (Ministry of Commerce) 中华人民共和国商务部 (2018) 中国对外承包工程发展报告: 2017–2018 [Annual report on China international project contracting: 2017–2018]. Available at: http://fec.mofcom.gov.cn/article/tzhzcj/tzhz/upload/dwcbgc2017-2018.pdf. (accessed 16 July 2021)

MOFCOM (Ministry of Commerce) 中华人民共和国商务部 (2019) 中国对外承包工程发展报告: 2018–2019 [Annual report on China international project contracting: 2018–2019]. Available at: http://images.mofcom.gov.cn/fec/202106/20210630085424891.pdf. (accessed 16 July 2021)

MOFCOM (Ministry of Commerce) 中华人民共和国商务部 (2020) 中国将如何应对因新冠疫情导致的非洲债务减免呼声？[How will China respond to Africa's call for debt relief due to COVID-19?]. 14 April. Available at: http://www.mofcom.gov.cn/article/i/jyjl/k/202004/20200402955221.shtml (accessed 23 November 2020).

MOFCOM (Ministry of Commerce) 中华人民共和国商务部 (2014b) 中国驻加纳使馆经商参处成功举办PPP讲座 [The Commercial Affairs Office of the Chinese Embassy in Ghana successfully held PPP seminars]. 10 October. Available at: http://gh.mofcom.gov.cn/article/zgqy/201411/20141100791159.shtml (accessed 6 March 2021).

MOFCOM (Ministry of Commerce) 中华人民共和国商务部 (2015b) 多哥正在酝酿将公司公私合营法律规范化 [Togo is considering regularizing the law on corporate public–private partnerships]. 29 July. Available at: http://tg.mofcom.gov.cn/article/jmxw/201507/20150701065017.shtml (accessed 13 March 2021).

MOFCOM (Ministry of Commerce) 中华人民共和国商务部 (2015c) 基础设施情况 [Infrastructure situation]. 21 July. Available at: http://rw.mofcom.gov.cn/article/sqfb/201507/20150701053599.shtml. (accessed 13 March 2021).

MOFCOM (Ministry of Commerce) 中华人民共和国商务部 (2018b) 参赞致辞 [Counsellor's speech]. 4 September, Available at: http://na.mofcom.gov.cn/article/about/greeting/201809/20180902782830.shtml. (accessed 13 March 2021).

MOFCOM (Ministry of Commerce) 中华人民共和国商务部 (2020b) 中国对外承包工程发展报告: 2019–2020 [Annual report on China international project contracting: 2019–2020]. Available at: http://images.mofcom.gov.cn/fec/202012/20201201171840137.pdf. (accessed 16 July 2021)

Naughton, Barry (2020) China's global economic interactions. In David Shambaugh (ed.) *China & the World*. Oxford: Oxford University Press, pp. 113–136.

Nyabiage, Jevans (2021) China cancels Democratic Republic of Congo loans as it joins Belt and Road. *South China Morning Post*, 7 January. Available at: https://www.scmp.com/news/

china/diplomacy/article/3116837/china-cancels-democratic-republic-congo-loans-it-joins-belt (accessed 10 January 2021).

OECD (2018) *Enhancing Connectivity Through Transport Infrastructure: The Role of Official Development Finance and Private Investment*. Paris: OECD Publishing.

Osei-Kyei, Robert, and Albert P. C Chan (2016) Developing transport infrastructure in sub-Saharan Africa through public–private partnerships: policy practice and implications. *Transport Reviews* 36(2): 170–186.

Osei-Kyei, Robert, Albert P. C. Chan, Yao Yu, et al. (2018) Root causes of conflict and conflict resolution mechanisms in public–private partnerships: comparative study between Ghana and China. *Cities* 87: 185–195.

Pettis, Michael (2022) How China trapped itself. *Foreign Affairs*, 5 October. Available at: https://www.foreignaffairs.com/china/how-china-trapped-itself (accessed 22 February 2023).

Ram, Ed (2021) How Nairobi's 'road for the rich' resulted in thousands of homes reduced to rubble. *The Guardian*, 8 December. Available at: https://www.theguardian.com/global-development/2021/dec/08/how-nairobis-road-for-the-rich-resulted-in-thousands-of-homes-reduced-to-rubble (accessed 8 January 2023).

Reuters (2017) China overhauls $2.69 trillion public-private projects as debt fears rise. 17 November. Available at: https://www.reuters.com/article/us-china-economy-ppp-idUSKBN1DH0DE (accessed 29 September 2022).

Ruan, Wenjing, Hanxiong Xiao, and Xinxin Feng (2021) Exploration and thinking on the integrated model of overseas investment, construction and operation of Chinese electric power enterprises. IOP Conference Series: Earth and Environmental Science 829: 012006.

Schindler, Seth, Ilias Alami, and Nicholas Jepson (2023) Goodbye *Washington Confusion*, hello *Wall Street Consensus*: contemporary state capitalism and the spatialisation of industrial strategy. *New Political Economy* 28(2): 223–240. https://doi.org/10.1080/13563467.2022.2091534.

Schindler, Seth, and J. Miguel Kanai (2021) Getting the territory right: infrastructure-led development and the re-emergence of spatial planning strategies. *Regional Studies* 55(1): 40–51.

State Council Information Office 中华人民共和国国务院新闻办公室 (2018) 外交部就非洲国家债务问题等答问 [The foreign ministry answered questions on the debt issue of African countries]. 6 March. Available at: http://www.scio.gov.cn/m/xwfbh/gbwxwfbh/xwfbh/wjb/Document/1624715/1624715.htm (accessed 15 February 2021).

Stone, Randall W., Yu Wang, and Shu Yu (2022) Chinese power and the state-owned enterprise. *International Organization* 76(1): 229–250.

Sum, Ngai-Ling (2019) The intertwined geopolitics and geoeconomics of hopes/fears: China's triple economic bubbles and the 'one belt one road' imaginary. *Territory, Politics, Governance* 7(4): 528–552.

Taylor, Ian, and Tim Zajontz (2020) In a fix: Africa's place in the Belt and Road initiative and the reproduction of dependency. *South African Journal of International Affairs* 27(3): 277–295.

The Sentry (2021) The backchannel: state capture and bribery in Congo's deal of the century. Available at: https://thesentry.org/wp-content/uploads/2021/11/TheBackchannel-TheSentry-Nov2021.pdf (accessed 15 December 2022).

Wang, Ling, Lihong Zhou, Yan Xiong, et al. (2019) Effect of promotion pressure and financial burden on investment in public–private partnership infrastructure projects in China. *Asian-Pacific Economic Literature* 33(2): 128–142.

Wei, Lingling (2022) China reins in its Belt and Road program, $1 trillion later. *Wall Street Journal*, 26 September. Available at: https://www.wsj.com/articles/china-belt-road-debt-11663961638 (accessed 29 September 2022).

Were, Anzetse (2018) Debt trap? Chinese loans and Africa's development options. South African Institute of International Affairs*, Policy Insights No. 66*.
Wheatley, Jonathan, and James Kynge (2020) China curtails overseas lending in face of geopolitical backlash. *Financial Times*, 8 December 2020. Available at: https://www.ft.com/content/1cb3e33b-e2c2-4743-ae41-d3fffffa4259. (accessed 22 June 2022)
World Bank (n.d.) What is a PPP: defining public–private partnership. *Public Private Partnership Legal Resource Center*. Available at: https://ppp.worldbank.org/public-private-partnership/what-ppp-defining-public-private-partnership (accessed 14 September 2022).
Wu, Zhixin 吴之昕, Buyi Zhao 赵步一, and Fei Han 韩飞 (2014) 以PPP模式开展非洲基础设施建设的前景和风险 [Prospects and risks of PPP model for infrastructure construction in Africa]. 国际工程与劳务 [*International Contracting & Labour Service*] 2014(4): 22–24.
Xinhua 新华网 (2018) 习近平：未来对非重点实施八大行动 [Xi Jinping: In the future, we will carry out 'eight major actions' for Africa]. 3 September. Available at: http://www.xinhuanet.com/world/2018-09/03/c_129946121.htm (accessed 27 February 2021).
Xinhua 新华网 (2019) 第五届对非投资论坛热议PPP模式 [The PPP model is hotly discussed on the fifth forum on investment in Africa]. 13 September. Available at: http://www.xinhuanet.com/2019-09/13/c_1124994278.htm (accessed 21 March 2021).
Xiong, Wei, Bin Chen, Huanming Wang, et al. (2020) Public–private partnerships as a governance response to sustainable urbanization: lessons from China. *Habitat International* 95: 102095.
Yescombe, E.R., and Edward Farquharson (2018) *Public-Private Partnerships for Infrastructure: Principles of Policy and Finance*, 2nd ed. Oxford: Butterworth-Heinemann.
Yu, Po Shan, Zuo Zhang Chen, and Jin Sun (2018) Innovative financing: an empirical study on public–private partnership securitisation in China. *Australian Economic Papers* 57(3): 394–425.
Zajontz, Tim (2022c). The Chinese infrastructural fix in Africa: lessons from the Sino–Zambian 'road bonanza'. *Oxford Development Studies* 50(1): 14–29.
Zajontz, Tim (2022b) Debt, distress, dispossession: towards a critical political economy of Africa's financial dependency. *Review of African Political Economy* 49(171): 173–183.
Zajontz, Tim (2022d) 'Win–win' contested: negotiating the privatisation of Africa's freedom railway with the 'Chinese of today. *Journal of Modern African Studies* 60(1): 111–134.
Zajontz, Tim (2022a) Infrastructure. In: Engel, Ulf (ed.) *Yearbook on the African Union*. Vol. 2. Leiden: Brill, pp. 120–138.
Zhang, Bo, Li Zhang, Jing Wu, et al. (2019) Factors affecting local governments' public–private partnership adoption in urban China. *Sustainability* 11(23): 6831. DOI: https://doi.org/10.3390/su11236831.
Zhao, Zhirong Jerry, Guocan Su, and Dan Li (2018) The rise of public–private partnerships in China. *Journal of Chinese Governance* 3(2): 158–176.
Zhou, Hang (2022) Western and Chinese development engagements in Uganda's roads sector: an implicit division of labour. *African Affairs* 121(482): 29–59.
Zhu, Weidong 朱伟东 (2017) 非洲 PPP 项目的法律政策环境 [The legal and policy environment for PPP projects in Africa]. 中国投资 [*Chinese Investment*] 2(4): 78-79.

Author Biographies

Kjeld van Wieringen works as a Policy Analyst at the European Parliamentary Research Service (EPRS) in Brussels. He has degrees in History (BA) and Conflict Studies and Human Rights (MA) from Utrecht University, in European and International Governance (MSc) from the Free

University of Brussels, and studied Mandarin in China. He previously assisted with research at the Conflict Research Unit of the Clingendael Institute in The Hague and with development work in the Democratic Republic of Congo. Kjeld has published on African security and now primarily analyses EU–China relations. He is fluent in Dutch, English, French, German, and Mandarin Chinese.

Tim Zajontz is a lecturer in Global Political Economy at the Chair for International Politics at TUD Dresden University of Technology, a research fellow in the Centre for International and Comparative Politics at Stellenbosch University and a research associate in the Second Cold War Observatory. He is co-coordinator of the "African Politics and International Relations" research group of the Africa–Europe Group for Interdisciplinary Studies (AEGIS). He has previously worked in various advisory positions in German and EU politics. His current research is concerned with the political economy of competing connectivity initiatives and Africa's changing relations with China, the European Union and the United States.