Infrastructure is central to China’s reemergence in global development since the late 1990s. Around that time, the Chinese government began financing overseas development projects at a breathtaking pace. Since 2000, it has committed hundreds of billions of dollars for projects in transportation, energy, industry, water, and other infrastructure-heavy sectors. The Belt and Road Initiative (BRI), launched in 2013 to promote connectivity along a broadly envisaged overland “belt” in Eurasia and a maritime “road” spanning several regions, accelerated this trend, and China soon became the largest bilateral provider of development finance in the Global South (Dreher et al. 2022). Today, physical infrastructures such as roads, highways, railroads, bridges, ports, dams, power plants, factories, mines, pipelines, stadiums, government buildings, and event venues visually embody China’s massive, complicated role as a provider of development capital.

China’s global infrastructure spree has attracted widespread international attention, particularly in the United States and other liberal democracies concerned about China’s growing economic power, as well as in developing countries that host Chinese-financed projects. Debates are contentious and often polarized. Advocates appreciate the speed, efficiency, and lack of bureaucratic red tape with which China finances and builds development “hardware” (Wade 2008; Shikwati, Adero, and Juma 2022). Critics warn that China is a strategic, opaque lender determined to extract natural resources and policy concessions while making recipient countries less prosperous, more debt-laden, and less democratic (Naim 2007; Chellaney 2017). Other skeptics contend that Chinese infrastructure is economically wasteful, consisting of “useless buildings” and roads to nowhere.¹ The BRI’s first decade has intensified this debate by providing opportunities for enthusiasts and skeptics alike to gather anecdotes as datapoints for their respective claims.

Concerns about Chinese overseas infrastructure in particular have fueled larger assertions about China’s global economic influence. Outside suspicion toward Chinese overseas infrastructure projects is of course not new, much less did it originate with the BRI. For example, the “rogue aid” label first popularized by Foreign Policy in 2007 suggested that China offers aid and infrastructure abroad for “boosting international alliances that advance China’s growing global influence” (Naim 2007, 97; emphasis added). Decades earlier, Cold War-era Chinese global infrastructure projects were similarly criticized by Western observers as tools of an expansionist foreign policy designed to accumulate influence and spread political ideology (Large 2008).

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Today, such sentiments are even stronger. According to some accounts, China’s influence is advancing in lockstep with its economic development. The US Department of State is publicly operating on this assumption, asserting in 2020 that China’s “global reach and international influence have expanded accordingly” following four decades of rapid growth (Office of the Secretary of State 2020, 40). Chinese global infrastructure is often seen as an important influence tool within this narrative. Observers have suggested that China is “weaponizing” the BRI to bring other countries into its orbit (Russel and Berger 2020). In particular, the opaqueness of Chinese policy bank-issued loans for infrastructure creates potential for massive liabilities, including “hidden debt” that China might shield from the international community and wield as a “debt trap” to exercise influence over other countries (Chellaney 2017; Gelpern et al. 2022).

This viewpoint has been popular in the corridors of power within the United States amid mounting bilateral tensions. The US 2017 National Security Strategy asserts that “China’s infrastructure investment and trade strategies reinforce its geopolitical aspirations” (Trump 2017). In 2018 Vice President Mike Pence contended that “China uses so-called ‘debt diplomacy’ to expand its influence,” and that for China’s development finance to developing countries, “the benefits invariably flow overwhelmingly to Beijing” (Pence 2018). A year later, former Secretary of State Mike Pompeo criticized Beijing for brokering “corrupt infrastructure deals in exchange for political influence.” In 2021, Secretary of State Antony Blinken suggested that many BRI host countries “feel pressured to take bad deals on terms set by others,” tacitly referring to China’s influence over these governments.

American anxieties about the consequences of Chinese global infrastructure are shared by other governments. French President Emmanuel Macron stated in 2018 that new Silk Roads built along the BRI are “a tool to promote new international standards, rules and norms.” The same year, Penny Wong, now Australia’s Minister of Foreign Affairs, remarked that the BRI “is a game-changer” that “employs economic power as an expression of strategic power” and represents “a fundamental change in the way that strategic business is done.” Host country governments have also occasionally perceived Chinese infrastructure projects as influence conduits. As discussed in Section 4, former

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3 www.state.gov/a-free-and-open-indo-pacific/.
4 www.reuters.com/article/us-china-france-idUSKBN1EX0FU.
Malaysian Prime Minister Mahathir Mohamad in 2018 criticized “unfair” infrastructure deals signed by his predecessor that would disproportionately benefit China and leave Malaysia “indebted,” and later advised other infrastructure-seeking countries to “regulate or limit influences from China.”

Concerned governments have begun backing rhetoric with bilateral and multilateral policy responses. Both the United States and Japan have notably eschewed the Asian Infrastructure Investment Bank (AIIB), a Chinese-led multilateral, infrastructure-focused development bank founded in 2015. In 2018, the US Congress passed the Better Utilization of Investments Leading to Development (BUILD) Act, which enabled the formation of the Development Finance Corporation designed in part to finance infrastructure alternatives to Chinese-financed projects. In November 2019, Australia, Japan, and the United States launched the “Blue Dot Network” to monitor the quality of global infrastructure projects, including those financed and built by China. In December 2021 the European Union (EU) established the Global Gateway and in June 2022 the Group of Seven (G7) unveiled the Partnership for Global Infrastructure Investment (PGII), formerly Build Back Better World (B3W), ostensibly to provide alternative infrastructure initiatives to the BRI. The United States claims that PGII will deliver “game-changing projects to close the infrastructure gap in developing countries, strengthen the global economy and supply chains, and advance U.S. national security.”

Researchers have been more cautious in questioning and qualifying assertions about Chinese infrastructure and influence. But policy and popular debates have largely abandoned nuance and clarity in favor of a linear narrative that pegs China’s influence to its global infrastructure and other investments, even as many observers possess strong doubts about the economic viability and future of the BRI. This has primed audiences to fixate on the potential influence benefits of infrastructure for China while downplaying its potential risks.

Moreover, despite enormous policy, media, and academic interest, the conceptual and empirical contours of Chinese global infrastructure remain surprisingly unclear. A large literature has unpacked the nature and impacts of different forms of Chinese overseas development capital (e.g. Alden 2007; Bräutigam 2009; Lee 2017; Dreher et al. 2022). But there are few if any systematic accounts of Chinese overseas infrastructure, which instead is often bundled into more general studies of Chinese aid, lending, and investment. Moreover, existing measures of infrastructure often rely on indirect measures of financial

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flows rather than actual infrastructure projects. For example, researchers employing statistical analyses often proxy for infrastructure by aggregating dollars committed to infrastructure-intensive sectors such as energy, transport, and industry, or to financial flow types such as loans, lines of credit, export buyer’s and seller’s credits, and other instruments (e.g. Blair, Marty, and Roessler 2022; Zeitz 2021; Dreher et al. 2022). Qualitative research that employs interviews, case studies, site visits, or other approaches has carefully examined many individual Chinese-supported infrastructure projects around the world, but struggles to generate scalable, systematic inferences due to local contextual factors.

In addition, existing accounts of the BRI and Chinese overseas infrastructure offer remarkably little comparative or historical context for their claims. This recency bias discounts both earlier eras of Chinese global infrastructure and preexisting knowledge from other fields about domestic and international infrastructure projects. It also makes it difficult to assess whether and how contemporary Chinese global infrastructure is distinctive in its motives, features, and impacts.

China’s “infrastructure-influence nexus,” that is, the ways in which infrastructure potentially generates influence, remains similarly nebulous despite immense curiosity. Many existing accounts assume that infrastructure creates Chinese influence but do not specify how this occurs. Most research has focused on high-level policy outcomes, such as China’s ability to finance and build infrastructure in exchange for diplomatic and political support by other governments, though evidence suggests that rising powers like China also care deeply about “winning hearts and minds” among foreign public audiences (e.g. Brazys and Dukalskis 2019). In general, few studies have rigorously considered how infrastructure in particular might generate influence for China’s government (e.g. Hillman 2019a; Ho 2020).

In short, the BRI has attracted immense public and scholarly attention as a global infrastructure drive since its launch a decade ago. But despite this curiosity, we have surprisingly little clarity about what Chinese global infrastructure actually refers to, or how it impacts China’s pursuit of international influence.

This Element offers a comprehensive account of Chinese global infrastructure and helps address the aforementioned questions in three steps. First, it

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8 This is symptomatic of a larger challenge of measuring how China’s growing material resources translate into influence. Other work shows that Chinese trade, investment, and aid are important influence conduits (e.g. Kastner 2016; Norris 2016; Dreher et al. 2018). Other scholars have considered various other conditions under which China can influence developing countries (e.g. Goh 2014; Lampton, Ho, and Kuik 2020).
situates China’s twenty-first-century global infrastructure drive within China’s broader global development finance program since 1949. It offers a general definition of Chinese global infrastructure that can be applied to study a wide range of China’s most economically and politically consequential infrastructure projects in the Global South. In particular, it spotlights two primary forms of global infrastructure that China has consistently financed and built: “high-profile” infrastructure such as transportation and other large, economically productive projects, and nationally symbolic “prestige” infrastructure such as government buildings and stadiums.

Second, it operationalizes this definition and employs two newly created datasets to directly measure Chinese global infrastructure projects committed since 1949. One of these datasets was constructed over the past three years, during which my research team catalogued approximately 4,000 total projects, including nearly 1,500 physical infrastructure projects, that the Chinese government committed to developing countries during the second half of the twentieth century. This comprehensive catalog of historical projects challenges overwhelmingly present-focused accounts of Chinese global infrastructure. Decades before the BRI was conceived, the Chinese government had already begun financing and building global infrastructure at scale, including hundreds of high-profile and prestige projects in over 100 countries across Africa, Asia, and other developing regions.

Third, the Element helps clarify how global infrastructure generates different intended and unintended influence outcomes that affect China’s interests. Chinese global infrastructure is a valuable form of national political capital for host country leaders who can acquire and brand projects to serve a variety of economic and political functions. But China’s overseas infrastructure projects are no less immune to well-known pitfalls that have jeopardized other large-scale infrastructure ventures throughout history. The same features that make infrastructure attractive also tend to make its planners prone to risk miscalculation. In addition to economic risks, earlier Chinese global infrastructure and the BRI have demonstrated that overseas infrastructure can also introduce major volatility for states’ international influence, even when influence-seeking is not the primary objective. These projects have unpredictable trajectories and have likely complicated rather than enhanced China’s global influence, and have also diminished the ability of the Chinese government to control its net influence abroad. Overall, global infrastructure has been a useful tool for China’s pursuit of high-level influence outcomes such as political support from foreign governments. But its returns for China’s popular influence and image abroad, as well as China’s longer-term net influence, are considerably murkier.
Important takeaways emerge from this contextual approach. Contemporary Chinese global infrastructure is unique in terms of its currently unrivalled scale throughout the Global South. The evidence presented below shows that China is also rather distinct in terms of its consistent willingness to provide global infrastructure since the Cold War. But historical and comparative perspectives also reveal that contemporary Chinese global infrastructure projects are hardly exceptional. Their political dynamics often resemble those of earlier Chinese-financed global infrastructure, and of other large infrastructure ventures pursued by governments and other stakeholders in a variety of settings.

Moreover, Chinese global infrastructure projects remain as much political ventures as they are financial investments. Overlapping domestic and international political incentives between host country governments and China’s government provide important rationale for both sides to pursue global infrastructure. These visible, nationally relevant projects promise short-term political benefits – including potential influence for China’s government – but also generate major economic and political uncertainty for governments over time. More careful appreciation for global infrastructure’s political dynamics complements recent research heavily focused on the financing and debt aspects of Chinese infrastructure lending. Chinese global infrastructure’s political logic is crucial for understanding its long-term persistence in developing countries.

The remainder of the Element proceeds as follows. Section 2 provides a primer on the evolution of China’s development finance from 1949 in order to situate contemporary Chinese global infrastructure. It explains how China’s government arrived at its current position as the world’s largest provider of global infrastructure, and how important policy foundations were laid down during the second half of the twentieth century. It also synthesizes a large literature on the nature, motives, and consequences of Chinese development finance – including but not limited to infrastructure – that has emerged over the past 20 years.

Section 3 turns specifically to Chinese overseas infrastructure development projects. A sprawling, interdisciplinary literature suggests that these projects generate important short-term economic benefits as well as longer-term risks. I introduce the concept of “global infrastructure,” defined as government-financed physical infrastructure projects which are both highly visible and nationally salient in other countries. I focus on two prominent forms of Chinese global infrastructure: “High-profile” projects are large-scale, complex economic infrastructure projects, including massive transportation, energy, and other productive infrastructures. “Prestige” projects are financially smaller but equally visible and flashy infrastructure projects possessing national symbolism such as government buildings, stadiums, and conference centers, and are
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primarily allocated to small states in the Global South. Global infrastructure’s visibility and national scope produces an outsized, conspicuous presence that host country politicians amplify through their own branding efforts. These features make global infrastructure distinct forms of political capital for both host country governments and China’s government relative to other types of development cooperation. Section 3 utilizes two new datasets to document China’s provision of global infrastructure since 1949.

Section 4 turns to the relationship between infrastructure and influence. It argues that global infrastructure possesses outsized scale, complexity, and visibility that magnify both its political benefits for host country governments and influence possibilities for donor and lender governments. In the short-term, global infrastructure offers concrete political capital for both host country leaders and for China’s government. The former can seek, acquire, and brand high-profile or prestige infrastructure as national achievements that serve a variety of domestic political purposes, while China’s government can provide these projects to enhance its international influence. These features make global infrastructure politically attractive for governments in the short term, but also create complicated and poorly understood political consequences for China’s government and host country governments as projects move from conception to reality. In particular, global infrastructure activates unintended “influence externalities” for China via political mobilization and infrastructure narratives in host countries that muddle the net political value of these projects and weaken governments’ control over influence outcomes.

Section 5 summarizes and reflects on the Element’s main findings. It concludes that the BRI is an important chapter in a larger history of Chinese global infrastructure and in a much larger, global story of states’ consistent attraction to infrastructure despite massive socioeconomic and political risks. This broader view helps grasp the roles of political in addition to economic considerations that lead host countries and the Chinese government to jointly pursue global infrastructure. It also suggests that global infrastructure is likely to remain as a central component of China’s development cooperation even as it evolves into digital and other new forms with different stakeholders and financial arrangements.

2 The Lineage of Chinese Overseas Development Projects

How did China’s government become the world’s largest provider of infrastructure in developing countries? This section first provides a background of China’s broader set of global development activities since 1949 to situate Chinese global infrastructure. It reviews evidence on the motives and impacts
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of China’s global development projects and then discusses two new datasets that can be used to document and analyze Chinese global infrastructure.

2.1 China’s Long March toward Global Infrastructure

Policymakers, journalists, and scholars have closely scrutinized the growing overseas development programs of China and other “emerging donors” since 2000 (Woods 2008). But China is not a new donor or creditor. The People’s Republic of China (PRC) initiated overseas development assistance almost immediately after its founding in 1949. Since then, China’s basic posture toward overseas development finance has shifted multiple times, often in response to changing political and economic priorities at home. For example, China was a net donor throughout most of the Mao era. Outgoing aid was an important foreign policy tool driven heavily by political and ideological directives, particularly after the Sino-Soviet Split, when Mao adopted an extremely activist, revolutionary foreign policy orientation (Yu 1977; Alden and Alves 2008; Brazinsky 2017; Cheng and Taylor 2017; Eisenman 2018). This expansion was significant: Even as hundreds of millions of Chinese citizens lived in poverty, Chinese government spending on foreign aid accounted for over 5 percent of the national budget by the early 1970s (Dreher et al. 2022). Chinese foreign aid was initially concentrated in nearby socialist states, but during the 1960s China began providing aid to dozens of countries in Asia, Africa, and other regions within the “Third World.”

Revolutionary aid was fiscally unsustainable, and China experienced a role reversal and became a major net recipient of aid inflows during the reform and opening period. Its outgoing aid was scaled down and redirected toward smaller, economically sustainable projects under Deng Xiaoping. China concurrently began to receive high volumes of development finance, including many large-scale infrastructure projects, from donors and lenders like Japan and the World Bank. The Chinese government reengineered its development finance approach once again during the 1990s – a process discussed more in the following section – and returned to its status as a net provider of development finance around 2005 (Kobayashi 2008; Chin 2012). 9

These shifts are important for understanding the origins of China’s contemporary global infrastructure drive. In particular, important policy changes during the early reform era helped position China to dramatically scale up its provision of overseas infrastructure. As China’s economy incrementally opened up during the 1980s and 1990s, the Chinese government reoriented its outgoing development finance to chiefly serve commercial in addition to political purposes. This adjustment was informed by China’s own experience hosting Japanese-financed infrastructure and other development projects. For example, Japan’s government frequently utilized commodity-backed loans when financing infrastructure projects in China (Bräutigam 2009). It also adopted a project allocation approach in which China’s government, often jointly with Japanese enterprises, directly proposed specific infrastructure projects for Japan to finance (Zhang and Smith 2017). Both of these features are now well-known attributes associated with many contemporary Chinese-financed infrastructure projects abroad.

Several specific policy changes also occurred during this period with consequences for Chinese global infrastructure. In 1982, China’s Ministry of Commerce, at the time called the Ministry of Foreign Economic Relations and Trade (对外经济贸易部), established the Department of Foreign Aid (援助司) to manage overseas foreign assistance projects. Around the same time, China National Complete Plant Import & Export Corporation Ltd. (COMPLANT), which would eventually become a state-owned enterprise (SOE), was mandated with implementing most of China’s overseas development projects. China’s government also adopted a Contract Responsibility Mechanism (承包责任制) under which newly formed subsidiary enterprises of central and provincial government institutions, which would also eventually become SOEs, implemented Chinese-financed projects abroad (Cheng and Taylor 2017, 39–42). The government also began to encourage the creation of joint ventures between Chinese enterprises and foreign governments and firms, in part to support overseas development projects. Finally, the Chinese government started encouraging Chinese contractors to explore overseas markets as early as the 1970s, and Chinese construction companies began to accumulate experience as contractors for international infrastructure projects (Zhang 2020).

Commercialization of China’s development finance accelerated further in the 1990s with the establishment of China’s two primary “policy banks,” the Export-Import Bank of China (“China Eximbank”) and China Development Bank (“CDB”), which were created in part to take over underperforming domestic projects in China (Sanderson and Forsythe 2013). After their formation, Eximbank and CDB also began serving as the major financial vehicles through which China’s government provided capital for infrastructure projects.
around the world, particularly through concessional loans. Collectively, these experiences, policy reforms, and new institutions provided the foundation for China’s post-2000 global infrastructure drive.

The “Going Out” strategy launched by Jiang Zemin in the late 1990s and the BRI launched fifteen years later drove and accelerated China’s global infrastructure spree. Both initiatives explicitly linked several national economic priorities with China’s overseas development finance and mobilized immense state resources for financing and building infrastructure in developing countries. These objectives included finding alternative investment opportunities to US treasury securities and managing excess foreign exchange reserves; increasing foreign demand for Chinese goods and services, especially industrial inputs produced in excess; creating globally competitive, national champion firms; enhancing China’s energy security; and attempting to wean China’s own economy off of infrastructure investment (e.g. State Council 2013; Kong and Gallagher 2017; Ye 2020; Dreher et al. 2022). Relative to other development projects, infrastructure is particularly useful for pursuing many of these objectives as it offers massive financial and construction scale for allocating capital and supporting Chinese companies who serve as contractors.

The net result of these developments was that, by the early 2000s, China’s government was no longer a “traditional” donor who provided most of its overseas development capital as concessional aid. Instead, it had transformed into a massive provider of infrastructure primarily financed by loans motivated just as much by commercial considerations as political goals (Dreher et al. 2022). China still remained an important aid donor during this transformation, and its provision of smaller, highly concessional foreign aid projects in agriculture, education, health, and various social sectors has also increased significantly since the 1980s and after 2000. But these projects now represent a shrinking share of China’s overall global development footprint. China has taken on a hybrid role as a major source of both development aid and commercial infrastructure lending, though the latter is increasingly dominant as a share of China’s overall development finance. For example, between 2000 and 2007 China committed 61 cents of aid for every dollar of lending committed (Dreher et al. 2022, 105). In contrast, from 2013 to 2017, it committed just 11 cents of aid for each dollar of lending (Malik et al. 2021).

This evolution has arguably made it more difficult for the Chinese government to consolidate its development finance program – an already strenuous task given a wide range of stakeholders – by further increasing the number of relevant political and commercial actors. The Ministry of Commerce (MOFCOM) has long been the primary actor in managing China’s overseas