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Delegated Origination: Corporate Influence in Chinese Lending

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Abstract

Abstract: Sovereign lending is usually analyzed as a bargain between creditor and debtor states, taking creditors' capacity to identify lending opportunities for granted. We develop a theory of delegated origination: lenders lacking independent appraisal capacity rely on contractors to identify projects and package information for approval. China is a revealing case because its overseas lending expanded faster than its institutional capacity and integration into established creditor networks. Contractors possessed informational advantages over China-based lenders regarding local project conditions and over borrower-country officials regarding Chinese financing procedures. Delegation initially accelerated lending expansion, but contractors earned their returns at construction while lenders carried repayment for decades, and this divergence ultimately constrained lending. Using fieldwork in Zambia and Nigeria and an original panel of Chinese contractor activity in 38 African countries (2005-2024), we find that lending first rises and then falls with accumulated contractor footprint. Larger prior contractor footprints are associated with a higher probability of loan distress, and steeper post-2020 retrenchment. Our study highlights how creditors' institutional capacity—not just their strategic intent—shape sovereign credit. Firms can play an outsized intermediary role where creditor capacity is weak, introducing incentive distortion in sovereign lending processes.

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1. Introduction

Sovereign lending reflects not only creditor states' strategic preferences over resource allocation but also their capacity to assess borrowers and projects. Creditors face at least two related information problems. First, they must assess a borrower's willingness and capacity to repay, drawing on its borrowing history and aggregate fiscal conditions. Second, where lending is organized around specific projects, they must assess how project costs, expected revenues, and implementation risks affect the borrower's fiscal burden and ultimately repayment risk. Research on sovereign debt has examined the first problem extensively: how borrowers establish commitments to repay, how creditors assess and price sovereign risk, and how the two sides bargain when repayment problems arise (Stasavage 2003; Schultz and Weingast 2003; Tomz 2007; Panizza et al. 2009). Yet we know far less about the second: how creditors organize the production of project-level information, and how this organizational capacity shapes loan supply.

Project-level information is often local and technical, costlier to acquire than the standardized information conveyed by a sovereign bond, and creditors have long relied on intermediaries to supply it. Historically, prestigious underwriters such as Rothschild helped certify which sovereigns were bankable during the first era of sovereign bond finance (Flandreau and Flores 2009). Contemporary sovereign-finance scholarship also recognizes the important roles of firms, but generally as providers of capital, participants in crisis bargaining, or downstream implementers (Lipson 1985; Aggarwal 1996). Even research showing that

contractors can influence multilateral loan *disbursement* begins after a project has been defined and financing is already in place (Malik and Stone 2018). We know much less about firms' upstream role in shaping which projects enter the lending pipeline in the first place. This omission matters because firms may profit from the transactions they help construct, allowing their commercial incentives to shape the information they supply.

These informational and organizational problems are particularly relevant in the context of China, which has emerged as a leading bilateral creditor. This is not only because many of China's borrowers lack public sovereign ratings, thus limiting standardized information about risk (Landry and Tang 2026), but also because Chinese overseas lending is dominated by project financing (Malik et al. 2021). Existing studies have explained Chinese lending through Beijing's strategic and commercial considerations, borrowers' preferences, and the distinctive terms of Chinese finance (Kaplan 2021; Dreher et al. 2022; Cormier 2023; Moura 2025). Recent work also shows that China's presence complicates coordination with traditional creditors in the Paris Club (Ballard-Rosa et al. 2026). Yet, this scholarship generally takes for granted China's *capacity* to allocate financing according to its strategic preferences, even though its major lending banks entered global sovereign finance with comparatively short overseas experience, limited project-appraisal capacity, and weak integration into the information-sharing networks of established creditors (Chen 2024; Bunte and Kinne 2025). We therefore ask a prior question: how do Chinese lenders identify and evaluate the projects they finance?

We argue that China addressed these informational and organizational constraints through an arrangement we call *delegated origination*, in which lenders relied on internationally active project contractors to identify projects and supply information that lenders could not easily acquire themselves. Contractors knew local project conditions better than Chinese lenders did and Chinese financing procedures better than borrower-country officials did. The arrangement

grew out of China's developmental strategy, limited appraisal capacity, and fragmented lending governance. Yet because contractors profited from project approval and implementation while lenders retained long-term repayment risks, delegation could create principal-agent problems with consequences for portfolio quality and subsequent lending.

Our theory interprets the rapid expansion of Chinese lending through the mid-to-late 2010s and its subsequent sharp contraction (Horn et al. 2025) as successive implications of delegated origination. During the expansion phase, the interests of contractors and lenders were aligned around internationalization, allowing the project pipeline to grow rapidly. As earlier loans entered repayment, however, their performance revealed weakness in portfolios assembled through this arrangement. Our theory therefore predicts that lenders should retrench most sharply in markets where delegated origination had previously played the largest role. We conceptualize this response to revealed portfolio performance as creditor updating.

We evaluate this argument with qualitative and quantitative evidence from Chinese lending in Africa. We first use fieldwork-based case studies from Zambia and Nigeria to trace the political-economic process of delegated origination and document how contractor firms shape project identification and loan origination in unfamiliar overseas markets. We then assemble an original panel of Chinese contractor activity in 38 African countries from 2005 to 2024 and link it to country-year lending and loan-level distress. The evidence follows our expected temporal sequence. At lower levels, accumulated contractor presence is associated with more subsequent Chinese lending, but this relationship reverses as the contractor footprint grows. Larger contractor footprints are also associated with a higher probability of subsequent loan distress; accumulated portfolio distress predicts lower subsequent lending; and the post-2020 contraction in China's share of sovereign lending is larger in markets with greater prior contractor exposure. The results remain robust across alternative specifications.

Our study makes two theoretical contributions. First, we shift the international political economy (IPE) of sovereign debt upstream, from the terms and enforcement of financial bargains to the organizational construction of loan supply. Our account shows that creditors' strategic preferences and borrower characteristics do not translate automatically into transactions. They operate through institutions and actors that identify opportunities, generate information, and determine which proposals reach lenders. This perspective is especially important as emerging creditor states become major providers of global finance (Morgan 2023), but it applies more broadly wherever official finance is tied to national firms and lenders depend on those firms for project development.

Second, we extend theories of delegation and economic statecraft by identifying contractors as origination agents inside creditor states. Existing work explains why states delegate to agents with specialized information (Nielson and Tierney 2003; Hawkins et al. 2006) and how private actors shape official lending once a transaction exists, whether through resources on which international financial institutions depend (Gould 2006) or lobbying over disbursement (Malik and Stone 2018). However, we identify delegation that operates before a transaction exists. The agent, a project contractor, does not merely implement policy or lobby over an approved loan; it helps produce the information and project pipeline on which the allocation decision rests. This delegation also occurs inside a creditor state's own lending system rather than between member states and an international organization. This temporal misalignment links the domestic organization of lending to a broader credit cycle of expansion, portfolio deterioration, and retrenchment. It also restores firm agency to sovereign lending before the formal interstate bargain begins.

The remainder of the paper proceeds as follows: Section 2 develops the information constraint facing emerging creditor states. Section 3 explains the origins and operation of

delegated origination in China. Section 4 derives its implications for lending expansion, portfolio risk, and creditor updating. Section 5 presents process evidence from Zambia and Nigeria. Section 6 introduces our data and empirical strategy. Section 7 presents the results, and Section 8 concludes with the broader implications of the study.

2. Information Constraint of the Emerging Creditor State

Assessing a borrower's aggregate creditworthiness is the better-understood problem. Dispersed investors use fiscal indicators, sovereign ratings, political institutions, reputation, and observations of comparable countries to infer borrower quality and impose market discipline (Mosley 2003; Tomz 2007; Gray and Hicks 2014; Brooks et al. 2015; DiGiuseppe and Shea 2016). The intensity of this discipline varies over global capital cycles (Zeitz 2022), while regime type, legal institutions, and partisan politics shape sovereign ratings and market assessments (Beaulieu et al. 2012; Biglaiser and Staats 2012; Barta and Johnston 2018). Electoral incentives also shape when governments borrow (Kaplan and Thomsson 2017). Research on official bilateral finance, meanwhile, emphasizes how creditors' strategic and geoeconomic interests shape allocation (Alesina and Dollar 2000; Dreher et al. 2018; Schneider and Tobin 2020) and how borrowers choose among creditors and financing arrangements (Bunte 2019; Ballard-Rosa et al. 2022; Mosley and Rosendorff 2023; Zeitz 2024). Neither body of work has closely examined the institutional capacity through which a creditor generates project-level information before allocating finance—the capacity on which project-based lending depends.

That capacity should not be treated as a natural attribute of wealthy or powerful states. Classic IPE demonstrates that international financial capacity is historically constructed through domestic institutions, regulatory rules, professional expertise, and public-private networks (Helleiner 1994; Germain 1997). Established creditors—typically members of the Development

Assistance Committee (DAC) of Organisation of Economic Co-operation and Development (OECD)—have accumulated organizational infrastructures for risk assessment, project appraisal, information exchange, and creditor coordination. Their export credit agencies, development institutions, ministries, and private financial actors operate within dense networks of precedent and professional knowledge (Dietrich 2021). These arrangements do not eliminate uncertainty or political influence, but they make the production and verification of information more institutionalized. The rise of emerging creditor states, whose domestic governance institutions are still evolving, therefore calls for rethinking the assumption of creditor capability.

China's rise as a leading bilateral creditor has led many to examine how its authoritarian regime and geopolitical interests shape its aid or loan allocation (Bader 2015a, 2015b; Dreher and Fuchs 2015; Dreher et al. 2018; Zeitz 2025). Reflecting the general trend in the sovereign lending literature, researchers remain concerned with the Chinese state's strategic choices without questioning its capacity to implement them. This assumption sits uneasily with studies of China's domestic financial bureaucracy, which highlight bureaucratic fragmentation and incoherent policy implementation across banks, ministries, regulators, and state-owned firms (Bräutigam 2022; Hameiri and Jones 2024; Wu 2026), and with China's relatively short history of market transition, global economic integration, and banking modernization: China's financial institutions are "latecomers" to global finance, often imitating Western counterparts as they start to engage internationally (Chen 2024). This constraint is less visible in the purpose-built multilateral institutions China later helped establish. Institutions such as the Asian Infrastructure Investment Bank (AIIB) recruited international personnel and adopted formal appraisal and governance procedures partly through interaction with established multilateral practices (Qian et al. 2023). China's bilateral lending, by contrast, remained embedded in domestic institutions characterized by unfamiliarity with international practices and evolving regulatory environment.

Late entrants also have less access to external information networks. Bunte and Kinne (2025) show that bilateral creditors infer information from the lending choices of political partners and rivals. China could draw less readily on such peer signals when it expanded in markets receiving limited finance from established Western creditors. It also operated outside many arrangements through which established creditors exchange information and coordinate risk, including the OECD-DAC, the Paris Club, and the OECD Arrangement on Officially Supported Export Credits (Mahdavi et al. 2026). The export-credit regime developed common disciplines over financing terms and tied procurement while supporting professional exchange among participating creditors; China's emergence as a major nonparticipant strained that regime (Hopewell 2021). While China has increasingly engaged established coordination mechanisms, much of that engagement has arisen in response to debt restructuring rather than during project origination and has in general remained frictional (Ye 2023; Huang and Bräutigam 2025).

We therefore conceptualize China's emerging creditor state as a strategic, yet informationally bounded, actor. Chinese authorities retain formal approval power and pursue commercial, developmental, and diplomatic objectives. But their ability to implement those objectives depends on how information about borrowers and projects enters the lending system. Collateralization, credit insurance, and sovereign guarantees can mitigate particular losses, but they do not independently generate local project knowledge or verify the assumptions embedded in a proposal (Landry and Tang 2026; Bräutigam and Huang 2026). An informationally bounded creditor must either build this capacity internally, obtain it from established external institutions, or rely on intermediaries that already operate in the target markets. In China's tied project-finance system, internationally active contractors became those intermediaries.

3. Institutional Roots of Delegated Origination

China's bilateral lending is predominantly project based: loans fund specific projects rather than transferring unrestricted budget resources (Malik et al. 2021). Much of this finance is also tied to procurement from Chinese contractors, a form of "commercial conditionality" despite that links the provision of credit to the internationalization of national contractors and the export of Chinese equipment and materials (Kaplan 2021; Zhang 2025). These institutional features make contractors part of the lending process before implementation begins.

These features call into question the typical conceptualization of sovereign lending as an interstate financial relationship between unitary actors. Classic IPE work did not treat sovereign debt as a purely interstate relationship. Research on international banking and the 1980s debt crisis placed commercial banks, creditor committees, creditor governments, and international institutions at the center of debt negotiation and crisis management (Lipson 1985; Aggarwal 1996). Yet these actors were studied primarily as providers of capital, participants in creditor coordination, or bargainers after debts had been contracted. In the coding of Chinese sovereign lending, the state-centric focus has been the dominant perspective. The common conceptualization of Chinese loans as "official development assistance (ODA)-like" or "other official flows (OOF)" can direct attention toward the final source of finance and away from the market activities that produced the underlying project. Most Chinese project loans are not allocated like grants from a centralized aid budget (Bräutigam 2011; Custer et al. 2023; Chen 2025; Wu 2026). They emerge through interactions among borrowers, banks, and ministries, and the firms seeking contracts.

We argue that this phenomenon is a consequence of the informational constraint in China's emerging creditor state, as discussed in the previous section. The dominance of project

loans tied to Chinese contractors reflect an institutional equilibrium in China's domestic political economy. Specifically, this equilibrium is shaped by firms' information advantage compared to lenders, reinforced by an incentive structure that aligns lenders' interest with firms' interest within a certain period. Rather than simply private creditors or downstream beneficiaries of an already allocated loan, contractor firms in our account are upstream organizational intermediaries that shape what becomes the subject of negotiation before the formal interstate bargain begins.

Delegated origination belongs to a broader class of delegation problems in international finance. IR scholarship shows that principals delegate authority to agents because agents possess expertise or local information that principals cannot efficiently generate, but delegation creates opportunities for agency slack and preference divergence (Nielson and Tierney 2003; Hawkins et al. 2006; Honig 2018). Research on the IMF and World Bank further shows that dependence on private financiers and contractors can allow commercial actors to shape institutional decisions (Gould 2006; Malik and Stone 2018). Our mechanism differs in two respects. First, delegation occurs within the creditor's own lending system rather than from member states to an international organization. Second, the agent supplying project information is also positioned to receive the implementation contract, linking informational authority directly to the commercial payoff from loan approval.

Chinese contractors were able to assume this role because they internationalized before the country's major lenders. These firms originated as engineering units within line ministries and provincial governments during the Maoist era, where they implemented overseas aid projects across the Global South (Zhang 2021).² Following the reform era, these units were corporatized and encouraged to compete for international contracts, precisely because they possessed

² For example, China Civil Engineering Construction Corporation (CCECC), a leading contractor firm active overseas, originated as the foreign aid unit within China's Ministry of Railways, which was responsible for delivering the famous Tanzania-Zambia Railway in the 1970s.

capabilities and international networks that few other Chinese organizations had developed under Mao's isolationism. Throughout the 1980s and 1990s, leading contractors accumulated local relationships, technical experience, and overseas business-development teams cross developing countries—while China's banks remained domestically oriented. By 2002, 43 Chinese firms ranked among the world's largest 225 international contractors; by 2005, major Chinese contractors were active in at least 98 foreign markets.³ By contrast, the China Development Bank and Export-Import Bank (Eximbank)—two leading lenders in China's overseas finance—were established only in 1994 and did not begin substantial overseas lending until the 2000s (Rudyak and Chen 2021).

The asymmetry in overseas market knowledge between contractor firms and Chinese lenders gave rise to the dynamic we call *delegated origination*. Rather than building pipelines entirely through direct engagement with prospective borrowers, Chinese lenders often received projects that contractors had already discussed with host-state agencies and prepared through feasibility studies, cost estimates, and preliminary designs. Contractors translated local infrastructure demands into proposals that could navigate Chinese financing procedures (Tang 2026). Through this delegation, firms became the organizational intermediaries through which market intelligence was translated into sovereign lending decisions, shaping how, when, and where Chinese credit was deployed.

Contractors held an informational advantage over both lenders and borrowers in the loan origination process. Relative to Chinese lenders, they possess more detailed knowledge of local demand, political relationships, construction conditions, and project costs. Relative to borrowing governments, they possessed greater knowledge of China's fragmented and opaque financing

³ Computed based on data from Engineering-News Record, The Top 225 International Contractors, 2003 and 2006.

bureaucracy. Different loan instruments require approval from different authorities in the Chinese bureaucracy, including the Ministry of Commerce, the China International Development Cooperation Agency, and the Ministry of Finance, adding to the procedural uncertainty (Wu 2026). External actors had limited access to precedents or loan terms, which is another key distinction from established bilateral and multilateral creditors, whose rules and procedures are more developed, transparent, and with abundant precedents to refer to (Gelpern et al. 2023). Contractors could therefore broker between two informationally constrained principals. A Chinese Ministry of Commerce official described the practice directly:

“Companies eager for contracts complete application themselves ...they prepare and submit materials [on behalf of the borrowing country]. Even some feasibility studies are carried out by the companies themselves...[The phenomenon of company-led projects] has never been fully banned, because if everything were done strictly by the book, many projects might never get off the ground.”⁴

This arrangement initially aligned with China’s broader developmental strategy. Since the late 1990s and in response to China’s accession to the WTO, Chinese government has been actively encouraging internationalization of Chinese firms, known as the “Going Global” or “Going Out” policy. In this context, both firms and banks are incentivized to demonstrate rapid international expansion, and few international economic activities provide as immediately feasible and visible a vehicle as overseas project contracting—which not only involves Chinese contractors building high-profile infrastructure projects (Strange 2023), but also promotes the export of China’s capital goods, including machinery, equipment, and construction materials such as steel. It reflects an active industrial policy of leveraging contracting capacity to promote

⁴ Interview 2022121401, online.

capital-goods exports (Zhang 2025). Our interviews with major Chinese contractors also confirm that the newly available state-backed loans became a critical “window of opportunity” for firms’ international expansion, especially after some of them were shut out of multilateral financing after World Bank debarment due to collusive bidding (World Bank 2019).⁵

Within this delegated institutional environment, firms are far from equal. China’s state capitalism is organized hierarchically, with “national champion” state-owned enterprises (SOEs) controlled by the central government, typically operating in strategic sectors such as infrastructure, being especially well connected politically and enjoying privileged access to finance and policy support (Lin and Milhaupt 2013; Pearson 2015; Leutert 2024). In the context of imperfect information about project quality, lenders are also incentivized to support projects involving large SOEs, which are politically safer to justify in case of bad loan. Large SOEs’ information advantage is thus mutually reinforcing with their political status within China’s economic governance. This argument is supported by our test reported in Appendix A: projects contracted to central government SOEs received significant larger loans compared to other firm types after controlling for their technical competency.

Delegated origination facilitates rapid lending expansion but also creates principal-agent problems (Figure 1). Contractors were rewarded primarily for securing and executing construction contracts, while lenders’ returns depended on repayment over a much longer horizon. Lenders retained formal approval authority, but their dependence on contractor-supplied information limited their capacity to verify project assumptions independently. As a result, project proposals from the contractors can present overly optimistic estimate of costs, revenues, or fiscal implications. Bribery and deliberate misrepresentation represent extreme forms of this problem. In one high-profile case, executives at a major Chinese contracting firm

⁵ Interview with a manager of a leading Chinese contractor firm, May 21, 2022, online.

were convicted of bribing officials at China Eximbank and the Ministry of Commerce to secure approval for a loan package, part of which was used to bribe borrower-country officials (Huanggang Intermediate People’s Court of Hubei Province 2020).

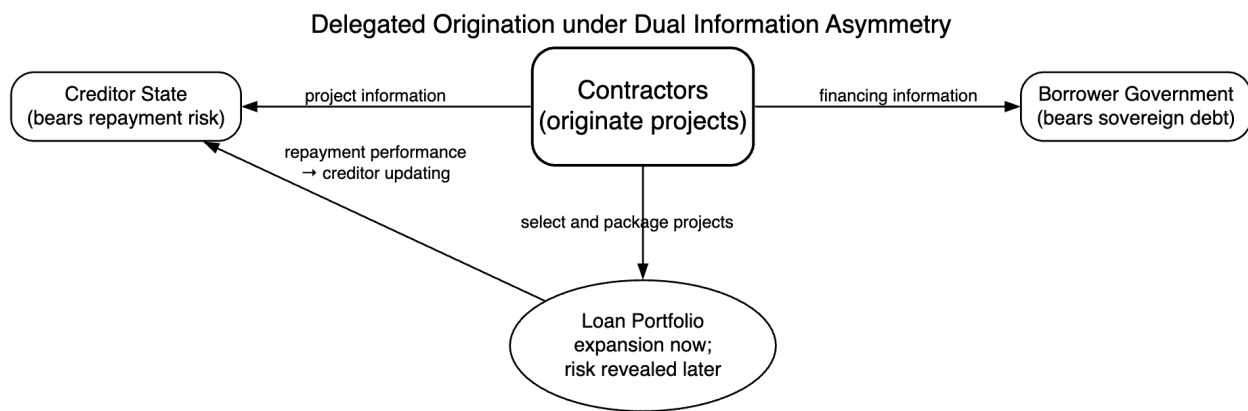


Figure 1.

Yet, this expansionary mechanism gradually unravels as contractors’ and lenders’ incentives diverge. While contractors continue to pursue new project contracts and seek financing to support them, lenders increasingly confront repayment risks as earlier loans move beyond their initial grace periods. As lending portfolios begin to show distress, lenders receive new information about the risks embedded in contractor-originated projects. Portfolio deterioration not only limits the resources available for new lending but also prompts lenders to reassess their reliance on delegated origination. As a result, new lending commitments decline sharply while lenders seek alternative arrangements for project origination and appraisal.

4. Delegated Origination: Sequential Implications

The mechanism we outlined implies a dynamic sequence. We decompose it into three analytically distinct yet sequential implications—self-limiting market expansion, revelation of portfolio quality, and lender learning—each of which yields a testable hypothesis. Together, these propositions describe how delegated origination can support rapid lending expansion

while generating risks in a portfolio whose quality becomes observable only over time. Our hypotheses evaluate observable implications of this proposed sequence.

4.1. Self-limiting Market Expansion

At the market level, delegated origination implies that contractor presence should eventually become self-limiting. Early in a market's opening, we expect contractor entry and lending to rise together: contractors identify projects, prepare feasibility study, and connect borrowers to Chinese finance. More contractors may enter when approved loans signal Chinese lenders' willingness to support a given market. However, as repayment performance becomes observable, lenders update their assessments of markets in which contractors have become heavily entrenched. Contractor entry therefore ceases to generate additional lending opportunities. The relationship between contractor presence and subsequent lending should therefore be non-monotonic: positive or flat while markets are lightly penetrated, and negative once presence has accumulated.⁶

Hypothesis 1: Cumulative Chinese contractor presence has an inverted-U relationship with future Chinese lending; in heavily penetrated markets, the marginal relationship is negative.

4.2. Revelation of Portfolio Quality

The true bankability of projects in the lending portfolio begins to be revealed as they enter the repayment period, typically after the five-year grace period common in Chinese loans. Loan distress provides an imperfect *ex-post* indicator that projects were less financially viable than expected at origination. We predict that conditional on observed country and loan characteristics,

⁶ This prediction differs from two alternative interpretations. If contractor presence proxies for market size or infrastructure demand, additional contractors should predict more subsequent lending throughout; and if the pattern reflected the market's overall project stock, the accumulated presence of non-Chinese international contractors should predict the same decline. Neither should hold under our account.

distress should be more common among loans committed in markets with greater accumulated contractor presence. Because contractors are rewarded for securing construction contracts rather than loan performance, maintaining deal flow may encourage continued origination even after the most commercially viable opportunities have been exhausted. We therefore expect the marginal project brought to lenders in a crowded market to be weaker on average.

One may argue that a larger number of contractors in the same market can enhance competition and mitigate the information asymmetry. This is not necessarily true. Competition may help expose weaknesses in proposals already under review, but it cannot undo the distortions introduced earlier at the origination stage. As these markets become ultra-competitive, firms can resort to mutual vilification (Hu 2014), producing untrustworthy information that lenders would rather avoid. Under these conditions, an accumulation of contractors need not improve overall deal quality and may instead accelerate the exhaustion of viable projects.

Hypothesis 2: Loans originated in markets with greater accumulated contractor presence are more likely to enter financial distress within a fixed post-commitment window, and portfolio distress accumulates in the markets where contractors are most entrenched.

4.3. Lender-side updating and retrenchment

Information generated through repayment may allow the creditor state to update its assessment of overseas markets. As more Chinese firms become active in a market, the supply of information also diversifies, contributing to more balanced signals as firms compete to originate new loans; over time, lenders should become increasingly skeptical of new commitments proposed by established contractors. Our fieldwork captures this updating directly: in a 2022 interview, the general manager of a Chinese contractor firm in Ethiopia explained that

contractor-initiated projects outnumbered those proposed by the Ethiopian government, and that the China Eximbank had already halted new lending commitments to Ethiopia because of the overdue debt-service obligations.⁷

We focus here on the retrenchment of new lending. If lenders learn from revealed portfolio performance, two patterns should follow. First, accumulated portfolio distress should predict lower subsequent lending, over and above the effect of contractor presence itself. Second, although both borrower-side adjustment and lender-side updating may contribute to the decline in new lending, delegated origination specifically predicts that lender responses should be strongest in the markets where contractor-led expansion had previously been greatest — so the post-2020 contraction should be concentrated in contractor-dominant markets.

Hypothesis 3a: Accumulated portfolio distress predicts lower subsequent Chinese lending.

Hypothesis 3b: The post-2020 contraction is concentrated where pre-existing Chinese contractor dominance was greatest.

5. Illustrative Process Evidence: Two Routes to Delegated Origination

Before turning to the aggregate tests, we draw on fieldwork in Zambia and Nigeria to show how delegated origination operated at the project level. The cases trace two routes into the lending pipeline: in Zambia, a contractor identified an underserved market niche and actively pulled sovereign financing toward it. In Nigeria, a contractor converted a state-opened financing window into a sequenced railway program. These cases illustrate the upstream mechanism before we move to test cross-national prevalence.

⁷ Interview with the General Manager of a Central Chinese SOE, Addis Ababa, July 4, 2022.

5.1. Zambia: Contractor-created origination under weak screening

When Chinese contractor AVIC arrived in Zambia in 2009, the Link Zambia 8000KM road program had stalled due to funding shortage. Rather than simply competing for a project already prepared by the Zambian government, AVIC identified a different opportunity. Zambia's infrastructure strategy had focused primarily on intercity highways, while Lusaka's urban road network remained underserved. AVIC proposed shifting attention toward urban roads and mobilized Chinese financing for what became the Lusaka 400KM project, ultimately securing more than US\$240 million for its third phase.

AVIC's role placed it between two parties with different information constraints. The Zambian government lacked the technical and planning capacity to develop a pipeline of finance-ready projects, as well as information about Chinese lending procedures, while Chinese lenders had limited knowledge of local infrastructure demand and implementation conditions. AVIC supplied both sides with information that the other could not easily obtain. Referring to the shift toward urban roads, an AVIC manager recalled: *"This was crucial, and I think it might have been our idea."*⁸ The company then prepared project feasibility studies and presented the proposal to China Eximbank. In this way, AVIC did not merely respond to a financing decision but helped define the project over which the lending decision would be made.

Reliance on contractor-supplied information also weakened independent scrutiny. A Ministry of Finance official recalled that "there was no feasibility study before the loan was signed,"⁹ while another explained that feasibility studies were sometimes completed only after projects had already been approved.¹⁰ Concerns extended to project pricing. As a senior civil engineer put it, "It is easy to inflate the price,"—by overstating the volume of gravel, for

⁸ Interview. Market Manager, AVIC, June 6, 2022. Lusaka.

⁹ Interview, Director of Monitoring & Evaluation, Ministry of Finance, May 11, 2022, Lusaka.

¹⁰ Interview, Former Head, Ministry of Finance PPP unit, May 19, 2022, Lusaka.

example.¹¹ A Zambian official estimated that Chinese-financed roads cost approximately US\$1.1 million per kilometer, compared with roughly US\$800,000 for Indian-financed roads with similar technical specifications (Tang 2026). These comparisons cannot establish the appropriate price of any individual road, but they show the consequences of a process in which the contractor that supplied the project information also stood to receive the construction contract.

AVIC's role therefore went beyond implementing a project selected by the two governments. By identifying the urban-road niche, preparing the proposal, and supplying much of the information on which approval rested, the company shaped what entered China's sovereign lending pipeline in Zambia. The same informational position limited the capacity of the borrower and lender to scrutinize project cost and feasibility independently.

5.2. *Nigeria: from a state-opened window to a contractor-driven pipeline*

Nigeria illustrates a slightly different route to delegated origination. Here, economic diplomacy created the initial opportunity, but it did not determine which project would ultimately be funded. During President Hu Jintao's visit to Nigeria ahead of the landmark 2006 Forum of China-Africa Cooperation (FOCAC) Summit, China Eximbank signed a memorandum of understanding (MOU) with Nigeria's Ministry of Finance that made Chinese financing available without specifying which projects would be funded. The agreement opened a window through which contractors could build the subsequent pipeline.

China Civil Engineering Construction Corporation (CCECC) seized this opportunity. Having operated in Nigeria since 1981 and accumulated extensive relationships with Nigerian political and business elites, CCECC mobilized both its Beijing headquarters and Nigerian office to secure Chinese financing for the Lagos–Kano Standard Gauge Railway. The resulting US\$8.3

¹¹ Interview, Senior Infrastructure Manager, EU Delegation to Zambia. May 5, 2022. Lusaka.

billion contract was the largest overseas project awarded to a Chinese contractor at the time (Zhao et al. 2006).

CCECC subsequently helped reshape the lending pipeline as circumstances changed. When the original railway project proved too large to implement as a single package, the company actively guided its restructuring. As one CCECC manager explained, “During the implementation process, we also realized that building the entire railway line all at once was overly optimistic... We did have a plan, and we guided [the Nigerian government] accordingly.”¹² Eximbank subsequently financed successive phases of the railway through separate loan agreements, while CCECC remained the implementing contractor. The case illustrates that Chinese contractors not only identified projects for financing but also actively reconfigured lending portfolios as market conditions evolved.

The two cases begin from different openings but converge on the same mechanism. AVIC generated a proposal from the market upward; CCECC entered through a financing window created by economic diplomacy. In both cases, the contractor’s local knowledge and command of Chinese financing procedures allowed it to shape the project pipeline before the creditor state made a formal allocation decision. Our quantitative analysis asks whether the aggregate footprint left by this system is associated with the lending and repayment patterns implied by our theory.

¹² Interview with manager at CCECC, June 29, 2022, Abuja, Nigeria

6. Research Design

6.1. Data

Measuring the Contractor Footprint

We measure Chinese infrastructure-contractor activity using the *Engineering News-Record* (ENR) Top 250 International Contractors list. Beginning in 2005, ENR’s “Where They Worked” bulletin identifies the countries in which ranked contractors operate. After linking these records to our lending outcomes and covariates, our analytic panel covers 38 African countries from 2005 to 2024.¹³ Although the records are self-reported, ENR is widely used in the construction industry and has been validated against information disclosed by publicly listed firms (G. Wang et al. 2020; Niu et al. 2025; Lu 2014). The top 250 threshold excludes smaller firms, but this selectivity is appropriate for our argument: delegated origination requires firms with sufficient organizational resources, political access, and financing experience to assemble projects and navigate Chinese state lending procedures.

We aggregate individual firms to their ultimate parent groups. Overseas projects are often executed by subsidiaries or specialized bureaus, whereas strategic expansion, political access, and relationships with Chinese lenders are organized through the parent-group level—many headquartered in Beijing. We identified the ultimate parent of each ENR-listed Chinese firm using company reports and official profiles, producing a crosswalk of 126 firms. Subsidiaries controlled by the same parent are treated as one group. When no parent could be identified, we retain the firm as an independent entity. This rule is more likely to overstate than understate the number of distinct parent groups in a market.

¹³ The top ten most active Chinese contractors in Africa between 2005 and 2024 are reported in Appendix Table B1.

The resulting measure exhibits substantial cross-national and within-country variation, which provides leverage for examining how lending changes as contractor footprints accumulate. Chinese parent-group presence ranges from 0 to 44 across the 38 countries, with a mean of 15.0 and a standard deviation of 10.3. Average within-country variation over the period is 6.6 groups (Appendix Figure B1). The number of Chinese firms active somewhere in the sample rises from 39 in 2005 to 65 in 2020 and remains above 60 through 2024 (Appendix Figure B2). By comparison, the number of non-Chinese international contractors active in African markets remained more stable over the same period. Appendix Table B1 lists the ten most active Chinese companies by African country-year frequency.

Our principal measure is the cumulative contractor footprint: the number of distinct Chinese parent groups observed in a country up to year t . This measure captures the accumulated depth of the origination channel that Hypotheses 1 and 2 test. For the post-2020 analysis, we also use contractor dominance, measured as the Chinese share of all active ENR contractors in a country. The footprint captures how crowded the delegated origination channel has become in absolute terms, while the dominance captures the country's relative exposure to Chinese contractors compared with other international firms. We use dominance only when the empirical question concerns whether the lending contraction was larger in markets that had depended more heavily on the delegated-origination channel, which Hypothesis 3b tests.

Lending and Portfolio-Performance Data

Our country-year lending outcomes come from the African Debt Database (ADD), which records over 50,000 loan and bond transactions involving 54 African countries between 2000 and 2025 (Manger et al., 2025). Its broad creditor coverage allows us to calculate China's share of total sovereign borrowing in each country-year. One of the Hypotheses 1 specifications and

the Hypothesis 3b contraction test use this share measure, which requires comprehensive coverage of both Chinese and non-Chinese sovereign finance. The ADD provides such all-creditor coverage for Africa; to our knowledge, no comparable transaction-level database provides consistent country-year coverage for other regions. Chinese loan volumes and loan-level distress can in principle be examined globally, but the share specifications are the binding constraint on geographic scope.

Loan-level distress, sector, and implementing-agency variables come from AidData's China's Loans and Grants (CLG) Global Dataset v1.0 (Dreher et al. 2022). This produces a loan-level file that links the contractor footprint at commitment to repayment performance over a common post-commitment period. Appendix Table A2 validates this contractor-matched sample directly against the ENR panel: the large majority of AidData-recorded Chinese implementing contractors, and an even larger majority of the loan and grant projects they carry, belong to ENR-listed parent groups, confirming that the flow (AidData) and stock (ENR) data sources capture largely the same corporate population.

We measure borrower fiscal conditions using World Bank indicators for fiscal balance,¹⁴ public debt relative to GDP, and external debt to reserves (Kose et al. 2022). Additional controls include corruption, natural-resource rents, and commodity terms of trade, all of which may shape the demand for and availability of Chinese finance (Bräutigam 2009; Bräutigam and Gallagher 2014; Isaksson and Kotsadam 2018; Gruss and Kebhaj 2019; Landry and Tang 2026). We use the World Bank Contract Awards Database to measure contractors' experience winning competitively procured projects, both in the borrower country and globally. Supplementary tests draw on the SAIS-CARI (2024) Chinese Contract Revenues in Africa database, the Boston

¹⁴ Measured as total government revenues minus total government expenditures as a percentage of GDP.

University Chinese Loans to Africa database, Afrobarometer survey rounds 6 through 9 (2014–2023) measurements on public sentiment toward China, and the HRV debt-transparency index (Hollyer et al. 2024).

Although our empirical evidence focuses on Chinese lending to Africa, the argument is not region-specific. We expect delegated origination to be most consequential where official project finance is tied to creditor-country contractors, lenders have limited independent appraisal capacity, and repayment performance is revealed only with delay. These conditions are especially pronounced in Africa. Chinese contractors have operated in the region since the 1980s, building on connections established through Mao-era aid programs (Zhang 2021). Since 2014, Chinese contractors have accounted for more than half of the African revenues reported by ENR’s Top 250 International Contractors.¹⁵ Their sustained local presence can give them an informational advantage over China-based lenders regarding project conditions and local political networks, while their familiarity with Chinese financing procedures can give them an advantage over borrowing-country officials.

6.2. Empirical Strategy

The empirical analysis follows the sequence implied by the theory. We first ask whether the accumulated contractor footprint predicts the subsequent path of Chinese lending. We then test whether loans committed in markets with a larger footprint are more likely to enter financial distress. Finally, we examine whether revealed portfolio distress predicts lower later commitments.

¹⁵ Authors’ calculation based on ENR Top 250 International Contractors reports, 2003-2025.

Contractor Saturation and Future Lending

We first estimate whether accumulated Chinese contractor presence predicts future Chinese lending:

$$ChineseLoans_{i,t+k}$$

$$= \beta_0 + \beta_1 ContractorFootprint_{it} + q FiscalSpace_{it} + \rho OtherBorrowing_{i,t+k} + \alpha_i + \gamma_t + \epsilon_{i,t+k}, \quad k \in [1, 2]$$

The dependent variable is Chinese lending to country i one or two years ahead, measured as the log value of commitments, China's share of total sovereign borrowing, or the count of Chinese loan commitments. Country fixed effects absorb time-invariant differences across borrowers, while year fixed effects absorb common shocks to Chinese overseas lending. The models include fiscal balance and non-Chinese sovereign borrowing, and cluster standard errors by country.

Hypothesis 1 predicts a non-monotonic relationship rather than a constant marginal effect. We therefore estimate a quadratic specification and calculate the implied turning point. We also divide the sample at alternative cutoff years to assess whether the relationship changes as the contractor footprint accumulates. The quadratic and split-period specifications provide the direct tests of the lending-cycle argument; the linear models summarize the average association across alternative lending outcomes.

Contractor Footprint and Loan Distress

We next estimate whether loans committed in markets with a larger contractor footprint are more likely to enter financial distress:

$$Distress_{lit} = \beta_0 + \beta_1 ContractorFootprint_{it} + \delta X_{lit} + \alpha_i + \gamma_t + \epsilon_{lit}$$

In this linear probability model, $Distress_{lit}$ indicates whether loan l enters financial distress within five years of commitment. We include country and commitment-year fixed effects, as well as loan size, sector, contractor ownership, and two measures of contractor technical competency independent of Chinese lending system—the contractor’s prior record of winning World Bank contracts in the same country and its cumulative World Bank contract record globally. A positive coefficient would indicate that loans originated in contractor-saturated markets are more likely to enter distress within five years. We also aggregate the loan data to the country-year level, measuring the share of a country’s cumulative Chinese portfolio in distress by both loan count and constant-dollar amount. These measures capture when repayment problems become sufficiently widespread to enter a country-level credit assessment.

Portfolio Distress and Subsequent Lending

Finally, we test whether revealed portfolio performance predicts subsequent Chinese lending:

$$\begin{aligned} ChineseLoans_{i,t+2} &= \beta_0 + \beta_1 ContractorFootprint_{it} + \beta_2 PortfolioDistress_{it} + q FiscalBalance_{it} \\ &+ \rho OtherBorrowing_{i,t+2} + \alpha_i + \gamma_t + \epsilon_{it} \end{aligned}$$

Portfolio distress is the count- or amount-weighted share of a country’s cumulative Chinese loan portfolio that has entered distress by year t . The model asks whether information revealed through repayment predicts Chinese commitments two years later, conditional on the prior contractor footprint and observable fiscal conditions. A negative coefficient on portfolio distress is consistent with creditors revising their assessments as repayment problems become visible.

We supplement this test with a post-2020 comparison, given the existence of a sharp contraction in Chinese overseas lending after 2020 (Moses et al. 2023; Engel et al. 2024; Ray et al. 2026). The comparison asks whether the contraction in China's share of sovereign lending was larger in countries where Chinese contractors had previously been more dominant relative to other international firms. The exposure measure is contractor dominance as defined above—the 2015-2019 average share of active ENR contractors that were Chinese.¹⁶ We estimate this for the Chinese loan share, Chinese contractor presence, and Chinese construction revenues. If lending falls disproportionately in high-dominance countries while contractors remain active, the pattern is more consistent with lender retrenchment than with borrower exit. As additional corroboration, we examine whether contractor activity persists after Chinese lending declines. If lender updating contributes to the contraction, contractor activity need not decline alongside Chinese lending because projects may continue under previously committed financing or alternative funding sources. Persistent contractor activity following a decline in Chinese lending is therefore more consistent with lender-side retrenchment than with borrower-side adjustment as the primary driver.

7. Empirical Results

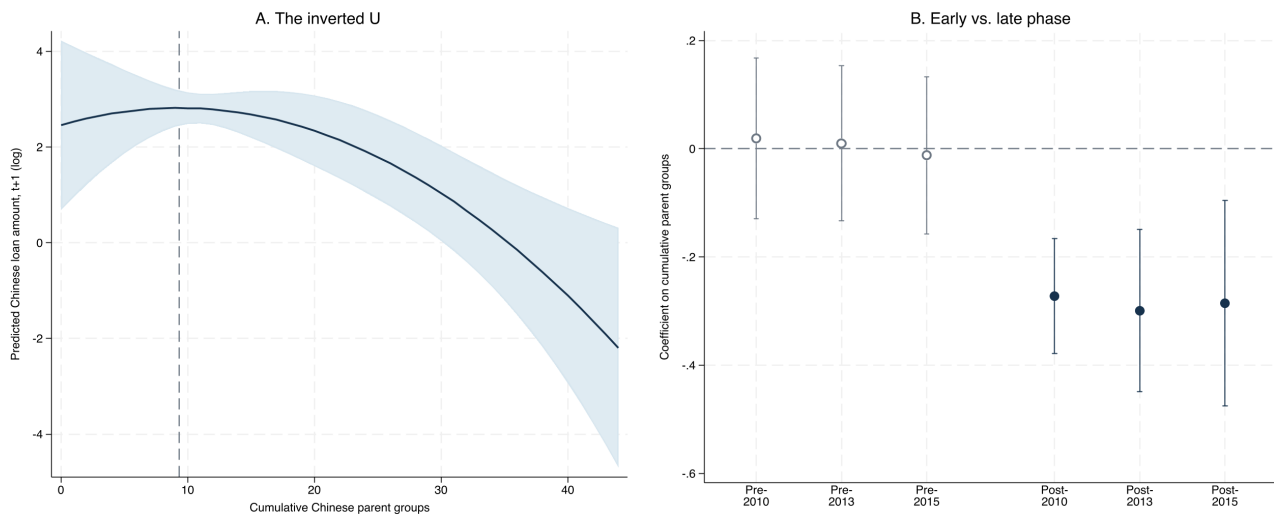
The three subsections examine the observable sequence anticipated by our theory: contractor saturation and the lending cycle, contractor footprint and portfolio performance, and portfolio distress and subsequent lending. They are then followed by a final subsection in which we engage alternative explanations from the borrower-side perspective.

¹⁶ The variable is standardized as a z-score in the estimation.

7.1. Contractor Footprint and the Lending Cycle

Hypothesis 1 predicts that contractor-led origination is initially expansionary but becomes self-limiting as the footprint accumulates. Figure 2 illustrates the results. Panel A includes a squared term to the commitment-amount specification and plots predicted lending across the observed range of Chinese parent groups. The fitted relationship rises with contractor footprint, peaks at around 9.3 cumulative parent groups, a threshold the median African market crossed before 2010,¹⁷ and declines thereafter (full estimates in Appendix Table B2).

Panel B tests whether the relationship also changes over time. We re-estimate the baseline model before and after cutoffs at 2010 (threshold identified above), 2013 (year of BRI announcement), and 2015 (year of BRI masterplan publication). The pre-cutoff coefficient is null at every cutoff. In the later periods, one additional parent group is associated with approximately 23 to 25 percent lower Chinese commitments two years later, regardless of where the sample is divided (Appendix Table B3).



Note: Panel A plots predicted Chinese loan commitments at t+1 (log) across the observed range of cumulative Chinese parent groups, from the quadratic specification (full estimates in Appendix Table B3); the shaded area is the 95% confidence interval, and the dashed line marks the implied

¹⁷ The turning point for the quadratic specification in Table 3 is calculated as $-\beta_{linear}/(2 \times \beta_{quadratic})$. Using the coefficients from the full model ($\beta_1 = 0.078$; $\beta_2 = -0.004$), the inflection point occurs at approximately 9.3 parent groups.

turning point (9.3 parent groups). Panel B plots the coefficient on cumulative parent groups from the baseline specification estimated separately before and after three cutoff years (dependent variable: $\ln(1 + \text{Chinese loan amount})$ at $t+2$; full estimates in Appendix Table B3). Hollow markers: pre-cutoff samples; solid markers: post-cutoff samples; vertical bars are 95% confidence intervals, standard errors clustered by country.

Figure 2. Contractor Presence and Future Chinese Lending: The Inverted-U

Because most country-years in our sample lie beyond the 9.3 cumulative parent groups threshold identified above, Table 1 reports a linear specification that estimates the average marginal relationship over the declining portion of the nonlinear relationship identified in Figure 2. One additional cumulative footprint is associated with about a one-percentage-point reduction in China's share of sovereign lending at both one- and two-year horizon. The amount estimates point in the same direction: Chinese commitments are about 14 percent lower one year later and about 16 percent two years later for each additional parent group. The number of new commitments falls by roughly 4 percent the following year.

Table 1. Contractor Presence and Future Chinese Loan Commitments

	(1)	(2)	(3)	(4)	(5)	(6)
	Lag for one year ($t+1$)			Lag for two years ($t+2$)		
	Amount	Share	Count	Amount	Share	Count
Cumulative Chinese parent groups	-0.142*** (0.039)	-0.009*** (0.003)	-0.042*** (0.012)	-0.158*** (0.042)	-0.010*** (0.003)	-0.024 (0.016)
Fiscal balance	0.030** (0.013)	0.002 (0.001)	0.008** (0.004)	0.035* (0.017)	0.003** (0.001)	0.009 (0.006)
Other loan amount	0.045 (0.075)	-0.025*** (0.007)	-0.003 (0.024)	0.023 (0.077)	-0.027*** (0.007)	-0.002 (0.026)
R-squared	0.487	0.477	0.493	0.495	0.483	0.485
Observations	752	752	752	714	714	562
Country FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES

Note: Table reports OLS specifications using cumulative Chinese parent-group presence in the focal country. Columns 1–3 use $t+1$ outcomes; Columns 4–6 use $t+2$ outcomes. All columns use data from the African Debt Database and include fiscal balance, other sovereign borrowing, country fixed effects, and year fixed effects, with standard errors clustered at the country level. Column 6, $t+2$ is restricted to 2005–2019 to avoid near-zero counts from the coverage gap in 2020–2021. *, **, *** denote significance at the 10, 5, and 1 percent levels.

Before further examining the empirical results, we address an important validity concern regarding our principal explanatory variable of contractor footprint. Could it simply proxy Beijing’s geopolitical strategy of firms and finance rather than the organizational mechanism we theorize? We address this by sequentially controlling for six widely-used measures of China’s bilateral geopolitical alignment: UN General Assembly voting similarity (Voeten et al. 2009), UN ideal-point distance (Bailey et al. 2017), Belt and Road Initiative (BRI) membership (Nedopil 2025), Chinese leader visits (Wang and Stone 2023), strategic partnerships (K. Zhang 2025), and AIIB membership. Results are reported in Appendix Table B4: Chinese contractor footprint remains a significant predictor for subsequent Chinese loan commitments in all specifications except for the one using UNGA alignment, which is estimated on a substantially smaller sample. Overall, these results suggest that contractor footprint captures explanatory variation beyond conventional measures of China’s geopolitical alignment.

The decline is concentrated in the kinds of lending for which contractors are most directly involved in project origination. Appendix Table B5 separates commitments by financing type and sector.¹⁸ The association is strongest for infrastructure and commercially oriented lending classified by AidData as “other official flows (OOF)-like”. In the OOF-like infrastructure category, one additional parent group is associated with a coefficient of -0.501 on logged commitments, equivalent to approximately 39 percentage lower lending. The non-infrastructure coefficient is much smaller and statistically insignificant. This pattern is consistent with a delegated origination mechanism rather than a general decline in all Chinese finance.

An alternative explanation is that the observed decline simply reflects the exhaustion of infrastructure investment opportunities in African markets rather than the consequences of

¹⁸ The category-specific outcomes come from AidData’s loan-level Flow Class and Infrastructure fields, so this t+2 exercise is observed through base year 2021.

delegated origination. To evaluate this possibility, we replace Chinese contractor footprint with the cumulative presence of *non-Chinese* ENR- contractors as a placebo measurement of overall market development. If the declining relationship merely reflects market saturation, non-Chinese contractor presence should exhibit a similar pattern. Instead, it yields a null effect on the amount margin and a weakly positive coefficient on the share margin. When both measures enter the model, the Chinese contractor coefficient is essentially unchanged while the non-Chinese coefficient remains null (Appendix Table B6). This pattern suggests that the decline is specific to the Chinese contractor–finance channel rather than a consequence of general market saturation. Another alternative explanation is that the decline simply reflects a regression to the mean after unusually large periods of rapid lending expansion. Our tests controlling for current and lagged Chinese lending produces similar estimates, thus reducing this concern (Appendix Table B7).

We use three further tests with alternative measures for robustness check. Appendix Table B8 shows that the cumulative contractor parent groups carry the relationship more consistently than the alternative measure of contractor footprint of annual flow of new entrants. The results are similar when we use raw firm counts rather than parent group aggregate for contractor footprint (Appendix Table B9) or the Boston University Chinese Loans to Africa database (Appendix Table B10) as an alternative source for the lending outcome.

7.2. Contractor Footprints and Subsequent Portfolio Distress

Hypothesis 2 concerns the repayment performance of loans entering the pipeline. Our theory predicts that continued origination in markets with large contractor footprints may bring progressively weaker projects to lenders. Table 2 evaluates whether contractor footprint at commitment is associated with subsequent distress at the loan and country levels. The dependent variable equals one if a loan first enters distress within five years of commitment. The

sample covers commitments from 2005 through 2018, ensuring that the same five-year window is observed for every loan.

Table 2. Contractor Presence and Subsequent Loan Distress

	Loan level: distress onset				Country level: cumulative distress share	
	(1) Within 5 yrs	(2) Within 5 yrs	(3) Ever	(4) Within 5 yrs	(5) Count share	(6) Amount share
Cumulative parent groups	0.018** (0.008)	0.016* (0.008)			0.004*** (0.001)	0.015** (0.006)
Loan size (ln)	0.033*** (0.011)	0.039*** (0.011)	0.105*** (0.026)	0.042** (0.017)		
Fiscal balance/GDP					0.000 (0.000)	0.000 (0.001)
Any prior WB contract (same country)	0.056 (0.159)	0.040 (0.142)	-0.323 (0.530)	0.153 (0.245)		
Cum. same-country WB contract value (log)	-0.004 (0.010)	-0.003 (0.009)	0.020 (0.028)	-0.010 (0.014)		
Any prior global WB contract	-0.382* (0.198)	-0.402** (0.172)	0.152 (0.347)	-0.291 (0.240)		
Cum. global WB contract value (log)	0.022** (0.011)	0.024** (0.009)	-0.007 (0.018)	0.021 (0.013)		
Observations	717	717	786	717	706	702
R-squared	0.386	0.404	0.748	0.718	0.520	0.566
Country FE / Year FE	Yes / Yes	Yes / Yes	—	—	Yes / Yes	Yes / Yes
Country × Year FE	No	No	Yes	Yes	No	No
Sector FE	No	Yes	No	No	No	No

Note: Columns 1-4: linear probability models on the CLG Africa loan universe; the dependent variable is financial distress onset within five years of commitment (columns 1, 2, and 4; loans committed 2005-2018, so the window is fully observed) or ever entering distress (column 3). Cumulative Chinese parent groups count unique Chinese parent groups active in the borrower country in the loan's commitment year. Columns 1-2: country and year fixed effects (column 2 adds sector fixed effects); columns 3-4: country-by-year fixed effects which absorb the parent-group measure. Contractor ownership type is controlled for in all loan-level columns but not shown. Columns 5-6: country-year panel 2005-2024; the dependent variable is the share of the country's cumulative Chinese loans in financial distress by count (column 5) or constant-2023-USD amount (column 6) with country and year fixed effects. Standard errors clustered by country. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

Across the main specifications, one additional cumulative parent group is associated with a 1.6- to 1.8-percentage-point increase in the probability that a loan enters distress within five years. This magnitude is substantial relative to the sample distress rate of about 12 percent. The relationship persists after controlling for loan size, sector, contractor ownership, and the contractor's World Bank contracting experience in the borrower country and globally, which measures the contractors' market competitiveness and competency. Repayment problems are also more common in infrastructure lending. Infrastructure status is associated with a 14- to 24-percentage-point higher probability of distress than non-infrastructure status within the same country-year (Appendix Table B11). This sector difference is consistent with our focus on contractor-linked project finance.

Columns 5 and 6 aggregate the same loan-level information to the country level. One additional parent group is associated with a 0.4-percentage-point increase in the count-weighted share of the cumulative Chinese portfolio in distress and a 1.5-percentage-point increase in the amount-weighted share. The association emerges gradually. It is statistically indistinguishable from zero in panels ending in 2010 or 2015 and becomes detectable only when the panel extends beyond 2020, after the grace periods on many boom-era loans had expired (Appendix Table B12).¹⁹ This timing is consistent with our theorized information mechanism: the weaknesses of a project becomes observable as repayment begins after a multiyear grace period and repayment performance accumulates.

7.3. Portfolio Distress and Subsequent Lending

The preceding results document associations consistent with the accumulation and delayed revelation of portfolio risk. Table 3 examines whether observed portfolio distress

¹⁹ Most of China Eximbank's concessional loans, for example, have a 5-year grace period with a 20-year maturity.

predicts lending two years later. Within the 38 African countries, a larger share of the existing Chinese portfolio in distress is associated with lower subsequent commitments, conditional on prior contractor footprint and observed fiscal conditions. We interpret this result as evidence that, holding constant the degree of reliance on delegated origination, portfolio distress provides additional information that is associated with subsequent lending decisions. While we cannot directly observe lenders' learning, this finding presents suggestive evidence that Chinese lenders update their lending behavior in response to information revealed through repayment performance.

Table 3. Portfolio Distress and Subsequent Chinese Lending (t+2), Post-2010

	<i>Chinese loan commitments</i>	<i>Chinese loan share</i>	<i>Chinese loan commitments</i>	<i>Chinese loan share</i>
Distress share (count)	-8.594** (3.794)	-0.535** (0.222)		
Distress share (amount)			-1.573* (0.805)	-0.071 (0.055)
Cumulative Chinese parent groups	-0.205*** (0.057)	-0.010** (0.005)	-0.216*** (0.057)	-0.011** (0.005)
Fiscal balance/GDP	0.038** (0.018)	0.002 (0.001)	0.037** (0.018)	0.002 (0.001)
Other sovereign borrowing (ln)	0.003 (0.083)	-0.019** (0.008)	-0.015 (0.091)	-0.020** (0.008)
Observations	467	467	467	467
R-squared	0.549	0.476	0.546	0.469
Country FE / Year FE	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes

Note: The dependent variable is $\ln(1 + \text{Chinese loan commitments})$ at t+2 in columns (1) and (3), and the log Chinese loan share at t+2 in columns (2) and (4). Sample: country-years with year > 2010 in the 38-country Africa panel. Performance (count) is the share of cumulative Chinese loans in financial distress by count; Performance (amount) uses constant 2023 USD amounts. All columns control for cumulative Chinese parent-group saturation, fiscal balance, and log other sovereign borrowing, with country and year fixed effects. Standard errors clustered by country. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The magnitude is substantively large. Using the count-based measure, a one-percentage-point increase in the share of a country's cumulative Chinese loans in distress is associated with a 0.086-log-point reduction in Chinese commitments two years later, equivalent to about 8.2 percent lower commitments. The same increase is associated with roughly a 0.6-

percentage-point reduction in China's share of sovereign borrowing. The amount-weighted distress measure also negatively predicts subsequent commitment volume.

7.4. Borrower-Side Explanations

Our analysis so far has examined whether contractor footprint and revealed portfolio distress predict subsequent lending in ways consistent with creditor-side updating. An important question is how the debtor side also responds to these dynamics. Recent research on borrower statecraft has highlighted debtor state agency in shaping international credit relationships (Bunte 2019; Zeitz 2024). Based on such insights, one might ask whether reduction of Chinese lending reflects borrower substitution, as debtor states concerned with over dependence on Chinese contractors and financing strategically reduce borrowing from China.

Table 4 helps address this question. It examines whether the post-2020 decline in Chinese lending is associated with Chinese contractor presence in the local market. We examine the post-2020 change based on the widely observed sharp contraction in Chinese overseas lending after 2020 (Moses et al. 2023; Engel et al. 2024; Ray et al. 2026). Here we measure contractor presence not as absolute count—as we did in previous tests—but in relation with other international contractors,²⁰ as such shares would better capture the level of dominance of Chinese contractors in any given market. This specification includes country and year fixed effects and holds commodity terms of trade constant (Gruss and Kebhaj 2019). We estimate this for the Chinese loan share, Chinese contractor presence, and Chinese construction revenues. If borrower substitution is the main mechanism, we should expect to see decline across these measures.

²⁰ Specifically, this is operationalized as China's average share of active ENR contractors during 2015–2019, standardized as a z-score in the estimation. For descriptive statistics, see Appendix Figure B3.

The results provide limited support for a pure borrower-substitution account. While Chinese loan shares decline, Chinese contractors' presence and their overall contracting revenues increase. Specifically, Column 1 shows that countries with a contractor dominance one standard deviation above the mean show an 8.5-percentage-point larger post-2020 decline in China's share of sovereign borrowing. By contrast, Columns 2 and 3 show that Chinese contractor numbers and total revenues in Africa continued to rise after 2020, which show no differential decline in markets where Chinese contractors are relatively dominant. Combined, these findings weaken the narrow account in which borrowers responded by withdrawing simultaneously from Chinese finance and Chinese contractors.

Table 4. Post-2020 Chinese Loan Share and Contractors Persistence

	(1)	(2)	(3)
	Chinese loan share	Chinese contractor presence (log)	Chinese contract revenues (log)
Post-2020	-0.061* (0.032)	0.938*** (0.139)	3.136*** (0.281)
Pre-2020 contractor dominance x Post-2020	-0.085*** (0.024)	0.095 (0.116)	0.329 (0.199)
Commodity terms of trade (ln)	0.077 (0.190)	1.131*** (0.398)	3.386*** (0.840)
Fiscal balance	0.002 (0.002)	-0.007*** (0.002)	0.004 (0.013)
Political corruption (V-Dem)	0.059 (0.176)	0.400 (0.293)	0.754 (0.895)
Observations	811	692	774
R-squared	0.446	0.812	0.836
Country FE / Year FE	Yes / Yes	Yes / Yes	Yes / Yes

Note: Dependent variables are: (1) Chinese share of sovereign borrowing; (2) $\ln(1 + \text{Chinese ENR contractors active in the country-year})$ full-coverage counts through 2024; (3) $\ln(1 + \text{SAIS-CARI gross contract revenues of Chinese companies})$ available through 2022. Pre-2020 contractor dominance is the 2015-2019 average share of active ENR top-250 contractors that were Chinese standardized. Post-2020 = 1 for 2021-2024. Country and year fixed effects in all columns. Standard errors clustered by country. *, **, *** denote significance at the 10, 5, and 1 percent levels.

We additionally test if Chinese lending was substituted with non-Chinese borrowing as predicted by Chinese contractor presence. If governments were substituting away from Chinese finance toward other lenders, non-Chinese commitments should rise as Chinese commitments fall. Results in Appendix Table B13 do not support this, either: Chinese contractor footprint does not predict an increase in non-Chinese commitments at either horizon.

However, this doesn't mean that borrower-side conditions don't matter. In fact, borrower fiscal constraints condition the relationship between Chinese contractor presence and creditor-side adjustments. Appendix Table B14 interacts the contractor footprint with general government debt. The estimated marginal relationship becomes more negative as debt rises: one additional parent group is associated with approximately 11 percent lower future lending at low debt levels and approximately 20 percent lower lending when government debt approaches 200 percent of GDP (Appendix Figure B4). This finding suggests that Chinese lenders respond more sharply to accumulated contractor footprint where borrower repayment capacity is already weak. We probe other borrower-side moderators in Columns (4)-(6) in Appendix Table B13, including two measures of corruption (Transparency International's Corruption Perception Index, and V-Dem's corruption index), as well as the HRV debt-transparency index (Hollyer et al. 2024). None of the interaction terms between these measures and cumulative Chinese parent groups are significant. We further control for public concern about excessive borrowing from China or overall sentiment toward China using Afrobarometer Rounds 6-9. The principal post-2020 estimate remains largely unchanged (Appendix Table B15).

8. Conclusion

Focusing on Chinese lending in Africa, this study develops a theory of how emerging creditor states with insufficient institutional capacity delegate loan origination to contractor firms.

Possessing dual information advantage over the lender on local conditions in the borrower state and over the borrower over the lender's financial bureaucracy, the contractors leverage such advantage to identify projects, package proposals, and connect them to financing while supporting their own international expansion. Yet contractors earn returns from securing and implementing projects, while lenders remain exposed to repayment risk for decades. This temporal mismatch can reduce the reliability of information reaching lenders and expose them to risks that become visible only once repayment begins. Rather than a monolithic state executing a predatory grand strategy implied by popular accounts of "debt-trap diplomacy" (for a rebuttal, see Bräutigam 2020), our account depicts a relatively inexperienced international creditor struggling to govern the agents on which its expansion depended.

We use this framework to make sense of the broader cycle of rapid expansion, rising portfolio distress, and subsequent retrenchment that has characterized Chinese sovereign lending over the past two decades. The Zambia and Nigeria cases document how contractors supplied crucial project information and shaped proposals before formal allocation decisions. Our quantitative analysis documents conditional associations linking accumulated contractor presence to subsequent loan distress and lower future lending. These findings are consistent with the temporal sequence proposed by delegated origination. While the observational analyses do not independently identify causal effects, their convergence with our qualitative evidence supports the proposed sequence linking contractor-mediated origination, portfolio deterioration, and subsequent lender adjustment. Although our evidence focuses on Africa, where Chinese contractor presence is most extensively documented and lending trajectory is especially visible, we expect the mechanism to operate elsewhere in China's bilateral lending. It should also extend beyond the Chinese case, to any creditor whose finance is tied to national contractors, whose

independent appraisal capacity is limited, and whose repayment information arrives only after a delay.

This study also suggests that reliance on delegated origination came under pressure once repayment risks surfaced in distressed loans. In 2019, the Chinese Ministry of Finance released the *Debt Sustainability Framework for Participating Countries of the Belt and Road Initiative*, signaling growing state attention to emerging debt sustainability concerns. China's sharp reduction of new lending in the post-2020 period suggests a period of adjustment and search for alternative mechanisms. Addressing the source of the delegation problem would require strengthening independent project screening, increasing transparency in loan origination, and reducing the information asymmetry between lenders and contractors. Recent studies suggest that Chinese lenders have increasingly resorted to cofinancing with other international lenders (Lu et al. 2024) and pushing contractors to contribute equity investment in overseas projects (Zhang 2025) as potential remedies. On the other hand, it is also possible that Chinese firms may be "graduating" from the initial support from Chinese financing and are diversifying their sources of financing (Brazys and Jung 2024). This could explain why Chinese lending declines while contractors remain, as suggested by findings in Table 4.

Our account moves beyond the usual focus on creditor and debtor states' strategic choices by showing how firms help construct the transactions over which states bargain. Future IPE scholarship on sovereign lending and international finance is encouraged to engage in more institution-level analysis on which actors serve as the information intermediaries, how their incentive structures shape the production and transmission of information, and how those organizational arrangements affect international financial flows. Strategic preferences matter, but they become loans only through organizations—and those organizations can shape both the expansion and the limits of sovereign credit.

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Appendix

Appendix A. Origination Microfoundations

This appendix examines deal-level evidence related to the premise of our argument: larger packages should be associated with contractors possessing greater access to China’s financing bureaucracy, even after accounting for observed technical capacity. Table A1 provides an observational test of this implication, including a robustness check that replaces the competence proxy with the contractor’s global rather than same-country World Bank contracting record. Table A2 validates the underlying contractor-matched sample against the ENR panel.

A contractor’s ability to navigate China’s financing bureaucracy

The dual information asymmetry gives contractors a structural advantage over both principals, but that advantage is not equally shared. It depends on a contractor’s ability to navigate China’s financing bureaucracy and access the institutional networks that authorize sovereign packages. In China’s construction sector, that capacity is tied directly to the ownership hierarchy. CSOEs are large conglomerates owned by the central government, often designated national champions in strategic sectors, with deep organizational ties to Eximbank, MOFCOM, and the ministerial networks that authorize high-value sovereign commitments. Local SOEs are owned by provincial or municipal governments and are less directly connected to

central financing channels. Private firms are more commercially driven and generally less well positioned than either SOE category to access state-backed financing and policy support. We thus treat ownership type as a proxy of bureaucratic access.

We hypothesize that CSOEs dominate larger deals through superior bureaucratic leverage. Their political positioning grants them access needed to effectively advance proposals within the delegated origination system. For lenders, the political prestige associated with CSOEs provides implicit cover: approving a CSOE-originated proposal is easier to defend institutionally if the loan subsequently turns bad. In other words, it is not simple state favoritism but the alignment of contractor and lender incentives that produces this outcome — contractors benefit from scaling deals, lenders benefit from deploying capital through politically credible partners. We test this premise with a deal-level OLS specification, asking whether CSOEs involvement is associated with larger loan sizes with a deal-level OLS specification:

$$LoanAmount_{itd} = \beta_0 + \beta_1 CentralSOE_{itd} + \beta_2 LocalSOE_{itd} + \beta_3 WBExperience_{itd} + \alpha_i + \gamma_t + \epsilon_{itd}$$

The dependent variable is the logged amount of loan deal d in country i in year t . The independent variables of interest are dummy variables indicating the type of Chinese contractor responsible for the project: $CentralSOE_{itd}$, $LocalSOE_{itd}$ (Municipal/Provincial SOE), and $Private_{itd}$ (private contractor, the baseline group). We present specifications with rotating omitted categories; the main comparison treats private contractors as the baseline. We include controls for the contractor's prior technical track record in the recipient country, measured using the World Bank's Contract Awards Database. Specifically, we include an indicator for whether the contractor has previously been awarded a World Bank contract in the same debtor country, and the logged cumulative value of those prior contracts. World Bank contracts are awarded through competitive procurement with independent technical evaluation, making prior World Bank contracting experience in the same country a reasonable proxy for demonstrated technical competence — the alternative explanation for why certain contractors might secure larger

Chinese-financed packages. This specification therefore tests whether deal size tracks political position within China's state hierarchy or observable technical performance: if the information-asymmetry mechanism is correct, contractor type should predict deal size while World Bank experience should not. We also include country and year fixed effects.

Deal-scaling results

Table A1 shows that the deal-scaling premium is concentrated among CSOEs. Loans involving a CSOE are about 73 percent larger than loans involving private contractors. Local SOE deals, by contrast, are about 34 percent smaller than private-contractor deals and only weakly distinguishable from zero. This is not a generic state-ownership effect. The private firms in our sample include globally prominent companies such as telecom giant Huawei and electrical equipment supplier TBEA, whose scale and market footprints can give them political access comparable to, or greater than, that of many local SOEs. What distinguishes CSOEs is their position in China's central state hierarchy. The premium therefore points to political connectivity, not ownership alone, as the source of deal scaling.

A natural concern is that CSOEs simply bid on larger projects because they are larger firms. We cannot fully separate firm size from political access, since the two are closely linked in China's state-capitalist hierarchy. But two features of the evidence weigh against a pure size interpretation. First, the model includes country and year fixed effects, which absorb systematic differences in project scale across markets and time periods. The CSOE premium therefore reflects within-country, within-year variation in deal size across contractor types, net of any aggregate tendency for certain markets to host larger projects. Second, Table A1 includes two measures of prior World Bank contracting experience in the same debtor country: whether the contractor had won any earlier World Bank contract, and the logged cumulative value of those prior contracts. It is well documented that Chinese contractors are major receivers of World Bank contracts (Kenny 2025). Because World Bank projects are awarded through competitive

procurement and independent technical evaluation, these measures capture a contractor's observable technical track record in that market. Neither measure is statistically significant. If Chinese lenders were scaling loans based on verified technical competence, prior World Bank success should predict larger Chinese-financed deals. It does not. The results are therefore more consistent with a system in which lenders, facing weak independent appraisal capacity, rely on political prestige and bureaucratic hierarchy as screening devices.

Columns (2)–(3) subject this conclusion to a stronger test. The same-country World Bank proxy is sparse — only 198 of 1,102 deals involve a contractor with any prior World Bank contract in the same debtor country — so its null result could simply reflect imprecision rather than a genuine absence of a competence effect. Columns (2)–(3) replace it with the contractor's cumulative *global* World Bank contract record before the deal year: a far better-populated measure (955 of 1,323 deals) of demonstrated execution capacity, verified through competitive procurement worldwide and independent of any China-specific relationship. The CSOE premium is essentially unchanged under this stronger control (sector fixed effects added in column 3), while global capacity itself remains null on both margins — whether a contractor has any competitively-won global World Bank record, and how much that record is worth, neither predicts Chinese-financed deal size. Verified technical capability, however measured, does not explain who wins the largest packages; political position does.

Table A1. Contractor Type, Prior World Bank Experience, and Chinese Loan Amount

	(1)	(2)	(3)	(4)	(5)
Dependent Variable: Chinese Loan Amount (Log)					
	Private base	Private base	Private base	LSOE base	CSOE base
Central SOE (CSOE)	0.547*** (0.153)	0.393** (0.173)	0.489*** (0.179)	0.957*** (0.231)	
Local SOE (LSOE)	-0.410* (0.210)	-0.476** (0.215)	-0.164 (0.235)		-0.957*** (0.231)
Private				0.410* (0.210)	-0.547*** (0.153)

Any prior World Bank contract	-1.541			-1.541	-1.541
	(2.000)			(2.000)	(2.000)
Prior World Bank contract value	0.092			0.092	0.092
	(0.112)			(0.112)	(0.112)
Any prior global World Bank contract		0.076	0.547		
		(0.838)	(0.763)		
Global World Bank contract value (log)		0.009	-0.020		
		(0.042)	(0.038)		
Sector fixed effects	No	No	Yes		
Observations	1102	1102	1088	1102	1102
R-squared	0.267	0.268	0.393	0.267	0.267

Note: Dependent variable is $\ln$ (loan amount, constant 2021 USD). OLS with country and year fixed effects. The sample uses the full contractor-linked AidData and World Bank project merged file, observed through 2021. Contractor-type omitted categories rotate across columns to compare CSOEs, LSOEs, and private firms directly. Prior World Bank experience is measured by an indicator for any earlier World Bank contract in the same debtor country and $\ln(1+\text{cumulative value})$ of those prior contracts. Standard errors clustered at the country level are reported in parentheses. *, **, *** denote significance at the 10, 5, and 1 percent levels.

Validating the contractor-matched sample against ENR

Table A1's sample links each AidData loan record to an implementing contractor and, through that contractor, to its ultimate parent group. Because our market-level saturation measure is built entirely from the ENR panel, the deal-level analysis is only informative about the same delegated-origination system if the firms actually financing loans are, in fact, the firms ENR ranks. Table A2 checks this directly, cross-tabulating every Chinese implementing agency named in AidData's loan and grant records against the ENR Top 250 contractor rankings from 2003 to 2024.

Restricting to construction and engineering contractors — the population ENR actually ranks — 76 percent of parent groups, 91 percent of implementing-agency names, and 98 percent of loan records belong to ENR-listed firms; restricting further to groups that have implemented at least one loan-financed project, the match rises to 81 percent of parent groups and over 98 percent of both loan and grant value. The residual, uncaptured firms are

concentrated among telecommunications and electronics suppliers, equipment manufacturers, and design institutes — categories ENR does not rank because they are not international construction contractors, not because our crosswalk is incomplete. AidData (flow) and ENR (stock) are, for the population this paper studies, capturing the same corporate universe.

Table A2. Chinese Implementing Agencies in AidData Projects and the ENR Top International Contractors Rankings, 2003-2024

	(1) All firms	(2) Construction contractors	(3) Loan- implementing contractors
Panel A: Ultimate parent groups			
Parent groups	142	66	52
ENR-listed	57	50	42
Share ENR-listed (%)	40.1	75.8	80.8
Panel B: Implementing-agency names			
Agency names	297	206	190
Belonging to ENR-listed groups	200	188	178
Share (%)	67.3	91.3	93.7
Panel C: Project records			
Loan records	1,073	841	841
Under ENR-listed groups	875	827	827
Share (%)	81.5	98.3	98.3
Grant records	430	334	312
Under ENR-listed groups	329	327	311
Share (%)	76.5	97.9	99.7

Note: Chinese implementing agencies are extracted from the AidData Global Chinese Development Finance records (loan and grant flows; vague and debt-rescheduling flows and government or institutional agencies excluded). Each agency name is matched to its ultimate parent group; all assignments were reviewed and verified by the authors. A parent group is ENR-listed if it appears at least once on the ENR Top 250 International Contractors ranking between 2003 and 2024, based on the authors' extraction of all ranking editions. Column (2) restricts to parent groups whose primary business is construction or engineering contracting (the population ENR ranks); column (3) further restricts to contractor groups implementing at least one loan-financed project. Panels B and C count the agency names and project records belonging to each column's parent groups. Non-contractor firms in column (1) include telecommunications and electronics firms, equipment manufacturers, design and supervision institutes, pharmaceutical suppliers, and trading companies.

Appendix B. Tables and Figures

Tables

Table B1: Top 10 most active Chinese companies in Africa, 2005-2024

Chinese company	Country-year frequency	Type
China Communications Construction Group*	402	CSOE
China Railway Group Ltd.	346	CSOE
China Geo-Engineering Corp.	325	CSOE
China Railway Construction Co.	306	CSOE
Power Construction Corp. of China	297	CSOE
China Nat'l Machinery Industry Corp.	259	CSOE
China State Construction Eng'g Corp.	221	CSOE
China Jiangsu Int'l Econ-Tech. Coop.	214	Provincial SOE
China Jiangxi Corp. For Int'l Eco. & Tech.	213	Provincial SOE
China Henan Int'l Cooperation Grp. Co.	201	Provincial SOE

* The group's subsidiaries include the CRBC and China Harbour Engineering Company, both leading contracting firms in overseas markets.

Data Source: ENR company-edge file, 2005-2024; company type coded by the authors from the parent-group ownership crosswalk.

Table B2. Quadratic term estimation, with commodity terms-of-trade control

	(1) Chinese Loan Amount	(2) Chinese Loan Share
Chinese parent groups	0.115 (0.099)	0.004 (0.007)
Chinese parent groups squared	-0.005** (0.002)	-0.000 (0.000)
Commodity terms of trade (ln)	-2.381 (1.867)	-0.015 (0.146)
Fiscal balance/GDP	0.044*** (0.014)	0.003** (0.001)
Other sovereign borrowing (ln)	-0.025 (0.087)	-0.037*** (0.009)
Joint p (linear+quadratic)	0.007	0.010
Implied turning point	12.4	8.5
Observations	703	703
R-squared	0.493	0.500
Country FE / Year FE	Yes / Yes	Yes / Yes

Note: Quadratic specification (Table 2) adding the commodity terms-of-trade control. DV at t+1. Country and year FE; SEs clustered by country. * p<0.10 ** p<0.05 *** p<0.01

Table B3: Split-Period Estimates at Three Cutoffs (2010, 2013, 2015)

Period	Amount (t+2): coef.	(SE)	N	Share (t+2): coef.	(SE)	N
Split year: 2010						
2005-2009	0.061	(0.081)	185	-0.004	(0.007)	185
2010-2024	-0.256***	(0.047)	529	-0.014***	(0.004)	529
Split year: 2013						
2005-2012	0.027	(0.063)	296	-0.004	(0.005)	296
2013-2024	-0.269***	(0.069)	418	-0.011**	(0.005)	418
Split year: 2015						
2005-2014	0.008	(0.078)	372	-0.005	(0.006)	372
2015-2024	-0.309***	(0.084)	342	-0.012*	(0.006)	342

Note: Coefficient on cumulative Chinese parent groups from the core saturation model (fiscal balance and $\ln(1+\text{other sovereign borrowing})$ controls; country and year FE; SEs clustered by country; DV at t+2). Rows split the base-year sample around the sample year when the average market crossed the quadratic turning point, the BRI launch (2013), and the midpoint of the 2005-2024 coverage window (2015). *, **, *** denote significance at the 10, 5, and 1 percent levels.

Table B4. Controlling for Geopolitical Alignment

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: Chinese loan commitments at t+2						
	UNGA align.	BRI member	AIIB member	UN ideal dist.	Strategic partner	Leader visit
Cumulative Chinese parent groups	-0.074 (0.058)	- 0.168*** (0.038)	- 0.166*** (0.037)	- 0.166*** (0.037)	- 0.154*** (0.038)	- 0.162*** (0.037)
UNGA alignment	3.359 (4.101)					
BRI member		0.217 (0.571)				
AIIB member			- 3.844*** (0.446)			
UN ideal distance				0.527 (0.392)		
Strategic partner					-0.089 (0.142)	
Leader visit						0.535 (0.444)
Observations	562	708	708	707	708	708
R-squared	0.455	0.499	0.499	0.500	0.500	0.500

Note: Dependent variable is $\ln(1+\text{future Chinese loan commitments})$ at t+2. Each column adds one geopolitical covariate to the preferred cumulative parent-group saturation specification with fiscal balance, $\ln(1+\text{other sovereign borrowing})$, country fixed effects, and year fixed effects. Outcomes are observed through base year 2023. Standard errors clustered at the country level are reported in parentheses. *, **, *** denote significance at the 10, 5, and 1 percent levels.

Table B5. Cumulative Parent-Group Saturation and Disaggregated Future Loan Commitments

	(1)	(2)	(3)	(4)	(5)	(6)
DV: Chinese loan commitments (at t+2)	ODA	OOF	Infra	Non-Infra	ODA-Infra	OOF-Infra
Cumulative Chinese contractor parent groups	-0.366*** (0.131)	-0.432*** (0.142)	-0.438*** (0.145)	-0.100 (0.103)	-0.310** (0.127)	-0.501*** (0.132)

Note: Dependent variable is $\ln(1 + \text{future Chinese loan commitments})$ at t+2 by AidData flow/sector category. Columns are based on AidData FlowClass and Infrastructure fields; because those category data are currently observed through 2023, the t+2 disaggregated sample runs through base year 2021. Cumulative parent-group saturation counts unique Chinese parent groups, so once the same group appears in a country it is not counted again in later years. Fiscal balance and $\ln(1 + \text{other sovereign borrowing})$ are included in all columns. Country and year fixed effects are included throughout. Standard errors clustered at the country level in parentheses. *, **, *** denote significance at the 10, 5, and 1 percent levels.

Table B6. Placebo: Non-Chinese Contractor Saturation

	(1)	(2)	(3)	(4)
Dependent Variable: Chinese Loan (t+2)	Amount		Share	
Cumulative non-Chinese ENR contractors	-0.005 (0.019)	0.025 (0.020)	0.001 (0.001)	0.003** (0.001)
Fiscal balance	0.040** (0.019)	0.041** (0.018)	0.004** (0.001)	0.004** (0.001)
Other loan amount	0.034 (0.083)	0.047 (0.077)	-0.025*** (0.008)	-0.024*** (0.007)
Cumulative Chinese parent groups		-0.181*** (0.041)		-0.013*** (0.003)
Observations	714	714	714	714.000
R-squared	0.468	0.498	0.460	0.491

Note: Dependent variables are $\ln(1 + \text{Chinese loan commitments})$ at t+2 (cols 1-2); Chinese loan share at t+2 (cols 3-4). Country and year FE; SEs clustered by country. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

Table B7. Mean-Reversion Robustness

	(1)	(2)	(3)	(4)
	Chinese loan amount (t+2)	Chinese loan amount (t+2)	Chinese loan share (t+2)	Chinese loan share (t+2)
Cumulative Chinese parent groups	-0.142*** (0.038)	-0.141*** (0.038)	-0.009*** (0.003)	-0.009*** (0.003)
Chinese loan amount (log), t	0.151***	0.143***		

	(0.048)	(0.047)		
Chinese loan amount (log), t-1		0.054		
		(0.042)		
Chinese loan amount (log), t-2		-0.002		
		(0.040)		
Chinese loan share, t			0.108***	0.092***
			(0.035)	(0.032)
Chinese loan share, t-1				0.070*
				(0.035)
Chinese loan share, t-2				0.032
				(0.033)
Observations	714.000	714.000	714.000	714.000
R-squared	0.507	0.509	0.496	0.504

Adds current and lagged levels of the outcome to the preferred t+2 saturation models to address mean reversion. Country and year FE; SEs clustered by country. * p<0.10 ** p<0.05 *** p<0.01

Table B8. Annual New Parent-Group Entry and Horse-Race Specifications

Dependent Variable: Chinese Loan	(1)	(2)	(3)	(4)
	Amount (t+1)	Share (t+1)	Amount (t+2)	Share (t+2)
Panel A. Annual new entries only				
New Chinese parent groups	0.062 (0.105)	0.009 (0.007)	-0.019 (0.084)	-0.004 (0.005)
Fiscal balance	0.033** (0.014)	0.002 (0.001)	0.041** (0.017)	0.003** (0.001)
Other sovereign borrowing	0.058 (0.077)	-0.024*** (0.008)	0.039 (0.083)	-0.025*** (0.008)
Observations	715.000	715.000	677.000	677.000
R-squared	0.467	0.456	0.471	0.456
Panel B. Horse-race: stock and flow together				
Cumulative Chinese parent groups	-0.167*** (0.042)	-0.010*** (0.003)	-0.170*** (0.042)	-0.010*** (0.003)
New Chinese parent groups	0.087 (0.104)	0.011 (0.006)	0.018 (0.084)	-0.002 (0.005)
Fiscal balance	0.029* (0.014)	0.002 (0.001)	0.037** (0.017)	0.003** (0.001)
Other sovereign borrowing	0.037 (0.078)	-0.025*** (0.007)	0.030 (0.080)	-0.026*** (0.007)
Observations	715.000	715.000	677.000	677.000
R-squared	0.495	0.479	0.498	0.477

Note: Panel A estimates the baseline country-saturation specifications using only annual new Chinese parent-group entries, defined as the year-to-year increase in the cumulative parent-group count. Panel B reports horse-race specifications that include both the cumulative stock and the annual entry flow. The sample begins in 2006, so the opening 2005 stock is not treated as new entry. All columns include fiscal balance, the corresponding other sovereign borrowing

control, country fixed effects, and year fixed effects, with standard errors clustered at the country level. *, **, *** denote significance at the 10, 5, and 1 percent levels.

Table B9. Country Saturation and Future Chinese Loan Commitments, Raw Contractor-Firm Counts

	(1)	(2)	(3)	(4)	(5)	(6)
	Lag for one year (t+1)			Lag for two years (t+2)		
	Amount	Share	Count	Amount	Share	Count
Chinese contractors (cum. firms)	-0.131*** (0.034)	-0.009*** (0.003)	-0.038*** (0.011)	-0.143*** (0.036)	-0.009*** (0.003)	-0.024 (0.014)
Fiscal balance	0.029** (0.013)	0.002 (0.001)	0.008** (0.004)	0.034* (0.018)	0.003** (0.001)	0.009 (0.006)
Other loan amount	0.034 (0.075)	-0.025*** (0.007)	-0.009 (0.021)	0.012 (0.076)	-0.028*** (0.007)	-0.002 (0.025)
R-squared	0.491	0.482	0.498	0.499	0.487	0.487
Observations	752	752	752	714	714	562
Country FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES

Note: This table re-estimates the country-saturation specifications in Table 2 using cumulative raw Chinese contractor-firm counts rather than parent-group counts. The cumulative firm count is constructed from ENR contractor observations, so once the same Chinese contractor appears in a country it is not counted again in later years. Columns 1-3 use t+1 outcomes; Columns 4-6 use t+2 outcomes. Columns 1-2 and 4-5 use Chinese loan amount and Chinese loan share as dependent variables; Columns 3 and 6 use $\ln(1 + \text{count of Chinese loan commitments})$. All columns use African Debt Database outcomes and include fiscal balance, the corresponding other sovereign borrowing control, country fixed effects, and year fixed effects. Standard errors are clustered at the country level. For Column 6, t+2 is restricted to 2005-2019 to avoid near-zero counts from the coverage gap in 2020-2021. *, **, *** denote significance at the 10, 5, and 1 percent levels.

Table B10. CLA Robustness Replication of Table 2: Alternative Data Source for Chinese Loans

	(1) Amount t+1	(2) Amount t+2	(3) Count t+1	(4) Count t+2
Panel A: Cumulative parent-group saturation				
Chinese parent groups	-0.118*** (0.041)	-0.103** (0.045)	-0.034*** (0.011)	-0.031*** (0.010)
Fiscal balance	included	included	included	included
R-squared	0.463	0.460	0.515	0.531
Panel B: Cumulative raw Chinese-firm saturation				
Chinese contractors (cum. firms)	-0.112*** (0.033)	-0.097** (0.037)	-0.032*** (0.009)	-0.029*** (0.009)

Fiscal balance	included	included	included	included
R-squared	0.468	0.463	0.520	0.535
Observations	752	638	752	638
Country FE / Year FE	YES	YES	YES	YES

Note: Dependent variables in Columns 1–2 are $\ln(1 + \text{total Chinese loan amount in USD millions})$ and in Columns 3–4 are $\ln(1 + \text{count of Chinese loan commitments})$, both constructed from the Boston University Chinese Loans to Africa (CLA) database as an independent source check for Table 2. Panel A uses cumulative Chinese parent groups; Panel B uses cumulative Chinese contractor firms. All columns include fiscal balance, other sovereign loan amount, country fixed effects, and year fixed effects, with standard errors clustered at the country level. t+2 columns restricted to 2005–2021 to avoid sparse CLA coverage after 2021. *, **, *** denote significance at the 10, 5, and 1 percent levels.

Table B11. Distress Concentrates in Infrastructure Lending

	(1)	(2)	(3)	(4)
	Loan in distress	Loan in distress	Loan in distress	Loan in distress
Infrastructure loan	0.144*** (0.036)	0.153*** (0.044)	0.185** (0.089)	0.240* (0.119)
Cumulative Chinese parent groups			-0.015 (0.011)	
Infrastructure x cumulative parent groups			-0.001 (0.005)	0.000 (.)
Observations	1715	1715	1609	1609
R-squared	0.332	0.639	0.352	0.633

Note: LPM on the CLG Africa loan universe (distress-codable non-umbrella). DV: loan ever in financial distress. Infra = CLG infrastructure loan. Cols 1 3: country and year FE; cols 2 4: country-by-year FE. SEs clustered by country. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

Table B12. Contractor Presence and Portfolio Quality, Three Sample Periods

DV: Share of cumulative Chinese loans in distress	Pre-2011		Through 2015		Through 2020		Full 2005-2024	
	Count	Amount	Count	Amount	Count	Amount	Count	Amount
Cumulative Chinese parent groups	0.000	-0.002	0.001	0.001	0.001*	0.004	0.004***	0.015**
	(0.000)	(0.003)	(0.001)	(0.004)	(0.001)	(0.004)	(0.001)	(0.006)
Fiscal balance/GDP	-0.000	-0.001	-0.000	-0.001	0.000	-0.001	0.000	0.000
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)
Observations	202	198	375	371	558	554	706	702
R-squared	0.770	0.372	0.555	0.533	0.414	0.504	0.520	0.566
Country FE / Year FE	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes

Notes. The dependent variable is the share of cumulative Chinese loan commitments to the recipient country that are in financial distress as of year t , using onset-year timing ($\text{Financial_Distress_Onset_Year} \leq t$) from the AidData CLG Global Dataset v1.0 ($\text{Recommended_for_Aggregates} = \text{Yes}$). Columns (1)–(2): 2005–2010. Columns (3)–(4): 2005–2015. Columns (5)–(6): 2005–2020. Columns (7)–(8): full 2005–2024 panel. Odd columns use the count-based distress share; even columns use the amount-weighted share (constant 2023 USD). All specifications include country and year fixed effects; standard errors clustered by country. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table B13. Cumulative Parent-Group Saturation and Non-Chinese Sovereign Borrowing

Dependent variable: Other sovereign borrowing in the future	(1)	(2)
	t+1	t+2
Cumulative Chinese parent groups	-0.028 (0.039)	-0.019 (0.033)
Fiscal balance	-0.008 (0.015)	0.015 (0.011)
Observations	752	714
R-squared	0.810	0.821
Country FE	YES	YES
Year FE	YES	YES
Clustered SEs	Country	Country

Note: Dependent variable is $\ln(1 + \text{non-Chinese sovereign borrowing})$. The specification keeps the same OLS structure with fiscal balance, country fixed effects, and year fixed effects. Column (1) uses the t+1 placebo outcome, observed through base year 2024. Column (2) uses the t+2 placebo outcome, observed through base year 2023. Standard errors clustered at the country level are reported in parentheses. *, **, *** denote significance at the 10, 5, and 1 percent levels.

Table B14. Heterogeneous Effects of Cumulative Parent-Group Saturation on Future

Chinese Loans

	(1)	(2)	(3)	(4)	(5)	(6)
	Ext.Debt /GDP	Ext.Debt /Res.	GovDebt /GDP	TI CPI	V-Dem Corr.	HRV debt trans.
Cumulative Chinese parent groups	-0.127** (0.047)	-0.120** (0.045)	-0.109** (0.049)	-0.403*** (0.087)	- 0.183** (0.070)	-0.025 (0.066)
Parent groups × Ext. debt/GDP	-0.000 (0.000)					
Parent groups × Ext. debt/res.		-0.000** (0.000)				
Parent groups × Gov. debt/GDP			-0.000**			

			(0.000)		0.004 (0.003)	
Parent groups × TI CPI						
Parent groups × V-Dem corr.					0.041 (0.092)	
Parent groups ×HRV debt trans.						0.050 (0.043)
Fiscal balance	0.038 (0.029)	0.031 (0.035)	0.035 (0.030)	0.029 (0.018)	0.035** (0.017)	0.041** (0.019)
Other sovereign borrowing	0.030 (0.074)	-0.006 (0.092)	0.000 (0.077)	-0.051 (0.132)	0.023 (0.075)	0.117 (0.094)
Observations	695	569	684	415	714	399
R-squared	0.499	0.506	0.496	0.543	0.495	0.522
Country FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Clustered SEs	Country	Country	Country	Country	Countr y	Country

Note: Dependent variable is $\ln(1+\text{future Chinese loan commitments})$ at $t+2$. All columns are OLS with fiscal balance, $\ln(1+\text{other sovereign borrowing})$, country fixed effects, and year fixed effects. Columns (1)-(3) interact cumulative Chinese parent-group saturation with debt-burden measures. Columns (4)-(5) interact it with corruption and governance measures. Column (6) uses the HRV debt-transparency index central estimate; because that series is available only through 2015, the HRV column is estimated on a shorter 2005-2015 base-year sample. Standard errors clustered at the country level are reported in parentheses. *, **, *** denote significance at the 10, 5, and 1 percent levels.

Table B15. Public Sentiment toward China and the Post-2020 Decline

	(1) Loan share	(2) Loan share	(3) Loan share	(4) Loan share	(5) Loan share
Post-2020	-0.068* (0.036)	-0.069* (0.035)	-0.071* (0.037)	-0.070* (0.035)	-0.056 (0.035)
Pre-2020 contractor dominance x Post-2020	-0.085*** (0.028)	-0.095*** (0.028)	-0.087*** (0.026)	-0.095*** (0.028)	-0.083** (0.032)
Positive China sentiment (2019- 21) x Post-2020		0.066* (0.036)		0.055 (0.034)	
Borrowed too much from China (2019-21) x Post-2020			-0.036 (0.027)	-0.021 (0.023)	
Change in China sentiment (2014-15 to 2019-21) x Post- 2020					0.003 (0.017)
Fiscal balance	0.001 (0.003)	0.001 (0.003)	0.002 (0.003)	0.001 (0.003)	0.001 (0.003)

Political corruption (V-Dem)	0.113 (0.211)	0.106 (0.192)	0.114 (0.211)	0.109 (0.200)	-0.077 (0.111)
Observations	687	687	664	664	595
R-squared	0.439	0.448	0.442	0.447	0.383
Country FE / Year FE	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes	Yes / Yes

Note: DV: Chinese share of sovereign borrowing. Table 4 specification on the subsample of countries covered by Afrobarometer Round 8 (columns 1-4; 28 of 38 panel countries) or Rounds 6 and 8 (column 5). Sentiment measures are weighted country-level shares from Afrobarometer: R8 Q70E (China's influence somewhat/very positive) and R8 Q65C (government has borrowed too much money from China), z-scored and interacted with Post-2020. Country and year FE; SEs clustered by country. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figures

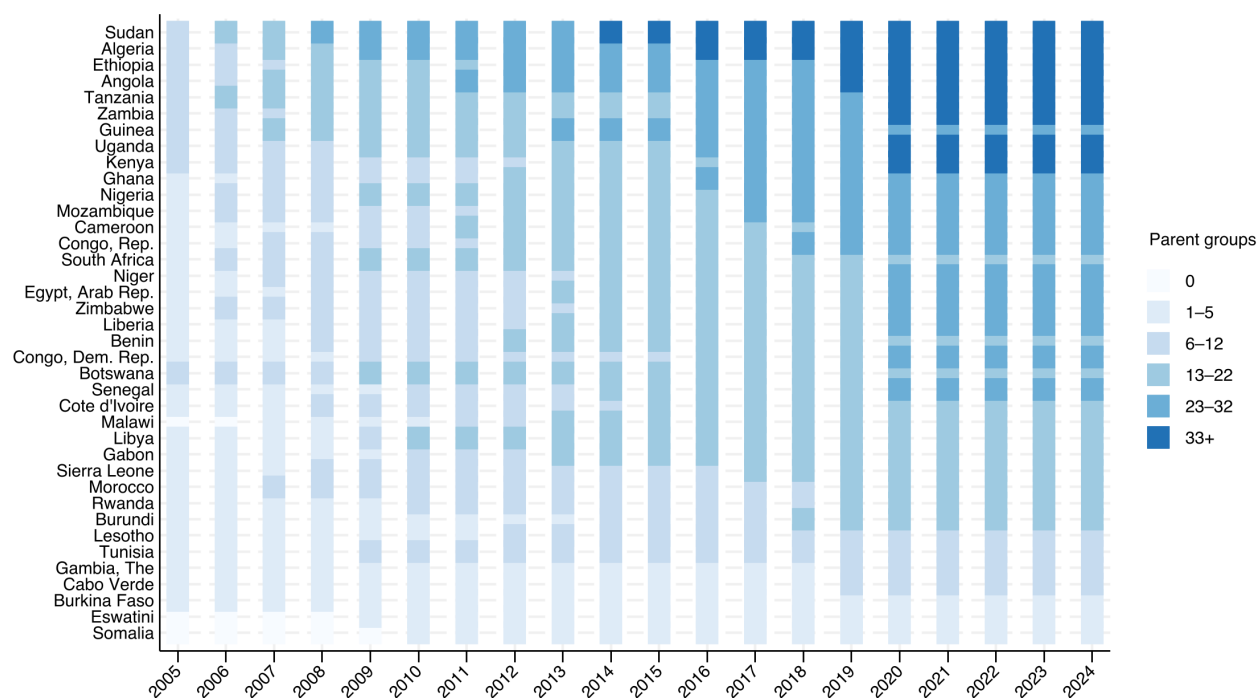


Figure B1. Variation in Cumulative Chinese Contractor Parent-Group Presence Across 38 African Countries, 2005–2024

Note: Figure B1 plots the cumulative number of distinct Chinese contractor parent groups ever active in each country as of year t . Countries are ranked by their 2024 total (bottom = most groups). Color bands: 0 (white), 1–5 (lightest blue), 6–12, 13–22, 23–32, 33+ (darkest blue). Mean within-country SD = 6.6; overall mean = 15.0; range = 0–44. Data source: ENR Top 250 International Contractors, aggregated to parent-group level.

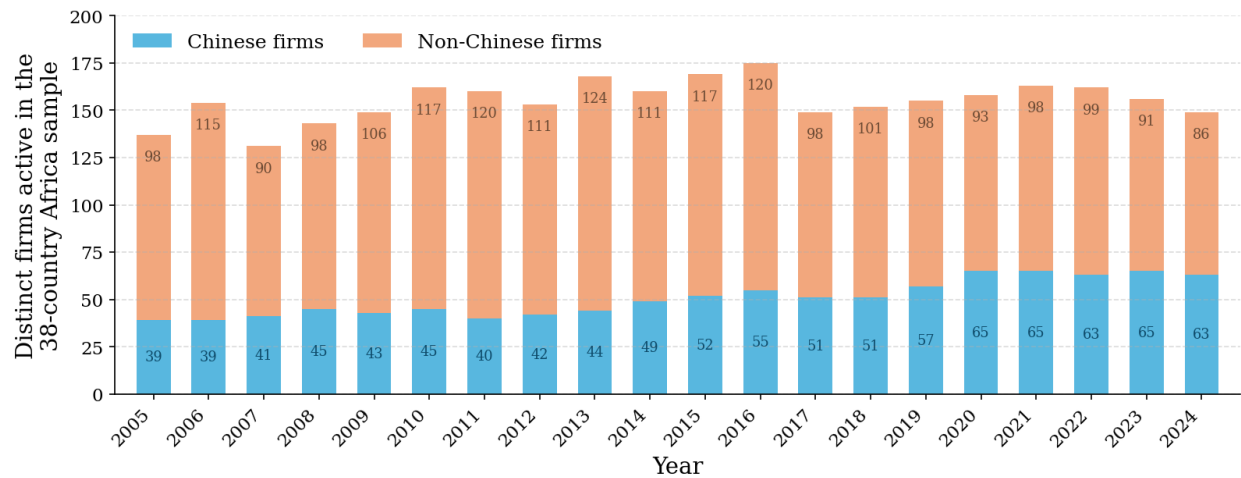


Figure B2: Number of top 250 international contractors active in Africa, 2005-2024.

Data Source: ENR Top 250 International Contractors

Average Number of Chinese Contractors in Africa (2015-2019)

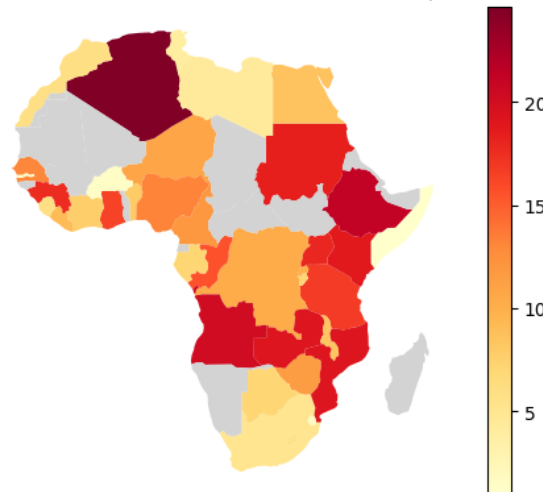


Figure B3. Chinese Contractor Presence in Africa (Average, 2015-2019)

Data Source: ENR Top 250 International Contractors

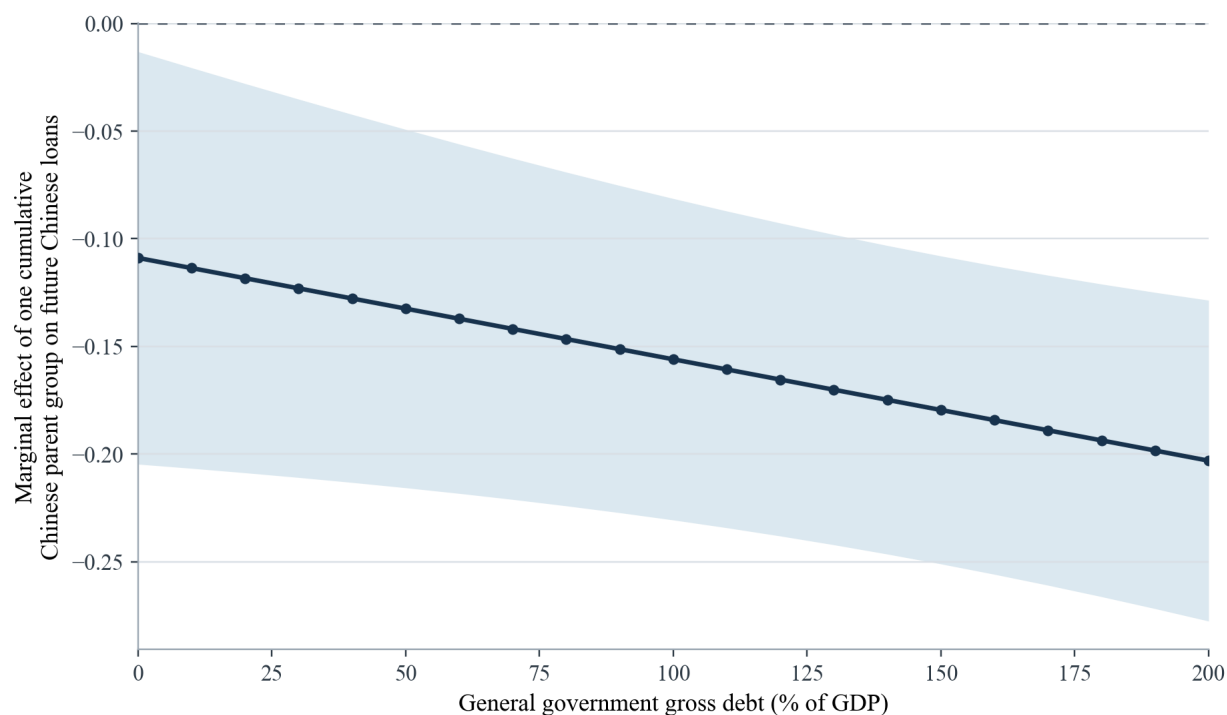


Figure B4. Marginal Effect of Cumulative Chinese Parent Groups on Future Chinese

Loans by General Government Gross Debt (% of GDP)

Note: Figure B4 plots the marginal effect of one additional cumulative Chinese parent group on future Chinese loan commitments at different levels of general government gross debt, from 0% to 200% of GDP. The estimated effect becomes more negative as debt rises: it is about -11% at 0% debt, about -16% at 100% debt, and about -20% at 200% debt. The shaded band shows the 95% confidence interval, which remains below zero across the plotted range.