

Collaborating for sustainable development: the role of cofinancing in shaping outcomes of Chinese lending and overseas development finance projects

Increasing infrastructure finance is [high on the agenda](#) for achieving sustainable development targets and climate goals in developing countries.

Many development finance institutions, including the [World Bank](#), [Asian Development Bank](#) and [Global Environment Facility](#), have identified cofinancing as a key tool for mobilizing more financial resources, which at the same time could improve project outcomes. Cofinancing refers to the practice of multiple institutions, such as multilateral, bilateral and local parties, pooling their financial resources to jointly finance a project or program. This could include parties with and without formal cofinancing agreements.

Despite increasing demands for cofinancing in international development finance, there is little understanding of the impact of cofinancing from an academic perspective. In

addition to mobilizing more financial resources, advocates of cofinancing [argue that](#) joint investment can ensure project success and improve the sustainability of development projects, but quantitative evidence to substantiate these claims has been lacking.

In a [new working paper](#), we narrow this literature gap by providing empirical evidence from project-level outcomes of Chinese lending and overseas development finance. Given China's role in global infrastructure finance, it is critical to understand how cofinancing with multiple partners may influence project outcomes.

As a major financier in global infrastructure development, China has [increasingly highlighted](#) the importance of cofinancing in its lending and overseas development finance. China's approach to cofinancing involves partnering with

recipient countries, international organizations and other stakeholders to jointly finance and implement development projects (Lin and Wang, 2017; Chin and Gallagher, 2019; Humphrey and Chen, 2021). Initiatives have included formal partnerships with multilateral development banks, such as the [Asian Development Bank](#), as well as the establishment of various bilateral and multilateral development funds, such as a [\\$2 billion cofinancing fund](#) between the China Development Bank and the African Development Bank and the [China Co-financing Fund for Latin America and Caribbean Region](#) between the Inter-American Development Bank and the People's Bank of China.

Co-financing can also occur at the project level, as evidenced by the Industrial and Commercial Bank of China (ICBC) and the European Bank for Reconstruction and Development (EBRD). In 2017, they issued a [\\$140 million syndicated loan](#) for the construction of three solar power plants in Egypt's Benban Solar Park. Another instance of cofinancing took place between the Bank of China and Nedbank, the fourth-largest bank in South Africa. They signed a project financing cooperation agreement and provided a [\\$120 million loan](#) for the Mamba

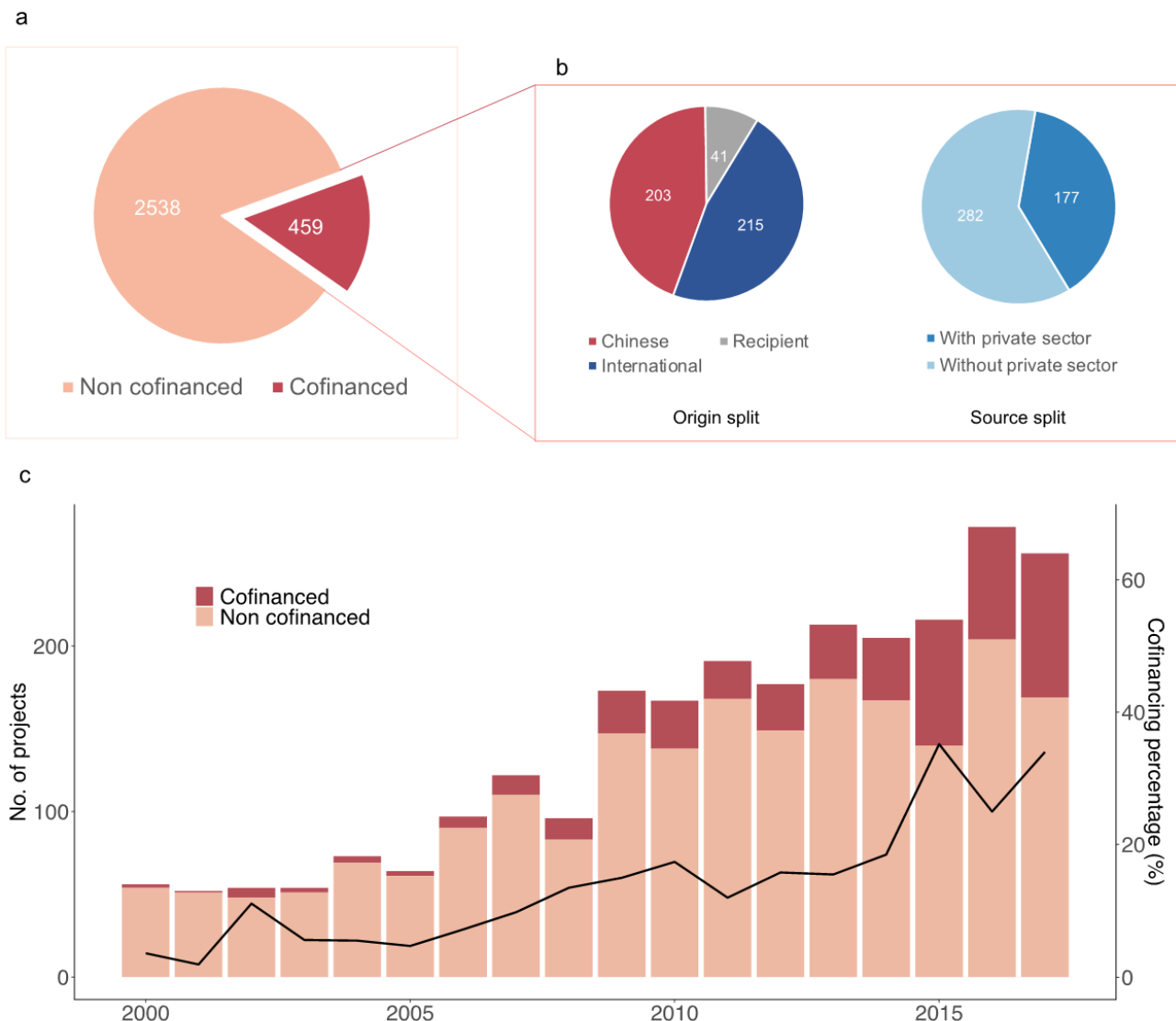
Cement Company in South Africa.

In our study, we analyzed infrastructure projects supported by Chinese lending and overseas development finance that were committed from 2000–2017. Among the 2,997 Chinese overseas development infrastructure projects, 15 percent are cofinanced, including 215 with international partners, 41 with recipient partners and 203 with Chinese partners. When broken down by financing sources, 282 projects are entirely funded

by the public sector, while 177 have were partly cofinanced by private sector institutions, such as Banco Santander, HSBC and BNP Paribas. The share of cofinanced projects has also increased over time, with more cofinanced projects in recent years.

Figure 1 presents the cofinancing characteristics of the sample.

Figure 1.
Cofinancing characteristics of infrastructure projects supported by Chinese lending and overseas development finance



To investigate the impact of cofinancing, we focused on two types of infrastructure project outcomes: project implementation and environmental impacts. Infrastructure projects are often complex and large-scale endeavors that involve a high degree of uncertainty and lengthy implementation periods. It's not uncommon for such projects to face cancellations and withdrawals, which underscores the critical importance of successful implementation to achieve project and development goals. This requires specialized technical expertise and access to local regulatory and market information. We focus on two implementation outcomes that are central to implementation: completion and localization.

Furthermore, we examine the environmental performance of Chinese overseas development projects, as environmental impacts, particularly those related to climate change and biodiversity, are major risks facing infrastructure projects in developing countries (Ascensão et al., 2018). The evaluation of environmental impacts is highly variable and dependent on the unique nature of each project. To facilitate analysis, we investigate two measurable and comparable impacts that are critical to international institutions' environmental safeguards and China's push to green the Belt and Road Initiative: CO₂ emissions intensity of power generation units and biodiversity risks of infrastructure projects with precise geographical boundaries. To construct these impact variables, we use established methods from the literature on carbon emission estimation and biodiversity risk evaluation (Pfeiffer et al., 2018;

Springer, Evans, and Teng, 2021; Yang et al., 2021).

Overall, we find cofinancing is associated with better project outcomes, though effects vary across examined outcomes and cofinancing arrangements. Cofinancing, in general, can enhance projects' completion rates, as cofinanced projects are found to be 3.3–7.0 percentage points less likely to be cancelled or suspended than non-cofinanced projects. This supports the argument that cofinancing arrangements may enhance project accountability and therefore ensure project success.

We also find cofinancing with specific partners can bring particular benefits. Precisely, projects with cofinancing from the recipient country have a 20.4 percentage points higher probability of involving local implementors and an average of 0.11 increase in the number of local implementors than non-cofinanced projects.

On the other hand, projects with cofinancing from international partners have better environmental performance with regard to a 2.7 percent lower carbon dioxide emissions intensity and a 0.42 standard deviation decrease in biodiversity risk compared to non-cofinanced projects.

These results imply that cofinancing with recipient and international partners promotes Chinese lending and development finance institutions to engage with local communities and enhance the environmental performance of their overseas infrastructure projects.

The results suggest that cofinancing can be an effective

tool to improve the outcomes of Chinese overseas development finance projects. Of course, cofinancing alone is not a guarantee of success, but leveraging the resources and strengths of multiple financiers can certainly contribute to the goal of implementing projects in a sustainable way, as illustrated on average by the large sample evidence in this study. Chinese development finance institutions should further foster partnerships with the recipient and international partners to encourage cofinancing.

These findings come at a critical time. The Global South is facing [a vast infrastructure and green finance gap](#) that must be closed to achieve climate targets and sustainable development goals. Beyond Chinese overseas development projects, cofinancing should be fostered further to build inclusive and sustainable infrastructure in developing countries, even more so in regions facing severe consequences of climate change.

- ★ **Yangsiyu Lu** is a postdoctoral research fellow at the Paris School of Economics and a former global China research fellow with the Boston University Global Development Policy Center.
- ★ **Cecilia Springer** is the assistant director of the Global China Initiative at the Boston University Global Development Policy Center.
- ★ **Bjarne Steffen** is assistant professor of climate finance and policy at ETH Zurich, Switzerland and a research affiliate at the MIT Center for Energy and Environmental Policy Research.

Ascensão F., Fahrig L., Clevenger A. P., Corlett R. T., Jaeger J. A. G., Laurance W. F. & Pereira H. M., 2018, "[Environmental challenges for the belt and road initiative](#)", *Nature Sustainability*, 1 (5): 206–9.

Humphrey C. & Chen Y., 2021, "[China in the multilateral development banks evolving strategies of a new power](#)".

Chin G.T. & Gallagher K. P., 2019, "[Coordinated credit spaces: the globalization of Chinese development finance](#)", *Development and Change*, 50(1), pp. 245–274.

Kotchen M. J. & Negi N. K., 2019, "[Cofinancing in environment and development: evidence from the global environment facility](#)", *World Bank Economic Review*, 33(1), pp. 41–62.

Lin J. Y. & Wang Y., 2017, "[Going beyond aid: development cooperation for structural transformation](#)", *Cambridge University Press*.

Pfeiffer A., Hepburn C., Vogt-Schilb A. & Caldecott B., 2018, "[Committed emissions from existing and planned power plants and asset stranding required to meet the Paris agreement](#)", *Environmental Research Letters*, 13 (5): 054–019.

Springer C. H., Evans S. & Teng F., 2021, "[An empirical analysis of the environmental performance of China's overseas coal plants](#)", *Environmental Research Letters*, 16 (5).

Yang H., Simmons B. A., Ray R., Nolte C., Gopal S., Ma Y., Ma X. & Gallagher K. P., September 2021, "[Risks to global biodiversity and indigenous lands from China's overseas development finance](#)", *Nature Ecology & Evolution*.