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# Strategic problems in North–South climate finance: creating joint gains for donors and recipients☆

*Johannes Urpelainen* *

*Department of Political Science, Columbia University, 420 West 118th Street, 712 International Affairs Building, New York, NY, United States*

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ABSTRACT

Carbon dioxide emissions are growing rapidly in the developing world, and industrialized countries have access to resources that could fund additional mitigation in the global South. In this article, I examine the political economy of North–South climate finance. Building on previous research, I develop a game-theoretic model that includes three key issues in climate finance: incentives for recipient participation, capacity building, and leveraging private finance. The game-theoretic analysis shows how these factors interact and produces several interesting empirical implications. For example, improvements in recipient quality can decrease the donor's capacity building efforts and the probability of successful project implementation.



## 1. Introduction

While wealthy industrialized countries have caused most of climate change, emissions are now rapidly growing in developing countries (Stern, 2006). Since many developing countries face chronic resource constraints, the question of North–South *climate finance* – mitigation in developing countries funded by industrialized countries – has gained prominence in international negotiations (Stewart et al., 2009). Unfortunately, this prominence has largely been one of intense controversy. Only months after wealthy industrialized countries pledged to substantially increase climate finance at the Copenhagen Conference of December 2009, the developing countries complained in public that these promises were not being met.[1]

Climate finance is a difficult strategic problem for a variety reasons. This article focuses on three problems that are both important and strategically related, so that analyzing them under a unified analytical framework promises high theoretical and empirical payoffs.[2] First, most donors prefer to minimize funding and maximize conditionality, while most recipients demand generous support and oppose conditionality as interference with national sovereignty (Breidenich and Bodansky, 2009; Werksman, 2009). Second, climate finance cannot be effective unless donors and recipients solve the difficult problem of *capacity building*: supporting the development of effective implementation institutions for the recipient. The design of such institutions features complex questions of effectiveness, power, and accountability (Ballesteros et al., 2009; Sagar, 2000; Victor, 2011). Finally, the relationship between private and public finance remains unresolved (Brinkman, 2009). Although scholars and practitioners generally agree that public finance should leverage contributions from the private sector, the relationship between the two sources of finance remains unexplored.

This article offers a game-theoretic analysis of these strategic problems in the context of climate finance. The first

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* Tel.: +1 734 757 0161.
E-mail address: ju2178@columbia.edu.

[1] "Murky Climate Finance Risks Undermining Trust at U.N. Talks." *Reuters* June 4, 2010.

[2] Among problems that fall outside the scope of this study are collective action among climate finance donors and the relationship between adaptation and mitigation finance.

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noteworthy finding pertains to the benefits of successful capacity building. While facilitating successful implementation, effective capacity building can also help secure the participation of both donors and recipients. Capacity building is profitable for the donor, not only because it increases the probability of successful mitigation, but also because it reduces the need to compensate the recipient for participation. While development scholars have rightly criticized the unsuccessful nature of many capacity building efforts (Easterly, 2006; Prowse, 2002), my findings suggest that investment in effective capacity building pays off because it can directly alleviate the distributional conflict surrounding burden sharing in climate finance between donors and recipients.

Empirically, the analysis implies the existence of an inverse relationship between capacity building efforts and the reward that the donor offers to the recipient for a mitigation policy. If changes in exogenous circumstances increase capacity building, the need to compensate the recipient with incremental public funding decreases. If the value of emissions reductions to the donor increases, so that the donor has an incentive to respond by increasing efforts towards capacity building, it also has an incentive to reduce direct incremental funding to the recipient. This produces the counterintuitive empirical hypothesis that if the donor and the recipient expect large benefits from a given mitigation project, the donor will invest substantially in capacity building while offering a small reward to the recipient.

The equilibrium analysis sheds new light on the relationship between private and public funding. On the one hand, private funding benefits both the donor and the recipient because investors cover some of the implementation cost. On the other hand, private funding reduces the need for public funding by the donor or the recipient, so the effect of private funding on rewards is also negative. If the donor manages to secure private funding for mitigation policies by the recipient, the set of feasible and mutually profitable projects expands. This is mutually profitable because it will be easier to secure participation by both North and South. This win–win effect may prove essential in breaking the North–South climate finance gridlock.

The model's primary policy implication pertains to the types of projects that benefit from capacity building. Enhanced capacity building can greatly increase the political feasibility and success rate of projects that are potentially attractive to both private investors and donors, yet costly to the recipient and implemented in contexts fraught with political and economic risks. Perhaps the best example is substituting new renewable electricity technologies for fossil fuels in rapidly growing but politically and economically volatile countries with limited regulatory capacity. Investments in clean electricity require large amounts of capital and their successful implementation depends on a functioning regulatory framework, but the potential benefits for donors (climate mitigation) and investors (electricity sales) are large. In rapidly growing economies that suffer from political instability and limited regulatory capacity, such as Indonesia and Nigeria, donors should pay particular attention to developing effective programs for capacity building. In these cases, successful capacity building can not only improve the mitigation potential of climate finance, but also create opportunities for successful political cooperation between key donors and recipients.

I begin with a concise introduction to North–South climate finance. I then discuss the associated strategic problems. Next, I conduct the analysis and summarize the theoretical and empirical implications thereof. I conclude with some ideas for practical implementation and a discussion of the broader implications of the analysis.

## 2. North–South climate finance

I define climate finance as the provision of resources by a donor to support climate mitigation by a recipient (Stewart et al., 2009). Thus, the key criterion is that a wealthy donor offers public funding in exchange for the implementation of a mutually agreed mitigation policy. I leave adaptation finance outside my definition of climate finance. Mitigation and adaptation are different issues surrounded by different politics, so it seems prudent to focus on one.[3]

At the outset, it is important to note that the North–South distinction in international politics has already blurred. Rapidly industrializing countries such as China and India are now major donors of foreign aid. However, this does not mean that North–South climate finance does not have a role to play. On a per capita basis, the distribution of economic wealth remains uneven. Even rapidly industrializing countries with large reserves face many urgent challenges, such as urbanization and persistent poverty, so their willingness to fund climate mitigation is limited. Equity concerns further emphasize the importance of North–South climate finance (Müller, 2001).

Climate finance is now widely recognized as an integral element of a future climate regime (Ballesteros et al., 2009; Nakhooda, 2008; UNFCCC, 2007). As Stewart et al. (2009, p. 4) write, the rapid growth of carbon dioxide emissions in large developing countries, notably China and India, means that climate stabilization is completely impossible without aggressive mitigation measures in the global South. However, developing countries are only willing to invest limited resources to adopt and implement effective mitigation policies, so external assistance is essential to achieve the requisite degree of decarbonization.

Climate finance has been available in some form since the entry into force in 1994 of the United Nations Framework Convention on Climate Change (UNFCCC). Regarding multilateral funding, Paragraph 3 of Article IV of the UNFCCC commits developed countries to financial assistance to developing countries in view of implementing the convention. For bilateral finance, Paragraph 5 of Article XI of the UNFCCC states somewhat vaguely that "developed countries... may also provide financial resources related to the implementation of the convention through bilateral, regional and other multilateral channels." While this paragraph does not prescribe bilateral assistance, it provides a legal and institutional basis for bilateral climate finance under the emerging

[3] To be sure, mitigation and adaptation finance could compete for scarce resources. This article does not illuminate this strategic relationship.