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Partner selection in international environmental networks: The effect of skills and money on cooperation in the Global South

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ABSTRACT

What explains cooperation in international environmental networks? What are the effects of skills and money on the decision by state agencies to collaborate across borders on environmental problems? This article answers these questions, showing that international cooperation provides environmental bureaucrats and their agencies with the opportunity to pool scarce resources, update critical skills, and attract funds from international donors. Theory and results offer novel findings on network homophily (the tendency of similar actors to work together), as international cooperation increases between environmental state agencies at similar levels of program development. Hypotheses are tested using social network analysis to measure cooperation on a dataset that includes all regional and global grants awarded over the past two decades by the Global Environment Facility (GEF).

1. Introduction

The main mission of International Governmental Organizations (IOs) is to advance inter-state cooperation. While IOs achieve this goal in multiple ways, one exclusive tool available to them is the collection of programs and projects they manage and through which members – especially developing countries – can work together on common problems. Because of scarce resources and pressure to deliver results and remain accountable to country donors, IOs aim to enlarge the number of participants (Young, 2002; Biermann and Siebenhüner, 2009; Kahler, 1992). Indeed, many multilateral agencies have technical cooperation programs where in addition to working with individual countries, international managers help coordinate cross-national projects within and across regions. In contrast to individual country assistance, multilateral partnerships "spreads the wealth" of state agency resources more efficiently and effectively (Schiff and Winters, 2002; Horton, 2003). Just as critically, these partnerships multiply the effects of cooperation and create networks of knowledge, as project participants (i.e. national bureaucrats) forge lasting ties, share knowledge and practices, and address common problems (Carmen et al., 2015). While IOs help create the conditions that facilitate country-to-country cooperation (and have resources to do so), states decide whether to work together or not on an international project. This is not a costless choice for member states in the Global South. When a developing country decides to participate in an IO-sponsored project, it requires that personnel from understaffed state agencies be assigned away to work externally for extended periods of time and monies be allocated away from chronically underfunded domestic budgets and toward international partnerships. What then explains a country's decision to collaborate with other states in IO-sponsored projects? What kind of incentives can IOs offer states to get them to cooperate? By explaining the determinants of partner selection among developing country members, this paper furthers our knowledge of how international organizations advance cooperation on the environment across the Global South and contribute to a rich literature on political and policy environmental networks (Conca, 2005; Hochstetler and Keck, 2007; Hadden, 2015).

To answer the above questions, I examine partner selection under the Global Environment Facility (GEF), the world's largest public fund for inter-state environmental projects in the Global South. The GEF offers significant funding to member states in order to meet the expenses of cross-national technical projects in environmental remediation and adaptation. Over its 24 year history, the GEF has disbursed $14.6 billion directly in individual, regional, and global grants to the national environmental agencies of 155 developing countries and former Soviet republics.[1] GEF

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[1] See http://www.thegef.org/gef/home.

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grants cover partial project costs, leaving national environmental agencies to procure their share (or co-financing) of the funding (Young, 2002). In turn, country members have provided co-financing for almost $74.3 billion (see footnote 1). Under GEF, environmental experts in Africa, Asia, and Latin America work together with regional and global peers on complex projects in Biodiversity, Climate Change, Chemicals, International Waters, Land Degradation, Sustainable Forest Management, and Ozone Layer Depletion. There is great variation among GEF members regarding the extent of resources that governments can bring to bear on environmental policy problems. For example, government spending and budget appropriations for the protection of the environment will be vastly greater in Brazil than in Tanzania. Furthermore, overall country levels of human capital, needed to address the complex technical challenges of the deteriorating natural environment, also differ enormously across countries of the Global South and emerging markets. The GEF works in tandem with the United Nations Environmental Program (UNEP) and the United Nations Development Program (UNDP), providing technical expertise to help implement GEF projects. Thus, similar to other IOs, the GEF offers two key resources to foster international cooperation in the protection of the global environment: funding and skills.

I argue that while member states respond to the monetary incentives to collaborate (that is, GEF funding should be a predictor of project participation), another key driver of transgovernmental cooperation in technical sectors such as environmental policy is the need to acquire and update skills. My argument begins with the actual participant of GEF-sponsored projects, the expert bureaucrat, and the career incentives she faces to invest in her skills if her employer, the state, does not. I define *skills* as the learned capacities and practical and theoretical know-how that bureaucrats use to carry out day-to-day tasks and solve concrete policy problems (Ericsson, 2006; Abers and Keck, 2013). Without sharp skills, state experts cannot respond to the demands of common citizens as well as those of local and national politicians. Skills are also critical for bureaucrats that seek to maintain their market value, oftentimes at the intersection of the private, semi-public, and public sectors. Undoubtedly, technical skills are becoming increasingly indispensable in environmental policy as "the environmental movement and subsequent social change created the demand for environmental expertise to grow rapidly and provided a basis for new elite of risk professionals" (Evetts et al., 2006, p. 120).

If skill upgrading is the primary causal mechanism behind cooperation in GEF projects, the empirical analyses should reveal a strong *homophily* effect, which refers to the tendency of actors who share similar characteristics to work together (McPherson et al., 2001; Maoz, 2012; Kinne, 2013; Videras, 2013; Gerber et al., 2013). If bureaucrats' priority is to advance their skills, they will seek out partners who have either superior or equal training. As not all project participants will be able to associate with colleagues from more developed programs, I expect homophily to drive partner selection within the GEF network.

To explain the effect of funds and skills on cooperation in GEF projects, I take advantage of new advances in the measurement of social networks. I run Exponential Random Graph Models (ERGM), which estimate the probability of observing a collaborative tie between each pair of environmental state agencies. ERGM allow us to include homophily terms measuring the effect of shared traits on collaboration, and consequently, the determinants of partner selection. Models show that two environmental state bureaus are more likely to cooperate when they (1) have similar levels of bureaucratic competence, (2) invest similar *overall* amounts of co-financing,[2] (3) receive similar *overall* amounts of GEF funding, and (4) have similar country levels of scientific productivity. I interpret these findings as confirming my argument: in order to increase their access to resources needed to solve common environmental problems and advance their professional careers, expert bureaucrats are willing to bear the costs of international cooperation with foreign peers within the GEF network.

The present study makes two important contributions. First, it offers empirical analyses of the effects of IO funding on international cooperation on the protection of the environment. If, as practitioners and advocates maintain, international collaboration is necessary in order to solve dire environmental problems, then understanding the determinants of inter-state cooperation and the role multilateral organizations play is essential (Carmen et al., 2015; Andonova, 2014; Biermann and Siebenhüner, 2009; Bauer, 2006). Second, this research helps advance our understanding of homophily in international cooperation, which remains under-theorized. The fact that state agencies with similar levels of development have a higher propensity to collaborate should be of special interest to managers of technical cooperation programs of IOs, who strive to distribute scarce resources in the most efficient and effective way (Young, 2002; Schiff and Winters, 2002). It creates a dilemma for the international manager as well. On the one hand, more equal country pairings are more likely to work, thus effectively advancing cooperation in the protection of the global environment. On the other, when unequal pairings "stick", they can be a great source of needed training and expertise for the lesser developed partner.

The organization of the paper follows. In the following section, I discuss my theory and formulate the main hypotheses of the study. Theoretical expectations are drawn from the political economy of skills as well as the literature on international cooperation. This section also draws from interviews I conducted with GEF managers and domestic environmental bureaucrats. The following section discusses the used and offers a visualization of the GEF sponsored network. In Section 4 I present the empirical models and study findings. Finally, in the concluding section, I offer a brief outlook of the research.

2. Theoretical discussion and study hypotheses

What explains partner-selection in GEF projects? How do IO resources facilitate inter-state cooperation? The argument presented in this paper begins with the clear incentive state experts have to maintain their skills sharp and current. Bureaucrats in charge of the protection of the environment, similar to "street level bureaucrats" and professionals in other technology-driven state agencies, need a degree of specialization to carry out the tasks assigned to them (Bach and Newman, 2014; Abers and Keck, 2013; Lipsky, 2010; Hochstetler and Keck, 2007; Hawkins and Jacoby, 2006; Hill, 2003).[3] Often, their particular skillset is what got them hired in the first place. The more specialized the area in which they work, the greater the impact of skills on job and career advancements. So what do bureaucrats do if they are not receiving the proper training at home from their employer, the state? The literature on skill acquisition tells us that access to training is critical to workers marketability and that when resources are scarce, workers that are more skilled (and younger and employed) benefit overwhelmingly from employer and state investment in skill upgrading (Thelen, 2004; Mayer and Solga, 2008; Booth and Snower, 1996). Past studies, beginning with the seminal Human Capital theorem by Becker (2009), find evidence that competing

[2] By *overall* I mean the totality of GEF funding (as well as country co-financing) for *all* projects in which each country has participated.

[3] "Street level bureaucrats" refers to those civil servants who interact with the public and critically shape the implementation of policy through the discretion that they wield and the resources that they hold (Lipsky, 2010; Hill, 2003).