Aiming at the Wrong Targets: 
The Domestic Consequences of International Efforts to Build Institutions

Mark T. Buntaine  
UCSB  
buntaine@bren.ucsb.edu

Bradley C. Parks  
College of William & Mary  
bcpark@wm.edu

Benjamin P. Buch  
Stanford University  
bpbuch@stanford.edu

3 February 2017

Abstract

We explain why international development organizations have had so little success building and reforming public sector institutions in developing countries. They often fail despite their apparently strong commitment to achieving measurable results and extraordinary amounts of time, money, and effort. We demonstrate that, when donors and lenders make access to financing contingent upon achievement of performance targets, recipient countries tend to choose easy and shallow institutional targets. These targets measure the organization of public sector institutions, rather than their effectiveness at addressing public problems. Such targets provide countries with low-cost opportunities to signal commitment to institution-building to international development organizations. We demonstrate the explanatory and predictive power of our argument in the context of a sector of World Bank lending — environment and natural resource management — that focuses heavily on improving public sector institutions.
“[W]hen you ask the Education Ministry ‘What’s your core function and who’s your client?’ they laugh at you. When I say that the client is the Afghan child — and the Ministry is an instrument, not the goal — it’s greeted with shock. It’s a new idea.” - Ashraf Ghani, The President of Afghanistan (quoted in Packer 2016).

Introduction

The question of how poor countries establish and maintain functional public sector institutions has long confounded both scholars and policymakers. Countries rarely succeed in promoting economic development and social well-being in the absence of agencies that can perform the basic functions of the state (North 1990; Rodrik 2000; Acemoglu and Robinson 2012). Without strong public sector institutions, government revenue goes uncollected and public goods go unprovided (Besley and Persson 2011; Pritchett, Woolcock, and Andrews 2013). International development organizations not only recognize the importance of public sector institutions, but also spend extraordinary amounts of time, money, and effort trying to build and reform them. However, the best available evidence suggests that their efforts usually fail (Berg 1993; IEG 2008a; Levy and Kpundeh 2005; van de Walle 2001).

We present a theory that explains this poor track record. International development organizations create incentives for a particular cohort of countries to signal their commitment to building institutions, but in ways that divert attention and effort away from actually solving public problems. In particular, aid agencies and development banks create incentives for those countries that access concessional financing (that is, grants and below-market-rate loans with grant elements) to focus on easy and shallow targets that measure how institutions in the public sector are organized. Focusing on these metrics come at the expense of more difficult targets that measure de facto institutional performance.

By contrast, similar countries that are eligible to access non-concessional financing (that is, loans at or near market rates) from international development organizations do not benefit by meeting targets that measure how institutions are organized, since access to financing does not depend upon achieving targets for these countries. Rather, their primary concern is satisfying domestic constituencies that care about actual institutional performance. They are therefore more
likely to focus their reform efforts on more difficult targets that measure whether institution-building activities solve public problems. Thus, the incentives that international development organizations have put in place for different countries that access different types of financing have resulted in a cruel irony: the countries most in need of more effective public sector institutions are least likely to invest in the creation of such institutions.

The pursuit of *de jure* institutional reforms that do little to solve *de facto* problems is a problem that cuts across virtually all sectors and programming contexts. Governing elites in developing countries create anti-corruption commissions with no intention of recovering public funds that are stolen; they pass legislation that criminalizes human trafficking but fail to prosecute the most egregious violations of the law; they create “one-stop shops” to simplify the process of legally registering a business without addressing corruption in licensing processes that begin after legal incorporation; and they host international election monitors while at the same time buying votes and stuffing ballot boxes (Meagher 2005; IEG 2008b; Haggard, MacIntyre and Tiede 2008; Hyde 2011a).

External sponsors are complicit in this problem (Andrews 2013; Pritchett et al. 2013; Samuel 2014). They not only enable and encourage their counterparts in developing countries to pursue *de jure* institutional development activities and targets, but also use the same shallow targets to demonstrate success to their member states or legislatures. For example, a multilateral development bank might approve a loan agreement with a performance target that measures whether the recipient reorganizes its regional tax offices, rather than whether it expands revenue collection. We refer to the former type of target as a measure of institutional “form” and the latter type of target as a measure of institutional “function.”

The World Bank, which provides the focus of our study, acknowledges that gaming in the selection of targets is a significant problem. In a comprehensive assessment of its public sector management activities, it recently concluded that "short-term targets may bias reform efforts towards the readily achievable, and away from tougher reforms needed for sustainable change that only show results many years down the line” (World Bank 2012a, 21). We provide evidence these biases are particularly strong for countries that need to achieve targets to maintain access to concessional financing.

To do so, we created two original datasets by compiling targets that the World Bank used to measure the success of institution-building in the natural resource and environmental
management sector, which we use for in-sample hypothesis testing and out-of-sample model validation. To our knowledge, these are the first datasets that contain theoretically-informed and systematic measures about the nature, outcomes, and long-run sustainability of specific, externally-sponsored activities to build institutions. Our focus on the natural resource and environmental management sector offers an excellent opportunity to test our argument because a preponderance of activities in this sector focuses on building institutions. Many environmental activities are also pursued at the behest of donor countries, which should heighten incentives for borrowing countries to choose easy targets that signal commitment to institution-building.

We coded all of the performance targets used to measure success for projects in our sample according to whether they measure solutions to public problems through institution-building (“function” targets) or only the existence or organization of a public sector institution (“form” targets). To take one example from our data, establishing regional water boards to manage the distribution of drinking water is a form target, while reducing the amount of water lost during distribution is a function target. We model how countries select these targets based on their differential access to concessional and non-concessional financing. We use access to concessional financing to measure the strength of the incentive that countries face to choose easy, form targets as a strategy to maximize access to development financing on favorable terms.

In both in-sample explanatory models and out-of-sample validation models, we show that countries that rely primarily or solely on concessional financing — and that must achieve project-specific targets to maintain or increase access — are more likely to choose form targets than countries that are over the threshold and eligible to access non-concessional financing that does not depend on the achievement of targets. Our results hold after controlling for the existence of baseline institutions and legislation, as well as for the subset of countries that are very similar in income but immediately on one side or the other of the eligibility threshold for non-concessional financing.

Our findings offer an answer to a key problem that has vexed policymakers and practitioners for decades: why efforts to build strong public sector institutions through externally-sponsored interventions have largely proven unsuccessful. This problem also plagues post-conflict peacebuilding (Donais 2009), democracy promotion (de Zeeuw 2005), judicial reform (Haggard et al. 2008), and macroeconomic management (Heckelman and Knack 2008; Dreher and Rupprecht 2007), among other areas. Research in these other areas suggests that
externally-sponsored institution-building efforts often fail, but there remains considerable debate and speculation about why. Inasmuch scholars who study this topic in different sectors converge on an answer, it is that insufficient local ownership of institutional reforms matters. However, existing studies do not shed much light on how external actors create incentives that detract from local ownership. Our argument provides an answer to this question.

This article also has implications for a growing body of scholarship in international relations on, first, how external pressures encourage countries to engage in signaling behavior and, second, what intended and unintended outcomes result from those signaling activities. On one side of this debate are those who argue that states use signaling devices — for example, the ratification of international treaties, membership in international organizations, and policy responses to cross-country rankings — to increase the credibility of their commitments (see Mansfield and Pevehouse 2006; Dreher and Voigt 2011; Kelley and Simmons 2015). However, another group of scholars are much less sanguine about external incentives and pressures. They warn that these can result in unproductive or pathological behaviors, such as insincere compliance, strategic manipulation or withholding of information, and the creation of “rational fictions” for external consumption (McNamara 2002; Bush 2011; Simpser and Donno 2012; Samuel 2014; Kerner, Jerven, and Beatty Forthcoming; Sandefur and Glassman 2015). We provide new evidence about one mechanism (target-setting) through which international actors set in motion incentives for governments to engage in unproductive signaling.

**Building Institutions through Development Assistance**

Over the last several decades, international development organizations have devoted an extraordinary amount of time, energy, and funding to "capacity building" and "institutional strengthening" activities in developing countries (Berg 1993; IEG 2008a; UNECA 2003; Andrews 2013). An organization-wide World Bank strategy in 2000 outlined the crucial challenges and implications of its efforts to build and reform institutions, arguing that “only through such institution-building will countries be able to achieve the ultimate goals of poverty reduction, inclusion, environmental sustainability, and private sector development” (World Bank 2000, xxi).

Yet the best available evidence suggests that externally-sponsored programs of this type usually fail (Berg 1993; IEG 2008a; Levy and Kpundeh 2005; Meagher 2005; van de Walle
Many countries that received support for institution-building in previous decades are still receiving support for very similar activities today (Birdsall 2008, 517; IEG 2008a).

One reason for this poor track record is development organizations’ preoccupation with installing “blueprint” and “best practice” institutions — for example, the creation of anti-corruption commissions or one-stop shops for business registration — in very different countries, even though these institutions might not be appropriately tailored to the local context (Rodrik 2000; Evans 2004; Haggard et al. 2008; Tuozzo 2009). In a seminal book on this topic, Andrews (2013, loc. 32) notes that “[institutional reforms] … have emerged from nowhere to dominate development dialogue and practice” and “[t]hese reforms have become associated with common interventions that all countries are encouraged to adopt regardless of context.” He also presents evidence that these reforms are often unsuccessful. An evaluation of the World Bank’s global experience with public sector development arrives at a similar conclusion: "The Bank's approach was too technocratic; it relied on small groups of interlocutors within core ministries and promoted one-size-fits-all [civil service and administrative] reform blueprints in diverse country settings" (IEG 2008a, 2).

Left unchecked, this desire of donors to steer governments in developing countries toward “blueprint” and “best practice” institutions and measure success on the basis of whether such institutions are transplanted can result in a dysfunctional behavior that Pritchett et al. (2013) call isomorphic mimicry. Governments adopt “the camouflage of [institutional] forms that are deemed successful elsewhere to hide their actual dysfunction” (Pritchett et al. 2013, 2). Incentives to signal performance to donors encourage this behavior. Observable targets that describe the existence or organization of institutions provide tangible demonstrations of commitment to institution-building without requiring costly action to improve public sector performance (Arruñada 2007; Hood 2006). Artifice then breeds further artifice: once governments adopt these institutional forms, external funders declare success without actually helping public sector institutions solve public problems (Pritchett et al. 2013).

In order to illustrate this dynamic, consider Mauritania’s interactions with the IMF and the World Bank since 2000. Samuel (2014) notes that, on paper, the Government of Mauritania was a “model pupil” that embraced advice on institutional reform and assistance from the Bretton Woods institutions.¹ The local authorities standardized and streamlined value-added tax

¹ Samuel (2014, 79), who draws heavily upon his firsthand experiences and observations
rates and exemptions, revised public procurement and investment regulations, created a monitoring system for poverty-related expenditure, and adopted the global best practice of a Medium-Term Expenditure Framework (IMF 2003). They also adopted a code of ethics for public servants, joined the Extractive Industries Transparency Initiative (EITI), and created several anti-corruption bodies (for example the State Inspectorate General, the Commission for Financial Transparency in Public Life).

However, beneath this “reformist façade” was a situation of widespread institutional dysfunction and disorder, including the existence of an illegal yet openly functioning currency market, the large-scale raiding of public coffers, and the systematic falsification of macroeconomic data (Samuel 2014). The IMF understood the existence and severity of these practices and the broader fiction about reforms that authorities created more so than any other external actor because of its Article IV surveillance responsibilities:

[The] IMF team … played a crucial part in the process of constructing the [fictional] economic picture. … As a recipient of IMF loans until 2005, Mauritania was … subject to the constant ‘monitoring’ of its policies and statistical indicators by IMF teams, who went to Nouakchott at least three or four times a year. They worked closely with the working inside the Mauritanian government from 2003 to 2007, argues that “[b]y maintaining its status of the ‘good pupil’, [the government] ensure[d] a flow of income from outside, which was necessary both for security . . . and to supply government clients.”

2 Heilbrunn (2011) and David-Barrett and Okamura (2016) describe EITI participation and the creation of formal anti-corruption institutions as external signaling devices.

3 Girod and Walters (2012, 181) independently document the ways in which governing elites in Mauritania “attempt[ed] to strategically manipulate domestic reforms.” They characterize the military junta’s 2005 attempt to “stage-manage” democratic reforms as a thinly-veiled strategy to secure external resources: "the military seems to have initiated the 2005 [democratic] transition as a strategic choice aimed at maximising aid while allowing the military to remain in control behind the scenes" (Girod and Walters 2012, 186). A 2012 Freedom House report also documents the superficial nature of the governance and anti-corruption reforms that were undertaken: “In April 2007, … the government adopted a code of ethics for public officials. No concrete actions have been taken since then, however. Three years after it was adopted, the government was only at the stage of explaining the code to public servants through workshops. In the same vein, the Ould Cheikh Abdellahi government created the Commission for Financial Transparency in Public Life in October 2007, which has the power to require state officials, including the president, to declare their personal assets. After initially refusing, the current president and some ministers and other high-ranking civil servants declared their assets in fall 2010. However, although these declarations may play a positive symbolic role, it is well known that personal assets are often hidden under the names of relatives. Also, the commission has no power to verify these declarations, which are confidential” (Freedom House 2012, 416).
Mauritanian authorities, providing very concrete support to the development of economic policies: they discussed the consistency of the figures; the techniques used to produce them; how they should be interpreted; the technical hypotheses on which they were based; and so on. Ultimately, the IMF teams actually validated the economic policies and statistical data on which access to funds was based. So we can say that the statistical fiction that remained in place for over 15 years really was built up before their eyes. The question is not even whether or not [IMF] officials knew whether the figures were flawed. The fact is that they were continuously monitoring the methodologies and building the base on which the fiction was elaborated by the government (Samuel 2014, 81).

However, the IMF (2003, 6) remained silent and actually celebrated Mauritania’s “impressive array of structural reforms”. The World Bank (2002, i) followed suit, declaring that “the Government of the Islamic Republic of Mauritania (GIRM) has undertaken a wide-reaching macroeconomic, structural and social reform program that has been both ambitious and successful”. This pattern of complicit behavior is consistent with a small but growing literature on the strategic need that aid agencies and international financial institutions have for “showcase” reformers (Pop-Eleches 2009; Harrigan and El-Said 2006; Cling, Razafindrakoto, and Roubaud 2013).4

There are several reasons why the types of “blueprint” or “best practice” reforms that Mauritania pursued are generally less successful at building durable and high-performing public sector institutions. First, donor-driven reforms can crowd out tailored, country-specific solutions to governance problems that are identified and prioritized by domestic actors (Pritchett and Woolcock 2004; Arruñada 2007; Haggard et al. 2008). Second, the installation of externally-driven institutions from standardized blueprints is likely to fail or falter in out-years if they lack strong domestic support (Hirschmann 1993; Andrews 2013). Third, a focus on de jure institutional development can limit flexibility to respond to new demands for better, de facto governance (North 1990; Evans 2004).

The main alternative to “best practice” institutions is the pursuit of so-called “best fit” institutions that are tailored to the specific circumstances of individual countries and focused directly on solving public problems (Evans 2004; Andrews 2010; Andrews, Pritchett, and Woolcock 2013). Development scholars and practitioners generally agree that this approach to

---

4 Pop-Eleches (2009) suggests that “showcase” reformers may be particularly important to norm-diffusing IOs during periods of significant ideational contestation.
institution-building yields better results and is more resilient and adaptable to emerging governance challenges (Davis 2010; Barma, Huybens, and Viñuela 2014; Andrews 2015). However, the pursuit of such institutions is complex and may require ex ante analysis of the domestic political economy to understand the underlying motivations of individuals and organizations to preserve or alter institutions (Fritz, Kaiser, and Levy 2009; Grindle 2011). It may also require adaptive programming that enables personnel at donor agencies to make corrections during the implementation of programs (Pritchett, Samji and Hammer 2012; DFID 2015). Several donors are moving in this direction, but there are many incentives to remain focused on best practice institutions (Yanguas and Hulme 2015).

Our goal is to explain why governments in the developing world and their foreign sponsors often get stuck focusing on institutional forms (or “best practice” institutions), and how the incentives that get both parties stuck have wide-ranging implications for efforts to build stronger institutions in the countries that need them most. The conventional wisdom is that public sector institutions develop in response to the political demands of a broadening class of economically productive citizens and become more effective over long periods of time (North 1990; Acemoglu and Robinson 2012; Besley and Persson 2011). These accounts contain rich explanations about macro-level institutional dynamics, but they provide little guidance about interventions and programs that might facilitate institutional development gains in the short- to medium-term. We address the same fundamental question but on time scales that are more immediately useful and relevant to policymakers, since performance targets are one of the primary levers available to international development organizations.

Finally, before we introduce our theory of target selection, we must acknowledge that efforts to build or reform de jure institutions can be important when they are pursued as means to the end of solving public problems. We do not argue that donors or governments should abandon the careful design of public sector institutions, and we acknowledge that some types of de jure reforms (like ensuring that central banks and judiciaries are legally independent from legislative or executive pressures) can improve institutional function (Keefer & Stasavage 2003; Voigt and Gutmann 2013). We argue only that the success of de jure efforts should be measured according to whether the public sector institutions that are being organized, reformed, or strengthened can more effectively solve public problems.
A Theory of Target Selection for Institution-building

In 1995, the World Bank and Global Environment Facility approved the Solid Waste Management Project together with other partners for a group of Caribbean nations. One of the primary goals of the project was to establish “fully functioning autonomous or semiautonomous” agencies to manage solid waste in the borrowing countries (World Bank 2003, 6). In Antigua and Barbuda, the project helped establish the National Solid Waste Management Authority. The completion report for the project judged the institutional development target of establishing an agency to be a success. It further elaborated that the project had been a success because the Authority was staffed and able to process documentation and other administrative matters in a timely and efficient manner (World Bank 2003, 7-8). Collection frequency and coverage did also increase over the course of the project implementation period.

An independent audit of the National Solid Waste Management Authority ten years later paints a very different picture. Of ten indicators of function related to the collection, transport, and disposal of solid waste only one was being met — having a plan to open a new landfill (Office of the Director of Audit 2013, 32-3). Major problems were noted with maintenance, collection coverage, and landfill management to prevent contamination of surrounding areas. The audit did find that financial records were effectively maintained and updated, but an interview with the General Manager put this finding in context for the auditor:

It was also reported by the General Manager that the government has not placed any priority on waste management. In fact, the General Manager stated that currently, the Authority focuses “more on cash management than waste management.” A balance is urgently needed. (Office of the Director of Audit 2013, 14)

Over time, the project’s focus on institutional form and actions crowded out the pursuit of sustainable institutional function, a hypothesis that is common in more theoretical scholarship. Our theory helps to explain why so many countries like Antigua and Barbuda get stuck focusing on institutional forms rather than institutional functions and why international development organizations have had so little success at building institutions.

Our central argument is that policymakers in developing countries choose targets in order to maximize the payoffs that they expect the achievement and maintenance of targets will deliver. Their expected payoffs are a function of (a) the rewards for achieving and maintaining
different targets, and (b) the difficulty or cost of achieving and maintaining the targets. When different types of targets offer similarly-sized rewards — in terms of access to concessional financing and opportunities to mobilize support from domestic constituencies — governing elites in developing countries will often choose the easier target that requires less costly effort.

More specifically, we expect that countries that access higher levels of concessional financing will receive larger rewards for achieving and maintaining form-based targets of institutional development than countries with no or little access to concessional financing. Their continued access to concessional financing is conditional upon how they perform on targets, so they often choose easier and less costly targets. By contrast, countries with no or little access to concessional financing cannot unlock external financing if they achieve and maintain easier, form-based targets of institutional development, making them less beneficial to these countries. In light of this relative difference and the fact that domestic constituencies reward all countries for improved institutional function, countries with little or no access to concessional financing should face a larger relative difference in the rewards that they can reap by achieving form and function targets (Figure 1).

![FIG 1. Relative Rewards for Targets Based on Country Type](image)

In the next section of this article, we derive expectations about the relative rewards of achieving and maintaining different types of targets — and thus their expected payoffs — from primary interviews and previous research about donor practices. However, before doing so, two important elements of our argument need to be made explicit. Our theory assumes that this is a horizontal negotiation: international development organizations cannot mandate programmatic activities or performance targets without the agreement of governments that receive their financing (Hicks, Parks, Roberts, and Tierney 2008; McLean 2015), and borrower (recipient) governments must make requests for programs within the operational constraints of international
development organizations. We also assume that this negotiation gives both governments and their counterparts within international development organizations discretion to choose the types of targets they will jointly pursue. We have independently confirmed both of these assumptions. Our background interviews with World Bank officials suggest that formal organizational rules do not significantly constrain the choice of targets. We have also independently confirmed that these targets are negotiated between teams at the World Bank and staff in the line ministries of borrower countries. To explain the selection of targets, we must therefore understand the incentives of policymakers in developing countries and World Bank staff who prepare projects for approval.

_Incentives of Governments that Receive Development Financing_

All governments that receive development financing have incentives to maximize the expected payoff that they will gain by building institutions and are likely to select targets based on the relative benefits and difficulty of achieving them. Bilateral and multilateral aid agencies provide a variety of incentives for all types of governments to improve institutional function (Savedoff 2011; Parks, Rice, and Custer 2015). The Global Environment Facility, for example, conditions assistance on an indicator that measures “the extent to which [a country’s] environmental policies and institutions foster the protection and sustainable use of natural resources and the management of pollution” (World Bank 2011, 35). Countries can also secure discretionary sources of funding like budget support by improving their performance on measures of institutional function (Clist, Isopi, and Morrissey 2012; Perakis and Savedoff 2015; Parks et al. 2015).5

Governments of all types can also garner domestic benefits if they improve institutional function. Whereas domestic constituencies care little about the adoption of institutional forms, they do value and reward improved local governance and public service delivery (Banerjee, Kumar, Pande, and Su 2011; Campbell 2012; Martínez-Bravo, Padró-i-Miquel, Qian, and Yao 2013).

---

5 The amount of discretion that the World Bank yields to the counterpart government is usually tied to the performance of certain functions. In the environment sector, for example, use of these more discretionary financing modalities may depend on whether a government ministry is paying forest titleholders for protecting sensitive watersheds (World Bank 2010; World Bank Carbon Finance Unit 2013).
2014; Keefer and Khemani 2014; Baskaran, Min, and Uppal 2015). These benefits create incentives for all governments to pursue institution-building activities that improve the functioning of the public sector. However, our predictions from theory are not based on differing incentives to choose function targets among different types of countries. They are instead based on the stronger incentive to select form targets among countries that solely or primarily access concessional financing (IDA), as compared to countries that are eligible to access non-concessional financing (IBRD).

Continued access to concessional financing depends in part on the achievement of project-specific targets, whereas continued access to non-concessional financing does not (World Bank 2010). Countries that are below the income threshold that would make them eligible to receive non-concessional financing should therefore be more inclined to pursue form targets, which are easier to achieve than function targets (we empirically validate this assumption in Appendix A). Doing so is an easy way to maximize development financing. A recent World Bank assessment of public sector programming highlights this underlying source of demand for form targets: “Client governments recognize that they risk losing support, including sometimes from the World Bank, if they do not make their public administrations ‘look like’ broadly recognized ‘best practice’ standards” (World Bank 2012a, 6). Indeed, many suppliers of development financing allocate concessional resources through formulaic allocation systems that use information on the achievement and maintenance of project targets, while they do not use such systems for non-concessional development loans. Jürgen René Blum, a Public Sector Specialist at the World Bank, emphasizes the incentives that this system creates for the countries with the fewest options for financing:

6 Conversely, domestic constituencies punish leaders for poor local governance and service delivery (Ferraz and Finan 2008).

7 IDA’s performance-based allocation system has used a formula and quantitative measures of need, project performance, and policy and institutional performance to determine the resource envelope that will be made available to countries since the 1970s. Many multilateral development banks (the Inter-American Development Bank, the Asian Development Bank, the African Development Bank, and the Caribbean Development Bank) and multilateral institutions (IFAD, the Global Environment Facility, the European Commission) have followed suit and established similar performance-based resource allocation systems that reward countries for achieving better project performance scores, with no adjustment for the types of project performance targets that are chosen (Asian Development Bank 2005; Global Environment Facility 2013).
Above-average [public sector management] project performance in more aid-dependent countries … points toward the risks that [public sector management] project success will be on the surface only. Arguably, where client governments have less bargaining power, they also have less ownership and may pursue reforms for the sake of legitimacy in donor eyes, rather than performance. If this holds true on average, better project performance might simply reflect better compliance with donor demands but not better results on the ground — or benefits to citizens. (René Blum 2014, 39)

There is a great deal of primary and secondary evidence that this pressure to pursue institutional forms demanded by donor organizations cuts across sectors and programming contexts (Arruñada 2007; IEG 2008a; Andrews 2013). By way of illustration, consider efforts to build anti-corruption institutions. Heilbrunn (2011, 201-2) presents evidence that in many developing countries “the function of establishing [anti-corruption commissions] is not necessarily to address corruption directly, but to signal seriousness (whether genuine or not) about addressing the problem, and to maintain the support of international actors.” Similarly, others have described the formal adoption of national anti-corruption strategies as a de jure institutional development activity that often has an external rationale but not a domestic rationale. Georgia’s national anti-corruption strategy provides one such example. Di Puppo (2014) provides interview-based evidence that this strategy, which authorities nominally adopted in 2005, was little more than a cosmetic attempt to placate external funders. 8 To illustrate this point, she reports the verbatim response of one high-level Georgian government official who she interviewed about the strategy:

If I try to be as frank as possible, the anti-corruption strategy in part was a tribute to the request of the international community. It was not really the tool that we really daily used, of course you need to comply with formal criteria, you need to have an anti-corruption strategy, an anticorruption action plan and so on. But … I must be frank. It would be really mediocre to say that the anti-corruption strategy is a very good tool (Di

---

8 It is important to note that this effort at donor appeasement during the Saakashvili administration (2004-2012) took place in spite of the fact that the Government of Georgia was at the same time implementing far-reaching anti-corruption reforms that substantially improved de facto governance and public service delivery outcomes (World Bank 2012b; Saakhashvili and Bendukidze 2014; Light 2014). Indeed, no other country worldwide witnessed a larger improvement on the World Bank’s Control of Corruption index between 2004 and 2012 than Georgia. Its performance soared from the 28th percentile to the 64th percentile (among more than 200 countries and territories) during this period.
Another local interviewee indicated that:

[The national anti-corruption strategy] is some b…t that [the Office of the State Minister of Reform Coordination] did just to keep everyone happy…. Nobody cares about that, nobody looks at it, the same with the European Neighbourhood Action Plan. Nobody cares, sitting in [the Minister’s] office, it is not real. It’s just paper … They say you really need some paper, and the Georgians say “Ok, we’ll come up with some paper.” “You have to own it, it has to be your paper, you need a plan, do it in your special way.” “Yes, yes, we love it, we’ll do it, we just need some guidelines.” “Ok, so here are a few ideas and stuff like that.” “Ok, great, these are great ideas, give us some more ideas”. And the next thing you know Europeans have written a piece of paper and the Georgians [say] “here is the piece of paper do you like it?” (Di Puppo 2014, 116).

Yet another high-ranking official from an international organization offered the following reflection:

[W]e counted one time the number of anticorruption documents the government prepared for IMF, EU, World Bank and it was between 2000 and 2010, something like ten. The ownership was zero. It was “ok you want a strategy we will produce one, we have one, and give us the money” (Di Puppo 2014, 120).

We theorize that countries with access to concessional financing should be most susceptible to these types of signaling pressures, since they need to achieve targets to access external funds. Cooley and Ron (2002) uncovered similar dynamics with respect to non-governmental organizations. However, it is not enough to explain why policymakers in developing countries with significant access to concessional financing should be most susceptible to these pressures. We also need to understand why management and staff at international development organizations have incentives to support the choice of form targets.

Incentives of International Development Organizations

World Bank management and staff want to choose easily achievable targets because it helps them approve projects more quickly and it signals success to member states. The existing literature finds that World Bank staff are primarily rewarded — in terms of salary, promotion,
and internal prestige — for project approval and loan disbursement rather than project quality (World Bank 1992; Phillips 2009; IEG 2011). Conditional on securing approval for loans, staff receive credit for designing and operating projects that achieve measurable targets (Malik and Stone 2015). Under pressure to secure new lending, staff are likely to push for feasible targets that are ambitious enough to pass internal review. René Blum (2014, 33) notes that “[World Bank Task Team Leaders might] realistically adjust the ambitiousness of their projects’ objectives to the level of administrative ability they find at baseline.” Form targets are easier to achieve (see Appendix A); therefore, World Bank staff will often accept or propose form targets (Knack 2001). The World Bank itself sums up the challenge of selecting targets under these pressures:

Bank and other donor staff believe that public sector institutions matter crucially for sustainable service delivery improvements. However, as the “results agenda” permeates the Bank’s corporate reporting, pressures for demonstrating results are growing. As [public sector management] institution-building is a long-term agenda it may have less resonance in this results-hungry environment (World Bank 2012a, 9).

But why does this pattern persist if the member states (collective principal) of the World Bank want management and staff (their agent) to build stronger public sector institutions in developing countries? Like frontline staff, World Bank managers need to demonstrate to their principals that their organization is achieving measurable results (World Bank 2012a), which gives all World Bank employees strong incentives to select and report on performance targets that indicate success, even if these targets do not measure the underlying goal of improved institutional function (Pritchett 2002; Hood 2006; Honig 2015). According to Weaver (2008, 6), gaps between external representations of outcomes and actual outcomes have a strategic purpose; they help to “[shield] the Bank from the inconsistent demands of its political and task environments.” Donor countries demand success, so the World Bank has incentives to deliver it, even if this means choosing strategically how outcomes are represented.

Indeed, the management team of the World Bank has put in place a suite of reporting mechanisms for shareholders— including, but not limited to, the World Bank Corporate Scorecard, the IDA Results Measurement System, and the institutional reform commitments monitored by the World Bank President’s Delivery Unit — to provide standardized performance
data related to the Bank’s institutional development activities, and many of these indicators are weak proxy measures that are likely to show success (IEG 2008a; World Bank 2014; René Blum 2014; Miller and Benson Wahlén 2015). Targets such as the percentage of projects that reach their stated objectives are defined so that they enable both managers and staff to show that they are achieving measurable results, while at the same time preserving enough operational autonomy and discretion to enable the Bank to select weak within-project performance targets (René Blum 2014) or engage in creative classification or interpretation activities (Hood 2006). These types of initiatives show the importance that management places on signaling progress to the Bank’s shareholder countries, which should sharpen incentives to select easy targets.

Shareholder countries cannot easily prevent this type of behavior because institution-building is a task domain characterized by large information asymmetries (Knack, Kugler, and Manning 2003; Arruñada 2007). Establishing endogenously functional systems of governance that persist beyond donor project cycles is fundamentally not a technical exercise (Pritchett and Woolcock 2004; Pritchett et al. 2012). Whereas development programs that focus on direct service delivery provide metrics (for example the number of children vaccinated, the number of schools constructed, kilometers of roads rehabilitated) that reduce information asymmetries between principals and agents and limit agency slack, effective institutional development programs typically require that agents challenge the domestic political status quo and iteratively adapt to local constraints and opportunities (Srivastava and Larizza 2013; Andrews 2013, 86; Andrews 2015). The success of institutional development programs is also best measured over longer time horizons—typically five, ten, or fifteen years after project closure.9 For these reasons, frontline managers of effective institutional development programs usually require high levels of operational discretion, and previous research suggests that principals tend to grant more discretion to their agents when they know a task domain requires soft information and “navigation by judgment” (Honig 2015). Institutional development is also a task domain where World Bank staff claim significant technical expertise, which further widens the informational asymmetry between member states and the World Bank and creates greater scope for targets to be chosen because of unproductive signaling pressures.10

9 Natsios (2010, 10) points out that “institution-building programs cannot prove they are sustainable until after the aid program has ended and funding has been cut off.”
10 Indeed, it has long been recognized that control over information provides international organizations considerable autonomy to behave in ways that are inconsistent with their
predictions about the Selection of Targets

Given this permissive environment, countries that interact with international development organizations are likely to prefer targets that maximize the expected payoff that achieving and maintaining these targets will deliver. Countries that receive concessional financing can reap a significant financial reward if they select and achieve form targets. But no such payoff exists for countries that receive non-concessional financing; therefore, given that domestic constituencies reward governments for institutional function rather than new institutional forms, countries that are eligible for non-concessional financing face a larger relative difference in the benefits that they can reap by achieving form and function targets, even though they have the same target choices available to them. This difference in relative benefits across different types of countries explains why the countries most in need of institutional development will be less likely to choose more difficult targets that measure public sector function.

Our theory contributes to a developing literature in international relations about how opportunities for governments to signal to external audiences can impact governance, reform, policymaking, and international commitments. An optimistic camp generally accepts the notion that signaling pressures result in productive behavioral changes and better policy outcomes (see Mansfield and Pevehouse 2006; Dreher and Voigt 2011; Kelley and Simmons 2015). Young democracies and countries undergoing democratic transitions have no track record of honoring their commitments and their promises are less credible because of the high risks of leadership turnover and the reversal of reforms. Therefore, they seek to lock in policy commitments that would otherwise be difficult to achieve by ratifying international treaties and joining international organizations and voluntarily submitting to their rules, norms, and principles (Pevehouse 2002; Keefer 2007; Kapstein and Converse 2008). States with weak rule of law institutions that wish to secure better credit ratings join international organizations to render their promises of contract enforcement and property rights protection more credible (Dreher and Voigt 2011). Similarly, states participate in bilateral investment treaties and comply with World Bank policy conditions to send signals to foreign investors (Elkins, Guzman, and Simmons 2008; Girod and Tobin 2016). Within this camp it is generally assumed — and sometimes demonstrated — that pressures to signal result in better outcomes.

underlying mandates (Barnett and Finnemore 1999, 717-9).
A more pessimistic camp, however, warns that pressures to signal to external audiences can result in unproductive outcomes, insincere compliance, and strategic manipulation of information (McNamara 2002; Bush 2011; Simpser and Donno 2012; Samuel 2014; Kerner et al. Forthcoming; Sandefur and Glassman 2015). For example, some argue that ratifications of human rights treaties are shallow commitments that autocratic governments make to gain legitimacy and support at home and abroad (Neumayer 2005). Others argue that governments seeking to maximize rewards and minimize penalties (of either the material or reputational variety) will engage in strategic signaling behavior, whereby they adopt shallow or cosmetic changes to satisfy external actors but the underlying rules of the game are left intact; thus, governing elites invite international election monitors without any intention of running free and fair elections (Hyde 2011a, 2011b), adopt gender reforms without fundamentally altering political power disparities between men and women (Bush 2011; Murdie and Peksen 2015), and create central banks that are only independent in a \textit{de jure} sense (McNamara 2002). External pressures may even promote fraudulent signaling behavior. Kerner et al. (Forthcoming) find evidence that countries strategically manage and manipulate their national accounts data in order to signal to bilateral and multilateral aid agencies and development banks that they remain poor and thus deserve concessional funding.

\textbf{Data: Measuring the Choice of Targets}

While our theory of signaling through target selection is intended to be general to all types of externally-sponsored institution-building, environment and natural resource management activities supported by the World Bank offer an ideal domain for empirical testing. Projects that focus on human interactions with the natural environment deal almost exclusively with institution-building, which offers an efficient way to sample long documents for targets. Additionally, the concerns of donor governments and aid agencies often drive institution-building in the environmental sector (Keohane and Levy 1996; Hicks et al. 2008), and this imbalance between borrower and donor demand for such activities should, on average, strengthen incentives for borrowers to engage in shallow signaling efforts. Our ambition in this study is to test for the kind of signaling effect that our theory predicts; future empirical work will need to establish scope conditions around these results.

For the purposes of our explanatory, in-sample analysis, we created an original dataset of
targets that measure institutional development in the environment and natural resource management sector from World Bank post-project evaluations. We identified all World Bank projects completed between 2003 and 2009 that allocated more than 10% of their financing to strengthening environmental institutions. We then collected Implementation Completion Reports and Independent Evaluation Group evaluations for all of these 250 projects and systematically extracted all performance targets that were used to measure institutional development upon project completion. We focused on targets reported at completion because we can use the same reports to compile information on the achievement and persistence of targets, to test the assumption that form targets are easy to achieve and maintain (see Appendix A). We identified 826 institutional targets, around 3.3 per project. We assigned all institutional development targets to form, action, or function categories according to the following rules (see Appendix C for more details):

Form: the target records that an institution, law, policy, or regulation exists or is organized in some way. There is no measure of activities or the policy impacts of the institutional form. Examples include the establishment of a governmental unit or the passage of a law.

Action: the target records that an agency did something, though the intended results of the activity are not measured. Examples include regularly conducting an analysis or regularly monitoring an environmental attribute.

Function: the target records the results of institutional development for a relevant environmental attribute or policy outcome. Examples include reducing wasted water or the number of days with severe air pollution.

From a theoretical perspective, we do not consider action targets (for example, annual program planning) to be substantially different from form targets, since both involve measuring whether an institution or process exists, rather than whether the institution or process solves a public problem. Form and action targets, we find, are achieved and maintained at a similar rate; therefore, in the main analysis that we present
below all indicators classified as form and action are combined into one category, enabling us to focus on what causes countries to choose function targets over these alternatives. We present robustness checks that show consistent results when dropping action targets in Appendix B. Table 1 contains actual examples of targets to illustrate coding choices.

TABLE 1. Examples of Institutional Development Indicators from Study Sample

<table>
<thead>
<tr>
<th>Country</th>
<th>Completion Year</th>
<th>Project Name</th>
<th>Indicator</th>
<th>Form, Action, or Result?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>2008</td>
<td>Natural Resource Management Project</td>
<td>Does the Environmental Protection Agency maintain regional offices in all ten regions of Ghana?</td>
<td>Form</td>
</tr>
<tr>
<td>Argentina</td>
<td>2007</td>
<td>Native Forests &amp; Protected Areas Project</td>
<td>Does Argentina regularly update its national inventory of forest resources?</td>
<td>Action</td>
</tr>
<tr>
<td>Guinea</td>
<td>2006</td>
<td>Third Water Supply and Sanitation Project</td>
<td>What is the billing/production ratio of the Guinean Water Operation Company (SEG)?</td>
<td>Function</td>
</tr>
</tbody>
</table>

Note: All of the targets and codings are available in the replication files.

Model and Results: The Political Economy of Institutional Target Selection

We hypothesize that selecting form targets benefits countries that can maximize international development financing by achieving targets. The World Bank provides an ideal empirical setting to test this hypothesis because, unlike other aid agencies and development banks, it has for many decades relied upon a transparent set of rules that govern access to its concessional and non-concessional financing. These eligibility rules provide countries with a clear and stable incentive structure. The International Development Association (IDA) offers poor countries and countries with low levels of creditworthiness access to grants and highly concessional loans, and the International Bank for Reconstruction and Development (IBRD) offers loans on non-concessional terms to countries as their per capita income rises and creditworthiness improves.

We therefore use three different operationalizations of access to concessional financing, which should decrease the selection of function targets. First, we use the project-level proportion
of funding from IDA, as opposed to the IBRD. Both borrowing countries and their World Bank counterparts should be less likely to choose difficult function targets in IDA projects. Second, extending this logic to the portfolio level, countries that access funds primarily from IDA, as opposed to the IBRD, should place higher value on achieving targets and should thus be less likely to choose difficult function targets. The portfolio-level measure captures the proportion of total World Bank financing from IDA received by a given country in a given year.\(^{11}\)

Third, we use the operational category assigned by the World Bank that divides countries that receive only IDA financing from countries that are eligible to borrow from the IBRD and receive less favorable IDA terms. Countries that are only eligible to receive IDA financing should be more reliant on achieving targets as a strategy to maximize aid and thus we expect them to select fewer difficult function targets.\(^{12}\)

Additionally, in recognition of the fact that natural resource rents provide governments with an independent revenue stream that might blunt the incentive to signal commitment to international development organizations (Girod and Tobin 2016), we rely on the share of GDP from natural resource rents for each country as a control variable. We use a measure developed by Hamilton and Clemens (1999) that sums rents from fuel and nonfuel natural resources. To rule out the possibility that low-income countries that receive concessional financing simply have fewer institutions in place and need to pursue these targets as precursors to function targets, as previous research suggested (Dasgupta, Mody, Roy, and Wheeler 2001), we also control for the existence and age of a national environmental ministry (Aklin and Urpelainen 2014) and an omnibus, national environmental law (Longhofer and Schofer 2010).\(^{13}\)

To ensure that our model of target choice accounts for country-specific factors and the level of implementation (municipal, regional, national), we specify a random-effects model where the intercept varies by country and the level of implementation. We also control for variables that are likely to be independent from country- and implementation-level random

\(^{11}\) Here we define “total World Bank financing” as the sum of IDA and IBRD financing.

\(^{12}\) While our sample is not optimized to examine how countries that cross eligibility thresholds change the way they select targets because of limited temporal coverage, we present limited results that exploit the IDA graduation threshold within country series in Appendix B.

\(^{13}\) These two indicators are closely correlated. Aklin and Urpelainen (2014, APP-6) note that “[t]he diffusion of environmental ministries follows a curve that is almost identical to environmental framework laws.” We thank Evan Schofer for sharing an updated version of the environmental legislation data used in Longhofer and Schofer 2010.
effects. First, in order to account for the growing pressures for measurement that the results agenda may have brought to bear on the World Bank over time, we include a count of years since the first year in our sample. Second, we expect that projects with an environmental justification will induce signaling behavior and the prioritization of easy-to-achieve targets, as these projects are often less preferred by borrowers and implemented less successfully than projects with a blended set of development and environmental objectives (Buntaine and Parks 2013). Additionally, a background paper from the World Bank on the monitoring and evaluation of environmental activities notes that “due to their relative infancy, environmental data are difficult to come by compared to data for economic and social indicators” (Segnestam 2002, 17) and “so-called commitment indicators [of institutional development outcomes in the environmental sector] … do not reveal whether the management, enforcement or implementation is effective, that is, the quality is not monitored” (Segnestam 2002, 23). Therefore, in light of the signaling incentives and challenges of identifying function targets in the environment sector specifically, we control for whether the Environment Sector Board at the World Bank was responsible for reviewing the project.\(^{14}\)

Our results support our main hypothesis that countries which receive primarily concessional financing from the World Bank are less likely to choose function targets, even after controlling for the presence of major public institutions in the environment sector (Table 2). The results are insensitive to the choice of indicator used to measure reliance on concessional World Bank financing. The results are also insensitive to controlling for the presence of environmental ministries, or alternatively, major environmental legislation. The results do not change when we adjust the time frames that define new or established public institutions in the environment sector. Likewise, the results are insensitive to the removal of action targets from the sample (see Appendix B). In the next section of the paper, we present additional analyses to rule out the alternative explanation that poorer countries are simply in greater need of institutional forms and richer countries are in greater need of institutional function.

\textbf{TABLE 2. Choice of Function Institutional Development Targets (At Project Approval)}

\(^{14}\) Sector boards at the World Bank are cross-cutting units, typically made up of managers in a specialized field who have responsibilities to ensure that projects are designed and managed according to the prevailing knowledge and practice in a given sector.
<table>
<thead>
<tr>
<th>DV: Function Target</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project IDA proportion</td>
<td>-0.78 (0.32)</td>
<td>(0.01)</td>
<td></td>
</tr>
<tr>
<td>Portfolio IDA proportion (AY)</td>
<td></td>
<td>-0.67 (0.39)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>IDA-only operational classification (AY)</td>
<td></td>
<td></td>
<td>-0.61 (0.29)</td>
</tr>
<tr>
<td>Resource Rents / GDP (% @ AY-1)</td>
<td>0.05 (0.02)</td>
<td>(0.01)</td>
<td>0.04 (0.02)</td>
</tr>
<tr>
<td>New Environmental Ministry (≤ 5 yrs.)</td>
<td>0.14 (0.34)</td>
<td>(0.33)</td>
<td>0.09 (0.34)</td>
</tr>
<tr>
<td>Established Environmental Ministry (≥ 6 yrs.)</td>
<td>0.10 (0.42)</td>
<td>(0.42)</td>
<td>0.06 (0.43)</td>
</tr>
<tr>
<td>Approval Year (centered linear)</td>
<td>-0.00 (0.00)</td>
<td>(0.03)</td>
<td>-0.00 (0.04)</td>
</tr>
<tr>
<td>Environment Sector Board</td>
<td>-1.54 (0.33)</td>
<td>(0.33)</td>
<td>-1.44 (0.33)</td>
</tr>
<tr>
<td>Level R.E.</td>
<td>Yes (4)</td>
<td>Yes (4)</td>
<td>Yes (4)</td>
</tr>
<tr>
<td>Country R.E.</td>
<td>Yes (85)</td>
<td>Yes (81)</td>
<td>Yes (85)</td>
</tr>
<tr>
<td>Observations</td>
<td>806</td>
<td>801</td>
<td>806</td>
</tr>
</tbody>
</table>

Model cells list: Parameter estimate; (Standard Error); [p-value of one-sided z-test]
All models are random-intercept logit fitted by Laplace approximation with levels as indicated

Across all of our model specifications, we find that countries with more natural resource rents as a proportion of GDP are also more likely to choose function targets. We interpret these model results to mean that countries with more access to alternative sources of revenue reap fewer benefits from pursuing form-based performance targets that primarily signal commitment to donor audiences. Our out-of-sample prediction models (presented below) call this result into question, however.

To aid substantive interpretation of our in-sample explanatory models, Figure 2 contains
simulation results that display changes in the probability of choosing a function target based on our three different measures of access to concessional financing. We randomly draw from all the coefficient distributions in each model to capture total model uncertainty, and then compute pairs of predicted probabilities varying only the main predictor variable. For the simulation, we set the other variables to their sample means, except for binary measures, which we set to their median value in the sample.

The top row of Figure 2 shows that changing from a non-concessional IBRD project (or country-level portfolio) to a concessional IDA project (or portfolio) decreases the probability that a function target will be chosen by approximately 20%. The bottom row of Figure 1 shows that moving from the operational category that makes a country eligible to receive non-concessional IBRD financing to the IDA-only category also predicts approximately a 15% decrease in the probability of selecting a function target. All of these results support the same conclusion: that countries that access primarily or solely concessional financing from the World Bank are less likely to choose function targets, even after controlling for the pre-existing level of institutional development in the environment sector. The countries that choose function targets are also less in need of donor-supported institution-building programs, which helps explain why results have been so disappointing for so long among poor countries that most need stronger public sector institutions. These countries favor form-based targets, on average.
Validating Models

Ruling out an Income Effect

One concern about our findings is that they may result from an income effect, rather than the need to signal commitment to foreign donors. According to this alternative argument, countries will focus on establishing basic institutional forms at early stages of economic development and then focus more on targets that measure de facto institutional performance once
they become wealthier (Krasner 2011, 125-6). Since each country in our analysis is classified as eligible for concessional or non-concessional financing as a function of its per capita income, this alternative explanation is a serious threat to inference about signaling.

We pursue two strategies to rule out an income effect. First, we show that even within the narrow band of per capita income around the eligibility cutoff for non-concessional financing (where countries have substantially similar per capita incomes), the effect of having a “concessional-only” classification still has a substantively negative and statistically significant effect on choosing function targets. We show that this result holds across a range of bandwidths around the cutoff for non-concessional eligibility. Second, we show that if we divide our sample into two subgroups — country-observations ineligible and eligible for non-concessional financing — income does not predict the selection of targets. This means that the only plausible income effect is one that occurs nonlinearly, locally, and precisely at the non-concessional eligibility threshold, a proposition that seems very implausible.

In Table 3, we display two different bandwidth choices near the eligibility threshold that have substantive interpretations. First, we consider the subset of country-observations that have common support on both sides of the cutoff for eligibility for non-concessional lending. That is, we remove from the sample all observations where concessional-only countries are poorer than the poorest non-concessional country in our dataset, and we remove all observations of non-concessional countries that are richer than the richest concessional-only countries based on constant 2005 per capita income (Table 3, Models 4-6). Second, we take advantage of the fact that countries are determined to be concessional-only or not based on preliminary estimates of per capita income that are often revised later. We examine the robustness of our analysis to the subset of countries that are so similar in income that they are within the observed margin of error in classification based on the revised per capita income data (Table 3, Model 7-9). In both cases, the point estimates from the main models in Table 2 never change significantly, though we do

---

15 Income and eligibility for non-concessional finance covary formulaically. Each year the World Bank publishes an income per capita threshold value that will determine where a country can receive only IDA loans and grants or whether they are eligible also for IBRD terms. They then use a tentative value of GDP per capita derived using the Atlas method for the previous year to determine eligibility. Because the threshold value is not announced in advance and changes each year and because the GDP per capita value cannot be perfectly predicted, borrowing countries cannot predict with certainty what side of the threshold they will be on in any given year. Some countries switch back and forth across the threshold multiple times.
have lower statistical power because of the observational penalty involved with using less than half of our sample. The cleanest measure of our independent variable, concessional-only classification, is always significant and negative as expected. We show that these results are robust to many different bandwidth choices in Appendix D. Finally, we show that per capita income does not predict the choice of targets within concessional-only and non-concessional subgroups (Table 3, Models 10-11). In fact, with the concessional-only group the non-significant point estimate for GDP per capita is negative, indicating that if anything, higher income decreases the selection of function targets. These results rule out an income effect as the source of our main findings.
TABLE 3. Model Specifications that Rule Out an Income Effect

<table>
<thead>
<tr>
<th>DV: Function Target</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project IDA proportion</td>
<td>-0.55 (0.48) [0.13]</td>
<td></td>
<td></td>
<td>-0.99 (0.52) [0.03]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portfolio IDA proportion (AY)</td>
<td></td>
<td>-0.78 (0.75) [0.15]</td>
<td></td>
<td></td>
<td>-0.94 (0.87) [0.14]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IDA-only operational classification (AY)</td>
<td></td>
<td></td>
<td>-0.55 (0.42) [0.09]</td>
<td></td>
<td></td>
<td>-1.27 (0.49) [0.00]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP per capita (AY)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource Rents / GDP (% @ AY-1)</td>
<td>0.04 (0.03) [0.07]</td>
<td>0.04 (0.03) [0.07]</td>
<td>0.05 (0.03) [0.06]</td>
<td>0.05 (0.03) [0.07]</td>
<td>0.04 (0.03) [0.06]</td>
<td>0.05 (0.03) [0.06]</td>
<td>0.06 (0.04) [0.06]</td>
<td>0.02 (0.03) [0.17]</td>
</tr>
<tr>
<td>New Env. Ministry (≤ 5 yrs.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Established Env. Ministry (≥ 6 yrs.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approval Year (centered linear)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment Sector Board</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subgroup</td>
<td>CS</td>
<td>CS</td>
<td>CS</td>
<td>E</td>
<td>E</td>
<td>E</td>
<td>CO</td>
<td>NC</td>
</tr>
<tr>
<td>Level R.E.</td>
<td>Yes (4)</td>
<td>Yes (4)</td>
<td>Yes (4)</td>
<td>Yes (4)</td>
<td>Yes (4)</td>
<td>Yes (4)</td>
<td>Yes (4)</td>
<td>Yes (4)</td>
</tr>
<tr>
<td>Country R.E.</td>
<td>Yes (33)</td>
<td>Yes (32)</td>
<td>Yes (33)</td>
<td>Yes (30)</td>
<td>Yes (30)</td>
<td>Yes (30)</td>
<td>Yes (46)</td>
<td>Yes (50)</td>
</tr>
<tr>
<td>Observations</td>
<td>402</td>
<td>401</td>
<td>402</td>
<td>352</td>
<td>352</td>
<td>352</td>
<td>428</td>
<td>378</td>
</tr>
</tbody>
</table>

Model cells list: Parameter estimate; (Standard Error); [p-value of one-sided z-test]
All models are random-intercept logit fitted by Laplace approximation with levels as indicated
Subgroups: CS (common support on per capita income); E (margin of error in classification); CO (concessional-only); NC (non-concessional eligible).
Out-of-Sample Prediction

To assess whether our models can predict the selection of targets out-of-sample and thus alleviate concerns that our results hinge on particular modeling assumptions, we collected a new dataset of targets from appraisal reports of all 79 IDA and IBRD projects with an officially assigned “environmental policies and institutions” theme approved between 2009 and 2011. For this wave, since we only seek to validate our models of target selection and not also the persistence and achievement of targets as with the explanatory model wave, we used projects that were only approved and not yet completed. To limit our ability to search through model specifications and report only those specifications that fit our hypotheses, we have not updated the models in the previous section in light of this prediction study. In total, we extracted and coded 454 institutional targets from the 79 World Bank projects. We used each of the three models in Table 2 to predict whether a function target would be chosen in the new sample given the characteristics of the country, project, and level of implementation.

To validate and assess the predictive power of these models, we calculated Receiver Operator Characteristic (ROC) plots (see Ward, Greenhill, and Bakke 2010). Because logistic models produce a probability estimate between 0 and 1 for each observation, a rule to convert these estimates to binary predictions is necessary to assess the predictive power of a model. ROC plots show the percentage of correctly predicted true positives against incorrectly predicted false positives along different threshold values that convert probabilistic predictions into binary predictions. The area under the resulting curve (AUC) will be higher when more true positives than false positives are predicted at each threshold value, indicating correct sorting by the model. A model with no predictive power will produce true and false positives at the same rate at each threshold, resulting in a baseline AUC of 0.5. Predictive results for our three models are displayed in Figure 3. All three models perform better than random guessing.

---

16 The models presented above do differ slightly from earlier versions of the paper, particularly in terms of the inclusion of control variables for environmental ministries that measure institutionalization in our study sector. We have not updated the in-sample models to optimize the prediction results below, though as we explain that is possible.
FIG 3. Number of Correctly Versus Incorrectly Predicted Function Targets at Differing Threshold Levels for the Three Models

While these figures give a sense of the predictive power of each model, they do not show which variables add predictive power. To assess how each independent variable contributed to predictive power, we constructed partial models by removing one predictor variable at a time, fitting the model to the in-sample data reported above, and then predicting the out-of-sample outcome for our second dataset. We then calculated the AUC for each of these partial models and compared it to the AUC of the full model. We repeated this process for the partial model that
removed the most predictive variable, resulting in a new set of partial models. We repeated the process again for a third stage (Figure 4).

FIG 4. Representation of the Drop in AUC Accompanying the Removal of Each IV

Whether a project was routed through the environment sector board is most predictive of the target that is chosen in all of the models, again potentially due to the signaling incentives of borrowing countries and to the difficulty of identifying and monitoring function targets for
projects with a primary environmental focus. However, in each of the models the second most predictive set of variables are our measures of access to concessional financing. In each model, these variables continue to add predictive power even after the environmental sector board is removed from the model, as displayed in the stage 2 results. No other variables add out-of-sample predictive power. These results add further support to our theory and show that our results generalize across time and are not produced by idiosyncratic modeling choices.

Removing access to natural resource rents from the model fit always improves predictive power, indicating that while resource rents may have been statistically significant in our initial sample, this effect does not hold in our new set of data. Our finding about natural resource rents is likely an artifact of our sample period or model specifications reported in Table 2, which illustrates the importance of out-of-sample procedures for model validation. If we had updated our in-sample results in light of this prediction study, we would have found that our main variables of theoretical interest add significantly more predictive power in partial models without access to natural resource rents included as a variable, while our main independent variables are both significant in-sample and predictive out-of-sample.

**Conclusion**

Previous research suggests that a focus on form rather than on function is one of the principal reasons why external actors have had limited success helping developing countries build effective domestic institutions. We provide an explanation for why institution-building efforts that focus on form prove attractive to both donor agencies and developing countries: performance targets that measure institutional form are easier to achieve and maintain than targets that measure institutional function. Countries under pressure to achieve targets are then more likely to choose easy form targets. Needing to signal commitment, the countries most in need of stronger public sector institutions are least likely to engage in reform efforts that will lead to more functional institutions. The results from our in-sample explanatory and out-of-sample validation models provide strong support for this conclusion.

This study highlights the value of studying institutional development with micro-level data. Whereas most research to date focuses on historical trends in institutional quality based on cross-national indices, we collect and analyze two original datasets of 329 World Bank-sponsored projects containing 1280 specific and measurable institutional targets. Scholars rarely
study institutional outcomes at the same levels targeted by developing country governments and aid agencies (ministry-level, project- and program-level, and subnational locality-level), which narrowly limits the range of questions that we can answer about the causes and consequences of institutional development. It also produces empirical insights on time scales that are substantially less relevant and useful to aid agencies and governments in the developing world (Knack 2001; Knack et al. 2003; Chauvet and Collier 2008). While this study focused on the natural resource and environmental management sector for reasons of empirical tractability, evidence from primary documents of the World Bank suggest that these signaling dynamics are pervasive across sectors. Efforts to replicate our findings in other sectors would be useful.

Our findings call into question the conventional wisdom that building stronger monitoring procedures for aid projects will necessarily improve the impact of development assistance. While project success rates at the World Bank have apparently increased since the 1980s (Sud and Olmstead-Rumsey 2012), our findings suggest that it is not enough to measure performance vis-à-vis targets; monitoring and evaluation should place greater emphasis on measuring de facto institutional function. To be clear, we do not argue that aid agencies and development banks should completely abandon their so-called “results agenda.” However, the ability to choose different types of performance targets, even within organizations that prioritize accountability and measurable results, can result in perverse incentives that demand substantially greater attention.

Our findings also matter for research about targets and other devices that focus the attention and effort of public sector actors. Consistent with previous research on legislative targets and public administration (see Cullen and Reback 2006; Boyne and Chen 2007), our results highlight how extrinsic incentives can displace, distract, or distort public sector attention and effort away from activities of long-run value. We also show how international actors, in their zeal to support the acquisition of stronger public sector institutions, can inadvertently promote isomorphic mimicry and gaming behavior. Past research shows the disadvantages of focusing public sector attention and effort on

\[17\] Notwithstanding recent progress at the World Bank to produce core indicators that more effectively measure project success, many of these indicators still measure institutional forms and actions that are several steps removed from improved institutional function.

\[18\] It is worth noting that the international community’s increasing reliance on incentives, such as aid programs that link rewards and penalties to performance targets, may very well make this problem more acute (Hood 2006).
institutional forms without measuring if these institutions can solve public problems, but our study helps to explain why development organizations and their counterparts get stuck in this pattern. Our theory and results also suggest how to escape this pattern. We stress three policy implications:

First, in the same way that donors exercise due diligence during project appraisal to address social, environmental, and fiduciary risks, donors need to put in place measures that detect, combat, and deter isomorphic mimicry and opportunistic behavior geared towards maintaining stable access to aid (see Kerner et al. Forthcoming). They also need to confront internal organizational incentives for staff to collude with their government counterparts in developing countries during the selection of targets.

Second, given that a large number of bilateral and multilateral donors have taken up the results agenda, the efforts of any one donor to confront this issue will likely prove inadequate. The prospect of forum shopping points to the need for donors to coordinate on setting targets that provide appropriate incentives (Bourguignon and Platteau 2015).

Third, aid schemes that permit the flexible pursuit of solutions to public problems may provide decision makers in developing countries with the autonomy and maneuverability that they need to “crawl the design space” (Pritchett et al. 2012) in pursuit of difficult-to-identify solutions that fit local contexts (Natsios 2010; Sjöstedt 2013; Perakis and Savedoff 2015). However, the success of such arrangements hinges critically on the availability of sound targets and systems that make government officials in developing countries—as well as their aid agency counterparts—accountable for the right results. Institutional development is essential for a strong, endogenously functional state that can provide public services without continued external support. But we may not see substantial improvements until better measures of institutional function are developed and used.

As scholars and practitioners codify and expand a set of core indicators used to measure the success of development projects, they should prioritize indicators that measure institutional function. Additionally, donors should generally favor customized indicators of institutional function over those that can be standardized across projects and countries. The latter are more likely to measure institutional form or action. Donors should also pay considerably more attention to incentives that encourage developing countries to signal success and draw attention away from the ultimate objective of better functioning institutions.
Finally, this study carries a broader set of implications for international-relations scholars who study the ways in which states and international organizations set in motion signaling pressures that drive domestic action. It particularly highlights how international monitoring can short-circuit the process of building and reforming institutions over longer periods of time. For example, studies of election monitoring describe how threatened incumbents who are prevented from stuffing ballot boxes often shift instead to repressing the media (Simpser and Donno 2012). States pursue gaming strategies like reorganizing bureaucracies simply to be rated highly on international indices of business friendliness (Arruñada 2007; Schueth 2015). Our study demonstrates that such dynamics operate well beyond elections and international rankings. Member states of the World Bank, which together constitute a “results-hungry” collective principal (World Bank 2012a, 9), have created strong incentives for the World Bank’s management team, its frontline staff, and its borrower countries to pick targets that make it easy to declare success when building institutions. This article provides additional evidence for concerns that international monitoring of domestic performance often inadvertently encourages opportunistic behavior—such as target gaming, strategic manipulation of information, or shallow compliance—in domains characterized by complexity and long time horizons.
Supplementary Information

This article’s technical appendix can be found at the Mark Buntaine’s Dataverse [https://dataverse.harvard.edu/dataverse/mbuntaine], as well as the International Studies Quarterly data archive. The technical appendix contains analyses that show the difficulty of achieving and maintaining different types of targets, additional specifications and robustness checks, a description of coding procedures, and robustness checks on our bandwidth choices near the non-concessional eligibility threshold.

References


Barma, Naazneen H., Elisabeth Huybens, and Lorena Viñuela, eds. 2014. Institutions Taking


Clist, Paul, Alessia Isopi, and Oliver Morrissey. 2012. “Selectivity on Aid Modality:


University Press.


Keefer, Philip, and Stuti Khemani. 2014. “Radio’s Impact on Preferences for Patronage
Kelley, Judith, and Beth Simmons. 2015. “Politics by Number: Indicators as Social Pressure in
Keohane, Robert, and Marc Levy. 1996. Institutions for Environmental Aid: Pitfalls and
Promise. Cambridge: MIT Press.
Kerner, Andrew, Morten Jerven, and Alison Beatty. Forthcoming. “Does it Pay to be Poor?
Testing for Systematically Underreported GNI estimates.” Review of International
Organizations.
Indicators.” International Review of Administrative Sciences 69(3): 345-64.
Light, Matthew. 2014. “Police Reforms in the Republic of Georgia: The Convergence of
Domestic and Foreign Policy in an Anti-Corruption Drive.” Policing and Society 24(3):
318-45.
Longhofer, Wesley, and Evan Schofer. 2010. “National and Global Origins of Environmental
presented at the 8th Annual Conference on The Political Economy of International
Organizations, Berlin, Germany, February 12-14.
Martínez-Bravo, Monica, Gerard Padró-i-Miquel, Nancy Qian, and Yang Yao. 2014. “The
18101, National Bureau of Economic Research, Cambridge, MA.
of Theoretical Politics 27(2): 324-47.
Logic of Delegation.” *West European Politics* 25(1): 47-76.


Pop-Eleches, Grigore. 2009. *From Economic Crisis to Reform: IMF Programs in Latin


