Targeting, Accountability and Capture in Development Projects

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If development projects are to be effective, a minimum requirement is that the funding reaches its intended destination. Yet the history of international development is replete with examples of this not happening. I argue that there will be fewer problems with corruption or other diversions of funding—which I jointly label capture—in more precisely targeted projects. More well-defined targeting results in superior accountability relationships because there is greater clarity of responsibility, clearer information about outcomes, and improved identifiability of stakeholders. I use an original cross-country, cross-project data set on the incidence of capture in World Bank-funded investment projects to test the theory. The data show a negative relationship between targeting and capture, and I demonstrate that this relationship is robust to a variety of specifications. In addition, I find that there is a higher baseline likelihood of project capture in countries perceived as more corrupt according to commonly used survey-based measures from Transparency International and the Worldwide Governance Indicators, cross-validating those measures and my own.

“The only poverty that we have alleviated has been that of those in power who have plundered [World] Bank-funded projects along with their national treasuries and anything else they could get their hands on” (Berkman 2008:22).

In January 1996, the World Bank approved a $115 million credit to Kenya for the Urban Transport Infrastructure Project, intended to improve roads in 26 different cities across the country (World Bank Project ID P001319). The project’s goal was to fund routine maintenance on 2,400 km of roads and rehabilitation of an additional 400 km. By the end of the project, however, little of this work had been accomplished, and auditors discovered “multiple indicators of fraud and corruption” in the project (World Bank Report 34061: 8). As a result of bid-rigging in the project, three World Bank staff members were fired and 11 companies temporarily barred from bidding on Bank projects. The Bank’s review of the project concluded that “most of the outputs that were anticipated [have not] been accomplished and the project objectives [have not] been fully met” (World Bank Report 34061: 19).

Also in January 1996, the World Bank approved a $50 million credit to Kenya to fund improvements to 500 km of the road running from Nairobi to Mombasa (World Bank Project ID P005691). This project concluded at approximately the same time as the Urban Transport Infrastructure Project, yet in comparison, “the reconstruction and strengthening of the Nairobi-Mombasa road [was] rated highly satisfactory,” and the Bank congratulated itself by saying, “The El Nino rains destruction of this road would have resulted into [sic] a major economic crisis in the East African region had this project not come in time” (World Bank Report 31525: 4). The problems with corruption that resulted in project failure in the first case were not present in the second case.

Why do we see this variation in project outcomes for two development projects funded by the same international donor over the same period of time in the same country? I argue that the more-focused design of the second project facilitated the emergence of superior accountability relationships such that corruption was less of a problem in the project. In this paper, I use original data from almost 600 World Bank-funded investment projects to test the claim that more precisely targeted development projects will be less likely to suffer from problems with corruption or other forms of funding diversion, which I jointly label “capture.”

This research opens up a new dimension in the study of the relationship between accountability and corrupt-

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2 Capture is a broader concept than corruption, which is most often defined as “the use of public office for private gain” (Nye 1967; World Bank 1997). Capture might imply the diversion of funds either for private gain or by the government for political gain. For a similar use of the term, see Reinikka and Svensson (2004). The word capture is used elsewhere in the political science and economics literatures to refer to special interest group domination of policymaking (Laffont and Tirole 1991; Bardhan and Mookherjee 2006; Svensson 2000) or to the government establishing a monopoly on rents in a particular arena (Tollison 1982; Dabl-Norris and Paul 2006).
tion. In important literature from the last decade, political scientists and economists have examined the ways in which corruption levels correlate with different political institutions (Myerson 1993; Gerring and Thacker 2004; Kunicova and Rose-Ackerman 2005; Chang and Golden 2007; Tavits 2007) or are affected by broad bureaucratic reforms (Van Rijckeghem and Weder 2001; Di Tella and Schargrodsky 2003). There has been less attention, however, to the relationship between the design of specific development projects and the levels of corruption that they experience. Building on the notion that “clarity of responsibility” creates incentives for politicians to avoid abusing public office and to combat bureaucratic corruption (Powell and Whitten 1993; Powell 2000; Tavits 2007), I argue that greater specificity in development projects creates incentives for governments to be more faithful and better implementers. My argument implies that, when considering the strength of accountability relationships, we can and should look beyond overarching government institutions to also look at the design of particular government projects and programs.3

In the next section, I describe the logic of why project specificity will reduce capture. Then, I present the new data set that I use to examine this hypothesis. After defining the key explanatory variable, I show the empirical results.

How Targeting Increases Accountability and Makes Capture Less Likely

Accountability refers to citizens’ ability to identify those responsible for policy decisions and outcomes and to punish those individuals (or aggregate groups, such as political parties) if outcomes are found lacking (Przeworski, Stokes and Manin 1999; Persson and Tabellini 2003). An accountability mechanism is the map that guides citizens from observed outcomes to sanctions against public officials (Manin, Przeworski and Stokes 1999). Where accountability mechanisms are stronger, governments should provide better services because of the threat of sanctions. Accountability declines—and government performance suffers—when outcomes are difficult to observe, blame is difficult to attribute or the costs of using sanctions rise (Adsera, Boix and Payne 2006).

Much previous work has examined how these factors vary at the national level. A large body of work has argued that accountability and policy outcomes vary with political institutions and electoral systems (Persson, Roland, and Tabellini 1997; Gerring and Thacker 2004; Kunicova and Rose-Ackerman 2005; Chang and Golden 2007). Other authors have argued that the availability and freedom of the media improve accountability and reduce outcomes like corruption (Adsera et al. 2003; Charron 2009; Lessmann and Markwardt 2010).

I am similarly interested in the factors that strengthen accountability mechanisms, but rather than focusing on national political institutions or media environments, I look at the design of individual development projects. I argue that more precisely targeted projects will result in stronger accountability mechanisms with more salient sanction threats. As a consequence of more precise targeting and the increased threat of punishment for poor performance that follows from it, these specifically targeted projects will be less likely to suffer from capture. Precision targeting yields improved accountability mechanisms and less capture for at least three reasons: in such projects, there is greater clarity of responsibility, better information about outcomes, and improved identifiability of the relevant stakeholders.

First, more delimited projects generally have greater clarity of responsibility, that is clearer lines of accountability within the government. This makes it easier for a constituency to identify those responsible for poor performance and to lodge complaints about problems. If a project is supposed to go to a specific area or group of people, then the set of political and bureaucratic representatives responsible for ensuring the project’s delivery will be clearer on average.4 Where the lines of responsibility are clearer, capture is a less likely outcome because individual politicians or individual bureaucrats can more easily be held accountable and therefore are more likely to experience consequences in the event of improper or incomplete project implementation (Powell and Whitten 1993; Seabright 1996; Samuels 2004; Tavits 2007; Tommasi and Weinschelbaum 2007). At the national level, Tavits has directly linked clarity of responsibility to corruption, writing “political corruption depends on the effectiveness of the democratic process, that is, the ability of voters to monitor their representatives, to detect those responsible for unsatisfactory outcomes, and to hold them accountable by voting them out of office” (2007: 218).

The possibility of punishment exists in both democratic and nondemocratic regimes. Sanctions might be electoral (that is, citizens not voting for politicians associated with a poorly implemented project), contentious (that is, citizens protesting), or even personal (that is, citizens using social sanctions against a local politician or bureaucrat because of malfeasance). As Adsera et al. (2003) show, accountability varies both with the level of democracy and with other characteristics of the country, and in fact, those other characteristics (especially media circulation) may be more important.

Evidence that local-level accountability is meaningful and effective in development projects can be seen in studies which find that within-village targeting of anti-poverty programs is superior to between-village allocations of program resources (Galasso and Ravallion 2005; Bardhan and Mookherjee 2006) and in studies that look at the relationship between beneficiary participation and project success (Isham, Narayan and Pritchett 1995; Sara and Katz 1998; Isham and Kähkönen 2002a,b). In describing the lasting effects of the Kecamatan Development Project in Indonesia, for example, Guggenheim opens with a description of villagers refusing a small-scale infrastructure project because of the lack of clarity of responsibility with regard to the project (Guggenheim 2006).

Second, in more-focused projects, the outputs are easier to monitor. If goods and services are supposed to arrive in a single city or a single province, the local popu-

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3 I test the argument in the context of World Bank-funded projects; however, the scope of the theory extends beyond foreign aid projects. Among distributive projects that are of purely domestic origin, specificity should similarly facilitate superior government implementation (for example, funding construction of a single bridge versus funding a nationwide project of unspecified small-scale infrastructure improvements).

4 This will not be true in every case. A project targeted at a single city could have a large number of components with an array of implementing agencies, which would decrease clarity of responsibility.
lation has more opportunity to tell whether or not they actually have arrived as compared to knowing the fate of deliverables in a nationwide project. When goods and services are to be spread across multiple cities or multiple provinces, it is easier for a government or implementing agency to claim that they are being delivered elsewhere—that the project is being implemented even though some subset of citizens is not seeing the results. Such a claim is more likely to be debunked when made about a finely targeted project. Referring to the two roadbuilding cases in the introduction, in the first project, the Kenyan government could easily claim that the funds were being used elsewhere if one particular locale complained about the lack of outputs, whereas the intended destination of funding and the expected outputs in the Nairobi-Mombasa road project were clearer and therefore more easily monitored.

Geographic or social circumscriptio is not the only way to facilitate monitoring. Even in large-scale projects, it may be possible to improve the quality of local information. For instance, Reinikka and Svensson demonstrate how a newspaper campaign in Uganda that provided local information about expected resource transfers from a nationwide program drastically reduced the amount of capture in the program (Reinikka and Svensson 2005). Or it might be the case that national anti-corruption agencies or watchdog NGOs pay more attention to large projects. Yet barring such specialized interventions and actions, there should be, on average, better information about outputs and outcomes in more precisely defined projects among the group of people to whom it matters most.

Third, a more precisely defined project makes it easier for stakeholders to identify each other and to organize in support of the project. In a nationwide project, it can be unclear exactly who is supposed to receive benefits and when; in more delimited projects, the set of people who are supposed to receive benefits is more obvious, something that facilitates self-identification as a beneficiary and subsequent organizing around that status. At an extreme, we can think of foreign-funded projects that intend to benefit a single business (for example, a national electricity provider); in that case, the stakeholder is so well identified that monitoring of the project and attempted sanctioning for problems are straightforward.

At a more general level, individual citizens are more likely to identify with their local community as compared to an aggregate grouping. This means that they will be more outraged if they know that something has been taken from them locally or if money from which they or those near them were going to benefit instead has been redirected elsewhere or lost to corruption (Furia 2005; Wong 2010). Corruption in a broader project is less likely to evoke the same emotional sentiment among those who might take action.

Having stakeholders clearly identified creates the possibility of organization in the event of poor project outcomes. It is easier to hold a meeting of affected people in a single city; it is easier to saturate local news media with a local issue; it is easier to get in contact with local political representatives; it is easier to hold a local protest. As the size of the group that needs to be organized becomes smaller, meaningful organization becomes easier (Olson 1971). In the context of other international agreements, Dai refers to this as “empowering pro-compliance constituencies” (Dai 2005).

Importantly, this organization among end users does not necessarily have to come to fruition. The fact that the government anticipates such organization in the event of problems will either inhibit the government from directing resources or else will make the government a more effective monitor of project implementation.5 In cases where a reasonable organizational threat exists, capture is an off-the-equilibrium-path behavior by the government and its agents. Therefore, in precisely targeted projects, the threat of organization constrains the government—the threat of a reaction induces ex ante accountability, leading to less capture.6

In more specifically targeted projects, there will be greater clarity of responsibility with regard to project implementation; the costs of gathering information about the status and quality of project implementation will be lower; and the stakeholders will be more clearly identifiable and capable of organization. All three characteristics provide for stronger accountability mechanisms, which should translate into fewer problems in the project. Therefore, I expect governments both to be less likely to divert money from targeted projects and to take more care in implementing targeted projects. Overall, we should observe less capture among more precisely targeted projects.

**Outcome Variable: Capture in World Bank-Funded Development Projects**

In the existing literature, there is not comparable cross-country data on capture in development projects. A number of authors describe instances of corruption in individual projects (see, for example, Klitgaard 1991; Hancock 1994; Berkman 2008). In a few cases, the study of corruption has been systematized within a given project. For instance, Reinikka and Svensson use a public expenditure tracking survey to observe capture in capitation grants given to schools in Uganda (Reinikka and Svensson 2004). Olken studies a World Bank-funded community-driven development project in Indonesia, measuring the actual labor and materials used in road construction for comparison with what was reported on invoices and in labor records (Olken 2007). Sometimes, estimates of the overall amount of development funds being lost in a particular country have been produced (Winters 2002; Berkman 2008). Until now, however, no one has systematically

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5 The idea that the government is both constrained from diverting resources and from shirking on monitoring bureaucrats overlaps with Tavits’ idea that “politicians are responsible not only for their own corrupt activities but also for the failure to combat bureaucratic corruption” (Tavits 2007:220); see also Gerring and Thacker (2004).

6 This is the same logic that holds across studies of the correlation between political institutions and corruption (Myerson 1993; Gerring and Thacker 2004; Kunicova and Rose-Ackerman 2005; Chang and Golden 2007; Tavits 2007). In those studies, the logic is that politicians fear the risk of being held accountable (and losing office) to a greater extent in some systems as compared to others, which leads to less ex ante corruption in those systems.
compiled a data set of corruption across multiple development projects and multiple countries.

In the data set that I use here, I derive the coding of the dependent variable from an official World Bank report that is available across numerous development projects from all of the countries to which the World Bank lends. The document describes project implementation, outputs, and sometimes outcomes. In this section, I first describe at a general level the types of behaviors that fall under the definition of capture. Then, I describe the Implementation Completion Report and how I make use of the document to assign a coding to each project for whether or not there is evidence of capture. I discuss possible reporting biases and concerns about underreporting.

Common forms of corruption include bribe-taking either to accomplish or to expedite official duties, collusion with goods- or labor-suppliers for kickback payments, the manipulation of wage payments that allow an official to pocket the difference between reported and paid wages, and the inflation of labor or goods expenditures that likewise allow an official to pocket the difference between reported and actual amounts (Olken 2006). In any of these cases, corruption is harmful because it means that the anticipated quantity (or quality) of goods and services does not reach end users.

In addition, it is possible that a government will unfairly discriminate in favor of certain beneficiaries when distributing development funds. While not corruption per se, this is a form of capture that diverts development finance from its intended destination. For instance, in a national transportation infrastructure project, if the government chooses, despite need in other areas, to allocate funding to districts that are a source of electoral support or home to co-ethnics with the ruling party, this favoritism implies that development aid is being captured in a way that prevents the resources from reaching the intended recipients.

Another form of capture occurs when the government reallocates foreign aid funds for an alternative purpose from that for which they were intended. Although some scholars are concerned with indirect fungibility—where the presence of international assistance frees up other resources within a national budget to be used for alternative purposes (Pack and Pack 1993; Feyzioglu, Swaroop and Zhu 1998; Van de Walle and Cratty 2005)—I only consider the direct diversion of funds to be capture. Direct fungibility implies a reallocation of the actual transfer to some new use.

In all three of these scenarios—bureaucratic corruption, biased selection of beneficiaries, and the direct diversion of funding—development funds are not reaching their intended destination. This is a necessary condition to say that capture has occurred. In addition, to record a problem as an instance of capture, the failure of the money to reach its intended destination must have been the result of a purposeful act. Significant amounts of development financing are simply wasted because of inefficiencies and the lack of bureaucratic capacity in developing countries, and although this is a loss that involves intended beneficiaries not receiving goods and services, it is not a purposeful undertaking in the way that capture is. In assessing whether or not capture has occurred in World Bank projects, I pay attention both to the diversion of funds and to the intentionality of the act.

The Implementation Completion Report

The Implementation Completion Report (ICR, more recently known as the Implementation Completion and Results Report) is the World Bank’s main mechanism for reviewing project operations and effectiveness. The Bank describes the reports:

When a project is completed and closed at the end of the loan disbursement period ... the World Bank and the borrower government document the results achieved; the problems encountered; the lessons learned; and the knowledge gained from carrying out the project. A World Bank operations team compiles this information and data in an Implementation Completion and Results Report, using input from the implementing government agency, co-financiers, and other partners/stakeholders.

The report, prepared by Bank operational staff, is submitted to the Bank’s Board of Executive Directors for information purposes.

ICR-like instruments have been in use since 1973; the Bank introduced a set of general guidelines for these reports in 1977 (Grasso, Wasty, and Weaving 2003; Weiner 2003; Willoughby 2003). In 1994, the instruments were renamed and standardized in response to NGO criticisms of Bank operations (Köpp 2003). New guidelines for ICR preparation were released five years later in 1999. Beginning in August 2001—as part of a revised Bank Disclosure Policy—ICRs became immediately available to the public upon their completion.

ICRs include performance ratings for the Bank, the national government, and the project- implementing agency; a description of the quality of the project at entry; a description of project outputs and outcomes; an analysis of the economic and financial rates of return; an assessment of the project’s institutional impact; a discussion of the factors that influenced the project’s outcome; and a list of the lessons learned from the project.

Coding ICRs for Evidence of Capture

In general, ICRs do not directly describe problems with capture; there is not, for instance, a quantitative measure of the percentage of funds that reached their intended destination. In only a small number of cases is there a direct mention of corruption. For instance, one ICR

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8 This is a problem in particular with external funding. For instance, Bueno de Mesquita and Smith propose that certain types of governments will make use of foreign aid to satisfy the demands of particular constituencies (Bueno de Mesquita and Smith 2009); Morrison describes how foreign aid generally helps governments remain in power (Morrison 2009); and Jablonski provides evidence of aid targeting corresponding to electoral strategies (Jablonski 2012).

9 For instance, even if the presence of an internationally financed irrigation project implies that the government has redirected other (domestic) funds away from the agricultural sector, farmers still may get everything to which they are explicitly entitled under the irrigation project, in which case none of the actual project money has been captured.


describes “credible evidence that all consulting contracts may have been rigged” (World Bank Report 34061: 8), implying a loss of development funds through a biased selection of contractors.

For any project where the ICR describes actual corruption, the project is immediately coded as suffering from capture in the data set. In most cases, however, it is necessary to look for other observable implications of capture—descriptions in the ICR of financial management, audit, or procurement problems that imply corruption or descriptions of political interference that imply the diversion of funds. ICRs that trigger a positive capture coding, for instance, report “allegations of financial mismanagement” (World Bank Report 34384: 11), “problems with procurement and financial management” (World Bank Report 34513: 10), a failure to meet “fiduciary and financial management standards” (World Bank Report 34745: 5), or the delivery of services being “at risk of political interference” (World Bank Report 33541: 17).

I code as instances of capture those projects where there are descriptions of financial management or procurement “problems”; financial management, procurement, or auditing processes that were “irregular,” “unsatisfactory,” or “not meeting standards”; “late,” “missing,” or “incomplete” audits; “non-transparent” government involvement or “political interference”; resources that were “mismanged” or “improperly utilized.” In each case, the description implies development funds being diverted and not reaching the end user constituency for which they were intended.

As described above, I have defined capture as purposeful diversion. Therefore, in all cases where the ICR makes clear that the problem was due to a lack of bureaucratic capacity—rather than deceit—I do not code the project as subject to capture. Similarly in cases where fraud or corruption was discovered and then remedied by the government, I do not code the project as subject to capture. I also do not code as capture one of the most frequent complaints in ICRs: the lack of government counterpart funding. Across perhaps a majority of World Bank projects, the government fails to live up to its commitment to provide co-financing. Although this is certainly detrimental to project success, it is not a diversion of the funds coming from the World Bank and therefore is not capture per se. I code for capture only in the cases where I find evidence that a World Bank dollar expected to reach a certain destination did not reach that destination.

In summary, I code projects as subject to capture when there are

- direct descriptions of corruption
- negative descriptions of financial management,
- negative descriptions of procurement practices,
- negative descriptions of audit practices, or
- descriptions of direct political interference in allocation decisions.

Potential Biases in ICRs

Given the sensitivity of corruption and the incentives to conceal it, it is important to explore whether reporting in Implementation Completion Reports is likely to be biased. The reports are prepared by operational staff, who often have been involved with the implementation of the project. The reports are then reviewed by the World Bank’s Independent Evaluation Group (IEG, known as the Operations Evaluation Department until 2006), which is external to the Bank’s operational staff. All ICRs undergo desk review by the IEG. Both IEG and operations staff at the Bank assert that the IEG review is a credible check on ICR quality and that there would be professional repercussions for an ICR author who had his or her results repeatedly challenged by IEG (author’s interviews, January 2012). Staff across multiple divisions of the Bank—regional and sectoral operations units, IEG, the Integrity Vice Presidency (responsible for investigation allegations of corruption in Bank projects), and the research department—all acknowledge that there would be a bias against reporting corruption (author’s interviews, January 2012). Given that staff likely will want to undertake future projects in the same country, there are incentives to not report problems in projects. If the corruption has been publicly exposed, however, then it is likely to be reported in the ICR.

Although underreporting increases the proportion of false negatives in the data (that is, projects that did suffer from capture but are not coded as such), as long as this is not systematically more likely in targeted projects, then it will not impact the results of the analysis. While World Bank staff were concerned that estimates of capture from ICRs would be “imprecise,” “conservative,” and “subject to measurement error,” no one with whom I spoke thought that the bias would correlate with the key explanatory variable in this study (author’s interviews, January 2012).

One potentially troubling concern that was raised in interviews is the possibility that Bank staff might choose to report corruption in a project that is failing in order to shift blame for poor project performance onto the recipient government. If this is the case and if more targeted projects are more likely to be seen as performing poorly (something that might happen for some of the same reasons of observability that are described above), then this could introduce bias into the analysis. However, there is no correlation between targeting (as defined below) and the outcome rating assigned to the projects in the ICRs.

The $f^2$ statistic for a cross-tab of targeting and project outcome rating with $H_0$: no relationship between targeting and project outcome is 0.010 ($p < 0.92$).

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12 The complete coding scheme can be found in the online replication materials.

13 For instance, one ICR describes “an unsatisfactory rating for financial management” that was “corrected within a few months” after the Bank sent technical assistance missions to improve the implementing agency’s reporting procedures (World Bank Report 35481: 23).

14 An example of this is a project in which there was “fraud of US $300,000 in the Special Account,” but then “[t]he government fired two accountants and repaid the funds” (World Bank Report 20963: 16).

15 Currently, one in four projects also undergoes a field review by the IEG, which results in a new evaluation document called the Project Performance Assessment Report (PPAR, formerly known as the Project Performance Audit Report). I do not make use of PPARs here, although they may provide a useful resource in the future for checking the validity of the capture coding.

16 I also thank Bob Phare for first suggesting such a scenario to me.

17 The $f^2$ statistic for a cross-tab of targeting and project outcome rating with $H_0$: no relationship between targeting and project outcome is 0.010 ($p < 0.92$).
In sum, I acknowledge that noise exists in the data, but I have not found a plausible story for why the biases in reporting would correlate with the main explanatory variable and thereby bias the results of the analysis below. Despite its potential limitations, this data set is the first to include a single measure of capture across a broad set of development projects that span nearly all developing and middle-income countries in the world.

Explanatory Variable: The Level of Targeting in World Bank Projects

The key explanatory variable for this study is the level of targeting. As described above, I expect projects that are targeted to a more specific set of end users to suffer from a lower likelihood of capture. The World Bank does not have an explicit set of categories that it uses to describe how its projects are targeted. Therefore, for the World Bank investment projects in the data set, I classify the targeting of the project using nine categories that correspond to the concentration or diffusion of project outputs.18

There are five straightforward geographic codings, where a project is targeted at (i) a single city, (ii) a single region, (iii) multiple cities or (iv) multiple regions or else is (v) national. Projects are classified as regional if they intend to reach more than half of the cities within a region. Projects aiming to finance outputs in more than half of the largest subnational units in the country are coded as national. Two other codings are not strictly geographic but rather involve projects intended for specific types of areas within a country. Projects for (vi) the rural sector fund agricultural or other rural projects across the whole country (as compared to within a single region or specific subset of named regions), while projects for (vii) the urban sector fund urban infrastructure across the whole country (as compared to within a specified set of cities). Some projects are targeted at (viii) specific social groups, such as ex-combatants or students enrolled in higher education. And finally some projects have (ix) business or industry as the intended end users; the deliv-erables in these projects are private goods or private benefits for a specific (type of) business or industry.

Capture in World Bank Projects

I gathered the set of all Implementation Completion Reports available as of early 2006. Although the ICR has been in use since 1994, it did not become standard Bank practice to disclose them to the public until 2001. Therefore, at the time of data collection, only a limited number of ICRs (58) were available from before 2001. The majority of the data come from projects completed between January 2002 and June 2005.

I briefly assess whether or not there is any problem with sample selection bias due to missing ICRs. Of 610 investment projects that closed in the core period 2002–2005, ICRs exist in the data for 82.5% (503) of them.19 I regress the existence of an ICR on project and country characteristics to see whether there is anything systemati-

cally different about the projects without ICRs. Smaller projects, projects where the World Bank pays a smaller share of the total project costs and projects from more populous countries, are significantly less likely to have completed ICRs. There is no apparent skewing of missing ICRs toward particular themes, sectors, or regions of the world. Importantly, the quality of a country’s governance is not a significant predictor of whether or not an ICR was produced for a given project.

Columns (2) and (3) of Table 1 show the breakdown by year of the dependent variable: the number of projects suffering from capture. For the period 2002–2005, the proportion of projects each year evincing problems with capture ranges from 15 to 32%. Overall, approximately one in five World Bank investment projects shows evidence of capture.

Table 2 shows the reasons (and number of reasons) for the positive capture codings. For half of the cases (62), the ICR provides one indicator that leads to a positive capture coding. (The ICR may describe multiple instances of this single reason.) For over one-third of the cases (48), I find two indicators in the ICR that lead to a positive capture coding. And for the remaining 12 cases,

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18 The full coding rules are available in the online replication materials. For another coding scheme for aid project locations, see Findley et al. (2011).

19 ICRs also exist for programmatic lending (that is, budgetary support and structural adjustment lending) and technical assistance lending, but I exclude these loans from analysis. I also exclude direct lending to subnational governments, loans to non-governmental entities, and loans involving multiple recipient countries.
I find three or more reasons for a positive capture coding.

In the ICRs, the World Bank provides an overall ranking of the project outcome as well as rankings of the Bank and borrower’s performance in the project. Table 3 shows that projects coded as experiencing capture can be rated as satisfactory by the Bank—and in fact are more likely to be rated satisfactory than unsatisfactory—and also that projects can be rated unsatisfactory by the Bank for reasons other than those covered by the capture coding. Unsatisfactory ratings in projects where I do not find evidence of capture often are related to a lack of counter-part financing or inept—but not criminal—administration of the project such that the project fails to meet its development objectives. This table suggests that I am observing a phenomenon that the World Bank does not measure with its own ratings system (and that therefore is not analyzed in papers that use the World Bank’s outcome ratings as their dependent variable (Kaufmann and Wang 1995; Isham, Kaufmann and Pritchett 1997; Dollar and Svensson 2000; Dollar and Levin 2005; Denizer, Kaufmann and Kraay, 2011)).

As prima facie evidence for the validity of the capture measure, I show that a correlation exists between my capture coding and common measures of perceived country-level corruption. In Table 4, I present the results from linear probability models in which the country’s level of perceived corruption—as measured in column (1) by the Worldwide Governance Indicators’ Control of Corruption index, in column (2) by Transparency International’s Corruption Perceptions Index, and in column (3) by a variable from the World Bank’s Business Environment and Enterprise Performance Survey that measures the percent of firms in a country saying that bribes are necessary to get things done—predicts whether or not an individual project will suffer from capture. I cluster the standard errors on country-periods defined by the start and end dates of the project to account for the fact that there are multiple projects within countries and that the corruption perceptions measures change on an annual basis.

For all three country-level measures of corruption, there is a reduced likelihood of World Bank projects experiencing capture in less corrupt places. As the value of the anti-corruption indices created by the Worldwide Governance Indicators and Transparency International go up, the probability of capture goes down, whereas the probability of capture increases with the proportion of firms saying that they have to pay bribes in order to get things done. All three relationships are statistically significant.20 In other words, there is a greater incidence of capture in World Bank projects in countries that are judged to be corrupt by other measures.

This result provides cross-validation of both the new measure of capture that I introduce here and the traditional perceptions-based measures of corruption. In countries that are subjectively perceived as being corrupt, we are more likely to observe a positive coding for capture within a given World Bank project. Insofar as the capture coding is an objective measure of corruption within a country based on outcomes within particular development projects, this correlation suggests the validity of these commonly used measures of country-level corruption estimated from expert surveys.

**Targeting and the Incidence of Capture**

At a bivariate level, I find strong initial support for the hypothesis that targeting reduces capture. Figure 1 shows the incidence of capture for each type of targeting. Looking first at the geographic categories, projects targeted at a single city or a single region suffer from rates of capture lower than the average of 20%. Projects targeted at multiple cities or multiple regions or targeted at the

![Figure 1. Incidence of Capture across Targeting Categories.](Image)

**Notes.** Targeting categories are ordered from lowest incidence of capture to highest.

---

**Table 3. Capture Coding and Project Outcome Rating**

<table>
<thead>
<tr>
<th>Evidence of Capture</th>
<th>Satisfactory</th>
<th>Unsatisfactory</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capture</td>
<td>75</td>
<td>47</td>
<td>122</td>
</tr>
<tr>
<td>No Capture</td>
<td>423</td>
<td>53</td>
<td>476</td>
</tr>
<tr>
<td>Total</td>
<td>498</td>
<td>100</td>
<td>598</td>
</tr>
</tbody>
</table>

(Notes: $\chi^2$ statistic for $H_0$: no relationship between satisfaction ratings and capture | 52.3 ($p < 0.00$).)

**Table 4. Linear Probability Models Predicting Capture with National-Level Measures of Corruption**

<table>
<thead>
<tr>
<th>Control of Corruption (WGI)</th>
<th>Transparency Perceptions (TI)</th>
<th>Need to Pay Bribes (BEEPS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$-0.13^{***}$ (0.04)</td>
<td>$-0.09^{***}$ (0.02)</td>
<td>0.004* (0.002)</td>
</tr>
</tbody>
</table>

$N$ (Projects): 597
$J$ (Country-Periods): 242

(Notes: Robust standard errors clustered on country-period in parentheses. ***$p < 0.01$; **$p < 0.05$; *$p < 0.10$.)

---

20 The results are identical in terms of magnitude and significance in a logistic regression model using clustered standard errors.
Table 5. Capture in Single-City, Single-Region, Business/Industry, or Social Group Projects versus Other Types of Projects

<table>
<thead>
<tr>
<th></th>
<th>Capture</th>
<th>No Capture</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Cities, Single Regions, Businesses, or Social Groups</td>
<td>19 (12%)</td>
<td>146 (88%)</td>
<td>165</td>
</tr>
<tr>
<td>Nationwide or Other Targeting</td>
<td>103 (24%)</td>
<td>330 (76%)</td>
<td>433</td>
</tr>
<tr>
<td>Total</td>
<td>122 (20%)</td>
<td>476 (80%)</td>
<td>598</td>
</tr>
</tbody>
</table>

(Note: \( \chi^2 \) statistic for \( H_0 \): no relationship between targeting and capture — 11.08 (\( p < 0.01 \)).)

entire rural or urban sector, on the other hand, have higher-than-average rates of capture. Projects targeted at social groups or business and industry have very low rates of capture. These two types of projects share characteristics with those targeted at more limited geographic areas: they target delimited constituencies that likely have increased information about whether goods and services are being delivered and an increased ability to recognize fellow stakeholders and therefore organize as a group in pursuit of the goods and services to which they are entitled.\(^{21}\)

Table 5 splits the data to compare the incidence of capture among projects targeted at single cities, single regions, business/industry, or social groups to its incidence among nationwide projects or projects targeted at multiple cities, multiple regions, the rural sector, or the urban sector. The cross-tab shows that there is a significant difference in the proportion of capture in the more precisely targeted versus the less precisely targeted projects. As my theory predicts, there is less capture in the set of more precisely targeted projects.

Based on this relationship, I create an indicator variable for those projects that fall into the more precise targeting categories (that is, single city, single region, business/industry, or social group). I use this indicator in a series of logistic regression models to show that this negative relationship between the precision of targeting and capture is robust to the inclusion of a number of possible confounding covariates.\(^{22}\)

One immediate concern is that larger projects (in terms of their total cost) may both be less targeted and more susceptible to corruption and other forms of diversion (since with more money comes more opportunities for corruption). Therefore, I include a predictor measuring total project size as reported in the World Bank’s Project Database. Since the project size variable includes money from the government and other donors, I also examine a specification that controls only for the size of the World Bank’s contribution to the project. In both cases, I take the logarithm of the value.

The data set includes projects that are funded by either of the two lending wings of the World Bank. World Bank borrowers will potentially be more careful with implementa-

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\(^{21}\) Whether or not projects targeted at business/industry and social groups have clearer lines of accountability within the government is not clear.

\(^{22}\) Note that the coding of this variable, although in accordance with the theory, is partially ad hoc; it was not a priori clear whether social group and business/industry targeting should have been included in the concentrated targeting category. For the purposes of hypothesis testing and calculating accurate significance values, the inductive coding may be problematic, since information in the data already has been used to define the explanatory variable. Therefore, the results from the regressions shown in the next section remain suggestive rather than definitive. In the future, they can be confirmed using newly coded data (that is, an out-of-sample test).

\(^{23}\) Excluding the categories of information/communication and finance—where the total number of projects is small—projects in the industry and trade sector experience the lowest rate of capture (12%), whereas those in the water, sanitation, and flood prevention category experience the highest (28%). In terms of thematic content, projects that aim for social protection or risk management have the lowest likelihood of capture (12%), whereas those aiming for social or gender inclusion have the highest (45%) (ignoring economic management, given the small number of projects that fall under that theme).

\(^{24}\) The 95% confidence interval around the estimated change in probability is [0.06, 0.16], calculated using the delta method.
introduce country and year fixed effects. Even after controlling for the heterogeneity across the many countries that borrow from the World Bank, targeting continues to be a negative and statistically significant predictor of capture. This is true in column three, as well, when sector and theme effects are added to the model. Column four shows that the result is robust to the alternative measure of total project size.

In columns five through eight, I check the robustness of the results to alternative definitions of the outcome variable. In these models, I change the capture coding to 0 for cases that have been positively coded based on only one of the possible indicators and then rerun the model from column three. If there is any systematic bias in the coding of cases based on particular indicators of capture, then targeting may cease to be a significant predictor of capture. This is true in column three, as well, when sector and theme effects are added to the model. Column four shows that the result is robust to the alternative measure of total project size.

In column nine, I show the results of an ordered logistic regression where the outcome variable is coded 0 if there is no evidence of capture, 1 if the ICR contains one indicator of capture, and 2 if the ICR contains two or more indicators of capture. The coefficient estimates for this regression are almost identical with those from the regular logistic regression. A change from a non-targeted to a targeted project—holding project size at its median and the IBRD and blend indicators at zero—leads to an equal decrease in the probability of being in either of the two corruption outcome categories (six-percentage points).²⁶

Therefore, controlling for a range of possible confounding covariates and using a series of restricted operationalizations of the key outcome variable, we see a consistent, substantively, and statistically significant relationship between targeting and capture. Targeting results in a substantial reduction in the likelihood of project capture.

Table 7 situates these results in the multilevel setting of projects nested within countries. Specifically, I look at projects in country-periods that are defined by the approval and completion dates of the project, and I use a multilevel logistic regression to explore the extent to which country-level characteristics affect the baseline probability of capture for a project in that period. The values of the country-level predictors are averaged across all the years of the project.

Similar to Table 4, we see in column (1) that control of corruption is a significant negative predictor of capture.²⁷ Even after controlling for project characteristics, there remains a negative relationship between the effectiveness with which a country battles corruption and the baseline likelihood of observing capture in a project. This relationship continues to hold when controlling for GDP either of the two corruption outcome categories (six-percentage points).²⁶

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²⁶ The equivalent effects across the two outcome categories imply that there is little gained by treating the outcome variable as ordinal rather than dichotomous.

²⁷ The Worldwide Governance Indicators coverage begins in 1996. For projects already in progress by 1996, I make use of available observations, which may mean that the value assigned to a particular project disproportionately measures national conditions from the latter part of the project. The Worldwide Governance Indicators also lack values for the years 1997, 1999 and 2001. For those years, I have used a linear interpolation of the values from the preceding and subsequent year.

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**Table 6. Logistic Regressions Predicting Capture**

<table>
<thead>
<tr>
<th></th>
<th>(1) Logit</th>
<th>(2) Country and Year FEs</th>
<th>(3) Sector and Theme FEs</th>
<th>(4) IV: WB Funds</th>
<th>(5) DV: No Financial</th>
<th>(6) DV: No Procurement</th>
<th>(7) DV: No Audit</th>
<th>(8) DV: No Political</th>
<th>(9) Ordered Logit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeting</td>
<td>-0.84</td>
<td>-0.83</td>
<td>-0.83</td>
<td>-0.76</td>
<td>-0.74</td>
<td>-1.10</td>
<td>-0.81</td>
<td>-1.13</td>
<td>-0.85</td>
</tr>
<tr>
<td>(0.26)***</td>
<td>(0.26)***</td>
<td>(0.27)***</td>
<td>(0.27)***</td>
<td>(0.32)***</td>
<td>(0.37)***</td>
<td>(0.27)***</td>
<td>(0.35)***</td>
<td>(0.26)***</td>
<td></td>
</tr>
<tr>
<td>Log(Total Project Size, $US)</td>
<td>0.11</td>
<td>0.13</td>
<td>0.22</td>
<td>0.33</td>
<td>0.25</td>
<td>0.26</td>
<td>0.27</td>
<td>0.13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td>(0.11)</td>
<td>(0.12)</td>
<td>(0.13)***</td>
<td>(0.15)***</td>
<td>(0.12)**</td>
<td>(0.13)***</td>
<td>(0.10)</td>
<td></td>
</tr>
<tr>
<td>Log(World Bank Contribution, $US)</td>
<td>0.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cutpoint 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country Effects</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>ICR Year Effects</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Sector Effects</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
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<tr>
<td>Theme Effects</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>N (Projects)</td>
<td>598</td>
<td>442</td>
<td>442</td>
<td>412</td>
<td>428</td>
<td>373</td>
<td>428</td>
<td>420</td>
<td>598</td>
</tr>
<tr>
<td>J (Countries)</td>
<td>116</td>
<td>61</td>
<td>61</td>
<td>56</td>
<td>59</td>
<td>54</td>
<td>58</td>
<td>56</td>
<td>116</td>
</tr>
<tr>
<td>Pseudo-R²</td>
<td>0.03</td>
<td>0.08</td>
<td>0.17</td>
<td>0.16</td>
<td>0.19</td>
<td>0.18</td>
<td>0.17</td>
<td>0.21</td>
<td>0.02</td>
</tr>
<tr>
<td>Log-Likelihood</td>
<td>-294.05</td>
<td>-151.75</td>
<td>-156.44</td>
<td>-130.78</td>
<td>-121.78</td>
<td>-117.50</td>
<td>-132.21</td>
<td>-119.53</td>
<td>-377.93</td>
</tr>
</tbody>
</table>

*(Note: The models in columns (2) through (8) are conditional fixed-effect logistic regressions. The model in column (9) is an ordered logistic regression. Robust standard errors clustered on country in parentheses. *p < 0.10; **p < 0.05; ***p < 0.01.)*
In this paper, I have used an original data set of capture in World Bank projects to examine the impact of targeting on development project outcomes. The data is the first of its kind—it allows us to compare across projects and across countries to see what factors might make capture more or less likely. Building on the notion of clarity of responsibility, I have argued that capture is less likely when a project is more precisely targeted at a particular constituency. In the data, I find evidence of this: the incidence of capture among projects targeted at single cities, single regions, business and industry, or particular social groups is lower than the incidence among nationwide projects or more diffusely targeted projects. I show that this correlation is robust to the inclusion of potential confounding variables at the project- and country-level.

This result is an important addition to the literatures on corruption and accountability. It reveals the way in which project design can create superior accountability relationships that lead to less corruption. Whereas past work has focused on how the structure of government correlates with corruption, this article has looked at how the way that the government implements projects (or

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### Table 7. Multilevel Logistic Regressions Predicting Capture

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeting</td>
<td>−0.90</td>
<td>−0.95</td>
<td>−0.95</td>
</tr>
<tr>
<td>(0.32)***</td>
<td>(0.32)***</td>
<td>(0.32)***</td>
<td>(0.32)***</td>
</tr>
<tr>
<td>Log(Total Project Size)</td>
<td>0.13 (0.10)</td>
<td>0.11 (0.10)</td>
<td>0.11 (0.10)</td>
</tr>
<tr>
<td>IBRD (0/1)</td>
<td>−0.29 (0.29)</td>
<td>0.09 (0.38)</td>
<td>0.07 (0.38)</td>
</tr>
<tr>
<td>Blend (0/1)</td>
<td>−0.70 (0.75)</td>
<td>−0.59 (0.75)</td>
<td>−0.61 (0.74)</td>
</tr>
<tr>
<td>Country-Period Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control of Corruption</td>
<td>−0.81</td>
<td>−0.70</td>
<td>−0.76</td>
</tr>
<tr>
<td>(WGI) (Percent)</td>
<td>(0.34)**</td>
<td>(0.35)**</td>
<td>(0.35)**</td>
</tr>
<tr>
<td>Log(GDP Per Capita, $US PPP)</td>
<td>−0.41 (0.22)*</td>
<td>−0.44 (0.21)**</td>
<td></td>
</tr>
<tr>
<td>Democratic (Percent)</td>
<td>0.56 (0.27)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of Period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (Projects)</td>
<td>597</td>
<td>581</td>
<td>581</td>
</tr>
<tr>
<td>J (Country-Periods)</td>
<td>496</td>
<td>482</td>
<td>482</td>
</tr>
<tr>
<td>Log-Likelihood</td>
<td>−288.94</td>
<td>−280.40</td>
<td>−278.25</td>
</tr>
</tbody>
</table>

(Notes. Projects are nested in country-periods defined by the approval date and completion date of the project. Country-period variables are measured as averages across the period in question.

* p < 0.10; ** p < 0.05; *** p < 0.01.)

---

### Conclusion

The negative relationship between targeting and capture might be spurious if the World Bank was more likely to use targeting in countries where capture was less likely a priori. Although previous work has shown that subnational investment lending is negatively correlated with the governance characteristics of countries—such that projects are more likely to be at the subnational level in more corrupt countries (Winters 2010)—in the current data set, I find the reverse relationship. There actually is a higher proportion of targeted projects within the less corrupt countries. Out of 313 projects in the low-corruption countries, 100 are targeted (32%); out of 285 projects in the high-corruption countries, 65 are targeted (23%).

It is important to reiterate that the effects in Table 6, by virtue of the fixed effects in the models, are estimated off of the within-country variation in targeting and capture. Therefore, even if the World Bank is more likely to target in low-corruption countries, the fact remains that in either low- or high-corruption countries, targeting reduces capture. This effect also remains in the models in Table 7 where control of corruption is specified as a country-level variable.

However, given the abundance of targeting cases in low-corruption countries, we may be worried that the effects of the targeting variable are being identified from a set of cases where corruption is less of a concern in the first place. In order to explore this possibility, I allow the slope on targeting to vary across levels of corruption by introducing an interaction term between targeting and control of corruption to the model from column (1) of Table 7. The results produce a very similar coefficient estimate for the effect of targeting ($\beta = -0.94, p < 0.10$) and a statistically insignificant coefficient on the interaction term ($\beta = 0.14, p < 0.87$). If anything, the interaction term suggests an increased effect of targeting in high-corruption countries (which score lower on the control of corruption measure). The estimated change in the probability of capture for a country with a control of corruption score at the 10th percentile (high corruption) is a 12-percentage point decrease; for a country with a control of corruption score at the 90th percentile (low corruption), it is a 7-percentage point decrease. In sum, the slight concentration of targeted projects in low-corruption countries does not seem to be driving the results in any meaningful way.

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28 The high-corruption countries receive both a smaller number of projects and a significantly lower amount of World Bank funds during the time period under study: $24 billion as compared to $47 billion. These numbers are based only on the projects in the data set and are therefore not comprehensive.

29 As the uncertainty surrounding the interaction term would suggest, the 95-percent confidence intervals for the two estimated changes overlap.
agrees to implement projects) correlates with corruption. Insofar as political institutions are relatively difficult to change and likely to exist in an equilibrium determined by factors besides the risk of corruption, the institutional literature does not offer much hope for improving the clarity of responsibility and reducing corruption; I argue that these things can be achieved at a micro-level by thinking about project design.

In terms of foreign aid effectiveness, donors could improve aid effectiveness by using more targeted projects in more corrupt countries. But the implications of the theory are not limited to foreign-funded development projects; within countries, domestically financed development projects might also be improved through targeting, such that the government receives better feedback from citizens who are more equipped to monitor, detect, and hold the government accountable because of the clearer and more delimited project design.

References


