


Why Does Aid Not Target the Poorest?

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Foreign-aid projects typically have local effects, so they need to be placed close to the poor if they are to reduce poverty. I show that, conditional on local population levels, World Bank (WB) project aid targets richer parts of countries. This relationship holds over time and across world regions. I test five donor-side explanations for pro-rich targeting using a pre-registered conjoint experiment on WB Task Team Leaders (TTLs). TTLs perceive aid-receiving governments as most interested in targeting aid politically and controlling implementation. They also believe that aid works better in poorer or more remote areas, but that implementation in these areas is uniquely difficult. These results speak to debates in distributive politics, international bargaining over aid, and principal-agent issues in international organizations. The results also suggest that tweaks to WB incentive structures to make ease of project implementation less important may encourage aid to flow to poorer parts of countries.

Los proyectos de ayuda exterior suelen tener efectos locales, por lo que deben situarse cerca de los sectores pobres si quieren reducir la pobreza. Demuestro que la ayuda a los proyectos del Banco Mundial (BM), supeditada a los niveles de población local, se dirige a las partes más ricas de los países. Esta relación se mantiene a lo largo del tiempo y en todas las regiones del mundo. Pongo a prueba cinco explicaciones, desde el lado del donante, para la focalización a favor de los sectores ricos, utilizando un experimento conjunto registrado previamente sobre los líderes de los equipos de trabajo (Task Team Leaders, TTL) del BM. Los TTL perciben a los gobiernos receptores de la ayuda como los más interesados en orientar la ayuda políticamente y controlar su ejecución. También consideran que la ayuda funciona mejor en las zonas más pobres o remotas, pero que su aplicación en estas zonas es particularmente difícil. Estos resultados se refieren a los debates sobre la política distributiva, la negociación internacional de la ayuda y los problemas de agente-principal en las organizaciones internacionales. Los resultados también sugieren que los ajustes de las estructuras de incentivos del BM para que la facilidad de ejecución de los proyectos sea menos importante pueden fomentar que la ayuda fluya hacia las partes más pobres de los países.

Les projets d'aide étrangers ont généralement des effets locaux, ils doivent donc être plus proches des pauvres si leur but est de réduire la pauvreté. Je montre que l'aide des projets de la Banque mondiale cible les parties les plus riches des pays par rapport aux niveaux de richesses de la population locale. Cette relation persiste dans le temps et au travers des différentes régions du monde. J'ai mis cinq explications côté donateurs du ciblage pro-riche à l'épreuve en m'appuyant sur une expérience conjointe préalablement déclarée portant sur les chefs d'équipe de travail de la Banque mondiale. Ces chefs d'équipe perçoivent les gouvernements bénéficiant d'une aide comme étant les plus intéressés par un ciblage politique de l'aide et par un contrôle de sa mise en œuvre. Ils estiment également que l'aide est plus efficace dans les régions plus pauvres ou plus éloignées, mais que sa mise en œuvre dans ces régions présente des difficultés uniques. Ces résultats s'inscrivent dans les débats sur la politique distributive, les négociations internationales relatives à l'aide et les questions de principal-agent dans les organisations internationales. Ils suggèrent également que de légers ajustements des structures d'incitation de la Banque mondiale, qui auraient pour objectif d'accorder moins d'importance à la facilité de mise en œuvre des projets, pourraient encourager une propagation de l'aide aux parties plus pauvres des pays.

Introduction

The donor community has repeatedly pledged to use aid to reduce poverty (World Bank 1998, 38), and aid very often has local effects (Briggs 2018b). Thus, if one takes seriously the public positions of donors, then one would expect poorer people within countries to be the direct beneficiaries of aid. The case for targeting aid to areas of poverty is even stronger presently, as Sustainable Development Goal 10 commits the donor community to reducing income inequalities within countries.

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In this paper, I show that aid does not target poverty within countries and I test five common explanations for a lack of spatial poverty targeting using a pre-registered survey experiment run on World Bank (WB) aid supervisors, known as Task Team Leaders (TTLs).¹ The only explanation that is supported is that project implementation is uniquely difficult in poorer and more remote parts of countries, and so TTL career incentives for aid project volume may dissuade TTLs from selecting such projects.

My observational analysis shows that aid does not target poverty within countries. This is in line with past research on the question (Öhler and Nunnenkamp 2014; Briggs 2017, 2018a,b; Custer et al. 2017; Marty et al. 2017; Öhler et al. 2019). However, much of past research has focused exclusively on Africa (Briggs 2017, 2018a,b; Marty et al. 2017), most of it has only examined subnational aid targeting across large spatial regions (Öhler and Nunnenkamp 2014; Briggs 2017; Custer et al. 2017; Öhler et al. 2019), all of it

¹Before collecting data, I pre-registered the complete pipeline of code used in the analysis with EGAP. This was later migrated by EGAP to OSF; see <https://osf.io/5kyca/>.

has ignored possible changes in the relationship between aid and poverty over time, and none of it has examined a comprehensive group of aid recipients. I examine the subnational distribution of WB project aid and address all of these issues. I also examine regional and temporal heterogeneity in the aid-poverty relationship and show that the finding holds over time and across all world regions, though sub-Saharan Africa shows an especially strong pro-rich bias in subnational aid allocation. This result is not simply due to aid concentrating on capital cities, though capital cities receive more aid than their brightness or population would suggest. This result thus confirms a puzzle in the literature: Donors that say that they are pro-poor allocate within-country aid in ways that do not seem to be pro-poor.

The second analysis uses a conjoint experiment run on WB TTLs to test five explanations for why aid flows to richer parts of countries.² I find no support for the idea that client governments want to target aid to cities, or other relatively well-off places, because unrest there is uniquely threatening.³ I also find no support for the idea that aid works better in richer parts of countries. The most supported explanation is that poorer and more remote areas are uniquely difficult places in which to implement projects. If TTLs feel pressure to produce many projects and need to access project locations in order to get them approved and implemented, or if TTLs face bureaucratic hurdles to accessing remote areas, then this issue may explain why aid tends to not generally target poorer parts of countries. The negative causal effect of remoteness on ease of implementation is stronger in sub-Saharan Africa than in other regions, a finding that matches the descriptive result that aid is most pro-rich in Africa. TTLs working in Africa, but not elsewhere, also believe that projects in remote areas will receive worse outcome ratings than other projects. Thus, the best explanation for pro-rich subnational aid targeting is an interaction between difficult geography and bureaucratic incentives that encourage TTLs to select projects that they think are low risk and easy to implement.

Aside from directly related research on subnational poverty targeting (Öhler and Nunnenkamp 2014; Briggs 2017, 2018a,b; Custer et al. 2017; Öhler et al. 2019), the present research is related to work on the politics of subnational aid targeting. I find support for the idea that recipient governments would like to target aid to core voters (Briggs 2014; Jablonski 2014; Dreher et al. 2019). I also produce results of interest to those concerned with bypass aid (Dietrich 2013, 2016; Shin, Kim, and Sohn 2017), aid capture (Winters 2014), the importance of recipient ownership in the successful use of aid (Deutscher and Fyson 2008), and efficiency versus equity in resource allocations (Bardhan 1996).

This paper's focus on internal incentive structures within the WB places it within the "the bureaucratic turn" in research on foreign aid (Gulrajani 2017, 375). Past research in this vein has shown that independence from executive control can allow bureaucrats to make more technocratic and less political aid allocation decisions (Arel-Bundock, Atkinson, and Potter 2015) and that high turnover of project leaders reduces the effectiveness of the aid projects they manage (Denizer, Kaufmann, and Kraay 2013; Cornell 2014). More generally, this work fits within a larger research stream

that examines how decision-making structures within international organizations mediate between the preferences of important stakeholders (such as donor governments) and key outcomes (such as resource flows) (e.g., Vaubel 2006; Johns 2007; Johnson 2013). One of the present paper's contributions to this broader stream is to test the plausibility of a set micro-level mechanisms linking career incentives for staff within an international organization to one of the organization's key outcomes, which for the WB is poverty alleviation.

Methodologically, this paper is part of a growing body of research using survey experiments to evaluate the politics of foreign aid (Dietrich and Winters 2015; Milner, Nielson, and Findley 2016; Findley, Milner, and Nielson 2017; Findley et al. 2017; Winters, Dietrich, and Mahmud 2017; Blackman 2018; Dietrich, Mahmud, and Winters 2018; Doherty et al. 2020; Prather 2020). Most of this research surveyed mass publics or policy makers, usually in recipient countries, so an additional contribution of the present paper is examining the results of a survey of donor staff.

Why Might Aid Not Target the Poorest?

This section presents five explanations for why aid from poverty-sensitive donors may fail to reach the poorest. These explanations center on the role of donors in influencing aid allocation and specifically focus on the choices made by aid project supervisors, which at the WB are known as TTLs. TTLs are the Bank's main point of contact with the borrower for a project. On paper, TTLs are assigned to projects that client governments already want to be completed, but in practice TTLs often have agency in discovering relevant projects and promoting them to recipient governments. I later test these explanations using a conjoint experiment run on WB TTLs. The focus on donors and TTLs is a simplifying assumption that is based on the claim that donor incentives ought to influence where aid goes. The focus on donors should not be read as suggesting that recipient preferences do not matter.

The explanations in this section are motivated by the fact that TTLs face career pressure to get many projects approved, and less importantly, to make sure that their projects are rated well internally and by the WB's Independent Evaluation Group (IEG). The importance of these two factors is shown graphically in figure 1, where surveyed TTLs were asked about the importance of getting new projects approved and getting good IEG outcome ratings to their career.⁴ The high importance of getting projects approved, and the lesser but still present pressure to get good ratings, is known within the WB. For example, an IEG report from 2016 noted that staff face "pressure for lending volume", have a "perception that individual success depends more on obtaining new deals and ensuring timely disbursement than on quality implementation", and have an "acute focus on outcome ratings" (World Bank IEG 2016, 28). The same report noted that in the WB "prestige was perceived as coming from peer recognition of successes, particularly through getting new projects approved. Fear of damage to one's reputation and concerns about reputational risks attached to poor results was a recurrent theme" (World Bank IEG 2016, 28). TTLs also generally "supervise at least four or five projects at the same time" (Ika, Diallo, and Thuillier 2012, 106) and their skill matters to project outcomes (Denizer, Kaufmann, and Kraay 2013). In sum, TTLs are important and busy and

² Throughout this paper, "rich" should be understood as a relative term pointing to wealthier parts of countries rather than an absolute judgment.

³ The measure of client support is based on a question that asks TTLs which project they think clients will prefer. Throughout, when I discuss client preferences, I am referring to TTL perceptions of client support.

⁴ The bars are weighted using the survey weights. Details about the survey and sample are presented in Section.

Fourth, even if TTLs do not inherently care about the difficulty of implementation, they may still avoid remote areas if they fear that projects in these places will get worse ratings. Project outcome ratings assess “the extent to which the project’s major relevant objectives were achieved, or are expected to be achieved, efficiently” (World Bank IEG 2019). The three dimensions of the outcome score are the relevance of the project’s objectives, the extent to which the objectives were achieved (efficacy), and that the cost of the project was reasonable given the benefits (efficiency). Since 1995, these ratings have been on a six-point scale. Outcome ratings will be lower in poorer areas if projects in these areas are lower on any of the three dimensions of relevance, efficacy, and efficiency. If we consider efficacy, implementing projects in remote areas might mean leading projects that more often fail to achieve their goals due to unreliable infrastructure, a less certain security situation, or other factors that more often exist in remote areas. The IEG notes that sometimes “unsuccessful outcomes are caused by major shocks outside the control of the WB such as, for example, disasters, conflict, or economic crises” (World Bank IEG 2016, xiv).⁷ Staff understandably do not appreciate projects receiving bad ratings due to factors beyond their control, and the IEG writes in a recent report that “measuring and rating project outcomes at closing against objectives stated at design years earlier has become a source of tension and perceived rigidity” (World Bank IEG 2016, xiv). Nevertheless, if projects in poorer areas have more downside risk, then this may encourage rating-conscious TTLs to concentrate their efforts on projects in wealthier areas where outcomes are more consistent.

Fifth, and final, TTLs and the WB in general care about promoting development. Perhaps TTLs think that projects in richer (but still poor) parts of countries are better for development than projects in the poorest places. This could again be due to the cost-benefit calculations noted above. One can plausibly help more people per dollar if aid is spent in richer places within poor countries. It is also plausible that there are strong complementarities between aid and social or physical infrastructure, and these could imply that aid projects will work much better in richer places. One could also believe that urban aid is better if one thinks that the primary goal of aid is not to ameliorate the effects of poverty but to do things that make industrialization and fast economic growth more likely. This could involve boosting education or improving the energy sector or building roads, but regardless of the sector if one wants to use aid to industrialize and boost growth, then it would make sense to cluster these interventions in or near cities.⁸ In this way, the debate over efficiency versus equity in subnational aid allocation mirrors broader debates in public policy (Bardhan 1996).

Each of these five explanations maps to one dependent variable in a conjoint survey experiment that I ran on WB TTLs in May 2019. I randomize features of pairs of projects, such as where they are located within a recipient country, and then ask respondents to pick which project best fulfills

some criteria, such as which project the client government would be more interested in.⁹ This approach allows one to see which kinds of projects *do not* get implemented. Observational data from completed project lists cannot show us the projects that did not get implemented, so testing the causal effect of some factor on project initiation with observational data is incredibly difficult.¹⁰ An additional issue with observational data is that often variables that have different theoretical implications covary closely, and this makes it difficult to isolate the unique effects of either variable. For example, within countries, poverty and geographic remoteness are often closely correlated (Sahn and Stifel 2003; Smith, Ruel, and Ndiaye 2005; Boutayeb and Helmert 2011; Thorbecke 2013; Young 2013). Thus, if we analyze such data and see that aid does not flow to poorer (and more remote) areas, it is difficult to know if this is due to poverty or remoteness. In a survey experiment, one can independently assign poverty rates and geographic remoteness, allowing for a clean test of effects of each variable. I use a survey experiment for these reasons.

The results reveal that the most compelling explanation for pro-rich aid targeting is based on the reported difficulty of implementing projects in rural, remote, and poorer parts of countries. While these poorer places are thought to be harder places to implement aid, TTLs also think that aid is better for development when it reaches these places. The analysis of the survey data also presents a variety of results relevant to political science and development studies. For example, I show that TTLs think that client governments dislike bypass aid (Dietrich 2013) and want to target aid to core but not swing voters. Supporting the importance of local ownership of aid, I also show that implementation is thought to be harder in areas that support the opposition party and easier in places that support the party in power. The next section presents a descriptive analysis of WB aid targeting within countries using observational data.

Descriptive Analysis of Poverty Targeting

Research design

I examine aid from the WB to all recipients over a 10 year period, and relative to past work I retain more granularity in both the spatial and temporal dimensions of my data. In the spatial dimension, I aggregate measures of aid, poverty, and population into a 0.5° latitude by 0.5° longitude grid (Tollefsen, Strand and Buhaug 2012). This combination of better-than-regional subnational precision, universal coverage of recipient countries, and a decade of data is new in the literature.

Information on aid comes from AidData (Strandow et al. 2011) and I only look at aid projects as only they have the requisite geographic information. While not all aid is project aid, project aid made up 85% of all WB aid and 53% of all aid from OECD DAC countries in 2017, the most recent year with data (OECD DAC 2019). I use AidData’s WB

⁷ In the same report, they recommended reforming the review system to make it more able to accommodate course corrections and unforeseeable events.

⁸ The authors of the 2009 World Development Report write that their “message” is that “economic growth is seldom balanced [across rural and urban areas]. Efforts to spread it prematurely will jeopardize progress. Two centuries of economic development show that spatial disparities in income and production are inevitable” (World Bank 2009, 5–6). This argument will be especially persuasive if one believes that “growth is good for the poor” (Dollar and Kraay 2002; Dollar et al. 2016) and that aid can increase the growth rate if targeted to richer parts of countries.

⁹ This means that the client interest variable is measuring the degree to which TTLs *think* the client would be interested in a project. This is likely a reasonable approximation of actual client interest as TTLs are highly incentivized to understand what client governments want so that they can get more projects approved.

¹⁰ In particular, it is very easy to end up with correlations that illustrate Berkson’s paradox. For example, in the set of realized aid projects, one may find that projects located in remote areas are not more expensive to implement than projects in urban areas. However, donor staff are likely selecting projects based in part on implementation costs and so we will never see the possibly large number of remote projects that were too expensive to implement and so were passed over. For additional discussion and a simulation demonstrating this issue, see Briggs (2018b).

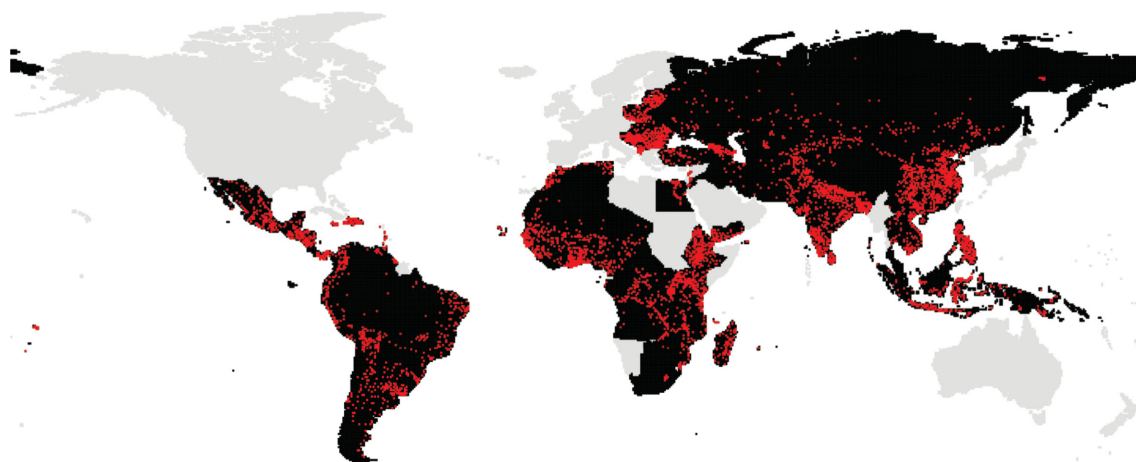


Figure 2. Red cells received at least one precisely targeted WB project between 1995 and 2005 (inclusive). Black cells received no WB project aid but were part of countries that received aid.

Geocoded Research Release, Version 1.4.2, which runs from 1995 to 2014. Following prior work (e.g., Briggs 2018b), I subset the data so that I include only projects with a precision code less than or equal to 2 (so all locations are geocoded to within 25 km of the correct location). This makes it very likely that each project is placed within the correct cell-year.¹¹ Figure 2 gives a sense of the fineness of the spatial grid and the global coverage of WB aid.

I examine both if poorer cells are more likely to receive some aid and if poorer cells are more likely to receive a greater dollar amount of aid when they do get aid. The measure of aid selection is binary. Cell-years that have a newly initiated aid project are marked with a 1 and are otherwise 0. The measure of aid intensity is continuous and is the natural log of the total dollar value of new aid per cell-year. When I calculate the dollar value of aid per cell-year, I follow prior work (e.g., Briggs 2017; Öhler et al. 2019) and evenly split the commitment amount of each project across its locations.

We lack grid-cell-level measures of poverty that are consistent over time and countries, so I proxy for the wealth of each cell-year using mean nighttime light emission from the DMSP-OLS Nighttime Lights Time Series Version 4 (Average Visible, Stable Lights, and Cloud Free Coverages).¹² While one would not want to use light at night to literally target aid, it is on average correlated with household wealth (Noor et al. 2008; Weidmann and Schutte 2017) and poverty rates (Elvidge et al. 2009; Wang, Cheng and Zhang 2012;

Proville, Zavala-Araiza, and Wagner 2017).¹³ I use the natural log of the standardized light variable and I lag the variable by 1 year.

I use HYDE population data, which are available for 1990, 2000, and 2005 (Goldewijk, Beusen, and Janssen 2010; Goldewijk et al. 2011).¹⁴ I fill in the values between the anchor years using linear interpolation, which seems reasonable as population is typically slow moving.¹⁵ I do not extrapolate past the last population estimate, so the final year of the analysis is 2005 when using the HYDE variable. One can check that the interpolation is not driving the result by noting the similarity of the relationship between light and aid in the anchor years (2000 and 2005) and the interpolated years in figure 3. In the Online Appendix, I show that the results are robust to using GPW population data, which extends the analysis out to 2010 (CIESIN and CIAT 2005). I use the natural log of the population variable (plus 1). I include country-year fixed effects in all models, so all comparisons are across grid cells within the same country in the same year.

Moving to estimation, models 1 and 2 in table 1 have a binary dependent variable and estimation is done using logistic regression. Only about 2 percent of cell-years in the analysis receive new aid projects. While this means that receiving aid is a rare event, regular concerns around analyzing rare event data with logistic regression are unlikely to apply to the present analysis because the magnitude of the bias caused by rare events is decreasing in sample size and the present sample is large (King and Zeng 2001). I use a conditional fixed-effects logistic model, which is appropriate when using a dataset with many groups and not overly many observations per group, which is a good description of

¹¹ I limit the data to precisely coded projects, rather than projects that were geocoded to (centroids of) regions, because I use a measure of light at night as a proxy for local-level poverty and a light measure taken at a regional centroid is unlikely to generally be a good representation of the true light level in the area of the project. This approach drops about half of the data, which was either coded with less precision or was coded with a code of 8, which is applied to aid that is assumed to go to a regional or national capital (e.g., aid for capacity building). See Briggs (2018b) for further discussion of the implications of sub-setting the data this way. In Online Appendix A, I show that the results hold when including projects with a precision code equal to or smaller than 3 (geocoded to centroids of ADM2 regions). When using this cruder geocoding, I am working with 73 percent of the rows in the WB dataset. Finally, it should be noted that the results of the present analysis are quite similar to other analyses that use less precisely geocoded aid and aggregate aid into accordingly larger spatial units (Briggs 2017; Öhler et al. 2019).

¹² Image and data processing were performed by the NOAA's National Geophysical Data Center. DMSP data were collected by the US Air Force Weather Agency. The light measure was standardized to be between 0 and 1.

¹³ Across Africa at the grid-cell level, places with higher light at night are more likely to be closer to cities in distance and travel time, have lower estimated child malnutrition and infant mortality rates, and are more populous (Briggs 2018b).

¹⁴ HYDE is likely preferable to GPW, as the former has more modeling and so is less likely to spread regional counts of people over cells that are very unlikely to have anyone in them due to environmental factors (see discussion in Briggs 2018b).

¹⁵ Linear interpolation is preferable to carrying the last estimate forward because if one did this, then the population variable would display large and discontinuous changes when an estimate was updated. This sharp change is unlikely to be a good representation of the true (but unknown) population count. Linear interpolation is also preferable to condensing the data into 5- or 10-year panels, as this would make it impossible to untangle if aid caused an increase in light or if aid merely went to places with more light.

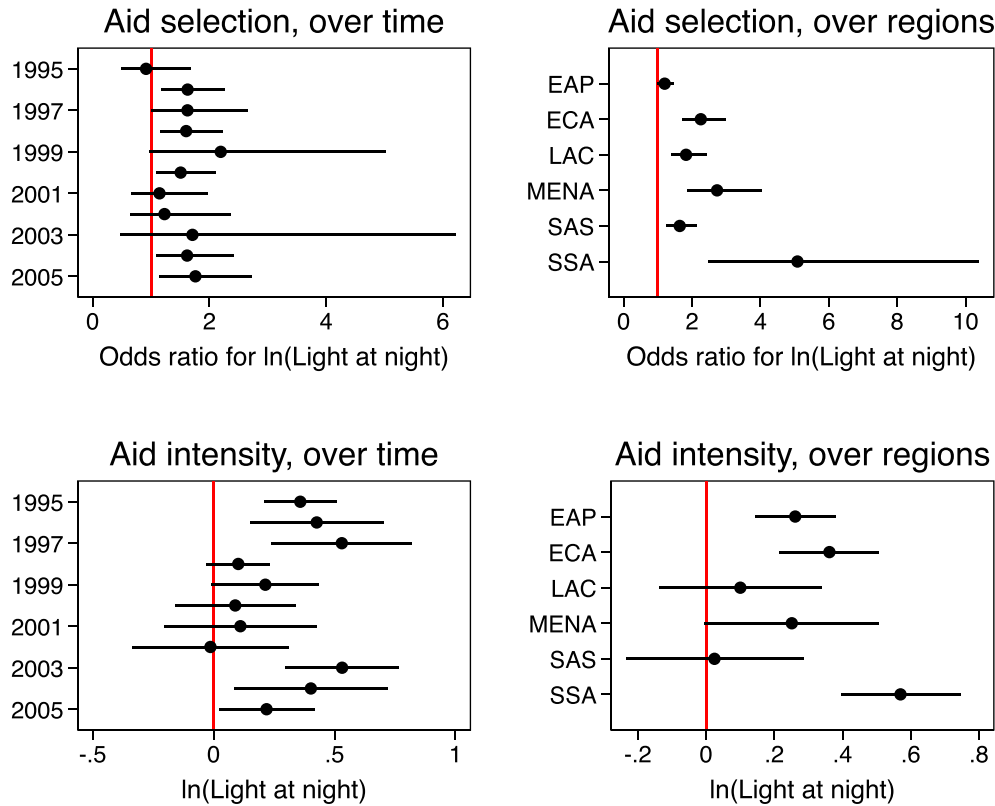


Figure 3. Heterogeneity in poverty targeting over years and regions. EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and Caribbean, MENA = Middle East and North Africa, SAS = South Asia, SSA = sub-Saharan Africa.

Table 1. Descriptive analysis of subnational poverty targeting

| | (1) | (2) | (3) | (4) |
|---------------------------------|---------------------|---------------------|------------------------|------------------------|
| $\ln(\text{light})_{t-1}$ | 1.532*** (0.110) | 1.500*** (0.109) | 0.235*** (0.043) | 0.222*** (0.043) |
| $\ln(\text{population})_t$ | 2.112*** (0.072) | 2.096*** (0.069) | 0.082*** (0.018) | 0.080*** (0.018) |
| <100 km to capital _t | | 1.274*** (0.084) | | 0.086** (0.035) |
| Dependent variable | Binary | Binary | $\ln(\text{aid cost})$ | $\ln(\text{aid cost})$ |
| Model | Logit | Logit | OLS | OLS |
| Country-year fixed effects | Yes | Yes | Yes | Yes |
| <i>n</i> country-years | 618 | 618 | 638 | 638 |
| <i>n</i> cell-years | 297,343 | 297,343 | 7,526 | 7,526 |

Notes: Models 1 and 2 show odds ratios and have bootstrap standard errors based on 1,000 replications and 618 country-year clusters in parentheses. Models 3 and 4 show standard errors clustered on country-years in parentheses.

** $p < 0.05$, *** $p < 0.01$.

the dataset under analysis (Beck 2015). Standard errors are based on 1,000 bootstrap replications with 618 country-year clusters. Models 3 and 4 limit the sample to cell-years that received new aid and have a continuous dependent variable. Estimation is done using ordinary least-squares (OLS) and standard errors are clustered on country-years.

Results

Conditional on population, places with more light at night are more likely to receive aid (model 1), and when they get aid, they get more in dollar terms (model 3). These relationships are not simply being driven by aid targeting capital

cities, as they hold after adding a dummy variable marking cell-years with centroids that are within 100 km from the country's capital city (models 2 and 4).

To test for heterogeneity in the conditional relationship between light and aid, I run the specifications used to produce models 1 and 3 in table 1 on each annual and regional subset of the data. Figure 3 graphs the coefficients and 95 percent confidence intervals for $\ln(\text{light})_{t-1}$ from these analyses. The top two panels show results from the selection model (model 1 in table 1) and the bottom two panels show results for the intensity models (model 3). Any estimate to the left of the vertical red lines in figure 3 shows pro-poor aid targeting. Nearly all point estimates show pro-

rich aid targeting. There is no obvious time trend in the relationship between light and aid. Sub-Saharan Africa has stronger pro-rich aid targeting than other regions, a finding consistent with past research (Öhler et al. 2019). South Asia and Latin America have lower levels of pro-rich aid targeting. In East Asia, richer places are not much more likely to receive aid, but when they do receive aid, they receive more than poorer places.

I subject this descriptive result to a large number of robustness tests, all of which are presented in Online Appendix A and only briefly described here. First, I run models 1 and 3 in table 1 while sequentially dropping all cell-years with fewer than 10, 100, 1,000, and then 10,000 people. This tests to see if the results are being driven by measurement error at the low end of the population variable. Second, to ensure that assumptions about functional form are not driving the results, I run models 1 and 3 in table 1 with an unlogged light at night variable. Third, I run models 1 and 3 in table 1, but rather than using a continuous measure of light at night, I enter a set of dummy variables marking the light quintile (within each country-year) to which each cell-year belongs. Fourth, I reproduce the OLS results in table 1 first using the unlogged dollar amount of aid per cell-year as the dependent variable and with a Poisson pseudo-maximum likelihood model (Santos Silva and Tenreyro 2006, 2011), then clustering standard errors on countries instead of country-years, and then after re-weighting the cell-years so that each country-year has the same weight rather than each cell-year. Fifth, I replicate table 1 and figure 3 using a different population variable and five additional years of data. Finally, I replicate table 1 but include projects that were geocoded to second-level regional centroids. With only very minor exceptions, all of these robustness tests show that aid flows to richer places. I find no evidence of subnational poverty targeting.

Why Does Aid Not Target the Poorest?

The prior descriptive results tell us that aid is flowing to richer places within recipient countries, but it does not tell us why this is happening. This section tests five explanations for a lack of poverty targeting using a conjoint survey experiment run on WB TTLs. First, client governments may not be interested in poverty targeting. Second, it may be easier to get projects in richer areas approved. Third, project implementation may be more difficult in poorer areas. Fourth, expected project ratings may be lower in poorer areas. Fifth, TTLs may think that projects in wealthier areas will have a larger impact on development.

Prior to running the survey, I pre-registered a qualitative description of my design and a complete pipeline of code that moves from the raw survey data to the final presentation of the results. All of what I describe in the following two sub-sections is based on this pre-registered analysis.¹⁶ The final sub-section presents an exploratory (not pre-registered) analysis of heterogeneous treatment effects.

Research design

On May 1, 2019, I emailed all WB staff who were listed as serving as a TTL on a project from 2008 until February 2019.¹⁷ In order to not select on people who had strong

¹⁶ A number of small changes to the pre-registered code are described in Online Appendix D. The changes are analytically inconsequential and mostly have to do with tweaking the presentation of the graphs.

¹⁷ I downloaded the TTL data on February 6, 2019, so I use all names from 2008 until then. I resorted to emailing TTLs after unsuccessfully trying to work

opinions about poverty targeting, my invitation to take part in the survey described it honestly but generally as “a research study to understand the career incentives facing Task Team Leaders and how these relate to project selection”.¹⁸ After 3 weeks, I emailed a reminder to all TTLs who had yet to complete the survey. Data collection closed 1 week later, on the last day of the month.

I anticipated a low response rate because “World Bank survey response rates are generally low and tend to be declining over time” (Smets 2018, 4). Indeed, in 2015, the IEG’s client survey (of WB staff, the Board of Directors, and external stakeholders) had a response rate of 4.7% (Smets 2018, 4). As I was running an unofficial survey based on cold-emailing TTLs, I predicted a response rate that was even lower. Low response rates can lead to bias if there are heterogeneous treatment effects and if the selection into the survey is correlated with treatment effects (Franco et al. 2017). Furthermore, even with no expected bias, small samples make it more likely that one gets an unlucky draw of respondents that fails to offer a good representation of the population of interest. I emailed 2,478 TTLs, of whom 115 completed the survey.¹⁹ Thus, while low, my response rate roughly matches some official WB surveys.²⁰

In anticipation of a low response rate, I asked respondents the region of the world and the sector in which they had done the largest share of their work at the WB. I use the WB’s official sectors and regions, and then I weight respondents so that they match the sectoral and regional distributions of all WB projects from 2008 until March 2019.²¹ In practice, my sample approximates the population on these two dimensions and the weighting does little to alter the results.²²

The conjoint experiment asked respondents to choose one of a pair of hypothetical aid projects that were in the sector and region of the world where they had previously stated that they had the most experience. Each project varied on five dimensions, all of which were independently randomly assigned. Projects could have an *average income of the project location* value of above national average, at national average, or below national average. Projects could be *located* in the capital city, an urban area, on the outskirts of a city, a rural area, or a remote area. Projects had a *political affiliation* of the president’s hometown, an area where residents favor the party in power, an area where residents favor an opposition party, an area where residents have weak partisan affiliations, or an area with no political affiliation. Each

through official WB channels for about 1 year. Directly emailing TTLs is possible because the WB project API lists the full name of the TTL associated with each project and the WB algorithmically creates email addresses based on names (first initial + last name + @worldbank.org). This process created 2,478 email addresses, of which 38 were not unique. I manually de-duplicated these non-unique email addresses by Googling the names of each of the 80 associated TTLs.

¹⁸ This wording should reduce concerns around experimenter demand effects, which in general seem weak (Mummolo and Peterson 2019).

¹⁹ Perhaps I should have offered the TTLs a free coffee mug, as done in Banuri, Dercon, and Gauri (2019).

²⁰ It is difficult to work out the exact response rate. Given that I algorithmically generated email addresses from names, it is probable that a few hundreds of the email addresses were incorrect. Unfortunately, Qualtrics did not record bounced emails. If we assume a denominator of 2,300, which seems conservative, then the response rate is 5% ($115 \div 2300 = 0.05$).

²¹ I downloaded the project data for weighting on March 13, 2019, so I include all projects up to that date.

²² I did not collect identifying information on TTLs, nor did I collect information on a TTL’s demographic characteristics because there is no publicly available demographic information against which to balance the sample. I can only check my sample against public information, such as the regional distribution of the WB’s portfolio. My sample is well balanced on the two dimensions that I consider (region and sector), and the weights correct for the remaining minor imbalance.

project had a *budget* that was larger than typical, typical, or smaller than typical. Finally, the *implementing partner* for each project was either the client government or an NGO. This setup yields 450 possible kinds of projects.

As previously described, aid may fail to target poorer parts of countries for at least five reasons. Each of these reasons maps to a dependent variable in the conjoint experiment. In order for a project to be implemented and so enter into the dataset analyzed in table 1, it must first interest the client government. Accordingly, I ask respondents to select the project that would be of greater interest to the client government. Then, the project must be approved through the hierarchy of the WB. I thus ask respondents which project would be easier to get WB approval.²³ Projects are then implemented and rated, and I ask respondents which project they think would receive a higher outcome rating. Finally, I ask respondents which project they think would have a larger positive impact on development (using their own personal definition of development). These five dependent variables were presented in random order for every pair of profiles. TTLs have career incentives to get many projects approved and to have them be rated well, so they should be attuned to my survey questions about the factors that make projects more likely to be approved and then rated well.

Each respondent was shown five pairs of projects, and for each pair of projects, the respondent made five binary choices between the projects (one per dependent variable). This means that every respondent produced 10 observations, each with data on all five dependent variables. Thus, each panel in figures 5 and 6 is based on an analysis of 1,150 observations from 115 respondents. The graphical presentation of the results in figures 5 and 6 shows marginal means, as ultimately I am interested in how likely it was that an aid project with a given feature level was selected, marginalizing over all other features (Leeper, Hobolt, and Tilley 2020). All features of projects are independently randomly assigned, so both projects in a pair can end up with the same feature level. Thus, the marginal means will range from the probability of co-occurrence to 1 minus the probability of co-occurrence (Leeper, Hobolt, and Tilley 2020). In the case of a variable with only two levels, this implies a possible range of 0.25–0.75. All other variables have a wider range. A final point on interpretation is that in a forced choice design if one level of a variable is selected more often, then another level of the same variable will necessarily be selected less often.²⁴ Because of this lack of independence within variables, one should evaluate the results of each independent variable holistically.

I calculate the marginal means using OLS with survey weights.²⁵ Figures 5 and 6 show point estimates and 95 percent confidence intervals based on standard errors clustered on respondents. While I would like readers to focus more on the probability of a project with a given feature level being picked rather than the statistical significance of differences between feature levels (the average marginal component effect), one can easily eyeball the statistical significance of the AMCE by comparing the point estimates and confidence in-

²³ The precise question was: “From project concept note to Board approval, which project would be easier to get approved?”

²⁴ Appendix A in Leeper, Hobolt, and Tilley (2020) has a very good discussion of related issues.

²⁵ For each independent variable, I run a regression of the dependent variable on every level of the independent variable (dropping the constant term). Thus, each panel in figures 5 and 6 is made up of five unique regressions, one per independent variable. This simple approach relies on the fact that all feature levels are independently randomly assigned to profiles.



Figure 4. Correlation between dependent variables.

tervals of the marginal means across values of a given independent variable. Note that it makes little sense to test the marginal means against a null of a 0.5 (half) selection rate, and such a test is not the same as the AMCE. The equivalent to an AMCE is testing if one point estimate is equivalent to another point estimate.

Results

The correlations between the dependent variables are shown in figure 4. All of the correlations are positive. Projects that are expected to have an easier approval process are also expected to get better ratings and have a higher impact on development. The weakest correlations are between ease of project implementation and developmental impact, though even this correlation remains positive.

The full results of the conjoint experiment are presented graphically in figures 5 and 6. My discussion of the results focuses on each dependent variable in sequence, and I discuss both the implications of the results for poverty targeting and for wider related questions in development studies and political science.

I find no support for the idea that client governments are more interested in projects that are placed in richer areas. Rather, client governments are perceived to be modestly more interested in aid that targets poorer areas. They are also thought to be more interested in aid to remote parts of countries and against aid to urban areas. Client governments are thought to be indifferent to the size of the project budget. The largest effect sizes are for the political affiliation variable. Clients are thought to be most interested in projects that are placed in the president’s hometown. When shown a project located in the president’s hometown, TTLs select that project to be of greater interest to the client government more than 70 percent of the time. This supports claims that leaders favor regions that share an ethnicity with the leader (Franck and Rainer 2012) or that simply hold the leader’s birthplace (Hodler and Raschky 2014). Clients also are perceived to prefer to target aid to their core supporters, a finding in line with Jablonski (2014) and Briggs (2014). I find no evidence of a desire to target swing voters.

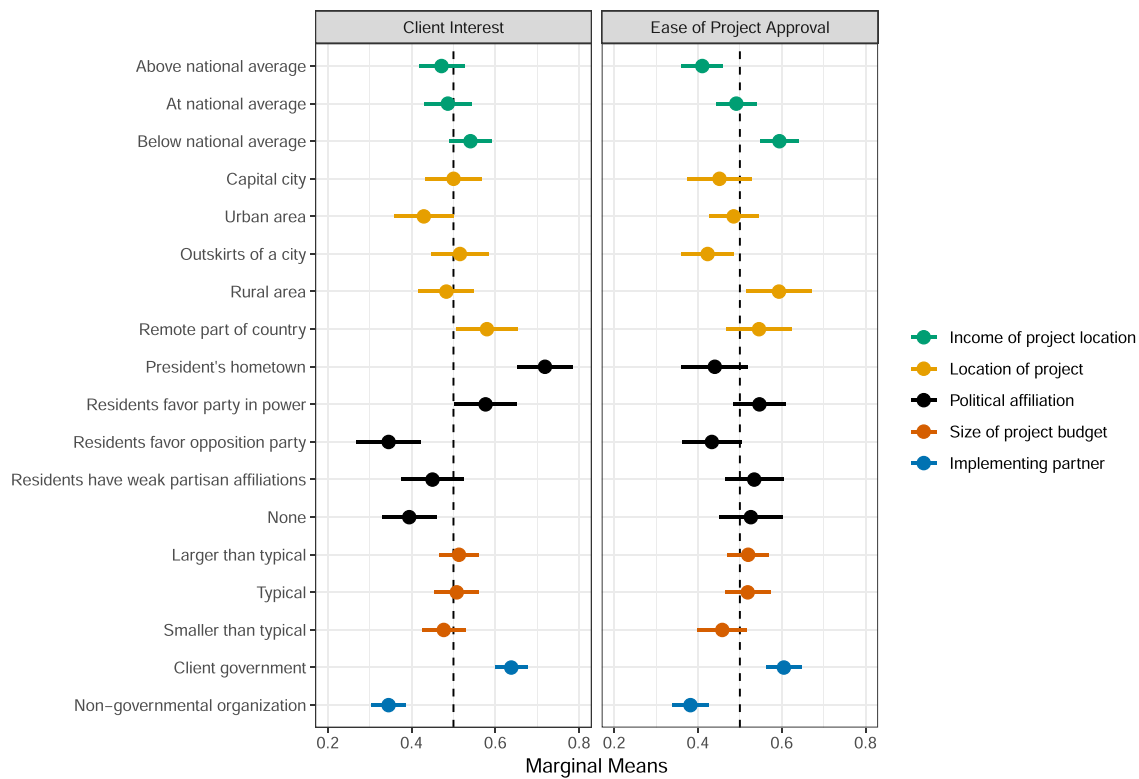


Figure 5. Effect of project attributes on probability of selection.

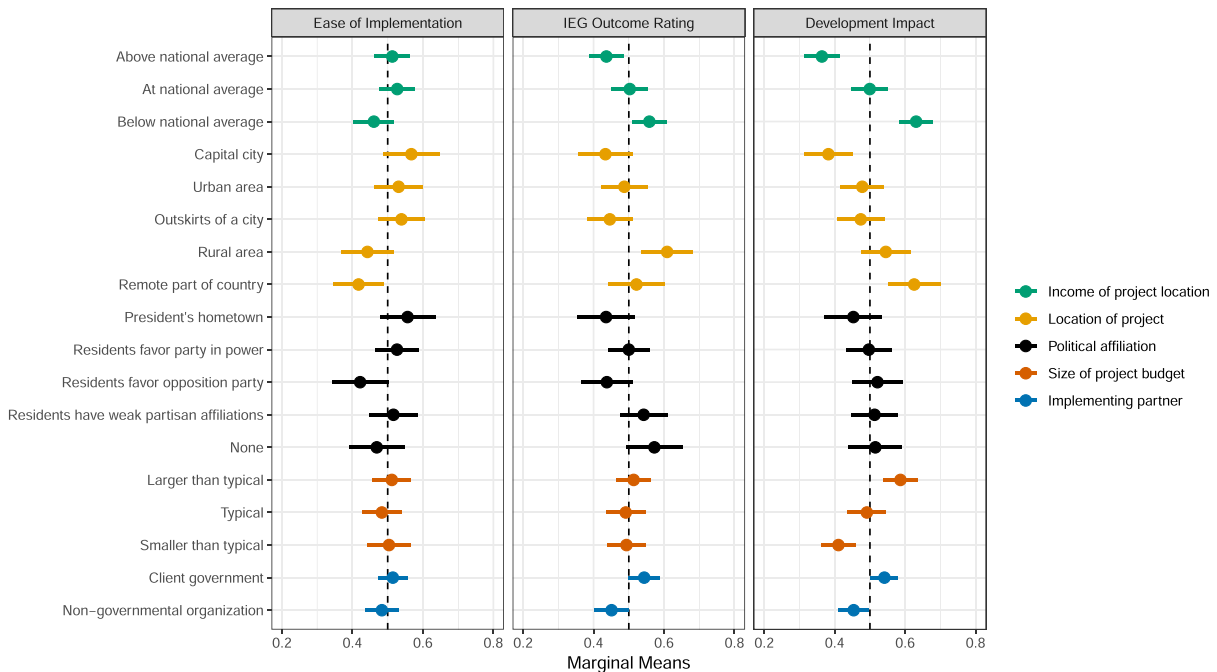


Figure 6. Effect of project attributes on probability of selection.

Recipient governments prefer projects where they are the implementing partner to projects that bypass them and are implemented using NGOs.

I also find no support for the idea that projects in poorer areas are harder to get approved. In fact, TTLs think that projects in poorer areas are easier to get approved. TTLs also report that it is easier to get projects approved if they take place in rural or remote areas. While the prior

results show that client governments prefer projects that are located in the president's hometown, such projects are harder to get approved. This may be one reason why the WB—unlike China—is not more likely to place aid in the president's hometown (Dreher et al. 2019). The WB is thought to have a preference for lending volume, and this is also borne out by the present results as TTLs think that projects with smaller budgets are harder to get approved.

One interesting and unexpected result is that approval is fairly easy when the project's location has residents that favor the party in power (but is not the president's hometown). This suggests a tolerance for core-voter targeting in WB aid, which has been shown to exist in at least Kenya (Briggs 2014; Jablonski 2014). It is easier to get approval when the project does not bypass the client government.

Implementation is thought to be harder in poorer areas, rural areas, and remote areas. This supports explanations for pro-rich targeting that prioritize ease of access to project areas. TTLs face time and budget constraints, and so they may want to focus their attention closer to cities to economize on time and money. It should be emphasized that this dependent variable is distinct from outcome ratings or developmental impact, and so is capturing ease of implementation, but is not a measure of the likelihood that a project "works". Implementation is also thought to be easier in the president's hometown and areas of core support relative to areas of opposition support. This result can be read as supporting the importance of recipient ownership. When aid is targeted to places where recipients want to help, they may work harder to ensure that implementation is smooth.

The outcome rating results also should enable pro-poor targeting. Outcome ratings are expected to be lower in richer areas, in capital cities, and on the outskirts of a city. They are expected to be higher in rural areas and poorer areas. These patterns suggest that outcome ratings are capturing development results in addition to capturing outlays or the ability to achieve pre-determined goals (Thomas and Tominaga 2010).²⁶ Outcome ratings are expected to be higher in places with no political affiliation or weak partisan affiliations and lowest in the presidential hometown or places that favor the opposition party. The former explanation could be due to fear of capture and the latter could be due to expected difficulties in implementation, but this is conjecture. TTLs expect that NGO-implemented projects will receive a lower outcome rating. This contradicts the results of an analysis of the effect of NGO implementation using observational data on WB projects in Shin, Kim, and Sohn (2017), but it is consistent with the results of a similar observational analysis in Winters (2019).

Finally, TTLs think that aid has a larger positive impact on development when it is targeted to poorer areas and more remote areas. This suggests that TTLs either view aid as primarily being about ameliorating the negative effects of poverty, or think that aid generally works better in poorer areas, or think that aid will be more likely to cause growth if targeted to poorer and more remote areas. The latter explanation seems unlikely, but the experimental data cannot rule it out. The second explanation clashes with the evidence that implementation is harder in poorer and more remote places, so it seems unlikely.²⁷ Thus, this probably reveals that TTLs think that the main goal of aid is to ameliorate the negative effects of poverty. TTLs think that projects with larger budgets do more good than smaller projects. Aid placed in the presidential hometown has a somewhat lower developmental impact, which again suggests that TTLs fear capture. TTLs think that bypass aid is less effective than aid where the client government is the implementing partner.

Much of the above results were supported by qualitative comments made by TTLs. For example, after learning the

descriptive pattern of pro-rich bias in subnational aid allocation, one TTL noted

Not surprised at all by the urban/wealthier bias. Look at budgets and preparation times and existing evidence and experience. Most of the people TTLs talk to and work with are from cities. It is much easier (faster, cheaper) to visit cities for feasibility studies and assessments. Every year the preparation budgets get reduced, every year we are encouraged to prepare projects more quickly. It is easier to put together a project that targets cities and rural areas (perhaps in outer years of the project) which then doesn't fully deliver, then to design a project targeting rural areas (except presumably in agriculture) from the beginning. Some of these places are FAR - I was supposed to do a school visit in March of this year that would have taken 2.5 days to get there and two full days to get back. Guess what? I didn't go.

This is one of many quotes and is only illustrative, but it suggests that the results resonate with the experience of at least some TTLs.²⁸ It also suggests that the features in the conjoint survey experiment map onto some of the forces that TTLs believe shape WB aid allocation within countries.

Exploratory results

This final section discusses an exploratory (not pre-registered) analysis of heterogeneous treatment effects. Figure 3 showed that aid from the WB had the strongest pro-rich targeting in sub-Saharan Africa. This supports similar results in Öhler et al. (2019). In response to these findings, I examine if TTLs whose work at the Bank mostly focused on sub-Saharan Africa respond differently to the conjoint experiment than those who focused on other regions.

Forty-six TTLs did the largest share of their work in Africa, while the remaining sixty-nine did most of their work in other regions.²⁹ Figure 7 shows the results when I replicate the analysis used to produce figures 5 and 6 but run the analysis separately for Africa and the rest of the world.³⁰

The client interest results are quite similar across the two groups. However, TTLs who work more in Africa are more likely to think that it is hard to get projects approved if the project is based in the president's hometown, and they are more likely to think that approval is easier if the location has no political affiliation. Probably the starkest result is that TTLs who work more in Africa are much more likely to think that implementation in remote areas is difficult. All TTLs think that implementation in remote areas is more difficult, but the magnitude of the African result stands out and may explain why aid to African countries is more pro-rich than aid to other world regions.

Outcome ratings are similar, though TTLs who work in Africa are more likely to expect that projects in remote areas will receive poor outcome ratings. Again, this could help explain why aid to Africa is more pro-rich than aid to other

²⁸ Most TTLs asked that I not quote their comments, even anonymously.

²⁹ I am unable to produce a similar analysis by sector because each sector has too few respondents. If I create sector groupings like a "social sector" group with health and education, I have only 18 respondents (and 180 observations) in this group. I thus focus only on regional heterogeneity.

³⁰ This analysis excludes survey weights, primarily because my weights were calculated on the full sample. The top panels in figure 7 (Africa) are based on an analysis with 460 observations and the bottom panels have 690 observations. Other than not using survey weights, the analyses are the same as those used to produce figures 5 and 6.

²⁶ Kilby (2015, 117) suggests that outcome ratings are (informally) influenced by rates of return in addition to their stated goal of measuring the extent to which a project met pre-determined objectives.

²⁷ While this explanation seems unlikely, it should not be ruled out. Zurlinden (2021, 157) finds that health aid works better in more disadvantaged areas.

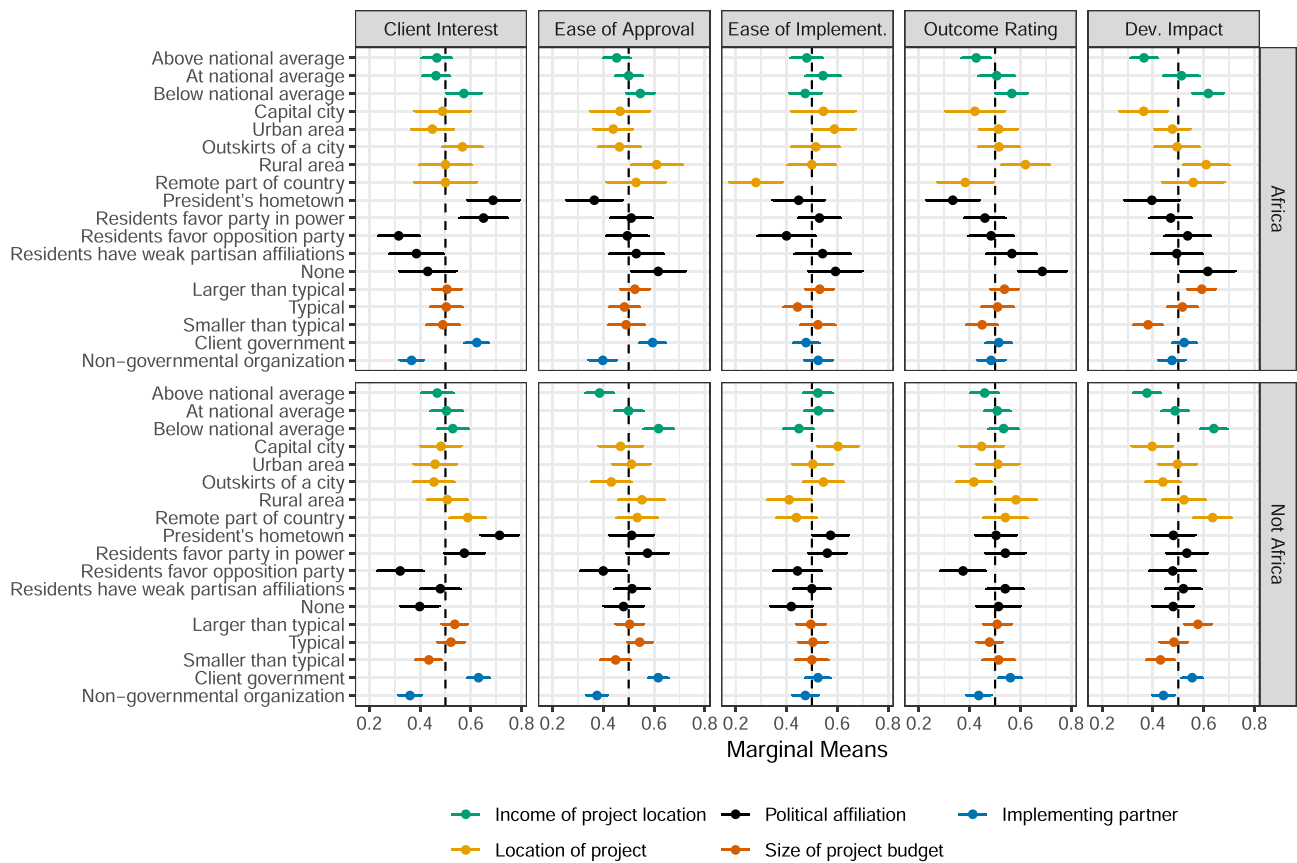


Figure 7. Effect of project attributes on probability of selection.

regions. TTLs who work more in Africa are also more likely to think that outcome ratings will be higher in apolitical areas or swing areas and worse in the president’s hometown. TTLs working outside of Africa think that outcome ratings will be worst in opposition areas. The developmental impact results are generally similar, with one exception being that only TTLs who worked more in Africa think that developmental impact is higher in areas with no political affiliation than presidential hometowns.

One plausible explanation for many of these political results is that aid capture is higher in African presidential hometowns, so only in Africa do we see presidential hometowns having more difficult implementation, lower outcome ratings, and lower expected developmental impact. This might explain why only in Africa is it thought to be harder to get projects in presidential hometowns approved. Outside of Africa, approval, implementation, and outcome ratings are lower in areas that support the opposition. Outside of Africa, it is also thought to be easier to implement projects in presidential hometowns and that such places are no worse in terms of outcome ratings or developmental impact. One can thus tell a story where outside of Africa, governments put more effort into favoring presidential hometowns with aid-funded public goods and that such aid is not more prone to capture. It may then be harder to implement projects in opposition areas simply because governments care less about helping them.

This section has revealed two sources of heterogeneity that may explain why aid is least likely to reach the poorest within African countries. First, implementation in remote areas is perceived to be harder in Africa than in other

regions. Second, outcome ratings in remote areas are expected to be lower only in Africa. Many of the additional results in this section are consistent with a story where aid to presidential hometowns in Africa is uniquely prone to capture, while aid outside of Africa is hardest to implement in opposition-held areas but easier to implement in areas where governments are motivated to help, such as presidential hometowns. These results come from an exploratory analysis of heterogeneity, and one avenue for future work is to confirm these results.

Conclusion

This paper has shown that WB aid does not flow to poorer parts of countries and has suggested that this is unlikely to be due to client governments being more interested in directing aid to richer areas, an easier approval process for projects placed in richer areas, or the belief that aid projects placed in cities or richer areas have a bigger effect on development. In fact, TTLs think that projects placed in poorer areas have an easier approval process and that the developmental impact of aid is higher in poorer places. The one explanation for pro-rich aid targeting to survive these tests is implementation concerns. Aid projects are thought to be harder to implement in poorer places, rural areas, and remote parts of countries. Perhaps aid is steered away from such areas because implementation there is time-consuming and incentive structures within the WB encourage TTLs to select projects that are easy to implement.

I also examined heterogeneity in both the descriptive analysis of aid targeting and in the conjoint experiment.

The descriptive analysis showed that Africa has the most extreme pro-rich aid targeting both in terms of aid selection and aid intensity. The conjoint survey experiment revealed that TTLs who have done most of their work in Africa think that implementation is harder in remote areas than do TTLs who worked elsewhere. TTLs who worked more in Africa also think that projects in remote areas are likely to get lower outcome ratings, a finding that does not exist in the group that mostly worked outside the continent. Both groups of TTLs agree that projects targeted to poorer and harder-to-access parts of countries have a larger positive impact on development than projects targeted to richer or more urban places.

The survey analysis also yielded a number of more broadly interesting results. First, on the politicization of aid, TTLs think that client governments want to target aid to the presidential hometown and to their core supporters. There is no evidence that client governments want to target aid to swing voters. Less surprisingly, TTLs thought that client governments were the least likely to be interested in projects that target opposition supporters. TTLs in Africa also think that it is hard to get approval for aid projects that are targeted to the presidential hometown, a result that offers a plausible explanation for the finding that in Africa Chinese aid, but not WB aid, favors the presidential hometown (Dreher et al. 2019).

Second, there are a series of interesting results on the pros and cons of directing aid to presidential hometowns. Clients want aid to go to the presidential hometown, and, outside of Africa, projects placed in presidential hometowns are thought to be the easiest to implement. In Africa, aid to presidential hometowns is expected to have the lowest developmental impact and a lower outcome rating. This is plausibly explained by a story where aid to presidential hometowns in Africa is more prone to capture, while aid outside of Africa finds a partner government that is more motivated to achieve success in producing effective public goods.

Third, TTLs generally viewed bypass aid skeptically. They think that clients like it less, that it is harder to get projects that bypass the client government approved, that bypass projects will get lower outcome ratings, and that bypass projects have a smaller developmental impact than projects where the client government is the implementing partner. The last result especially suggests the importance of working with, rather than around, client governments when possible.

Finally, budget size is sometimes used to proxy for project complexity (e.g., Denizer, Kaufmann, and Kraay 2013). The survey results cast some doubt on the validity of this proxy. TTLs do not think that projects with larger (or smaller) budgets are any harder to implement or have worse outcome ratings. They do think that more expensive projects have a larger impact on development, but one would hope to find this result given that the question is about absolute outcomes produced and not some measure of outcomes per dollar.

The present research also has a number of limitations that could be addressed in future work. First, both analyses report average effects across the WB's entire portfolio. There may, however, be sector-level heterogeneity that is masked by averaging. I lack a sufficiently large number of respondents in my survey to examine such heterogeneity, but it plausibly exists and could be examined in future work. Second, if future analyses have larger sample sizes, then they may be able to consider testing for interactions between the independent variables or between features of respondents and features of projects. Third, both analyses focused on only one donor. While some analyses of WB aid seem to general-

ize to other donors (Briggs 2020), future work could extend the analyses in this paper to more donors or to other actors in the WB. In a similar vein, the analysis could also be extended to other actors that have preferences over the spatial targeting of aid, such as people in recipient governments or civil society organizations. Tests of recipient government preferences over aid targeting seem to be an especially fruitful avenue of future work.

Past research on subnational poverty targeting noted that negative correlations between aid and poverty "should not be read as showing that aid is being targeted badly [because it is] entirely possible that aid is flowing to the places where it can be used most effectively and that [these] places tend to be places of relative wealth" (Briggs 2018a, 908). The present paper goes somewhat further. TTLs at the WB believe that aid works better for development when it is targeted to poorer and more remote parts of countries—but this is not happening. The only explanation for this pattern to survive the conjoint experiment was that implementation is more difficult in poorer and more remote areas, though in Africa aid to remote areas is also expected to get lower outcome ratings. Tweaks to WB incentive structures that make ease of project implementation less important, or that better condition outcome ratings on the difficulty of remote contexts, may encourage aid to flow to poorer parts of countries.

Supplementary Information

Supplementary information is available at the *International Studies Quarterly* data archive.

References

- AJMERA, MAYA, AND GREGORY A. FIELDS. 2016. *Invisible Children: Reimagining International Development at the Grassroots*. New York, NY: Springer.
- AREL-BUNDOCK, VINCENT, JAMES ATKINSON, AND RACHEL AUGUSTINE POTTER. 2015. "The Limits of Foreign Aid Diplomacy: How Bureaucratic Design Shapes Aid Distribution." *International Studies Quarterly* 59 (3): 544–56.
- BANURI, SHEHERYAR, STEFAN DERCON, AND VARUN GAURI. 2019. "Biased Policy Professionals." *The World Bank Economic Review* 33 (2): 310–27.
- BARDHAN, PRANAB. 1996. "Efficiency, Equity, and Poverty Alleviation: Policy Issues in Less Developed Countries." *The Economic Journal* 106 (438): 1344–56.
- BATES, ROBERT H. 1981. *Markets and States in Tropical Africa: The Political Basis of Agricultural Policies*. Oakland, CA: University of California Press.
- BECK, NATHANIEL. 2015. "Estimating Grouped Data Models with a Binary Dependent Variable and Fixed Effects: What Are the Issues?" Working paper presented at the Annual Meeting of the Society for Political Methodology, University of Rochester.
- BLACKMAN, ALEXANDRA DOMIKE. 2018. "Religion and Foreign Aid." *Politics & Religion* 11 (3): 522–52.
- BOUTAYEB, ABDESSLAM, AND UWE HELMERT. 2011. "Social Inequalities, Regional Disparities and Health Inequity in North African Countries." *International Journal for Equity in Health* 10 (1): 23.
- BRASS, JENNIFER N. W. 2012. "Why Do NGOs Go Where They Go? Evidence from Kenya." *World Development* 40 (2): 387–401.
- BRIGGS, RYAN C. 2014. "Aiding and Abetting: Project Aid and Ethnic Politics in Kenya." *World Development* 64: 194–205.
- . 2017. "Does Foreign Aid Target the Poorest?" *International Organization* 71 (1): 187–206.
- . 2018a. "Leaving No One Behind? A New Test of Subnational Aid Targeting." *Journal of International Development* 30 (5): 904–10.
- . 2018b. "Poor Targeting: A Gridded Spatial Analysis of the Degree to Which Aid Reaches the Poor in Africa." *World Development* 103: 133–48.
- . 2020. "Results from Single-Donor Analyses of Project Aid Success Seem to Generalize Pretty Well across Donors." *The Review of International Organizations* 15 (4): 947–63.

- CIESIN AND CIAT. 2005. "Gridded Population of the World, Version 3 (GPWv3): Population Count Grid." doi:10.7927/H4639MPP. Accessed March 6, 2013.
- CORNELL, AGNES. 2014. "Why Bureaucratic Stability Matters for the Implementation of Democratic Governance Programs." *Governance* 27 (2): 191–214.
- CUSTER, SAMANTHA, MATTHEW DILORENZO, TAKAAKI MASAKI, TANYA SETHI, AND JESSICA WELLS. 2017. *Beyond the Tyranny of Averages: Development Progress from the Bottom Up*. Williamsburg, VA: AidData at William & Mary.
- DENIZER, CEVDET, DANIEL KAUFMANN, AND AART KRAAY. 2013. "Good Countries or Good Projects? Macro and Micro Correlates of World Bank Project Performance." *Journal of Development Economics* 105: 288–302.
- DEUTSCHER, ECKHARD, AND SARA FYSON. 2008. "Improving the Effectiveness of Aid." *Finance and Development* 45 (3): 15–19.
- DIETRICH, SIMONE. 2013. "Bypass or Engage? Explaining Donor Delivery Tactics in Foreign Aid Allocation." *International Studies Quarterly* 57 (4): 698–712.
- DIETRICH, SIMONE. 2016. "Donor Political Economies and the Pursuit of Aid Effectiveness." *International Organization* 70 (1): 65–102.
- DIETRICH, SIMONE, AND MATTHEW S. WINTERS. 2015. "Foreign Aid and Government Legitimacy." *Journal of Experimental Political Science* 2 (2): 164–71.
- DIETRICH, SIMONE, MINHAI MAHMUD, AND MATTHEW S WINTERS. 2018. "Foreign Aid, Foreign Policy, and Domestic Government Legitimacy: Experimental Evidence from Bangladesh." *Journal of Politics* 80 (1): 133–48.
- DOHERTY, DAVID, AMANDA CLARE BRYAN, DINA HANANIA, AND MATTHEW PAJOR. 2020. "The Public's Foreign Priorities: Evidence from a Conjoint Experiment." *American Politics Research* 48 (5): 635–48.
- DOLLAR, DAVID, AND AART KRAAY. 2002. "Growth is Good for the Poor." *Journal of Economic Growth* 7 (3): 195–225.
- DOLLAR, DAVID, TATJANA KLEINEBERG, AND AART KRAAY. 2016. "Growth Still Is Good for the Poor." *European Economic Review* 81 (C): 68–85.
- DREHER, AXEL, ANDREAS FUCHS, ROLAND HODLER, BRADLEY C. PARKS, PAUL A. RASCHKY, AND MICHAEL J. TIERNEY. 2019. "African Leaders and the Geography of China's Foreign Assistance." *Journal of Development Economics* 140: 44–71.
- ELVIDGE, CHRISTOPHER D., PAUL C. SUTTON, TILOTTAMA GHOSH, BENJAMIN T. TUTTLE, KIMBERLY E. BAUGH, BUDHENDRA BHADURI, AND EDWARD BRIGHT. 2009. "A Global Poverty Map Derived from Satellite Data." *Computers & Geosciences* 35 (8): 1652–60.
- FINDLEY, MICHAEL G., ADAM S. HARRIS, HELEN V. MILNER, AND DANIEL L. NIELSON. 2017. "Who Controls Foreign Aid? Elite versus Public Perceptions of Donor Influence in Aid-Dependent Uganda." *International Organization* 71 (4): 633–63.
- FINDLEY, MICHAEL G., HELEN V. MILNER, AND DANIEL L. NIELSON. 2017. "The Choice among Aid Donors: The Effects of Multilateral vs. Bilateral Aid on Recipient Behavioral Support." *The Review of International Organizations* 12 (2): 307–34.
- FRANCK, RAPHAEL, AND ILIA RAINER. 2012. "Does the Leader's Ethnicity Matter? Ethnic Favoritism, Education, and Health in Sub-Saharan Africa." *American Political Science Review* 106 (02): 294–325.
- FRANCO, ANNIE, NEIL MALHOTRA, GABOR SIMONOVITS, AND L. J. ZIGERELL. 2017. "Developing Standards for Post-Hoc Weighting in Population-Based Survey Experiments." *Journal of Experimental Political Science* 4 (2): 161–72.
- GOLDEWIJK, KEES KLEIN, ARTHUR BEUSEN, GERARD VAN DRECHT, AND MARTINE DE VOS. 2011. "The HYDE 3.1 Spatially Explicit Database of Human-Induced Global Land-Use Change over the Past 12,000 Years." *Global Ecology and Biogeography* 20 (1): 73–86.
- GOLDEWIJK, KEES KLEIN, ARTHUR BEUSEN, AND PETER JANSSEN. 2010. "Long-term Dynamic Modeling of Global Population and Built-up Area in a Spatially Explicit Way: HYDEw 3.1." *The Holocene* 20 (4): 565–73.
- GULRAJANI, NILIMA. 2017. "Bilateral Donors and the Age of the National Interest: What Prospects for Challenge by Development Agencies?" *World Development* 96: 375–89.
- HODLER, ROLAND, AND PAUL A. RASCHKY. 2014. "Regional Favoritism." *The Quarterly Journal of Economics* 129 (2): 995–1033.
- IKA, LAVAGNON A., AMADOU DIALLO, AND DENIS THUILLIER. 2012. "Critical Success Factors for World Bank Projects: An Empirical Investigation." *International Journal of Project Management* 30 (1): 105–16.
- JABLONSKI, RYAN. 2014. "How Aid Targets Votes: The Impact of Electoral Incentives on Foreign Aid Distribution." *World Politics* 66 (2): 293–330.
- JOHNS, BENJAMIN, AND TESSA TAN TORRES. 2005. "Costs of Scaling up Health Interventions: A Systematic Review." *Health Policy and Planning* 20 (1): 1–13.
- JOHNS, LESLIE. 2007. "A Servant of Two Masters: Communication and the Selection of International Bureaucrats." *International Organization* 61 (2): 245–75.
- JOHNSON, TANA. 2013. "Institutional Design and Bureaucrats Impact on Political Control." *The Journal of Politics* 75 (1): 183–97.
- KILBY, CHRISTOPHER. 2015. "Assessing the Impact of World Bank Preparation on Project Outcomes." *Journal of Development Economics* 115: 11123.
- KING, GARY, AND LANGCHE ZENG. 2001. "Logistic Regression in Rare Events Data." *Political Analysis* 9 (2): 137–63.
- LEEPER, THOMAS J., SARA B. HOBOLT, AND JAMES TILLEY. 2020. "Measuring Subgroup Preferences in Conjoint Experiments." *Political Analysis* 28 (2), 207–21.
- MARTY, ROBERT, CARRIE B. DOLAN, MATTHIAS LEU, AND DANIEL RUNFOLA. 2017. "Taking the Health Aid Debate to the Subnational Level: The Impact and Allocation of Foreign Health Aid in Malawi." *BMJ Global Health* 2 (1): e000129.
- MILNER, HELEN V., DANIEL L. NIELSON, AND MICHAEL G. FINDLEY. 2016. "Citizen Preferences and Public Goods: Comparing Preferences for Foreign Aid and Government Programs in Uganda." *The Review of International Organizations* 11 (2): 219–45.
- MUMMOLO, JONATHAN, AND ERIK PETERSON. 2019. "Demand Effects in Survey Experiments: An Empirical Assessment." *American Political Science Review* 113 (2): 517–29.
- NOOR, ABDISALAN M., VICTOR A. ALEGANA, PETER W. GETHING, ANDREW J. TATEM, AND ROBERT W. SNOW. 2008. "Using Remotely Sensed Night-Time Light as a Proxy for Poverty in Africa." *Population Health Metrics* 6 (1): 5.
- OECD DAC. 2019. "QWIDS: Query Wizard for International Development Statistics: About." Accessed May 27, 2019. <https://stats.oecd.org/qwids/>.
- ÖHLER, HANNES, AND PETER NUNNENKAMP. 2014. "Needs-Based Targeting or Favoritism? The Regional Allocation of Multilateral Aid within Recipient Countries." *Kyklos* 67 (3): 420–46.
- ÖHLER, HANNES, MARIO NÈGRE ROSSIGNOLI, LODEWIJK SMETS, RENZO MASSARI, AND ZELJKO BOGETIC. 2019. "Putting Your Money Where Your Mouth Is: Geographic Targeting of World Bank Projects to the Bottom 40 Percent." *PLoS One* 14 (6): e0218671.
- PACIOREK, CHRISTOPHER J., GRETCHEN A. STEVENS, MARIEL M. FINUCANE, AND MAJID EZZATI, NUTRITION IMPACT MODEL STUDY GROUP. 2013. "Children's Height and Weight in Rural and Urban Populations in Low-Income and Middle-Income Countries: A Systematic Analysis of Population-Representative Data." *The Lancet Global Health* 1 (5): e300–e309.
- PRATHER, LAUREN. 2020. "Transnational Ties and Support for Foreign Aid." *International Studies Quarterly* 64 (1): 133–47.
- PROVILLE, JEREMY, DANIEL ZAVALA-ÁRAIZA, AND GERNOT WAGNER. 2017. "Night-Time Lights: A Global, Long Term Look at Links to Socio-economic Trends." *PLoS One* 12 (3): e0174610.
- SAHN, DAVID E., AND DAVID C. STEFEL. 2003. "Urban-Rural Inequality in Living Standards in Africa." *Journal of African Economies* 12 (4): 564–97.
- SANTOS SILVA, J. M. C., AND SILVANA TENREYRO. 2006. "The Log of Gravity." *The Review of Economics and Statistics* 88 (4): 641–58.
- SANTOS SILVA, J. M. C., AND SILVANA TENREYRO. 2011. "Further Simulation Evidence on the Performance of the Poisson Pseudo-maximum Likelihood Estimator." *Economics Letters* 112 (2): 220–2.
- SHIN, WONKYU, YOUNGWAN KIM, AND HYUK-SANG SOHN. 2017. "Do Different Implementing Partnerships Lead to Different Project Outcomes? Evidence from the World Bank Project-Level Evaluation Data." *World Development* 95: 268–84.
- SMETS, LODEWIJK. 2018. "Impact of Phone Reminders on Survey Response Rates." World Bank Policy Research Working Paper No. 8305.
- SMITH, LISA C., MARIE T. RUEL, AND AIDA NDIAYE. 2005. "Why Is Child Malnutrition Lower in Urban than in Rural Areas? Evidence from 36 Developing Countries." *World Development* 33 (8): 1285–305.
- STRANDOW, DANIEL, MICHAEL FINDLEY, DANIEL NIELSON, AND JOSH POWELL. 2011. *The UCDP-AidData Codebook on Geo-Referencing Foreign Aid. Version 1.1*. Uppsala, Sweden: Uppsala Conflict Data Program, Uppsala University.
- THOMAS, VINOD, AND JIRO TOMINAGA. 2010. "Evaluation for Better Development Results." *Journal of Development Effectiveness* 2 (3): 371–86.
- THORBECKE, ERIK. 2013. "The Interrelationship Linking Growth, Inequality and Poverty in Sub-Saharan Africa." *Journal of African Economies* 22 (suppl 1): i15–i48.
- TOLLEFSEN, ANDREAS FORØ, HÅVARD STRAND, AND HALVARD BUHAUG. 2012. "PRIO-GRID: A Unified Spatial Data Structure." *Journal of Peace Research* 49 (2): 363–74.

- VAN DE POEL, ELLEN, OWEN O'DONNELL, AND EDDY VAN DOORSLAER. 2007. "Are Urban Children Really Healthier? Evidence from 47 Developing Countries." *Social Science & Medicine* 65 (10): 1986–2003.
- VAUBEL, ROLAND. 2006. "Principal-Agent Problems in International Organizations." *The Review of International Organizations* 1 (2): 125–38.
- WANG, WEN, HUI CHENG, AND LI ZHANG. 2012. "Poverty Assessment Using DMSP/OLS Night-Time Light Satellite Imagery at a Provincial Scale in China." *Advances in Space Research* 49 (8): 1253–64.
- WEIDMANN, NILS B., AND SEBASTIAN SCHUTTE. 2017. "Using Night Light Emissions for the Prediction of Local Wealth." *Journal of Peace Research* 54 (2): 125–40.
- WINTERS, MATTHEW S. 2014. "Targeting, Accountability and Capture in Development Projects." *International Studies Quarterly* 58 (2): 393–404.
- . 2019. "Too Many Cooks in the Kitchen? The Division of Financing in World Bank Projects and Project Performance." *Politics and Governance* 7 (2): 117–26.
- WINTERS, MATTHEW S., SIMONE DIETRICH, AND MINHAI MAHMUD. 2017. "Perceptions of Foreign Aid Project Quality in Bangladesh." *Research & Politics* 4 (4): 2053168017735200.
- WORLD BANK. 1998. *Assessing Aid: What Works, What Doesn't, and Why*. Washington, DC: The World Bank.
- . 2009. *World Development Report 2009: Reshaping Economic Geography*. Washington, DC: World Bank.
- WORLD BANK IEG. 2016. *Behind the Mirror: A Report on the Self-Evaluation Systems of the World Bank Group*. Washington, DC: World Bank.
- WORLD BANK IEG. 2019. "IEG Data and Ratings." Accessed June 1, 2019. <http://ieg.worldbankgroup.org/data>.
- YOUNG, ALWYN. 2013. "Inequality, the Urban-Rural Gap and Migration." *The Quarterly Journal of Economics* 128 (4): 1727–85.
- ZURLINDEN, NOÉMIE. "Essays in Development Economics" (PhD thesis, University of St. Gallen, 2021).