

Winning Hearts and Minds or Stoking Resentment? Exploring the Effects of Chinese Foreign Aid on Africans' Perceptions of China

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Abstract

As China expands its worldwide economic footprint through ambitious policies such as the Belt and Road Initiative, an increasing number of average people are exposed to Chinese workers and China's business practices. These experiences in turn shape their perceptions of China. One facet of China's foreign economic activities at the center of scholarly and policy debates is foreign aid. While IPE and China scholars have focused on the economic effects of China's official financing, few studies examine how aid shapes citizen's opinions of China in recipient countries. I examine one mechanism through which aid influences perceptions—direct exposure—and predict that China's financing has differential effects by flow class and donor intent. Findings confirm my expectation that salient projects which improve economic welfare lead to more positive views towards donor countries. Contrary to expectations, however, exposure to Chinese projects that meet Western standards are perceived as less effective and have no bearing on attitudes toward China. There is also mixed evidence regarding whether projects exacerbate xenophobic attitudes toward China.

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1 Introduction

Since China launched its Going Out Policy in 1999, its foreign economic footprint has grown dramatically. Apart from expanding its foreign direct investment portfolio, foreign aid has also been a key element of China's global strategy. African countries were some of the earliest beneficiaries of China's Going Out Policy and continue to be major recipients of Chinese aid. Between 2000 and 2012, China committed roughly 52 billion dollars (deflated 2014) in foreign aid to African countries (Bluhm et al. 2018).¹ More recently at the 2018 Forum on China-Africa Cooperation, Chinese President Xi Jinping pledged another \$60 billion in unconditional aid and investment to African countries.²

Commitments of this magnitude have made China an increasingly important player in global aid and finance. Yet, its aid practices do not strictly adhere to the norms of the Organization of Economic Cooperation and Development (OECD) (Strange et al. 2017). This non-traditional approach to aid has drawn criticism from scholars and Western policy-makers who have labeled China a 'rogue donor' (Naím 2007) with less-altruistic or even malign interests (Alden 2005; Tull 2006; Halper 2010). The United States government, too, has advanced a similar narrative about China's foreign aid practices and has taken steps to counter China's aid initiatives.³

The tit-for-tat competition between these two countries highlights the inherently geopolitical nature of foreign aid and reflects a well-established literature on the foreign aid allocation (Morgenthau 1962; Schraeder, Hooks, and Taylor 1998; Alesina and

1. This number reflects only projects that qualify as complete or implemented and ignores commitments which vastly out pace realized projects. For example, if one includes commitments, China's official finance to Africa between these years approaches \$121.8 billion (USD deflated).

2. Fifield, Anna. "China pledges \$60 billion in aid and loans to Africa, no 'political conditions attached,'" Washington Post, Sep 3, 2018. Accessed online at https://www.washingtonpost.com/world/china-pledges-60-billion-in-aid-and-loans-to-africa-no-strings-attached/2018/09/03/a446af2a-af88-11e8-a810-4d6b627c3d5d_story.html?noredirect=on&utm_term=.575c79c3bbd7.

3. In its 2017 National Security White Paper, the United States identifies Africa's strategic importance and frames the US role in the region as offering an economic alternative to "China's often extractive economic footprint on the continent." To match word with deed, the US signed into law the *Better Utilization of Investments Leading to Development* (BUILD) Act of 2018, which transformed the Overseas Private Investment Corporation (OPIC) into the US International Development and Finance Corporation. At \$60 billion, the new body has double the budget of OPIC. More importantly, it can take an equity stake in its investments, unlike OPIC.

Dollar 2000; Kuziemko and Werker 2006; Mesquita and Smith 2007; Berman, Shapiro, and Felter 2011; Vreeland and Dreher 2014; Dreher and Fuchs 2015). However, these forms of economic assistance also play a role in Sino-US soft power competition. Once initiated, projects may have short and long term effects on local communities. Yet, apart from Findley et al. (2017), little research explores attitudes about foreign aid and, in particular, how aid influences people's perceptions of donor countries.

In this paper, I seek to answer the following questions: What is the effect of foreign aid on individual's attitudes toward donor countries? Do the attitudinal effects of aid depend on specific characteristics such as flow class, sector, or project value? And finally, do other domestic factors or individual characteristics moderate these effects? Answers to these questions are pertinent to China scholars and political economists alike. For China scholars, there is a need for more systematic analysis of the micro-level effects of Chinese aid to better understand if, and how, aid relates to debates about 'rising' Anti-Chinese sentiments. For IPE scholars, there is a growing impetus to develop our knowledge of foreign aid beyond what is discernible from country-level analyses.

I argue that aid can have differential effects on people's attitudes toward donors depending on the characteristics of the project and an individual's proximity to that project. Though there are multiple pathways—direct and indirect—through which aid can influence citizens' attitudes, I focus on the former in this paper which I call the *exposure pathway*. This applies to citizens living near projects who are likely to be directly exposed to aid projects and their outcomes, good or bad. For example, individuals may benefit from training or educational programs, new hospitals, schools, or infrastructure. However, the extent to which they benefit depends on their particular economic needs and background characteristics. Projects may also produce negative externalities such as increased environmental degradation and local corruption which should have uniform negative effects regardless of an individual's background characteristics.

To test this mechanism, I utilize geo-coded Afrobarometer survey data from 2014-2015 (BenYishay et al. 2017) that asks respondents multiple questions about Chinese

influence in their country and geo-coded data on Chinese government-financed projects in Africa over period from 2000-2014 ([Bluhm et al. 2018](#)). By matching respondents with project information, I identify those who are most likely to be directly exposed to Chinese aid and estimate the effect on these individuals' attitudes toward China.

Findings indicate exposure to Chinese projects that do not meet traditional OECD standards, referred to as other official financing in the literature, decreases positive sentiment toward China. Within the data, baseline attitudes among Africans toward China are largely positive, yet individuals who live within 25 kilometers of these types of projects are 6 percent less likely to very positive views of China and about 2.5 percent more likely to hold 'negative' or 'somewhat negative' views. Conversely, projects in line with OECD standards exhibit a slightly positive effect though not significant. However, these divergent trends suggest that citizens can discern notable differences in Chinese financial flow types and that direct exposure to these flows matters. While we cannot say with confidence that traditional aid projects generate positive sentiments, other official flows have clear negative ramifications for attitudes toward China.

In the next section I develop a theory of how direct exposure influences citizen attitudes toward donor countries. In the data and empirical strategy section, I introduce the Afrobarometer and Chinese official finance datasets and my approach to estimating the effect of direct exposure to Chinese projects on attitudes toward China. Then I discuss the results and conclude by discussing the implications of my findings and next steps.

2 Theory

The attitudinal shift within IPE is part of a broader trend towards connecting the micro and the macro. To this end, numerous studies examine the determinants of individuals' attitudes toward a range of economic issues including trade ([Scheve and Slaughter 2001; Mayda and Rodrik 2005; Hiscox 2006; Mansfield and Mutz 2009; Kaltenthaler and Miller 2013; Naoi and Kume 2015; Mutz and Kim 2017; Owen and Johnston](#)

2017; Rho and Tomz 2017), foreign direct investment (Fayerweather 1982; Domínguez 1982; Scheve and Slaughter 2004; Pandya 2010), preferential trade agreements (Spilker, Bernauer, and Umaña 2016), and foreign aid (Findley et al. 2017). While these studies identify the role of sectoral, factorial, and sociotropic variables in driving personal opinions and beliefs, they usually treat international economic flows as the dependent variable. Utilizing flows such as aid as independent variables is more rare. To my knowledge, this is the first paper to explore how exposure to foreign aid influences individual's attitudes toward the donor country.

In terms of international economic flows, aid closely parallels foreign direct investment (FDI) in two qualitative ways. First, much like FDI consists of myriad conceptually and empirically distinct flows which augur theoretically diverse outcomes (Kerner 2014), foreign aid is also complex. Aid varies in the degree to which it bypasses recipient governments (Dietrich 2015), how specifically targeted it is, and the size of the grant or lending type. As Dreher et al. (2018, 131) point out, it is important to distinguish between lending types as China's portfolio of development finance is quite diverse and motivated by foreign policy *and* development priorities.

One useful typology that parses out varieties of Chinese financing is AidData's TUFF methodology (Strange et al. 2017). The TUFF typology separates Chinese financing into two main categories depending on whether it meets OECD standards for official development assistance (ODA-like). To qualify as ODA, financing must be provided by official agencies to developing countries or multilateral institutions; promote the economic development and welfare of recipient countries as its main priority; and have a grant component that meets or exceeds 25 percent. If the lending fails to meet these stipulations, but is still funded by a Chinese government agency, then it is considered other official financing (OOF). Given the distinctly different aims of these two forms of financing, one should expect them to result in different economic and social outcomes.

A growing body of research verifies these expectations. Scholars have identified an array of local outcomes—deleterious and positive—associated with these different types of

Chinese aid. For instance, China's ODA-like aid not only improves economic development (2017), but also increases local corruption (Isaksson and Kotsadam 2018; Brazys, Elkink, and Kelly 2017). Similarly, OOF is associated with diverse outcomes. BenYishay et al. (2016) find higher levels of environmental degradation around Chinese OOF projects, while Bluhm et al. (2018) show it reduces interregional economic inequality. These studies identify how outcomes vary by flow class, but ignore other potentially meaningful sources of variation. For example, aid projects should vary in effect and salience depending on their scale, sector, and location. Their impacts should also be felt differently by individuals depending on their economic needs and prerogatives.

Second, both flows involve some sort of explicit or implicit negotiation between recipient country governments and foreign firms (FDI) or lending agencies (aid) regarding the terms of the flow. For FDI, conditions such as tax incentives and employment quotas for local workers underpin negotiations while for aid the issue at stake is the degree of recipient government control over implementation, especially whether aid will 'bypass' governments via third party agencies (Simone 2013). Assuming that citizens understand the foreign aid process, they should associate aid with both donors and their own government, much as a citizen might hold their elected officials accountable for giving a multinational corporation an overly generous tax break to attract investment. As Findley et al. (2017) show, average citizens are quite knowledgeable about the politics of aid, at least in an aid-dependent country where aid is prominent. By this token, it is reasonable to assume that even in countries where aid is less salient, citizens can intuit the basic political motivations of donors and recipients and will form opinions about aid that envelop both actors.

Qualitative and anecdotal evidence support this notion, at least in relation to Chinese aid. In Ghana, China's contribution of heavy machinery to small-scale mining has exacerbated local environmental degradation. Ghanaian critics not only blame the Chinese, but also other Ghanaians for acting as go-betweens for Chinese partners and the govern-

ment for doing little to stop these practices.⁴ In Zimbabwe, criticism of China's lending practices underpin the platform of the Movement for Democratic Change, the main opposition party. At the root of this criticism is a belief that Chinese loans help prop up Mugabe's Zanu-PF party.⁵ Similar narratives appear in Southeast Asian countries like Malaysia where funds from China's Belt and Road initiative have been implicated in a corruption scandal engulfing the former prime minister Najib Razak.⁶

Based on these aspects, I develop a theory of how direct exposure to projects influences the citizen attitudes toward donor countries. Assuming aid is not captured by elites, it will manifest at the local level as projects which will have an impact on citizen welfare conditional on project and individual characteristics. And even if people are not the direct beneficiaries of aid, if they are close to an aid-receiving community they may directly witness its effects on those communities or know people from those places. Because of the personalized nature of direct exposure, it should have a strong effect on people's attitudes. As the old adage goes, "seeing is believing."

It is also important to note that this mechanisms is effect agnostic. Either one could positively or negatively shape public perceptions of donors. The effect of direct exposure is contingent on aid- and individual-specific factors.

2.1 Different Aid Modalities and the Exposure Pathway

To understand how aid influences individual's perceptions of donor countries, I start by unpacking the ways in which donor and recipient characteristics and preferences shape aid allocation. There are two competing narratives about foreign aid in the international political economy literature. One strand of research that suggests aid is primarily driven

4. Fick, Maggie. "Ghana crackdown on illegal gold mining inflames tensions with Beijing." *Financial Times*. April 30, 2017. <https://www.ft.com/content/cb032036-2a63-11e7-bc4b-5528796fe35c>

5. Crabtree, Justina. "Zimbabwe opposition leader reportedly wants to give Chinese investors the boot." *CNBC*. May 3, 2018. <https://www.cnbc.com/2018/05/03/zimbabwe-opposition-leader-wants-to-give-china-investors-the-boot.html>

6. Wright, Tom and Bradley Hope. "Malaysia Suspects Chinese Cash Paid Troubled Fund's Debt." *Wall Street Journal*. July 31, 2018. <https://www.wsj.com/articles/malaysia-suspects-chinese-cash-paid-troubled-funds-debt-1533067876>

by the geopolitical prerogatives of donor countries (Morgenthau 1962; Mesquita and Smith 2007; 2009; Qian 2015) and thus highly subject to elite capture (Bräutigam 2000; Smith 2008; Morrison 2009; 2012; Gervasoni 2010). Another strand argues that since the Cold War donor self-interest and development priorities have converged (Bermeo 2017). Targeted toward specific issues, this type of aid is effective (Mavrotas and Ouattara 2006; Altincekic and Bearce 2014; Fuchs, Dreher, and Nunnenkamp 2014; Lee and Lim 2014; Bodenstein and Kemmerling 2015; Winters and Martinez 2015) and less prone to elite capture (Birchler, Limpach, and Michaelowa 2016). Thus, citizens in recipient countries could view aid either skeptically or positively depending on their experience with these politically divergent aid models.

While targeted aid tends to either bypass the hands of recipient governments or come with political stipulations, some donors still prefer to closely coordinate with recipient governments.⁷ China is among those that favor government-government lending. It emphasizes the political condition-free nature of its foreign aid as a key selling point over Western and multilateral donors. In contrast to traditional donors, Chinese official financing follows a 'demand-driven' process (Bräutigam 2011; Kragelund 2011; Reisen and Stijns 2011) whereby recipient governments approach China with specific proposals. China then decides to allocate the money or not. Once a project receives a green light, China's *modus operandi* is to control projects through the implementation phase and use Chinese contractors to conduct work (Bräutigam 2009). After project completion, "local ownership" is the norm (Nissanke and Söderberg 2011, 26).

While the Chinese play an intermediary role in the implementation phase, recipient country elites are in the driver seat at the start and finish, leaving room for elite capture and clientelism to take root. There is some evidence to bear this out. Chinese ODA-like projects are more likely to be situated in the home provinces of national leaders (Dreher et al. 2016) and increase local corruption (Brazys, Elkink, and Kelly 2017; Isaksson and Kotsadam 2018). However, these negative effects do not necessarily alter individual's

7. Dietrich (2015) notes that France and Japan are among the few OECD donors that still maintain a very state-centric approach to lending

opinions. [Blair and Roessler \(2018\)](#) find that Chinese development finance does not alter people's perceptions of state legitimacy in Africa. Finally, there is evidence that China's ODA-like finance increases economic growth at rates similar to US and OECD aid ([Dreher et al. 2017](#)).

While ODA-like financing tends to be allocated towards health, governance and education, Chinese OOF projects target specific development needs such as infrastructure, energy creation, mining, and transportation. Though this type of 'hard' development is associated with local environmental degradation ([BenYishay et al. 2016](#)), it also produces positive results. In Africa, Chinese OOF projects have improved local household welfare ([Martorano, Metzger, and Sanfilippo 2018](#)) and its 'connective financing,' or transportation initiatives, have reduced subnational economic inequalities ([Bluhm et al. 2018](#)). Given the salience of OOF projects and their effectiveness in generating positive economic outcomes,

I expect that exposure to OOF-like projects should improve citizens' perceptions of China's role in their country.

Whereas these 'hard' development projects tend to be larger and more visible, China's ODA-like projects tend to be smaller and focused in softer sectors such as health, government and civil society, and education.⁸ Even though these softer projects may not be as visible or create immediately tangible, positive economic spillovers, they can serve to promote a beneficent image of donor countries. A new school or hospital should be viewed positively by local citizens, even if they are healthy or do not have children. While some scholars have linked China's ODA projects with higher degrees of local corruption and bribery ([Brazys, Elkink, and Kelly 2017; Isaksson and Kotsadam 2018](#)), it is unclear whether citizens attribute responsibility for these outcomes to their own government or China. Findings by [Findley et al. \(2017\)](#) indicate that Ugandans show no preference between different donors, suggesting citizens might not attribute negative outcomes to

8. This is true when considering the number of projects by flow class and sector. When looking at monetary concentrations the picture is mixed and skewed by large projects.

donors. This is in concordance with China's emphasis on host country project management post-implementation. Given the less visible nature of ODA projects and their 'altruistic' orientation,

I expect that individuals exposed to ODA-like projects should view China more positively but that the geographic range of this effect should be much smaller.

China is also unique in that it often imports a large Han labor force to carry out its projects, resulting in small 'Chinatowns' appearing almost overnight in many recipient countries. This practice has been a source of consternation for recipient citizens who see the Chinese as crowding out local labor markets ([Bräutigam 2009](#)). Beyond shifting labor market dynamics, the sudden influx of Han Chinese may also put social strains on communities, leading individuals to feel as though their local culture and traditions are threatened. These perceptions may exacerbate in-vs-out-group sentiments, xenophobia, or ethnocentrism.⁹ Therefore,

I expect exposure to projects that are associated with large in-flows of Chinese workers such as OOF-like and/or commercially-driven projects in the infrastructure, energy creation, and communications sectors will lead to more negative attitudes toward China.

3 Data

3.1 Chinese-Financed Projects

The data on Chinese-funded projects come from AidData's Geocoded Global Chinese Official Finance Version 1.1.1 data set ([Bluhm et al. 2018](#)) that covers 2000-2012. The data set contains project-level information on 1650 projects in Africa totaling 128 billion USD (deflated 2014). To ensure the geographic precision of the data, I follow the conventional approach in the literature ([Knutsen et al. 2017; Brazys, Elkink, and Kelly](#)

9. This is one prominent approach to explaining attitudes in the IPE literature, especially towards trade and FDI. See [Mayda and Rodrik \(2005\)](#); [Mansfield and Mutz \(2009\)](#); [Kaltenthaler and Miller \(2013\)](#); [Mutz and Kim \(2017\)](#).

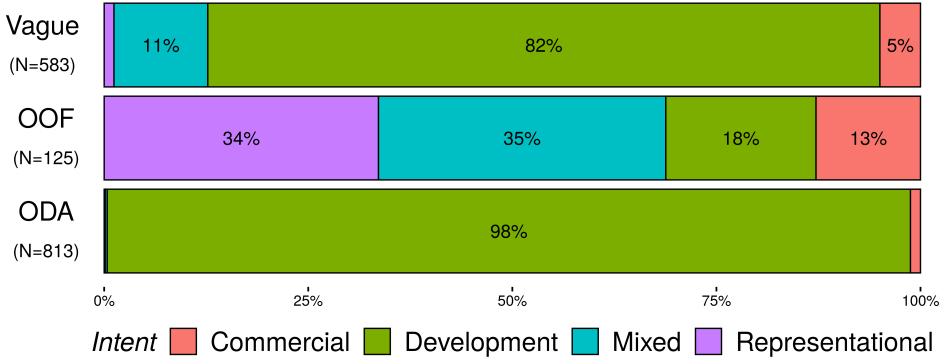


Figure 1: **Flow Class by Donor Intent.** ODA-like and Vague projects are primarily intended for development purposes. OOF projects, however, are more evenly distributed across each intent category. *Note: percent labels are cut off at $\leq 5\%$.*

2017; Isaksson and Kotsadam 2018) and only include projects coded at precision levels 1 or 2. This ensures the associated latitude and longitude either exactly correspond to the geographic location of the project or are within a 25 km radius (Strandow et al. 2011). This leaves 1521 projects across 32 countries spanning North and Sub-Saharan Africa.

A breakdown by donor intent shows that the projects are overwhelmingly intended for development ($N = 1303$), but also commercial ($N = 55$), representation ($N = 50$), and mixed ($N = 113$) purposes. Although development projects dominate by number, they tend to be much smaller in monetary value, averaging 48.5 million dollars per project, whereas commercial and mixed projects average over 128 and 201 million dollars per project, respectively. Representational projects tend to be the smallest at 21.8 million dollars per project. As for this latter group of representational projects, the term "project" may be a misnomer as these are often gifts for the purpose of advancing inter-cultural and educational exchange. They are often announced during diplomatic visits. In rarer cases, they are donations to political parties. Appendix A provides additional figures and tables showing the geographic and temporal distributions of projects by intent.

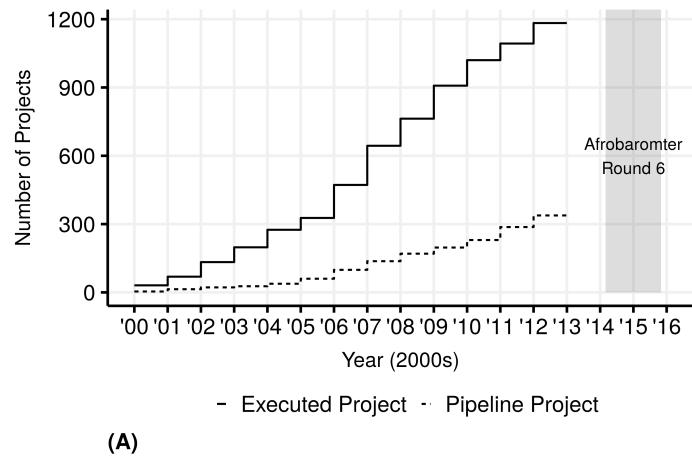
The vast majority of financing projects fall into either the "ODA-like" category—which composes roughly 50% of projects or more in most countries—or "Vague (Official Finance)". The latter category is an umbrella that captures "ODA-like" and "OOF-like"

projects but for which there is insufficient information to make a distinction. Figure 1 shows the percentage breakdown of flow class by donor intent. As expected, "ODA-like" projects are overwhelmingly development-related (98%). "OOF-like" projects are evenly distributed across intent types and, notably, are associated with either mixed or representational intentions. Most "Vague" projects fall into the 'development' category (82%). This is a result of differences between Chinese and Western donors' approaches to classifying and reporting aid—China's opaque approach renders it difficult to determine what, if any, standards their development projects meet.

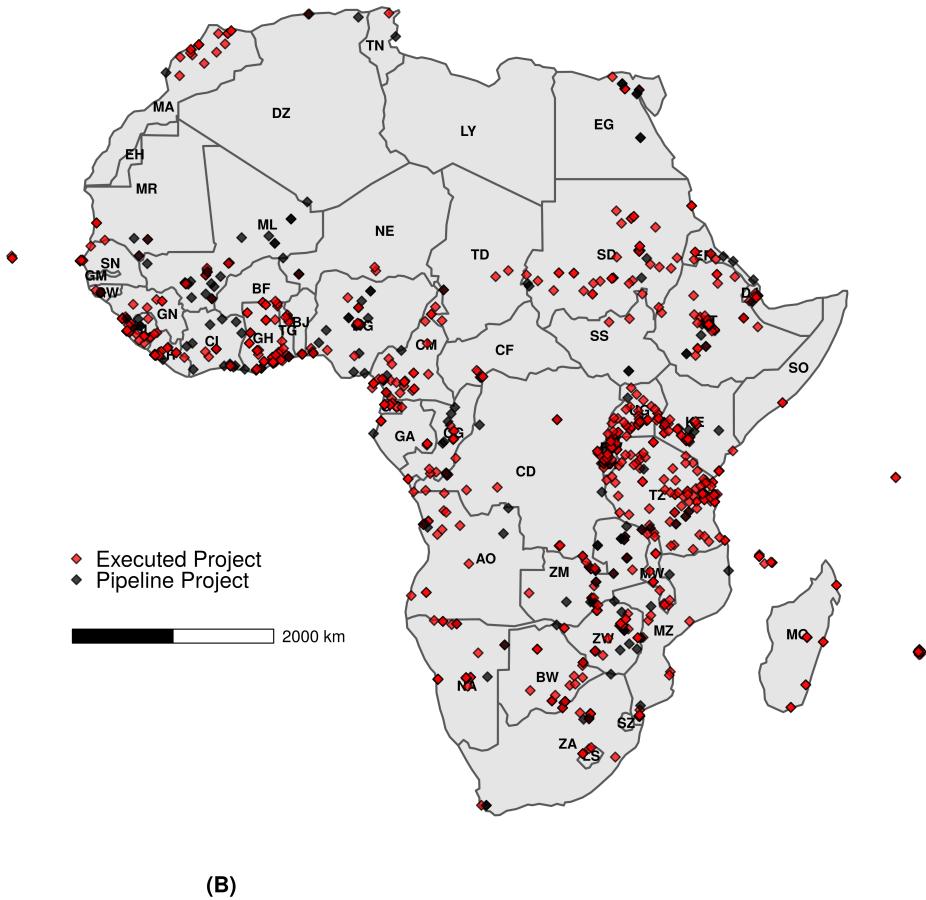
Not all projects in the data set have been implemented. Rather they may be at one of six stages: pipeline—pledge, pipeline—commitment, implementation, completed, suspended or canceled. In the subset of 1521 at precision levels 1 or 2, there are neither suspended nor canceled projects. Pipeline projects are planned but have not yet started for various reasons. Once commenced, it is classified as being at the *implementation* stage until it is *completed*. Since I leverage the differences between implemented versus pipeline projects as part of my identification strategy (see below), I collapse pipeline—pledge/commitment and implementation/completed projects into two categories, pipeline and executed, respectively. Figure 2 displays the timing and location of these two types of projects.

3.2 Opinions of China

Attitudes toward China come from the geo-coded Afrobarometer Round 6 survey data from 2014-2015 ([BenYishay et al. 2017](#)). The round 6 Afrobarometer data surveys respondents from 36 African on a range of social, political, and economic questions, a number of which specifically pertain to people's perceptions of China. After dropping Swaziland, Burkina Faso, Libya, and Sao Tome and Principe because either China-related questions are not asked there or there are no Chinese-financed projects in those countries, I have a sample of 35,635 respondents from 32 countries and . Afrobarometer samples response 6,338 township-villages.



(A)



(B)

Figure 2: Timing and Location of Executed versus Pipeline Projects. (A) The number of executed and pipeline projects coming online each year. I leverage the counterfactual difference in 'exposure' to these two categories. All project data precedes the survey wave. (B) Red and black diamonds indicate the locations of executed and pipeline projects, respectively.

Afrobarometer utilizes a clustered, stratified, multi-stage, area probability sampling strategy. Countries are stratified based on their main sub-national unit of government and by an urban/rural divide. This ensures ample coverage of ethnic and linguistic groups. Sampling of respondents from within these units then proceeds in five stages:

1. In rural areas, secondary sampling units are drawn.
2. Randomly select primary sampling units.
3. Randomly select interviewer start points within the unit.
4. Interviewers randomly select households.
5. Interviewers randomly select a respondent within the household and then iterate between males and females to ensure balance.

The round 6 survey asks multiple questions about people's views of China's activities in their country. I utilize two questions to measure individual's opinions of Chinese influence in their country. The first asks how well China's economic development assistance meets their country's needs. The second asks whether China's economic and political role is good or bad. Potential responses include a 5 point Likert scale as well as "Don't know/Haven't heard enough", "Refused to answer", and "China doesn't give dev assistance to [ENTER COUNTRY]" categories. I drop observations with any of these three responses. The wording of both questions can be found in Appendix [B](#).

The distribution of both responses skews positive. For instance, regarding China's economic influence 41 percent say "somewhat good job" and 24 percent say "very good job." In response to China's role more broadly, 42 percent say "somewhat positive," and 32 percent say "very positive." While these numbers may represent a notable crest in China's standing on the African continent which have since regressed to lower levels, they nonetheless exhibit China's success in cultivating a positive image via its financing instruments. When asked about the reason for China's positive image in their country, the largest plurality of respondents reference its investment in infrastructure and development.

4 Estimation Strategy

4.1 Identification

In an ideal world, one would have full experimental control over who received what type of aid from China, randomize treatment assignment, and then take pre- and post-treatment measures of people’s opinions of China. Unfortunately, this is not possible and it is not safe to assume the likelihood of living in closer proximity to Chinese infrastructures projects or benefiting directly from targeted development assistance efforts is free of confounding.

The demand-driven nature of Chinese aid projects is particularly problematic here. For instance, African leaders are more likely to funnel aid projects to their home regions ([Dreher et al. 2016](#)), potentially to reward their supporting coalitions. Other factors such as the importance of a given area to the country’s overall economy, its natural resource endowment, and local politicians’ entrepreneurship could all alter how likely some places are to become project sites. It is less likely that respondent characteristics influence the likelihood of exposure, unless people are intentionally ‘selecting into’ treatment in expectation of a certain payoff from exposure based on certain ideational or material endowments. All of these factors could also shape respondents’ views towards China. For instance, entrepreneurial politicians may be seen as effective (or corrupt) and if they associate themselves with aid projects ([Cruz and Schneider 2017](#)), respondents’ attitudes toward these politicians could influence how they feel about China as well.

Thus, to overcome confoundedness, I leverage random variation in the implementation of projects. By using pipeline projects as a placebo treatment, I can compare the difference in effect between respondents’ proximity to implemented and completed projects versus those that are yet to be undertaken. The two DAGs in [Figure 3](#) illustrate the assumed causal structure before and after identification. The key identifying assumption is that when projects start is exogenous to the factors above that may influence project placement and attitudes. Thus, uninitiated projects serve as a counterfactual



Figure 3: Directed Acyclic Graph of Identification Strategy. Let X be exposure, Y be attitudes, C be an unobserved set of demand-side confounders, and M an unobserved mechanism through which exposure influences attitudes. (a) C creates a backdoor path between X and Y , confounding estimates. (b) Switching to a subset t of data for which treatment follows an exogenous time schedule indirectly breaks the backdoor path.

placebo.

4.2 Model

To estimate the effects of exposure, I move beyond the conventional approach of creating a binary treatment variable based on whether respondents fall within a given bandwidth of the project site. Instead, I develop a continuous dose-response curve that assumes no fixed bandwidth but only that treatment attenuates as distance from a site increases until it vanishes after some cutpoint. Doing so requires a bespoke model for spatial data.

Spatial data exhibit certain properties that pose inherent challenges. First, treatment and outcome variables are not measured or defined at the same spatial level. Opinions are measured at the individual level while aid can range in scope from small village-level interventions to large-scale, province-spanning infrastructure projects. Second, treatments exhibit high heterogeneity. While some projects may be concentrated others may consist of multiple phases across time and space that operate in tandem to produce an effect. Third, owing to the previous property, spillover effects are likely a core feature of the treatment, not a bug. Effective aid should have a multiplier effect that extends beyond its spatial "unit." Yet, the temporal and spatial degree of spillover is difficult to identify *a priori*.

Such challenges requires special considerations that most traditional spatial regression models (e.g. [Bannerjee et al. 2008](#); [Anselin 2001](#)) which focus on spatially-correlated errors are ill-equipped to handle. More recently, others have chosen to match respondents to treatments based on given distance bandwidths around projects, encoding respondents within the threshold as having received treatment and others as controls (e.g. [Isaksson and Kotsadam 2018](#)). While this approach may help deal with property one above, it homogenizes treatments into a binary dose regardless of how many projects respondents are exposed to or their exact distance to the site. To overcome these challenges, I implement an additive semi-parametric spatial regression model ([Imai et al. 2018](#)) that estimates a flexible dose-response curve that is a function of a respondent's distance to *all* treatment sites.

The model is defined as follows. Let $i = 1, \dots, N$ denote respondents and $j = 1, \dots, J$ index treatment sites. The outcome variable is continuous $Y_i \in \mathbb{R}$ and treatment is binary $X_j \in \{0, 1\}$ for potential and implemented sites, respectively. Treatment is assumed to be random. Distances between respondents and treatment sites are represented by a distance matrix D_{ij} . Consider the specification:

$$Y_i = \alpha^* + \sum_{j=1}^J X_j f_i(D_{ij}) + \sum_{j=1}^J (1 - X_j) g_i(D_{ij}) + \epsilon_i \quad (1)$$

where $f_i(d)$ and $g_i(d)$ are unknown functions representing the dose-response curve for respondent i for treatment and placebo sites, respectively.

Following Imai et al.'s simulation findings, I use restricted cubic splines to estimate f and g .¹⁰ The flexibility of model (1) handles heterogeneous effects by allowing the same projects to affect individuals differently. However, it does assume treatment sites have an independent effect, i.e. no interaction among treatment sites. The average treatment

10. They find that compared with other estimation functions such as B-splines, natural cubic splines, and truncated power series, restricted cubic splines are most consistent and stable in their retrieval of the true data-generating dose-response curve. My experience corroborates their findings. In initial sensitivity tests, I also tested natural cubic splines and B-splines but found they were extremely sensitive to the chosen D_{max} value, with estimated randomly oscillating in direction as the bandwidth increased.

effect (ATE) as a function of distance is given by:

$$\hat{\tau}(d) = [G^*(d)^\top - G^*(D_{max})] \hat{\beta} \quad (2)$$

where G^* is a vector basis functions $\phi_{1:K}$ calculated at distance d :

$$G^*(d) \equiv (1, \phi_1(d), \dots, \phi_k(d), -\phi_1(d), \dots, -\phi_k(d))^\top \quad (3)$$

D_{max} is the distance at which effects are assumed to completely dissipate, and $\hat{\beta}$ is the vector of coefficient estimates for bases of f and g .

I estimate the effects with multiple distance thresholds to compare how this hyper-parameter influences the results. In addition to a baseline model, I also include country- and time-fixed effects models where time denotes the survey year. The results are reweighted using Afrobarometer’s survey weights so that samples from each country match national-level demographics, helping ensure the estimated effects are demographically generalizable beyond the samples located within the chosen distance bandwidths.

5 Results

With two dependent variables, four possibilities for fixed effects and eight compositions of aid types—all projects, three different flow classes, and four different donor intent categories—I estimated a total of 64 models. However, given that the spline basis functions are difficult, if not impossible, to directly interpret, I instead focus on analyzing the estimated treatment effects from the two-way fixed effects models. Interested readers can consult Appendix C for all regression panels.

Since the estimated treatment effects depend on treatment-outcome site pairs, including pairs with large distances leads to instability in the estimates. Moreover, we can safely assume that projects hundreds of kilometers away from respondents should have no effect on attitudes. Without any *a priori* reason to assume an exact threshold at which effects should fully diminish, I instead present results for 100, 200, and 300 km cut-offs

and compare them for consistency. All uncertainty bounds are based on bootstrapped confidence intervals clustered by the township-village sampling units. In general, estimated effect sizes will grow in magnitude with the threshold since it is an additive model but uncertainty tends to grow faster.

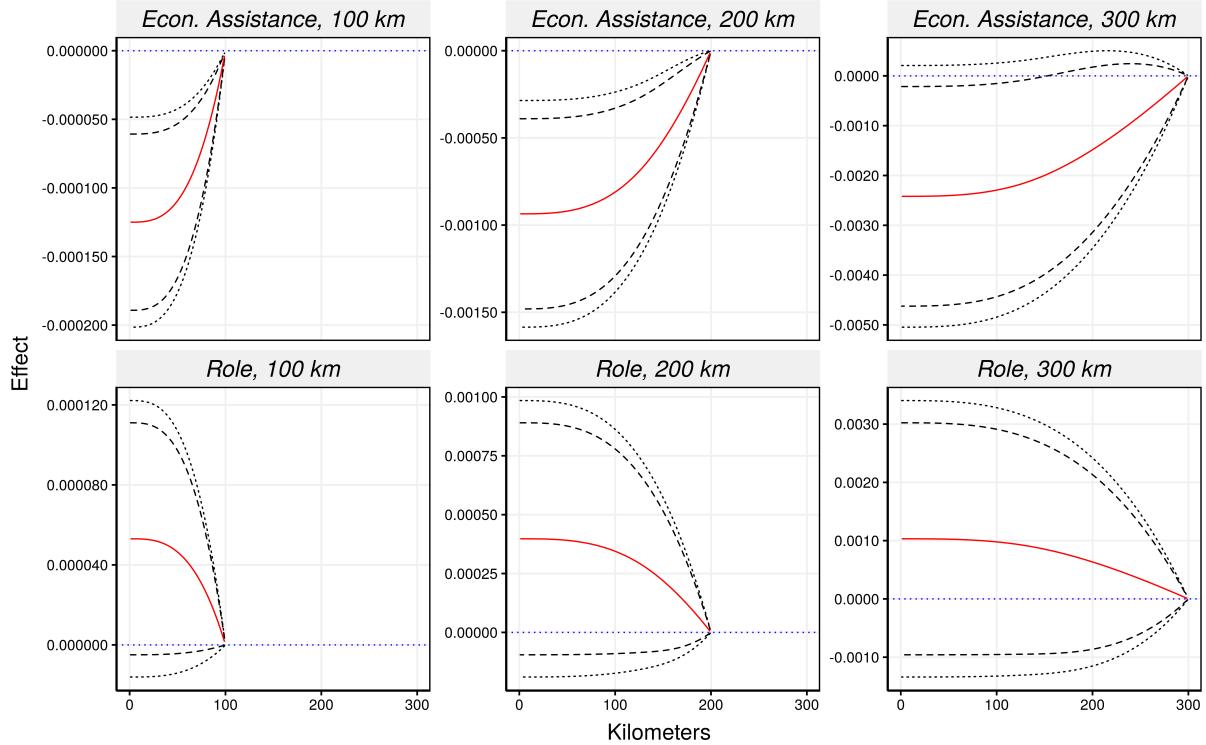


Figure 4: **Effect of Exposure—All Projects.** *Top panel:* the estimated effect of direct exposure on attitudes towards the effectiveness of China’s economic development assistance. *Bottom panel:* effect of exposure on valence towards China’s economic and political role in their country. Black dashed and dotted lines indicate 90% and 95% confidence intervals, respectively.

The panels in Figure 4 display the estimated average treatment effect of implementing or executing a project based on a range of distances between an individual and a planned project site (placebo) for all project types. Some treatment sites are more like financial transactions than tangible development initiatives. In such cases, distance should be thought of as a proxy for potential knowledge of the transaction rather than actual exposure to an initiative. However, distinguishing treatments by donor intent and flow class will help parse out these differences (more below). The top panel shows the effect on attitudes towards the efficacy of Chinese economic assistance and the bottom panel shows the effect on people’s emotional valence towards China’s economic and political

role in their country. Positive (negative) effects indicate exposure increases (decreases) people's perceived efficacy of aid and positivity towards China, respectively.

Initial results suggest strong exposure to projects has a negative effect of on perceptions of the aid efficacy, yet the opposite is true for valences—increased exposure slightly improves positive perceptions of China's political and economic role in respondent's countries. The effect directions are consistent across all three thresholds. On the surface, these results appear to be in logical contention. If exposure to projects makes people less likely to perceive Chinese aid as effective—perhaps because of negative impacts on the local environment, increased corruption, poor project oversight, or an influx of Chinese nationals—how and why would that then translate into *more positive* views towards China's role in their country? To answer this apparent inconsistency, I next turn toward the economic efficacy question in greater detail.

5.1 Attitudes toward Efficacy of Chinese Aid

First, I parse projects out by their flow class to determine whether differences between project implementation standards have a bearing on perceptions of economic efficacy. Recall, the ODA-like flow class means projects fall in line with more traditional OECD guidelines and are closer to Western aid initiatives in practice. OOF-like projects may be more commercially-motivated in nature though have some development elements as well. Vague projects are those that defy easy categorization.

Figure 5 plots average treatment effects disaggregated by each flow class. While the effect direction is consistent across all three distance thresholds across all classes, the magnitudes are small and highly uncertain. None of the confidence intervals exclude zero. If we are to read into the directionality at all, the results suggest exposure to ODA-like sites may decrease perceived efficacy while OOF-like aid improves perceptions. The Vague estimates are too noisy to give any weight.

Moving on, Figure 6 presents the results for each of the four donor intent categories:

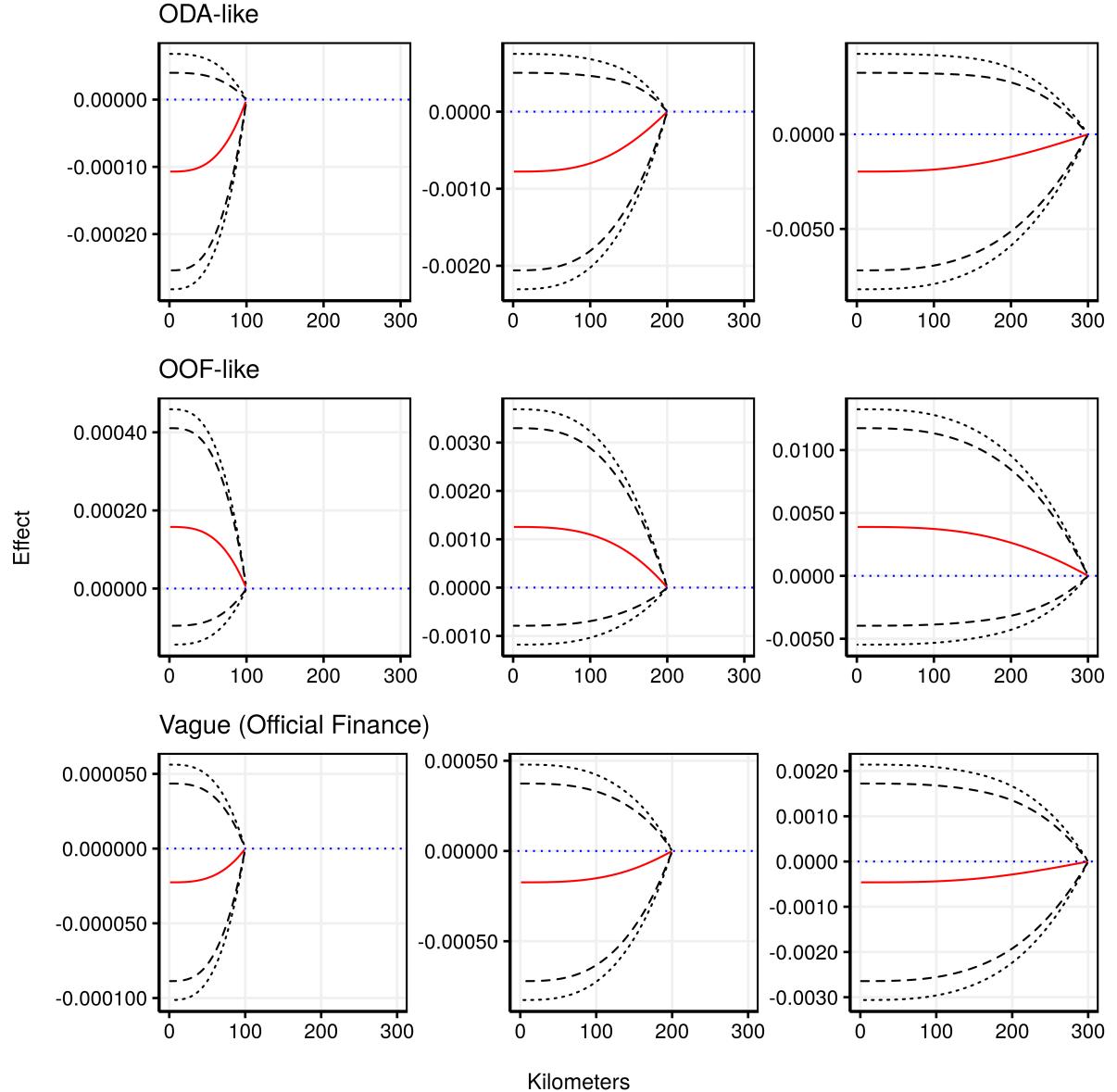


Figure 5: **Effect of Exposure on Aid Efficacy Attitudes—By Flow Class.** Black dashed and dotted lines indicate 90% and 95% confidence intervals, respectively.

commercial, development, representational and mixed. Clearer effects emerge here. Exposure to commercial projects has a relatively large and well-estimated, positive impact on perceived efficacy of China’s economic aid. This may be due to the salience and economic sector of such projects—they tend to be larger infrastructure projects in the energy, telecommunications or transport sectors. That proximity to these projects causes people to believe China’s economic activity in their country is good for economic development is unsurprising—these projects *are* economic development embodied, in some sense.

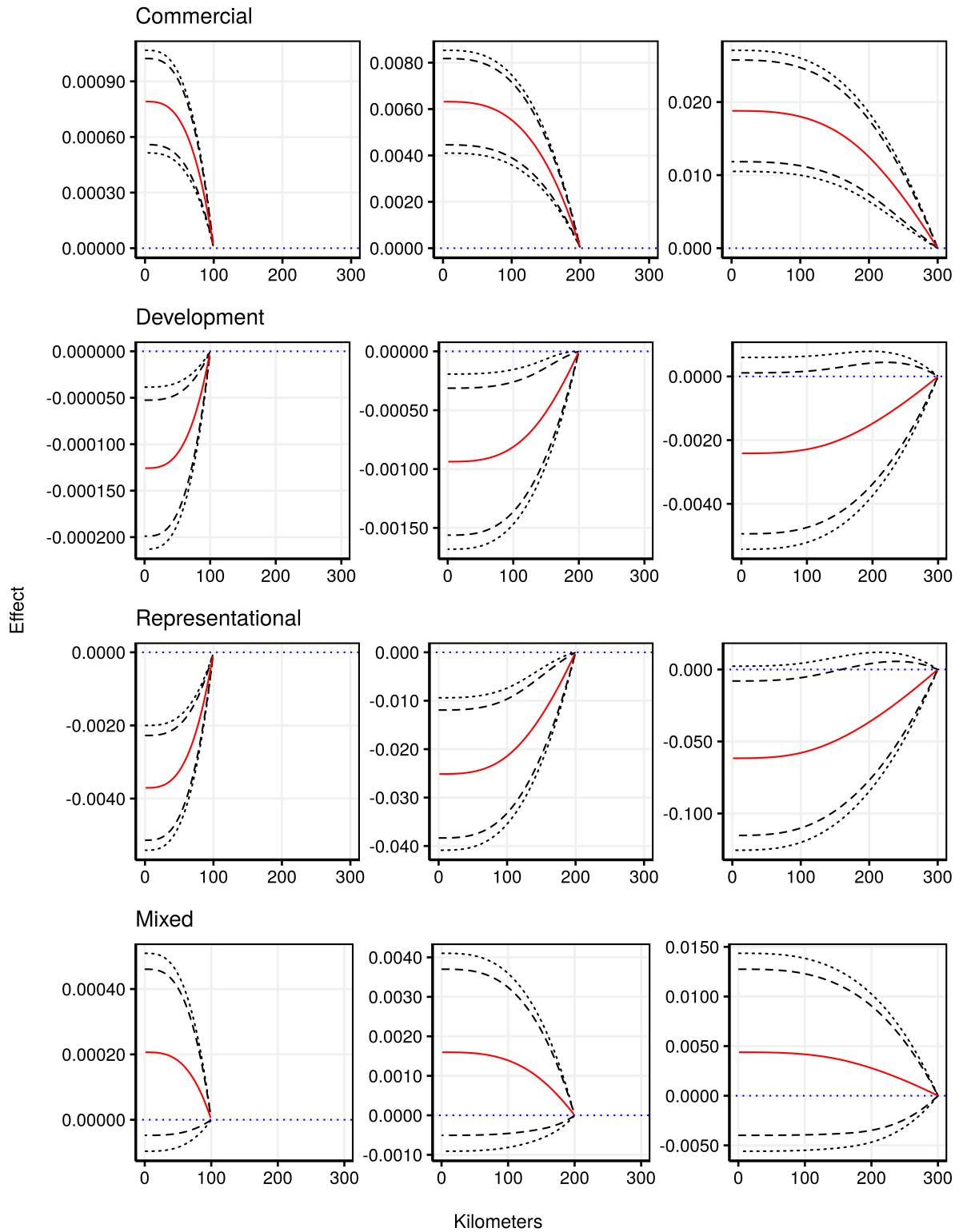


Figure 6: **Effect of Exposure on Aid Efficacy Attitudes—By Donor Intent.**
Black dashed and dotted lines indicate 90% and 95% confidence intervals, respectively.

Conversely, exposure to projects intended for development purposes (closely correlated with ODA-like status), decreases perceived efficacy. The exact reason for this is

unclear, but may be due to the closer association between these projects and recipient-country governments. Note, however, that in terms of magnitude, this negative effect is smaller than that for commercial projects by roughly an order of 10, depending on the threshold. Representational aid also degrades perceptions. Indeed, in terms of magnitude, it has the largest average treatment effect across all models. Since these projects usually have no clear economic motivation, but rather consist of donations to local political parties, cultural and educational exchanges, they may be viewed as outright conduits for corruption or stoke xenophobic attitudes in the case of the latter.

Mixed projects are positive in direction, but the confidence intervals also consistently include zero. This is because the mixed projects can be any combination of the three aforementioned intent types and so the positive and negative effects are in contention with one another. Nonetheless, the positive direction suggests many of the mixed projects likely take on more of a commercial intent and, though they do not improve perception of aid efficacy, neither do they hurt it.

5.2 Attitudes toward China’s Role in Country

Are there heterogeneous effects by flow class and intent categories on people’s emotional valence toward China’s economic and political role in their country? Results indicate yes.

Figure 7 breaks down direct exposure’s effect on valences by flow class. Unlike in the efficacy question, here the effect of ODA is in the positive direction as expected. It seems exposure to ODA-like projects may improve perceptions of China, but the estimates have large confidence bounds and so should not be interpreted too strongly. The same is true for the Vague flow class; effect direction flips but uncertainty remains high. If anything, this suggests that Vague and ODA-like projects may be correlated along a dimension of unobserved characteristics.

The key difference between the impact of valence and perceived aid efficacy lies in

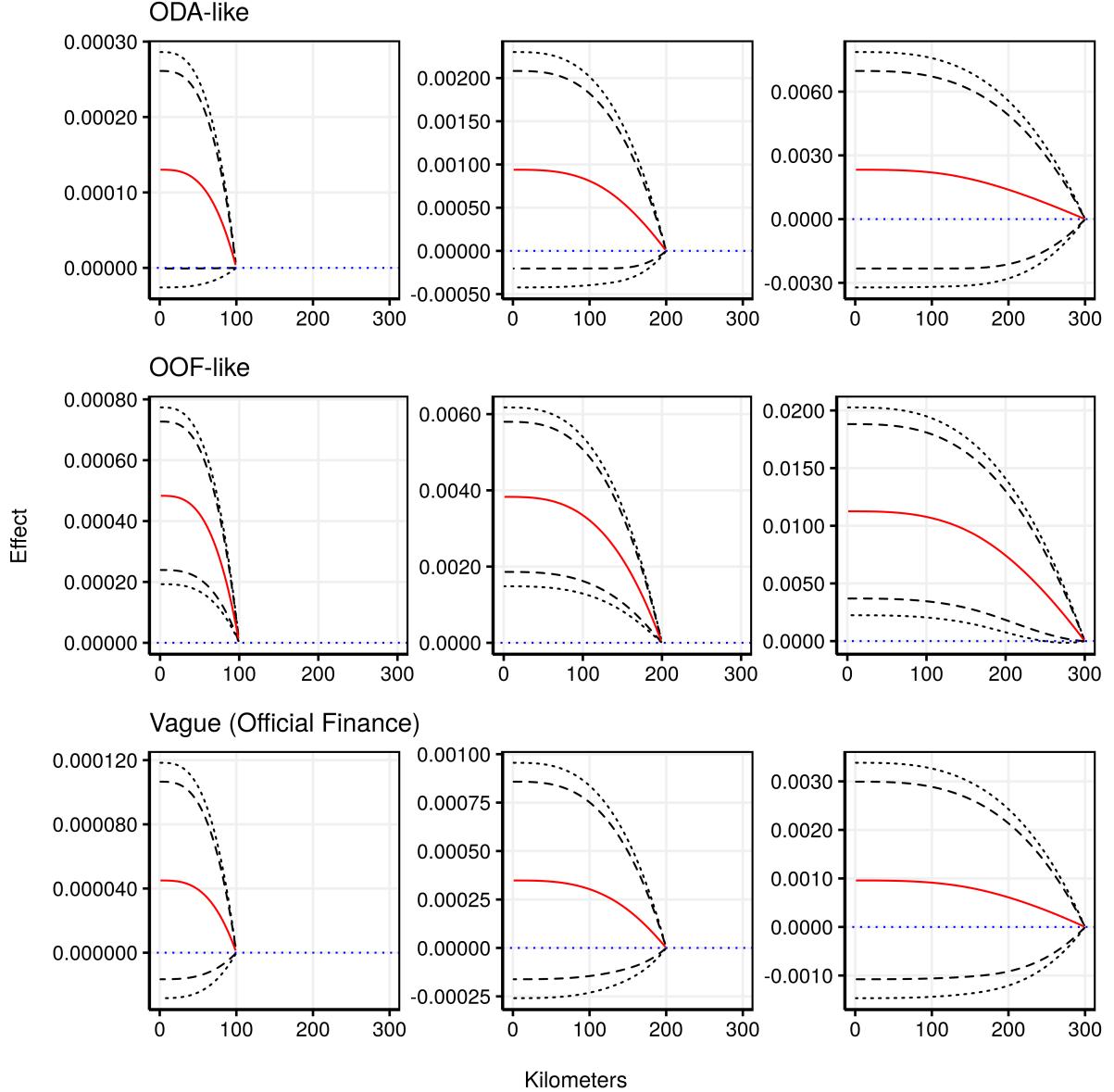


Figure 7: **Effect of Exposure on Valence Towards China’s Role in Country—By Flow Class.** Black dashed and dotted lines indicate 90% and 95% confidence intervals, respectively.

the effect of OOF-like sites. Exposure generates more positive attitudes towards China’s role in a respondent’s country, and this effect is significant and relatively large across all three bandwidths. This suggests the salience of OOF-like versus ODA-like projects may be a key determinant in how exposure to projects influences of attitudes towards China, at least when direct exposure is measured as a function of distance from to project site.

As with the question of aid efficacy, exposure to commercial-intent sites has a positive effect, improving perceptions of China’s role. Confidence intervals around these estimates

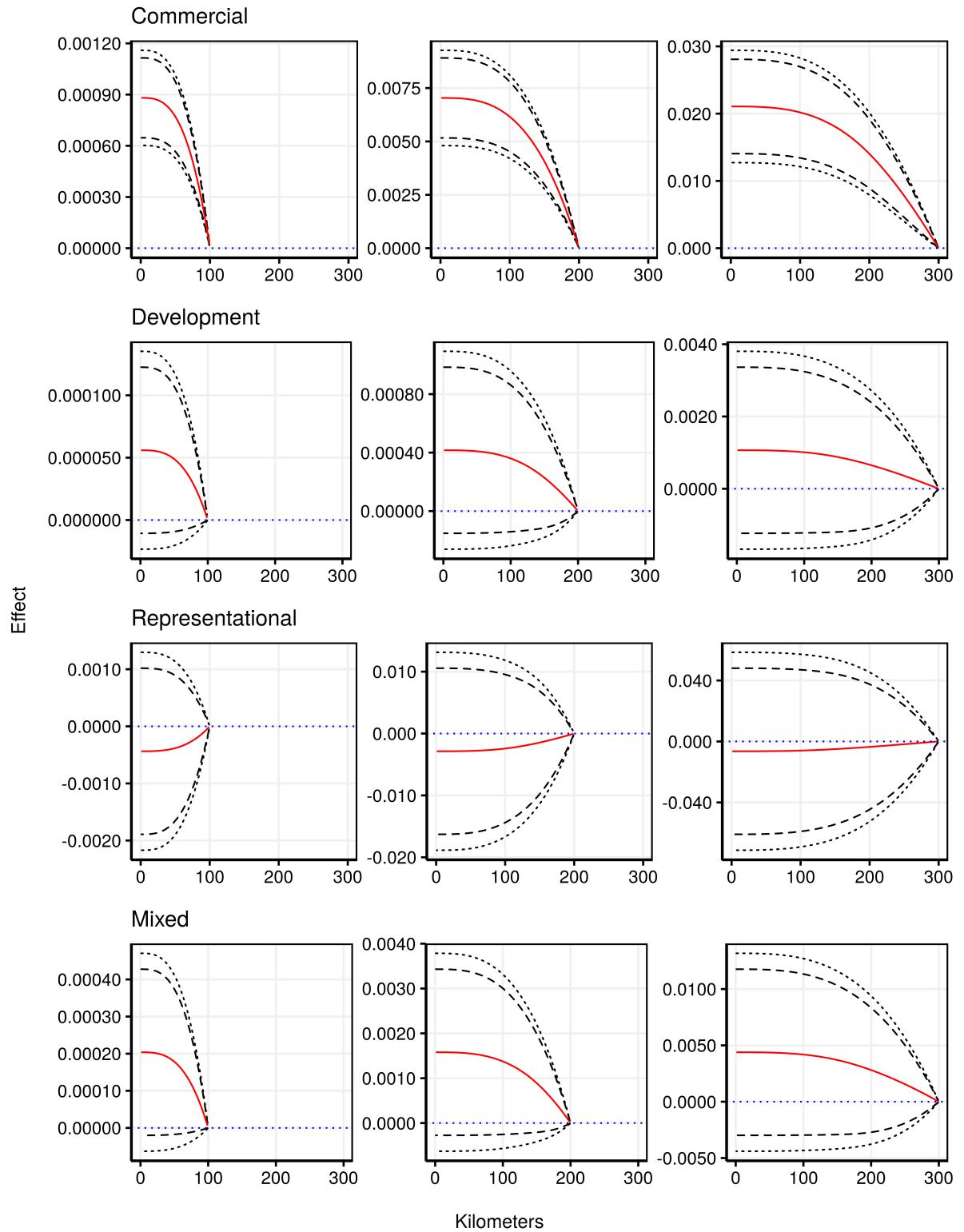


Figure 8: Effect of Exposure on Valence Towards China’s Role in Country—By Donor Intent. Black dashed and dotted lines indicate 90% and 95% confidence intervals, respectively.

are tight and consistent across bandwidths, further reinforcing the notion that project salience and more degrees of separation from local governments are a net positive for

China. Development and mixed projects also show effects in the positive direction but are extremely small and have large standard errors. The effect of exposure to representational projects on attitudes toward China is effectively null.

6 Discussion

Assessing the impact of exposure to foreign aid projects on perceptions of aid efficacy and emotional valence toward the donor country's economic and political role in the recipients country in conjunction poses an interesting contradiction. On the one hand, exposure ODA-like and, particularly, development sites causes recipients to perceive Chinese aid as less effective despite these projects technically adhering to what are deemed by Western donors to be "best practices". Yet, on the other hand, this deleterious effect on perceptions of economic efficacy are not clearly associated with a commensurate negative impact on attitudes towards China's overall political and economic role in recipient countries.

There are a couple plausible explanations for this seeming contradiction. One is that local ownership of development and ODA-like projects at the initial and final phases leads to a dissociative effect whereby poorly managed, environmentally-damaging, or elite-captured projects ([Brazys, Elkink, and Kelly 2017](#); [Isaksson and Kotsadam 2018](#)) are seen as the result of involvement by recipient-country government officials and not the Chinese. The implied assumption is that citizens see inefficiencies in aid as a demand-side or "local ownership" ([2011](#)) issue rather than supply-side issue, are thus indifferent to donors ([Findley et al. 2017](#)), and this impartiality benefits China.

Another explanation is that citizens view the traditional standards that ODA-like projects adhere to as constraints which hinder them from generating their full potential economic impact when compared with OOF-like alternatives. However, this degree of sophistication by citizens about different aid regimes and project specifics may be implausible. The representational category sheds further light on the plausibility of this mechanism.

In terms of OOF-like and commercial projects, the results are in concordance with previous studies. Exposure to these projects not only improves the perceived efficacy of aid in helping the economy but also create enthusiasm for China's role in the country. Their positive economic impacts such as improved local household welfare ([Martorano, Metzger, and Sanfilippo 2018](#)) and decreased local inequality ([Bluhm et al. 2018](#)) appear to outweigh potential environmental degradation ([BenYishay et al. 2016](#)). Representational projects are especially damaging to perceptions of aid efficacy. When considered in tandem with ODA-like aid, the commerce and infrastructure-centric nature of China's non-traditional aid may be perceived as a 'fresh', effective approach.

The findings provides clear support for only of my expectations: exposure to OOF-like aid produces more positive attitudes towards China. Though the estimated effects of exposure to ODA-like aid exhibited the correct direction, they are not robust. Moreover, if a positive effect does exist, it is not the result of perceptions about aid efficacy. Finally, there is no evidence OOF or commercial projects foster resentments towards China by stoking xenophobia. Though I do not directly test this by delineating projects associated with large Chinese workforces, strong positive effect of commercial projects on both perceptions of aid efficacy and valence suggest that even if exposure does generate stronger in-vs-outgroup dynamics, positive economic outcomes outweigh any negative effects, on average. The negative impact of proximity to Representational projects which often capture cultural exchange such as Confucius Institutes does lend some credence to the xenophobia mechanism, however.

7 Conclusion

How does aid influence people's perceptions of donor countries? In this paper, I provide part of the answer by examining the effect of direct exposure to Chinese-funded aid projects on Africans' attitudes toward China. I test the theory by combining Afrobarometer survey data with information on over 1500 Chinese aid projects in Africa. The results provide evidence that direct exposure matters, but that this effect is conditional

on the project's financing type. In particular, exposure to other official flows—aid that mixes commercial and development intent—leads people to view Chinese economic and political influence in their country positively. This effect is even more apparent when focusing on commercially-oriented projects and ignoring financing type. While ODA-like flows may have a small positive effect, the signal is too noisy to trust.

Donor intent and flow-types matter both for attitudes the donor country, generally, and whether their aid is economically effective. Not only do ODA-like projects not "purchase" the goodwill of those citizens who live in close proximity to those projects, the OECD standards they meet may actually be seen as ineffective by citizens compared with China's unconstrained approach. However, it should be noted, the findings here are based on a single survey wave from 2014-15. Additional research is necessary to determine whether these findings generalize to aid in other parts of the world and hold up over time. Nonetheless, this should be concerning to aid practitioners that view OECD standards as representing best practices. Even if they objectively produce more effective aid projects, they may fail at winning hearts and minds of donor-country citizens compared with China's non-traditional approach.

My results also pose questions about connections between the objective efficacy of aid regimes and their capacity to engender soft power for donor countries. Large, salient initiatives that improve general economic welfare even if they generate negative environmental externalities outweigh small-scale, targeted projects that follow Western standards. This points to a contention between perceptions and reality—an entire strand of the literature argues post Cold-war, targeted aid regimes are effective ([Mavrotas and Ouattara 2006](#); [Altincekic and Bearce 2014](#); [Fuchs, Dreher, and Nunnenkamp 2014](#); [Lee and Lim 2014](#); [Bodenstein and Kemmerling 2015](#); [Winters and Martinez 2015](#)) yet, at least, Chinese aid that is targeted and adheres to Western standards decreases perceptions of efficacy. Moreover, the fact that aid heterogeneously affects perceptions of donor-country's aid efficacy and its overall political and economic role in their country depending on the "local ownership" ([2011](#)) suggests perceptions are likely influenced by

domestic politics to a great degree. For donor countries seeking to improve their soft power position through an aid regime, managing projects' political dynamics may be marginally more important improving oversight standards or economic outcomes.

This paper helps update our understanding about possible mechanisms through which aid influences attitudes, yet it does not fully test the discussed mechanisms. Although flow classes and donor intent categories are correlated with different mechanisms, they are not substitutes for direct testing. Doing so is an important research avenue. For instance, one could run a two-stage analysis, estimating the effect of Chinese aid projects on local tree cover and using this as a proxy for the effect of negative environmental impacts on attitudes toward China in the second stage. Similar strategies could be used to isolate the effect of economics development—via changes in nighttime lights or local road density—on attitudes.

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Appendix A Chinese Official Financing Data

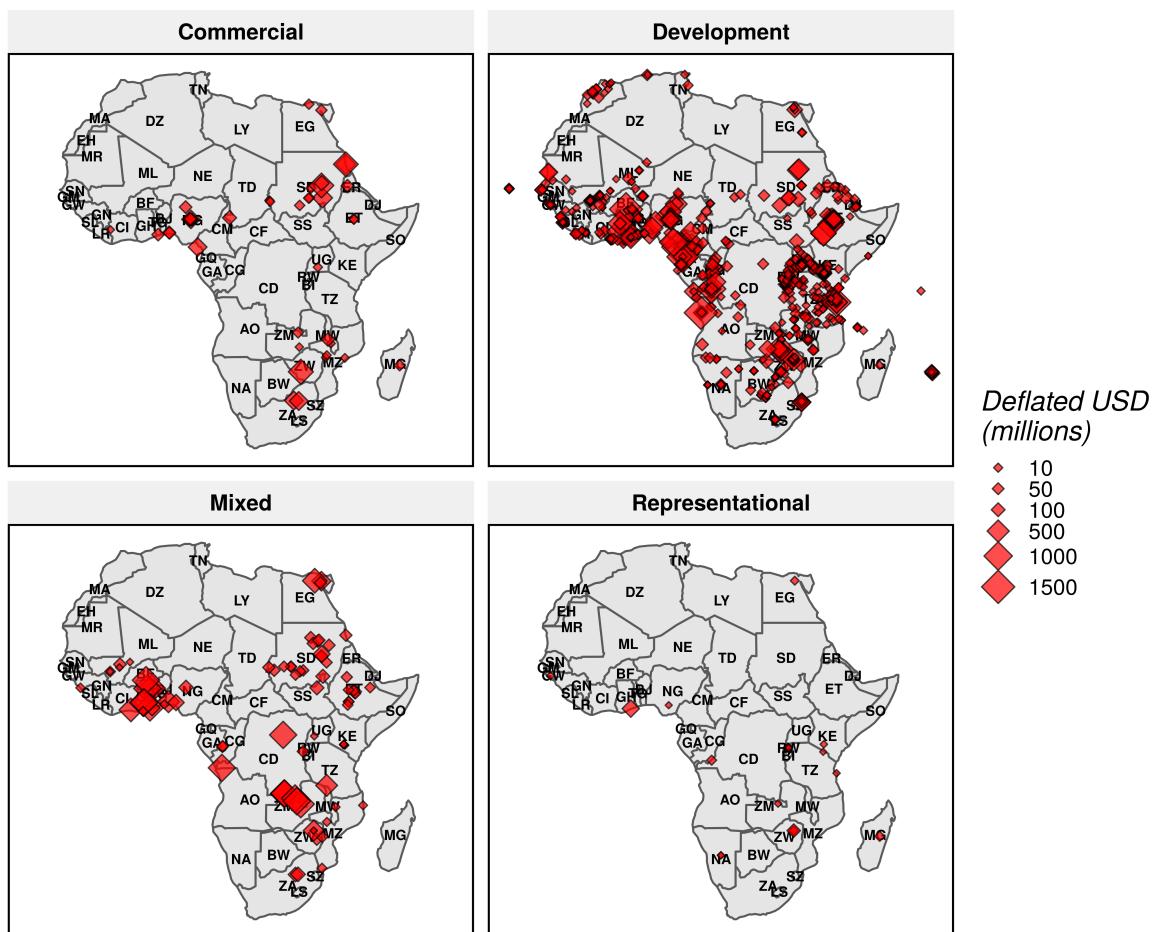


Figure 9: **Geographic Distribution of Projects by Intent and Value.** Projects are sized according to their value in terms of 2014 deflated US dollars.

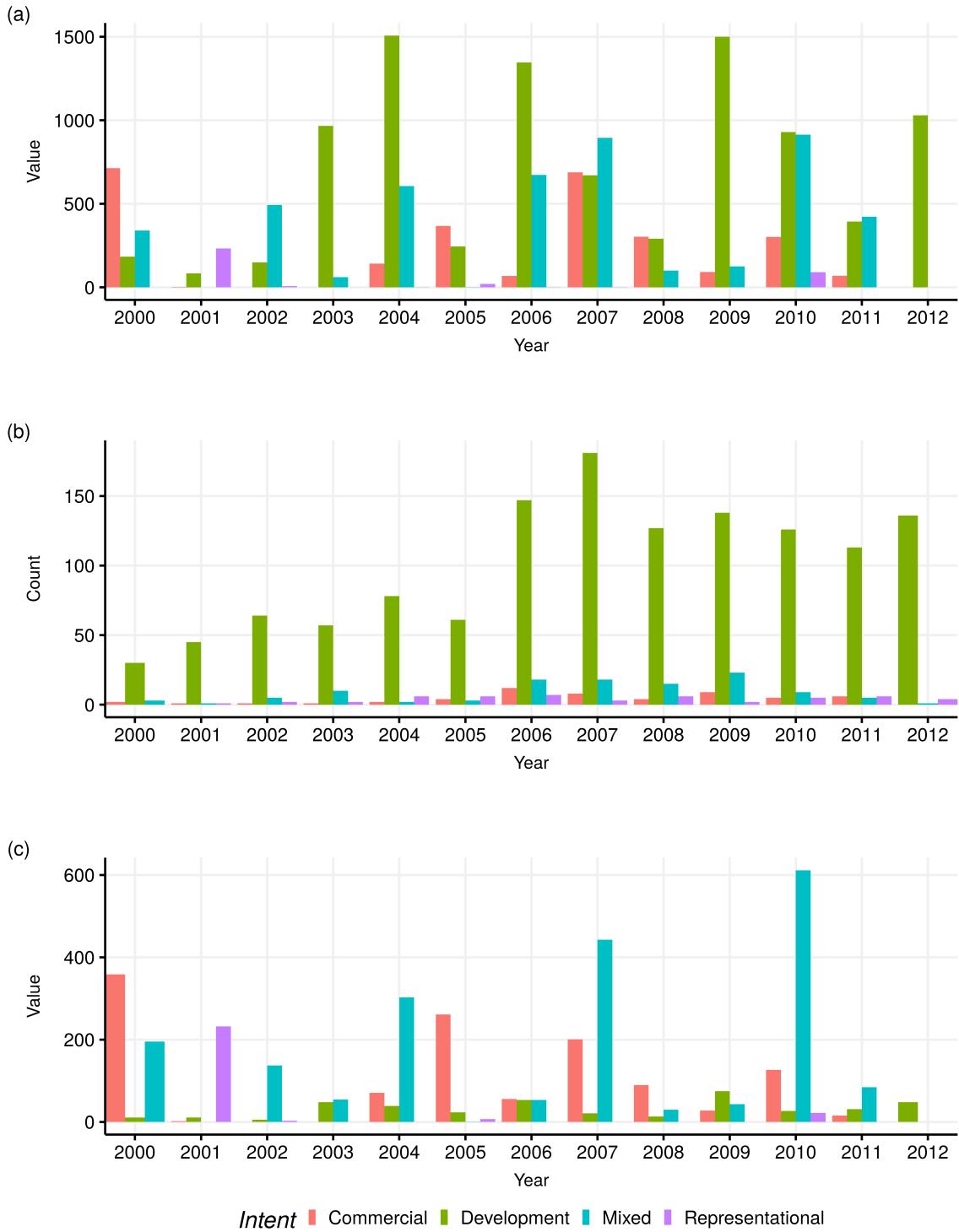


Figure 10: **Project Statistics by Intent and Year.** (A) Total monetary value in 2014 deflated US dollars. (B) The number projects implemented or announced. (C) The average monetary value of projects.

Table 1: Project Statistics by Year and Intent

Year	Commercial			Development			Mixed			Representational		
	N	Amount	Avg.	N	Amount	Avg.	N	Amount	Avg.	N	Amount	Avg.
2000	2	716.92	358.46	30	326.67	10.89	3	586.6	195.53	—	—	—
2001	1	2.01	2.01	45	490.37	10.9	1	0	0	1	232.14	232.14
2002	1	0	0	64	347.97	5.44	5	686.46	137.29	2	6.61	3.31
2003	1	0	0	57	2758.84	48.4	10	543.66	54.37	2	0.05	0.02
2004	2	141.65	70.82	78	3051.56	39.12	2	605.76	302.88	6	0.57	0.1
2005	4	1045.43	261.36	61	1437.82	23.57	3	2.02	0.67	6	41.02	6.84
2006	12	672.9	56.08	147	7865.2	53.5	18	966.64	53.7	7	1.08	0.15
2007	8	1603.83	200.48	181	3830.29	21.16	18	7967.23	442.62	3	0.57	0.19
2008	4	358.95	89.74	127	1665.27	13.11	15	444.24	29.62	6	0.11	0.02
2009	9	252.3	28.03	138	10308.71	74.7	23	1001.53	43.54	2	0	0
2010	5	632.32	126.46	126	3401.08	26.99	9	5503.79	611.53	5	109.67	21.93
2011	6	95.67	15.94	113	3538.4	31.31	5	422.78	84.56	6	0	0
2012	—	—	—	136	6543.04	48.11	1	0	0	4	0.25	0.06
Total	55	5521.97	100.78	1303	45565.24	31.32	113	18730.72	150.49	50	392.08	22.06

Note: Amounts are in millions of 2014 deflated US Dollars.

Appendix B Question Wording

Subsection B.1 Dependent Variable

Q81B: Now let's talk about the role that China plays in our country. In general, do you think that China's economic and political influence on [ENTER COUNTRY] is most positive, or mostly negative, or haven't you heard enough to say?

Q1E: Now let's talk about the role that China plays in our country. In your opinion, does China's economic development assistance to [ENTER COUNTRY] do a good job or a bad job of meeting the country's needs, or haven't you heard enough to say?

Subsection B.2 Controls

Q1: How old are you?

Q101: Respondent's gender (Answered by interviewer)

URBRUR: Urban or rural sampling unit (Answered by interviewer)

Appendix C Regression Tables

(See next page)

Table 2: Restricted Cubic Spline OLS: All

	Econ. & Pol. Role Valence					Aid Efficacy		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Treatment_{\phi_1}$	0.003*** (0.000)	0.000 (0.000)	0.003*** (0.000)	0.000 (0.000)	0.004*** (0.000)	0.002*** (0.000)	0.004*** (0.000)	0.002*** (0.000)
$Treatment_{\phi_2}$	-0.005*** (0.000)	-0.000 (0.001)	-0.004*** (0.000)	-0.000 (0.001)	-0.006*** (0.001)	-0.003*** (0.001)	-0.006*** (0.001)	-0.003*** (0.001)
$Treatment_{\phi_3}$	0.002*** (0.000)	0.000 (0.000)	0.002*** (0.000)	0.000 (0.000)	0.002*** (0.000)	0.001*** (0.000)	0.002*** (0.000)	0.001*** (0.000)
$Treatment_{\phi_4}$	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
$Treatment_{\phi_5}$	0.000*** (0.000)	-0.000 (0.000)	0.000*** (0.000)	-0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
$Control_{\phi_1}$	-0.001 (0.001)	0.003 (0.002)	-0.000 (0.001)	0.003 (0.002)	-0.010*** (0.001)	-0.003 (0.002)	-0.010*** (0.001)	-0.003 (0.002)
$Control_{\phi_2}$	0.002 (0.002)	-0.004 (0.003)	0.001 (0.002)	-0.004 (0.003)	0.015*** (0.002)	0.005* (0.003)	0.015*** (0.002)	0.005* (0.003)
$Control_{\phi_3}$	-0.001 (0.001)	0.002 (0.001)	-0.001 (0.001)	0.002 (0.001)	-0.006*** (0.001)	-0.002* (0.001)	-0.006*** (0.001)	-0.002* (0.001)
$Control_{\phi_4}$	0.001*** (0.000)	-0.000 (0.000)	0.000*** (0.000)	-0.000 (0.000)	0.001*** (0.000)	0.000*** (0.000)	0.001*** (0.000)	0.000*** (0.000)
$Control_{\phi_5}$	-0.000*** (0.000)	-0.000 (0.000)	-0.000*** (0.000)	-0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Observations	35,635	35,635	35,635	35,635	35,137	35,137	35,137	35,137
R ²	0.0516	0.1516	0.0531	0.1516	0.0324	0.1109	0.0324	0.1109
Within R ²		0.0024	0.0529	0.0024		0.0029	0.0309	0.0029
Country fixed effects		✓		✓		✓		✓
Year fixed effects			✓	✓			✓	✓

Table 3: Restricted Cubic Spline OLS: Oda-Like

	Econ. & Pol. Role Valence				Aid Efficacy			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Treatment</i> _{ϕ_1}	0.006*** (0.000)	0.001* (0.001)	0.006*** (0.000)	0.001* (0.001)	0.007*** (0.000)	0.004*** (0.001)	0.007*** (0.000)	0.004*** (0.001)
<i>Treatment</i> _{ϕ_2}	-0.009*** (0.001)	-0.002* (0.001)	-0.009*** (0.001)	-0.002* (0.001)	-0.011*** (0.001)	-0.005*** (0.001)	-0.010*** (0.001)	-0.005*** (0.001)
<i>Treatment</i> _{ϕ_3}	0.003*** (0.000)	0.000 (0.000)	0.003*** (0.000)	0.000 (0.000)	0.004*** (0.000)	0.002*** (0.000)	0.004*** (0.000)	0.002*** (0.000)
<i>Treatment</i> _{ϕ_4}	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	0.000 (0.000)	-0.001*** (0.000)	-0.000*** (0.000)	-0.001*** (0.000)	-0.000*** (0.000)
<i>Treatment</i> _{ϕ_5}	0.000*** (0.000)	-0.000* (0.000)	0.000*** (0.000)	-0.000* (0.000)	0.000*** (0.000)	0.000* (0.000)	0.000*** (0.000)	0.000* (0.000)
<i>Control</i> _{ϕ_1}	-0.000 (0.002)	0.007* (0.004)	-0.001 (0.002)	0.007* (0.004)	-0.017*** (0.002)	-0.001 (0.005)	-0.018*** (0.002)	-0.001 (0.005)
<i>Control</i> _{ϕ_2}	0.001 (0.003)	-0.011* (0.006)	0.002 (0.003)	-0.011* (0.006)	0.026*** (0.003)	0.001 (0.007)	0.027*** (0.003)	0.001 (0.007)
<i>Control</i> _{ϕ_3}	-0.001 (0.001)	0.004** (0.002)	-0.001 (0.001)	0.004** (0.002)	-0.010*** (0.001)	-0.001 (0.002)	-0.010*** (0.001)	-0.001 (0.002)
<i>Control</i> _{ϕ_4}	0.001*** (0.000)	-0.001*** (0.000)	0.000*** (0.000)	-0.001*** (0.000)	0.001*** (0.000)	0.000 (0.000)	0.001*** (0.000)	0.000 (0.000)
<i>Control</i> _{ϕ_5}	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	-0.000 (0.000)	-0.000*** (0.000)	-0.000 (0.000)
Observations	35,635	35,635	35,635	35,635	35,137	35,137	35,137	35,137
R ²	0.0530	0.1519	0.0554	0.1519	0.0368	0.1110	0.0377	0.1110
Within R ²		0.0027	0.0551	0.0027		0.0030	0.0362	0.0030
Country fixed effects		✓		✓		✓		✓
Year fixed effects			✓	✓			✓	✓

Table 4: Restricted Cubic Spline OLS: Oof-Like

	Econ. & Pol. Role Valence					Aid Efficacy		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Treatment_{\phi_1}$	0.012*** (0.001)	-0.002 (0.002)	0.013*** (0.001)	-0.002 (0.002)	0.007*** (0.001)	0.003 (0.002)	0.009*** (0.002)	0.003 (0.002)
$Treatment_{\phi_2}$	-0.019*** (0.002)	0.003 (0.003)	-0.022*** (0.002)	0.003 (0.003)	-0.012*** (0.002)	-0.005 (0.003)	-0.014*** (0.003)	-0.005 (0.003)
$Treatment_{\phi_3}$	0.008*** (0.001)	-0.001 (0.001)	0.009*** (0.001)	-0.001 (0.001)	0.005*** (0.001)	0.002* (0.001)	0.006*** (0.001)	0.002* (0.001)
$Treatment_{\phi_4}$	-0.001*** (0.000)	0.000 (0.000)	-0.001*** (0.000)	0.000 (0.000)	-0.001*** (0.000)	-0.001** (0.000)	-0.001*** (0.000)	-0.001** (0.000)
$Treatment_{\phi_5}$	0.001*** (0.000)	-0.000 (0.000)	0.001*** (0.000)	-0.000 (0.000)	0.001*** (0.000)	0.001* (0.000)	0.001*** (0.000)	0.001* (0.000)
$Control_{\phi_1}$	-0.004 (0.005)	0.017** (0.008)	-0.012** (0.006)	0.017** (0.008)	-0.032*** (0.005)	0.009 (0.008)	-0.038*** (0.006)	0.009 (0.008)
$Control_{\phi_2}$	0.008 (0.008)	-0.024* (0.012)	0.021** (0.009)	-0.024* (0.012)	0.054*** (0.009)	-0.010 (0.013)	0.064*** (0.009)	-0.010 (0.013)
$Control_{\phi_3}$	-0.006 (0.004)	0.006 (0.005)	-0.011*** (0.004)	0.006 (0.005)	-0.025*** (0.004)	0.000 (0.005)	-0.030*** (0.004)	0.000 (0.005)
$Control_{\phi_4}$	0.006*** (0.001)	0.002* (0.001)	0.006*** (0.001)	0.002* (0.001)	0.008*** (0.001)	0.003** (0.001)	0.008*** (0.001)	0.003** (0.001)
$Control_{\phi_5}$	-0.008*** (0.001)	-0.001 (0.001)	-0.009*** (0.001)	-0.001 (0.001)	-0.009*** (0.001)	-0.004** (0.001)	-0.009*** (0.001)	-0.004** (0.001)
Observations	35,635	35,635	35,635	35,635	35,137	35,137	35,137	35,137
R ²	0.0604	0.1528	0.0614	0.1528	0.0365	0.1097	0.0369	0.1097
Within R ²		0.0037	0.0612	0.0037		0.0015	0.0354	0.0015
Country fixed effects		✓		✓		✓		✓
Year fixed effects			✓	✓		✓		✓

Table 5: Restricted Cubic Spline OLS: Vague (Official Finance)

	Econ. & Pol. Role Valence				Aid Efficacy			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Treatment_{\phi_1}$	0.001 (0.001)	-0.000 (0.001)	-0.001 (0.001)	-0.000 (0.001)	0.001* (0.001)	0.001 (0.001)	0.000 (0.001)	0.001 (0.001)
$Treatment_{\phi_2}$	-0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	-0.002* (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
$Treatment_{\phi_3}$	0.001** (0.000)	-0.000 (0.001)	-0.000 (0.000)	-0.000 (0.001)	0.001** (0.000)	0.001 (0.001)	0.000 (0.000)	0.001 (0.001)
$Treatment_{\phi_4}$	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
$Treatment_{\phi_5}$	0.000*** (0.000)	0.000 (0.000)	0.000*** (0.000)	0.000 (0.000)	0.000* (0.000)	0.000* (0.000)	0.000*** (0.000)	0.000* (0.000)
$Control_{\phi_1}$	0.006*** (0.002)	0.001 (0.002)	0.007*** (0.001)	0.001 (0.002)	-0.001 (0.002)	-0.000 (0.003)	-0.000 (0.002)	-0.000 (0.003)
$Control_{\phi_2}$	-0.009*** (0.002)	-0.002 (0.004)	-0.010*** (0.002)	-0.002 (0.004)	0.001 (0.003)	0.000 (0.004)	0.000 (0.003)	0.000 (0.004)
$Control_{\phi_3}$	0.003*** (0.001)	0.001 (0.002)	0.004*** (0.001)	0.001 (0.002)	-0.001 (0.001)	-0.000 (0.002)	-0.001 (0.001)	-0.000 (0.002)
$Control_{\phi_4}$	0.000 (0.000)	0.000 (0.000)	0.000** (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000* (0.000)	0.000 (0.000)
$Control_{\phi_5}$	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.000*** (0.000)	-0.000** (0.000)	-0.000*** (0.000)	-0.000** (0.000)
Observations	35,635	35,635	35,635	35,635	35,137	35,137	35,137	35,137
R ²	0.0527	0.1514	0.0612	0.1514	0.0281	0.1103	0.0300	0.1103
Within R ²		0.0021	0.0609	0.0021		0.0023	0.0285	0.0023
Country fixed effects		✓		✓		✓		✓
Year fixed effects			✓	✓		✓		✓

Table 6: Restricted Cubic Spline OLS: Commercial

	Econ. & Pol. Role Valence				Aid Efficacy			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Treatment</i> _{ϕ_1}	-0.013*** (0.002)	-0.009** (0.004)	-0.014*** (0.002)	-0.009** (0.004)	-0.008*** (0.002)	-0.004 (0.004)	-0.008*** (0.002)	-0.004 (0.004)
<i>Treatment</i> _{ϕ_2}	0.023*** (0.004)	0.016*** (0.006)	0.023*** (0.004)	0.016*** (0.006)	0.014*** (0.004)	0.009 (0.007)	0.013*** (0.004)	0.009 (0.007)
<i>Treatment</i> _{ϕ_3}	-0.010*** (0.002)	-0.008*** (0.003)	-0.010*** (0.002)	-0.008*** (0.003)	-0.007*** (0.002)	-0.006* (0.003)	-0.007*** (0.002)	-0.006* (0.003)
<i>Treatment</i> _{ϕ_4}	0.002*** (0.000)	0.001** (0.000)	0.002*** (0.000)	0.001** (0.000)	0.002*** (0.000)	0.001** (0.000)	0.002*** (0.000)	0.001** (0.000)
<i>Treatment</i> _{ϕ_5}	-0.001*** (0.000)	-0.001* (0.000)	-0.001*** (0.000)	-0.001* (0.000)	-0.001*** (0.000)	-0.000 (0.000)	-0.001*** (0.000)	-0.000 (0.000)
<i>Control</i> _{ϕ_1}	0.057*** (0.005)	0.027*** (0.009)	0.058*** (0.005)	0.027*** (0.009)	0.020*** (0.005)	0.028*** (0.010)	0.019*** (0.005)	0.028*** (0.010)
<i>Control</i> _{ϕ_2}	-0.099*** (0.009)	-0.051*** (0.017)	-0.100*** (0.009)	-0.051*** (0.017)	-0.034*** (0.010)	-0.054*** (0.017)	-0.034*** (0.010)	-0.054*** (0.017)
<i>Control</i> _{ϕ_3}	0.045*** (0.005)	0.026*** (0.008)	0.046*** (0.005)	0.026*** (0.008)	0.016*** (0.005)	0.029*** (0.008)	0.015*** (0.005)	0.029*** (0.008)
<i>Control</i> _{ϕ_4}	-0.003*** (0.001)	-0.002** (0.001)	-0.004*** (0.001)	-0.002** (0.001)	-0.002*** (0.001)	-0.004*** (0.001)	-0.002** (0.001)	-0.004*** (0.001)
<i>Control</i> _{ϕ_5}	-0.001*** (0.001)	0.001 (0.001)	-0.001** (0.001)	0.001 (0.001)	0.000 (0.001)	0.002** (0.001)	0.000 (0.001)	0.002** (0.001)
Observations	35,635	35,635	35,635	35,635	35,137	35,137	35,137	35,137
R ²	0.0556	0.1512	0.0557	0.1512	0.0286	0.1104	0.0286	0.1104
Within R ²		0.0019	0.0554	0.0019		0.0023	0.0271	0.0023
Country fixed effects		✓		✓		✓		✓
Year fixed effects			✓	✓			✓	✓

Table 7: Restricted Cubic Spline OLS: Development

	Econ. & Pol. Role Valence				Aid Efficacy			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Treatment</i> _{φ₁}	0.003*** (0.000)	0.000 (0.000)	0.003*** (0.000)	0.000 (0.000)	0.005*** (0.000)	0.002*** (0.001)	0.004*** (0.000)	0.002*** (0.001)
<i>Treatment</i> _{φ₂}	-0.005*** (0.001)	-0.001 (0.001)	-0.005*** (0.001)	-0.001 (0.001)	-0.007*** (0.001)	-0.004*** (0.001)	-0.007*** (0.001)	-0.004*** (0.001)
<i>Treatment</i> _{φ₃}	0.002*** (0.000)	0.000 (0.000)	0.002*** (0.000)	0.000 (0.000)	0.003*** (0.000)	0.001*** (0.000)	0.003*** (0.000)	0.001*** (0.000)
<i>Treatment</i> _{φ₄}	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
<i>Treatment</i> _{φ₅}	0.000*** (0.000)	-0.000 (0.000)	0.000*** (0.000)	-0.000 (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
<i>Control</i> _{φ₁}	-0.001 (0.001)	0.003 (0.002)	-0.001 (0.001)	0.003 (0.002)	-0.012*** (0.001)	-0.003 (0.002)	-0.012*** (0.001)	-0.003 (0.002)
<i>Control</i> _{φ₂}	0.002 (0.002)	-0.004 (0.003)	0.002 (0.002)	-0.004 (0.003)	0.019*** (0.002)	0.005 (0.004)	0.019*** (0.002)	0.005 (0.004)
<i>Control</i> _{φ₃}	-0.001 (0.001)	0.002 (0.001)	-0.001 (0.001)	0.002 (0.001)	-0.008*** (0.001)	-0.002 (0.001)	-0.007*** (0.001)	-0.002 (0.001)
<i>Control</i> _{φ₄}	0.001*** (0.000)	-0.000* (0.000)	0.000*** (0.000)	-0.000* (0.000)	0.001*** (0.000)	0.000* (0.000)	0.001*** (0.000)	0.000* (0.000)
<i>Control</i> _{φ₅}	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	0.000 (0.000)	-0.000*** (0.000)	-0.000** (0.000)	-0.000*** (0.000)	-0.000** (0.000)
Observations	35,635	35,635	35,635	35,635	35,137	35,137	35,137	35,137
R ²	0.0512	0.1515	0.0528	0.1515	0.0353	0.1108	0.0355	0.1108
Within R ²		0.0022	0.0525	0.0022		0.0028	0.0340	0.0028
Country fixed effects		✓		✓		✓		✓
Year fixed effects			✓	✓			✓	✓

Table 8: Restricted Cubic Spline OLS: Representational

	Econ. & Pol. Role Valence				Aid Efficacy			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Treatment</i> _{ϕ_1}	0.090*** (0.005)	0.019*** (0.007)	0.088*** (0.005)	0.019*** (0.007)	0.063*** (0.005)	0.028*** (0.008)	0.063*** (0.005)	0.028*** (0.008)
<i>Treatment</i> _{ϕ_2}	-0.125*** (0.006)	-0.025** (0.010)	-0.124*** (0.006)	-0.025** (0.010)	-0.088*** (0.007)	-0.039*** (0.010)	-0.088*** (0.007)	-0.039*** (0.010)
<i>Treatment</i> _{ϕ_3}	0.039*** (0.002)	0.007** (0.003)	0.038*** (0.002)	0.007** (0.003)	0.027*** (0.002)	0.012*** (0.003)	0.027*** (0.002)	0.012*** (0.003)
<i>Treatment</i> _{ϕ_4}	-0.003*** (0.000)	0.000 (0.000)	-0.003*** (0.000)	0.000 (0.000)	-0.002*** (0.000)	-0.001* (0.000)	-0.002*** (0.000)	-0.001* (0.000)
<i>Treatment</i> _{ϕ_5}	0.001*** (0.000)	-0.001** (0.000)	0.001*** (0.000)	-0.001** (0.000)	0.000*** (0.000)	-0.000 (0.000)	0.000*** (0.000)	-0.000 (0.000)
<i>Control</i> _{ϕ_1}	-0.165*** (0.036)	-0.001 (0.046)	-0.160*** (0.036)	-0.001 (0.046)	-0.136*** (0.035)	-0.136*** (0.046)	-0.136*** (0.036)	-0.136*** (0.046)
<i>Control</i> _{ϕ_2}	0.226*** (0.050)	0.006 (0.064)	0.218*** (0.051)	0.006 (0.064)	0.184*** (0.050)	0.187*** (0.064)	0.184*** (0.050)	0.187*** (0.064)
<i>Control</i> _{ϕ_3}	-0.063*** (0.016)	-0.009 (0.020)	-0.061*** (0.016)	-0.009 (0.020)	-0.049*** (0.016)	-0.054*** (0.020)	-0.049*** (0.016)	-0.054*** (0.020)
<i>Control</i> _{ϕ_4}	0.004** (0.002)	0.005* (0.003)	0.004** (0.002)	0.005* (0.003)	0.002 (0.002)	0.003 (0.003)	0.002 (0.002)	0.003 (0.003)
<i>Control</i> _{ϕ_5}	-0.007*** (0.001)	-0.002 (0.002)	-0.007*** (0.001)	-0.002 (0.002)	-0.004*** (0.001)	-0.000 (0.002)	-0.004*** (0.001)	-0.000 (0.002)
Observations	35,635	35,635	35,635	35,635	35,137	35,137	35,137	35,137
R ²	0.0864	0.1518	0.0864	0.1518	0.0485	0.1104	0.0485	0.1104
Within R ²		0.0026	0.0861	0.0026		0.0024	0.0470	0.0024
Country fixed effects	✓		✓		✓		✓	
Year fixed effects		✓		✓		✓		✓

Table 9: Restricted Cubic Spline OLS: Mixed

	Econ. & Pol. Role Valence				Aid Efficacy			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Treatment_{\phi_1}$	0.021*** (0.002)	-0.002 (0.002)	0.019*** (0.002)	-0.002 (0.002)	0.017*** (0.002)	0.001 (0.002)	0.017*** (0.002)	0.001 (0.002)
$Treatment_{\phi_2}$	-0.032*** (0.003)	0.003 (0.003)	-0.029*** (0.003)	0.003 (0.003)	-0.026*** (0.003)	-0.002 (0.004)	-0.027*** (0.003)	-0.002 (0.004)
$Treatment_{\phi_3}$	0.013*** (0.001)	-0.001 (0.001)	0.011*** (0.001)	-0.001 (0.001)	0.010*** (0.001)	0.001 (0.001)	0.010*** (0.001)	0.001 (0.001)
$Treatment_{\phi_4}$	-0.001*** (0.000)	0.000 (0.000)	-0.001*** (0.000)	0.000 (0.000)	-0.001** (0.000)	0.000 (0.000)	-0.001*** (0.000)	0.000 (0.000)
$Treatment_{\phi_5}$	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
$Control_{\phi_1}$	0.031*** (0.006)	0.006 (0.008)	0.035*** (0.006)	0.006 (0.008)	0.029*** (0.006)	0.009 (0.009)	0.029*** (0.007)	0.009 (0.009)
$Control_{\phi_2}$	-0.049*** (0.009)	-0.008 (0.012)	-0.054*** (0.009)	-0.008 (0.012)	-0.046*** (0.010)	-0.014 (0.013)	-0.045*** (0.010)	-0.014 (0.013)
$Control_{\phi_3}$	0.019*** (0.004)	0.002 (0.005)	0.021*** (0.004)	0.002 (0.005)	0.018*** (0.004)	0.005 (0.005)	0.018*** (0.004)	0.005 (0.005)
$Control_{\phi_4}$	-0.002*** (0.000)	0.001* (0.001)	-0.002*** (0.000)	0.001* (0.001)	-0.002*** (0.001)	0.000 (0.001)	-0.002*** (0.001)	0.000 (0.001)
$Control_{\phi_5}$	0.000 (0.000)	-0.002*** (0.001)	0.000 (0.000)	-0.002*** (0.001)	0.001*** (0.000)	-0.001** (0.001)	0.001*** (0.000)	-0.001** (0.001)
Observations	35,635	35,635	35,635	35,635	35,137	35,137	35,137	35,137
R ²	0.0669	0.1509	0.0673	0.1509	0.0381	0.1091	0.0382	0.1091
Within R ²		0.0015	0.0670	0.0015		0.0009	0.0366	0.0009
Country fixed effects		✓		✓		✓		✓
Year fixed effects			✓	✓		✓		✓