

How does spatial complexity impact development effectiveness?

Political siting versus political implementation

Christopher Kilby[†]

Villanova University

August 2025

Abstract:

This paper uses GODAD data on World Bank-funded project locations and World Bank Independent Evaluation Group project ratings to assess the impact of the spatial dimension of projects on their outcomes. Following recent research on the spatial impact of recipient country domestic politics on project location selection (which I term “political siting”), this paper adds consideration of the impact recipient country domestic politics on subsequent project implementation (which I term “political implementation”). I explore how political siting and political implementation impact World Bank-funded investment project outcomes using a sample of projects approved between 1995 and 2020 and evaluated between 1998 and 2024. The analysis uncovers little evidence that political siting impacting project outcomes (likely because results are confounded by cherry picking) but does identify substantial variation in project performance linked to variation in political implementation.

Key words: World Bank; project performance; aid effectiveness; geolocated data

JEL codes: F35; F53; O19

[†]christopher.kilby@villanova.edu

Professor of Economics

The James Joo-Jin Kim Endowed Chair in Economics

Villanova School of Business

800 Lancaster Ave., Villanova, PA 19085 USA

+1-610-519-4324

I. Introduction

Development projects often have a deeper spatial dimension than simply which country receives funding. Investment projects in particular have a well-defined spatial footprint that is measured in various GODAD data sets at the subnational level (Bomprezzi et al. 2025). The spatial extent of a project has important implications for its impact. These can be positive, for example, influencing how many people have access to project benefits, or negative, for example, increasing the complexity of the project and hence reducing the odds of successful implementation. While these considerations can be factored into project design, politics may influence project location selection decisions (Berlin et al. 2023; Dreher et al. 2021; Dreher et al. 2022) and risk undermining project success and impact.

This paper uses GODAD data on World Bank project locations and World Bank Independent Evaluation Group project evaluation ratings to assess the impact of the spatial dimension of projects on their outcomes. Prior research by Dreher et al. (2013) suggests that geopolitical factors such as United Nations Security Council (UNSC) membership can lead to worse project outcomes for World Bank-funded projects if the borrower simultaneously faces financial distress. Kilby (2013, 2015) offers one mechanism, accelerated approval, where project preparation is rushed with subsequent negative effects on the project's outcome. The findings in Berlin et al. (2023) suggest another mechanism, politics influencing project location selection (which I term "political siting"). This paper develops a measure of spatial complexity that reflects political siting to explore the impact on project performance.

To operationalize this, I measure the average distance from project locations within a country to the birthplace of the country's leader (that is, the leader at the time the project was approved). The interaction of this with an indicator of the country's geopolitical importance at the time of project

approval (drawing on UNSC data) generates my measure of political siting. If a country is currently important to powerful World Bank shareholders (e.g., important to the U.S. while the country holds a nonpermanent seat on the UNSC), its government is in a better bargaining position and can push to locate project activities in politically preferred locations.

Projects with more extensive political siting may perform less well in terms of their economic rate of return for two reasons. First, the constraint to select project locations based on politics, aka political siting, yields sites less suited to the project than an unconstrained selection process. Second, these same political connections allow local elites to divert project resources to other (private) uses.

An important challenge to identification is the possibility that high-potential projects are disproportionately sited in the leader's birthplace (cherry picking). These projects may do less well than they would have at other locations but may still be high return relative to other development activities.

One way to address this is to consider not just political siting but also political implementation, i.e., where disbursement takes place. If a project begins before the opportunity for political siting arises (e.g., the country was not on the UNSC when the project was approved), cherry picking is not possible. However, with political implementation it is still possible to disburse extra funds for political reasons (or to allow local elites to divert project resources to other private uses). If there is no cherry picking, project outcomes should be worse for politically-sited projects that are approved during the UNSC membership window. If there is cherry picking, any effect found is likely to be a lower bound. But whether or not there is cherry picking at project approval, projects that have a greater overlap with leader birth regions during implementation when governments have bargaining leverage over the World Bank should have worse outcomes (particularly if most

of the funds have yet to disburse). I use monthly disbursement data to identify when disbursements happen and as a method to aggregate political implementation across the project's lifespan.

The rest of the paper proceeds as follows. Section II reviews the growing literature exploring the impact of recipient politics on subnational aid allocation and its links to growth. Section III details this paper's empirical strategy, providing details on how I construct variables to measure political siting and political implementation. Section IV briefly reviews the data used in this analysis. Section V presents estimation results, finding little evidence of political siting but significant patterns consistent with political implementation. Section VI concludes.

II. Literature Review

There is a rich and growing literature examining the determinants of World Bank project performance to explore a range of questions. Deininger et al. (1998) explore the impact of World Bank economic and sector work on the success of subsequent World Bank-funded projects. Making use of more detailed data, Ashton et al. (2023) examine the impact of prior World Bank analytical work. Kilby (2000) delves into the role of supervision by World Bank staff while Kilby (2015) uses exogenous variation in preparation to identify the role of preparation in subsequent project success. Several authors have investigated the impact of staff experience and background (Denizer et al. 2013; Honig 2020; Ashton et al. 2023). Blanc et al. (2016) explore factors that influence the downgrading of projects between implementation period evaluations and final ratings. Denizer et al. (2013) and Bulman et al. (2017) demonstrate the large role of project characteristics (as opposed to country macroeconomic characteristics and policies which are emphasized by Kaufmann and Wang (1995)) in explaining project outcome ratings. Caselli et al. (2021) demonstrate that aid effectiveness as measured by project success ratings is significantly lower in fragile states. Chauvet et al. (2010) examine project success in post-conflict situations to

learn lessons relevant to supervision, determining which type of projects to support, and what other project characteristics influence performance. In contrast to much of the literature that emphasizes investment projects, Dollar and Svensson (2000) focus on the determinants of the success or failure of development policy loans; Watkins (2022) examines whether the rapid expansion of Chinese aid has undermined compliance with World Bank development policy loan conditions. Shin et al. (2017) and Winters (2019) investigate the impact of outside partners on the performance of World Bank-funded projects. Malik and Stone (2018) explore (among other things) distortions in project ratings that reflect U.S. and Japanese corporate interests while Kilby and Michaelowa (2019) find evidence of geopolitical bias linked to UNSC membership.

Others have conducted innovative analyses using data for projects funded by other development agencies, including bilateral aid donors (Eilers et al. 2025), the Asian Development Bank (Feeny and Vuong 2017), the African Development Bank (Mubila et al. 2000), UN agencies where performance indicators are derived from text analysis (Eckhard et al. 2023), or a wide range of funding organizations (Honig 2019; Honig et al. 2023). Briggs (2020) presents evidence that findings derived from analyzing World Bank projects generalize relatively well to projects funded (and evaluated) by other agencies.

Several recent studies have examined the interaction of recipient domestic politics and aid effectiveness. Earlier work on World Bank projects (e.g., Dreher et al. 2013) took a different approach, looking at the impact of geopolitics at the national level. More recent research has made use of improved data to examine the impact of aid at the subnational level. A key issue is whether recipient country domestic politics influences the choice of project locations in a way that might undermine aid effectiveness. Looking at aid from China and measuring aid effectiveness in terms of changes in nighttime light emissions, Dreher et al. (2021) find a positive impact that is not

significantly undermined by domestic political influence as captured by leader birthplace. That is, the impact of Chinese aid on nighttime lights is positive both in locations that are not the leader's birthplace and those that are. Berlin et al. (2023) does not examine growth but instead explores in more depth the issue of when recipient country governments can influence the subnational location of aid. Using data on World Bank project locations, Berlin et al. measure the influence of recipient country domestic politics via both leader birth regions and co-ethnic regions. Building on previous work showing that recipient governments get preferential treatment from the World Bank when they hold a non-permanent seat on the UNSC (Dreher et al. 2009) and particularly when they do not vote against the U.S. while in this role (Dreher et al. 2022), Berlin et al. show that leader co-ethnic regions receive significantly more and larger World Bank loans when the country holds a seat on the UNSC. This effect is stronger when the country did not vote against the U.S. while on the UNSC and is largely related to World Bank IBRD loans (rather than IDA credits) but is unique to leader co-ethnic regions; it does not hold for leader birth regions that are not co-ethnic.

The key innovation in this paper relative to previous approaches is to extend Berlin et al. (2023) to examine the impact of domestic politics on aid effectiveness and to re-introducing World Bank project outcome ratings as a method to assess aid effectiveness. The paper also highlights an important but overlooked identification issue driven by cherry picking. The results illustrate that estimating the impact of recipient politics at project approval is compromised by this issue while estimating the impact during implementation is not.

III. Estimation Strategy

I measure proximity to the leader's birthplace as the distance in miles; for projects with multiple locations listed, this is the average distance across these locations.¹ As noted in the introduction, domestic political effects on project performance come both as the project is designed and during implementation. Leader birthplace can change over time (with leadership transitions) so that project location relative to leader birthplace may be different at project approval than it is at some later point in project implementation. To account for this, I construct two distance measures. *Distance at approval* is the average distance between project locations and leader birthplace the day the project is approved by the World Bank. *Distance during project* is the average distance between project locations and leader birthplace measured in each month that there are project disbursements; when there are multiple such months, each monthly measure is weighted by the share of observed disbursement that happens that month.²

Put more formally, the number of miles (M_{it}) between the birthplace of the leader in power in period t (LB_t) and the investment locations of project i (PL_{ij}) is measured by the following average across project locations (1 to N_i):

$$M_{it} = \frac{1}{N_i} \sum_{j=1}^{N_i} |LB_t - PL_{ij}| \quad (1)$$

¹ Calculated using latitude and longitude via Stata's geodist function. Since what distance counts as economically / politically near or far depends on the country's physical characteristics, all specifications control for the country's physical area (log of square kilometers).

² World Bank API data occasionally list negative disbursements (presumably correcting clerical errors or reflecting sums that are returned to the World Bank); these are ignored in the calculations described. Note that this weighting scheme may in some sense overweight time periods when leader birthplace is nearer to project locations if that link facilitates disbursement. Using disbursements in a project performance equation can raise red flags about endogeneity since problems with the design or implementation of a project may slow disbursement, e.g., there can be reverse causation. Using disbursement shares avoids this problem since performance issues scale both the numerator and the denominator of the share and hence cancel out. If the denominator were the original commitment amount rather than the sum of observed disbursement, the endogeneity concern would not be eliminated.

This may vary over time because of leadership changes. Weights (w_{it}) to aggregate across the months (t) of project implementation reflect disbursement activity for the project in each month (D_{it}):

$$w_{it} = \frac{D_{it}}{\sum_{s=1}^{T_i} D_{is}} \quad (2)$$

Applying this notation to measure distance at project approval is straightforward:

$$\text{Distance at Approval}_i = M_{i0} \quad (3)$$

To measure distance during project implementation involves a weighted average:

$$\text{Distance during Project}_i = \sum_{t=1}^{T_i} w_{it} \times M_{it} \quad (4)$$

This time dimension also applies to when to measure a country's geopolitical importance to key World Bank stakeholders. Here, I focus on the U.S. and nonpermanent UNSC membership. Loosely following Dreher et al. (2022) for UNSC voting measures, I distinguish between non-permanent UNSC members that do not vote against the U.S. (*Vote with US*) and those that do so at least once (*Vote against US*), as well as when countries do not hold a nonpermanent seat on the UNSC (*not UNSC*).³ For those countries that hold a nonpermanent seat, rather than looking at the annual level I consider each two-year term on the UNSC and whether the country has yet voted against the U.S. during that term. Thus, if a country first votes against the U.S. on July 4th of the first year of its term, I code the country as not voting against the U.S. from January 1 to July 3rd of its first year and as having voted against the U.S. from July 4th of its first year through December

³ For brevity, I use *Vote with US* as the variable name but like Dreher et al. (2022) this is really not voting against the U.S. Voting against the U.S. is voting No when the U.S. votes Yes or voting Yes when the U.S. votes No. All other cases (voting the same or one party either abstaining or failing to vote) are coded as voting with the U.S. (if the country occupies a nonpermanent UNSC seat). Finally, I only consider nonpermanent members so the variable *not UNSC* includes permanent members China and Russia.

31st of its second year. For project approval (*Vote with US at approval*), I track this at the daily level; for disbursements (*Vote with US during project*), I track this at the monthly level (since most disbursement data are monthly) and again weight by disbursement amount. In the example above, if the World Bank approves a project for that country on April 15 of the first year, *Vote with US at approval*=1; if the World Bank instead approves the project on September 15 in the first year, *Vote with US at approval*=0. In the first case, if that project had half its disbursements before July 4th of the first year and the rest after that, *Vote with US during project*=0.5. Parallel definitions apply to *Vote against US* and *not UNSC*.

Applying the same notation as above, the variables have the following definitions:

$$\text{Vote with US at Approval}_i = \text{Vote with US}_{i0} \quad (5)$$

$$\text{Vote with US during Project}_i = \sum_{t=1}^{T_i} w_{it} \times \text{Vote with US}_{it} \quad (6)$$

Again, parallel definitions apply to *Vote against US* and *not UNSC*. Interaction terms follow from these definitions as well:

$$\text{Distance} \times \text{Vote with US at Approval}_i = M_{i0} \times \text{Vote with US}_{i0} \quad (7)$$

$$\text{Distance} \times \text{Vote with US during Project}_i = \sum_{t=1}^{T_i} w_{it} \times M_{it} \times \text{Vote with US}_{it} \quad (8)$$

Equation (7) is the standard notation of an interaction term, i.e., the product of the same variables as enter the regression equation when examining the influence of geopolitics at project approval.⁴

However, equation (8) interacts each of the underlying variables in the given time period and then

⁴ This means the regressions examining UNSC variables at the time of project approval include *Distance at approval*, *Vote with US at approval*, *Vote against US at approval*, *Distance × Vote with US at approval*, and *Distance × Vote against US at approval*. The omitted category is *not UNSC*.

constructs a weighted average of these terms.⁵ Because of this difference, rather than including un-interacted variables plus their interaction, specifications that explore the influence of geopolitics during project implementation include separately defined variables for each case. In this setting, that means that in addition to equation (8) we have:

$$Distance \times Vote\ against\ US\ during\ Project_i = \sum_{t=1}^{T_i} w_{it} \times M_{it} \times Vote\ against\ US_{it} \quad (9)$$

$$Distance \times Not\ on\ UNSC\ during\ Project_i = \sum_{t=1}^{T_i} w_{it} \times M_{it} \times Not\ on\ UNSC_{it} \quad (10)$$

I include these terms in regressions examining UNSC variables during project implementation.⁶

IV. Data

I draw data from a number of sources. Location information (for World Bank projects and leader birthplace) is from GODAD (Bomprezzi et al. 2025). I supplement World Bank location data with information from the World Bank Projects Database (correcting obvious errors, such a Mozambique project with locations in Samoa and Virginia). Data for World Bank project monthly disbursements are from the World Bank API. Other World Bank project data (project type, funding amount, etc.) are from the World Bank Projects Database. Macro data (population, GDP, land area) come from the World Development Indicators (Azevedo 2011). World Bank project ratings are from the World Bank’s Independent Evaluation Group’s annual database.⁷ UNSC membership and

⁵ This is necessary because the product of weighted averages is not the same as the weighted average of products. For example: $(w_1X_1 + w_2X_2)(w_1Y_1 + w_2Y_2) = w_1^2X_1Y_1 + w_1w_2(X_1Y_2 + X_2Y_1) + w_2^2X_2Y_2 \neq w_1X_1Y_1 + w_2X_2Y_2$.

⁶ More precisely, these regressions include: (1) *Vote with US during project*; (2) *Vote against US during project*; (3) *Distance × Vote with US during project*; (4) *Distance × Vote against US during project*; and (5) *Distance × not UNSC during project*. Note that the baseline variable *Distance during project* is not included because all three terms with distance interactions are included. Again, *not UNSC* is the omitted category (the comparison group). In these “during project” regressions, I use a similarly weighted foreign-born leader variable though results are mostly the same with the at approval version.

⁷ I use the most recent rating in the IEG database(s). To have more complete coverage, I draw on the current version (IEG_ICRR_PPAR_Ratings_2025-01-07.xlsx) and another version (IEG_ICRR-PPAR_Ratings_Q4FY22.xlsx).

voting data are from Dreher et al. (2022), updated to 2024 using data from the United Nations Digital Library (United Nations 2025).

For a World Bank project to be included in this analysis, its location data must be available. This excludes many older projects. In addition, evaluation ratings must be available. This limits the analysis to projects that have completed their implementation period and have subsequently been evaluated. This excludes many new projects. Since 2007, many entries in the World Bank Projects Database (and its API) are for additional financing for existing projects (also called supplemental projects; see Kersting and Kilby (2019)). For many purposes (e.g., tracking disbursements and evaluation), the World Bank treats these as part of the original project and hence they likewise must be folded into the original project in this analysis.⁸ Because of clear differences between projects funded through IBRD and IDA lending on the one hand and trust funds on the other (Heinzel et al. 2023), I restrict the analysis to those funded via IBRD loans and IDA loans and grants. Finally, I restrict the sample to investment lending, excluding development policy finance.⁹

See Appendix for a list of variables, descriptions and sources, as well as summary statistics at project approval (Table A1) and during project implementation (Table A2).

V. Results

Except in a few cases, these IEG Excel files themselves list only the most recent evaluation ratings for a project. All ratings are from IEG, not necessarily the same ratings as assigned by World Bank Operations staff. See Kilby and Michaelowa (2019) for an analysis of differences between the various ratings.

⁸ This applies to disbursement weights and project ratings but not loan amount. Problematic projects are less likely to receive supplemental funding so including additional financing in the loan amount could introduce reverse causation.

⁹ Although the subnational location of development policy finance is ill-defined, the World Bank sometimes provides coordinates. To identify investment lending, I limit the data to Specific Investment Loans, Technical Assistance Loans, Financial Intermediary Loans, Sector Investment and Maintenance Loans, Emergency Recovery Loan, Investment Project Financing, Learning and Innovation Loans, Program-for-Results Financing, Adaptable Program Loans, and those called "Unidentified" but classified as investment lending. In practice, neither Adaptable Program Loans nor "Unidentified" Loans meet the other inclusion criteria.

I measure project performance using IEG’s overall project performance rating, which ranges from 1 (“Highly Unsatisfactory”) to 6 (“Highly Satisfactory”). All specifications include a set of control variables that may influence project performance and arguably could also be correlated with the key explanatory variables (distance and the frequency of nonpermanent UNSC membership). These are *Area* (log), *Population* (log), *GDP* (log, in constant 2015 USD), and *Loan amount* (log). I also include *Foreign-born leader* (=1 if leader was born outside the current boundaries of the country), *PPAR* (=1 if the rating is from a Project Performance Assessment Report rather than an Implementation Completion Report Review), and year dummies. Including *Foreign-born leader* accounts for potentially very large distance values.¹⁰

As discussed above, I explore political factors that may influence project outcomes, looking separately at the time of project approval (Table 1) and during the implementation of the project (weighting time-varying political factors by the share of disbursements in each period; Table 2). Not all World Bank projects report detailed disbursement data so the estimation sample shrinks somewhat when I shift from the “at approval” sample (2051 projects across 126 countries) to the “during the project” sample (1821 projects across 125 countries).

Table 1 presents results for specifications examining the influence of politics measured at project approval. I proceed from simple to more complex specifications, the latter matching more closely the theoretical mechanism for political siting described earlier. All specifications and both samples show a significant, positive link between loan size and project performance ratings. Recalling that *Loan amount* is logged, a doubling of loan size is associated with a 0.07-point increase on the 1 to 6 rating scale, ceteris paribus. *Foreign-born leader* enters with a significant positive coefficient,

¹⁰ Results are not sensitive to using approval year dummies, evaluation year dummies or both. As noted earlier, I use a weighted version of the foreign-born leader variable when examining geopolitics during project implementation.

indicating a 0.2-point increase in the performance rating, *ceteris paribus*. However, this effect shrinks and is no longer statistically significant in the country fixed effects specifications (Columns (5) and (6)). In the estimation sample, five countries had foreign-born leaders throughout and 104 never had a foreign-born leader, leaving just 17 countries with variation in this variable. Thus, the results in the last two columns illustrate that it is difficult to distinguish between the impact of a foreign-born leader and other time invariant country characteristics.

Most relevant for the purposes of this paper, none of the variables capturing political factors—specifically the interplay between domestic and geopolitical factors that reflect political siting—are statistically significant and in the expected direction. *Distance at approval* in Columns (1) and (3) enters with a negative sign (contrary to the theoretical prediction if there is political siting) but is never near statistical significance. The sign on *Vote with US at approval* is negative in Columns (2) and (3), consistent with the political siting prediction but not statistically significant. Columns (4) to (6) introduce the interaction terms so that the coefficient on the uninteracted term *Vote with the US at approval* now indicates, *ceteris paribus*, the effect when *Distance at approval* is 0. In this case, the marginal effect is positive (contrary to theory) but again not significantly different from zero. That positive effect generally diminishes as distance from the leader’s birthplace increases (interaction terms in (4) and (6)) but again this effect is not statistically significant.

Turning now to *Vote against US at approval*, recall that we distinguish between simply being a nonpermanent UNSC member and voting with the U.S. while holding that position. *Vote against US at approval* equals 1 for countries that have voted against the U.S. at least once during this UNSC term by the date of project approval. Based on this, *ceteris paribus*, these countries should be in a weaker bargaining position than countries that have not voted against the U.S. while on the UNSC and hence we expect less political siting of World Bank projects (and hence better project

performance). The results (negative coefficient estimates) are not consistent with this. The coefficient estimates for *Vote against US at approval* are statistically significant in Columns (2) and (3)—and significantly more negative than the estimates for *Vote with US at approval*.¹¹ Columns (4) to (6) introduce interactions with distance; the results are again not consistent with political siting though coefficient estimates are now imprecise and we cannot say with any certainty which coefficient is more negative. Thus Table 1 provides very little support for the political siting hypothesis, possibly because of the potential for cherry picking discussed above.

Table 2 presents results for specifications examining the influence of politics measured during project implementation (political implementation). As noted earlier, the estimation sample is somewhat reduced as the detailed disbursement data needed to calculate weights are not available for 230 of the original 2051 projects.¹² Results for control variables are similar to those in Table 1, with the exception that the coefficient estimate for *Foreign-born leader* is larger and remains significant in the country fixed effects specification.¹³

There are, however, several important differences between the results in the tables when we look beyond the control variables. In Columns (2) and (3) of Table 2, the coefficient for *Vote against US during project* is not statistically significant nor is it significantly more negative than *Vote with US during project*. While neither coefficient is statistically significant, both are negative—suggestive of political implementation lowering project performance. Turning to the full

¹¹ A one-sided t-test of $H_0: \text{Vote with US at approval} \leq \text{Vote against US at approval}$ vs. $H_1: \text{Vote with US at approval} > \text{Vote against US at approval}$ yields p-values of 0.00141 (Column (2)) and 0.0123 (Column (3)). If I estimated the same model but include country fixed effects, neither coefficient estimate is statistically significant but *Vote with US at approval* enters with a positive sign and *Vote against US at approval* with a negative sign and we can again reject the hypothesis that the effect of *Vote with US at approval* is more negative than *Vote against US at approval* (p-values of 0.0044 and 0.0056).

¹² Imposing the same sample limitations on Table 1 has no substantive impact on results described above.

¹³ This is likely because the variable—now a weighted average across the project’s implementation period—has more within country variation.

specification that estimates the impact of *Vote with US during project* for projects at the leader's birthplace and how that effect changes as we move projects further away from the leader's birthplace, the results line-up squarely with the predictions of political implementation. Looking at projects located very near the leader's birthplace, when the country voted with the U.S. in the UNSC during project implementation, we see significantly lower project performance (a drop of roughly 0.8 points on the 1 to 6 scale in Column (4)). The size of this effect drops for projects with locations further from the leader's birthplace, becoming statistically insignificant at about 100 miles.¹⁴

These results are robust across a number of critical dimensions and variations. They hold when including country fixed effects (Column (5)) and when excluding cases with foreign-born leaders (Column (6)).¹⁵ They are robust to including approval-year dummies, either instead of or together with evaluation-year dummies. Reported significance levels for the key coefficient estimates (*Vote with US during project* and $Distance \times Vote with US during project$) are robust to how standard errors are calculated (clustering by country, clustering by year or two-way clustering by country and year). They are robust to switching to random effects and robust to also incorporating the appraisal-period variables from Table 1.

Again looking at the full specification (Columns (4) to (6)), coefficient estimates for *Vote against US during project* are positive but not statistically significant. This indicates that, ceteris paribus, projects near a leader's birthplace do not see significantly more effects of political implementation when the country was on the UNSC but voted against the U.S. during the project (in contrast to

¹⁴ Using the preferred specification that includes country fixed effects (Column (5)).

¹⁵ Since *Foreign-born leader* is a weighted average in this specification (and hence not strictly a 0/1 variable), I set a threshold of 0.1 rather than 0 for inclusion. Results are not sensitive to switching to a 0 threshold (which drops an additional 42 projects).

the result when countries vote with the U.S.). The coefficient estimate on the interaction term (*Distance* $\times$ *Vote against US during project*) is negative but not statistically significant in the preferred country fixed effects specifications.¹⁶

In short, Table 2 provides substantial support for political implementation impacting project performance ratings. In the full specification including country fixed effects (and therefore controlling for the potential bias introduced by unobserved heterogeneity across countries), we see significantly worse performance for projects where/when politically connected elites are in a better position to redirect project resources to their own ends. This contrasts sharply with results for political siting. This difference should not be interpreted as showing that recipient country politics only influence the (re)allocation of aid resources during project implementation. Rather, it is more likely that there are two domestic political effects influencing the location of projects—political siting and cherry picking—and that the analysis at project approval is unable to disentangle the competing effects. This critique likely applies to any analysis that focuses on the impact of domestic politics on the choice of project location. Looking instead at the implementation period after project approval when the location and nature of the project are fixed and hence cherry picking is moot provides a much cleaner setting in which to explore the impact of recipient country politics on aid effectiveness.

VI. Conclusion

Investment projects—including development finance projects in low- and middle-income countries—have important spatial dimensions. During their investment/implementation phase,

¹⁶ *Distance* $\times$ *Vote against US during project* is also not significant in a random effects specification or when using alternative approaches to calculating standard errors.

resources flow to specific locations. Subsequently, the services provided by projects flow predominantly to these same locations. To the extent that host country domestic politics shape project location and implementation decisions, the broad economic impact of the project—and hence its rated performance—may suffer. In the case of development finance, recipient country politicians are better situated to influence these decisions when they have greater leverage over the aid agency. For World Bank projects, a substantial body of academic work demonstrates the (short term) advantages for recipient countries or their governments when they are important to the World Bank’s largest shareholder, the United States, and to the G5 whose interests often align (Vreeland 2019; Stone 2024).

For a particular investment project such political influence can be exercised by altering the locations where project investments take place (political siting) and by shaping subsequent implementation (political implementation). If borrowing governments have influence, they may push for the project to be sited in areas that are politically important to the incumbent government. All else equal, this can reduce the development impact of the project, e.g., because it does not serve those in greatest need (allocative efficiency is reduced) or because local conditions are not ideal for the undertaking (technical efficiency is reduced). Empirically, the impact of political siting on measured project performance is less clear when there is more than one funded project because cherry picking—directing higher return projects to politically important locations and the lower return projects to other locations—works in the opposite direction within a given country.¹⁷

Political implementation suggests that project performance will be lower in locations that are politically important to the incumbent government—if that government is in a strong bargaining

¹⁷ In short, this is a limitation of observational data in this context. Note that “more than one funded project” need not be limited to World Bank-funded projects; one needs to consider all government projects undertaken at that time.

position vis-à-vis the donor agency. This leverage and the willingness to use it in politically important locations means fewer obstacles to the disbursement of allocated funds and thus more opportunity for corruption in these locations, redirecting project resources to other activities that favor private benefits to politically important individuals or groups over broadly distributed public benefits. Since project implementation often continues over an extended period—averaging seven years for the projects analyzed in this paper—the situation during implementation, i.e., which governments have leverage over donor agencies and which locations these governments view as important, can be very different than when the project was designed. In the case of UNSC nonpermanent membership (which is limited to non-consecutive two-year terms), governments that have leverage due to membership at project approval will not have such leverage during peak implementation years (and vice versa). Thus, the cherry-picking problem that plagues attempts to analyze the politics of project placement do not bleed over to the analysis of the politics of project implementation.

This paper explored the impacts of both political siting and political implementation on the performance ratings of 2,051 World Bank-funded investment projects that took place in 126 countries between 1995 and 2024. Measuring borrowing government leverage over the World Bank via the country's standing with the U.S. based on voting during the country's current term on the UNSC and measuring the domestic political significance of locations based on their distance from the birthplace of the country's leader, I construct variables to capture the role of both political siting and political implementation. In the latter case because implementation can extend over a number of years, these variables are weighted averages of leverage and political importance at different points in time, where weights are constructed using the share of project disbursements at that point in time.

The empirical analysis finds little evidence of political siting having an impact on project outcomes, likely because of identification problems created by cherry picking of projects. In contrast, there is clear evidence of political implementation having an impact. Performance ratings are substantially lower for projects in locations that were politically important to the incumbent government during project implementation if these governments simultaneously enjoyed leverage over the World Bank. This effect shrinks as the distance from the project to the leader's birthplace increases.

The quest for development effectiveness in foreign aid depends in many ways on the alignment between donor and recipient objectives. Early research on this topic (Burnside and Dollar 2000) focused exclusively on recipient country characteristics and has generated decidedly mixed results. More recent analysis highlights the role of donor motives (Dreher et al. 2024; Kilby 2024), both to critique earlier identification strategies and to offer new insights into macrolevel determinants of aid effectiveness. This paper adds to a growing literature with a more micro approach that exploits geolocated GODAD data and examines the interaction of donor motives and recipient country politics to identify local and global political factors that drive successes and failures in development finance.

References

- Ashton, L., Friedman, J., Goldemberg, D., Hussain, M.Z., Kenyon, T., Khan, A., and Zhou, M. 2023. "A Puzzle with missing pieces: Explaining the effectiveness of World Bank development projects." *World Bank Research Observer* 38(1): 115-146.
- Azevedo, J.P. 2011. "wbopendata: Stata module to access World Bank databases." *Statistical Software Components S457234*. Boston College Department of Economics.
- Berlin, M.P., Desai, R.M., and Olofsgård, A. 2023. "Trading Favors? UN Security Council membership and subnational favoritism in aid recipients." *Review of International Organizations* 18(2), 237-258.
- Blanc, M., Esmail, T., Mascarell, C., and Rodriguez, J.R. 2016. "Predicting project outcomes: A simple methodology for predictions based on project ratings." *World Bank Policy Research Working Paper No. 7800*.
- Bomprezzi, P., Dreher, A., Fuchs, A., Hailer, T., Kammerlander, A., Kaplan, L., Marchesi, S., Masi, T., Robert, C., and Unfried, K. 2025. "Wedded to prosperity? Informal influence and regional favoritism." CEPR Discussion Paper 18878 (v.2).
- Bulman, D., Kolkma, W., and Kraay, A. 2017. "Good countries or good projects? Comparing macro and micro correlates of World Bank and Asian Development Bank project performance." *Review of International Organizations* 12: 335-363.
- Briggs, R. 2020. "Results from single-donor analyses of project aid success seem to generalize pretty well across donors." *Review of International Organizations* 15(4): 947-963.
- Burnside, C. and Dollar, D. 2000. "Aid, policies, and growth." *American Economic Review*, 90(4): 847-868.
- Caselli, F.G., Presbitero, A.F., Chami, R., Espinoza, R., and Montiel, P. 2021. "Aid effectiveness in fragile states." In *Macroeconomic Policy in Fragile States*, edited by R. Chami, R. Espinoza, and P. J. Montiel, 493-520. Oxford: Oxford University Press.
- Chauvet, L., Collier, P., and Duponchel, M. 2010. "What explains aid project success in post-conflict situations?" *World Bank Policy Research Working Paper Series No. 5418*.
- Deininger, K., Squire, L., and Basu, S. 1998. "Does economic analysis improve the quality of foreign assistance?" *World Bank Economic Review* 12(3): 385-418.
- Denizer, C., Kaufmann, D., and Kraay, A. 2013. "Good countries or good projects? Macro and micro correlates of World Bank project performance." *Journal of Development Economics* 105: 288-302.
- Dollar, D., and Svensson, J. 2000. "What explains the success or failure of structural adjustment programmes?" *Economic Journal* 110(466): 894-917.
- Dreher, A., Fuchs, A., Hodler, R., Parks, B.C., Raschky, P.A., and Tierney, M.J. 2021. "Is favoritism a threat to Chinese aid effectiveness? A subnational analysis of Chinese development projects." *World Development*, 139, 105291.

- Dreher, A., Klasen, S., Vreeland, J.R., and Werker, E. 2013. "The costs of favoritism: Is politically driven aid less effective?" *Economic Development and Cultural Change* 62(1): 157-191.
- Dreher, A., Lang, V., Rosendorff, B.P. and Vreeland, J.R. 2022. "Bilateral or multilateral? International financial flows and the dirty-work hypothesis." *The Journal of Politics* 84(4): 1932-1946.
- Dreher, A., Lang, V., and Reinsberg, B. 2024. "Aid effectiveness and donor motives." *World Development* 176(2024): 106501.
- Dreher, A., Sturm, J.E. and Vreeland, J.R. 2009. "Development aid and international politics: Does membership on the UN Security Council influence World Bank decisions?" *Journal of Development Economics* 88(1): 1-18.
- Eckhard, S., Jankauskas, V., Leuschner, E., Burton, I., Kerl, T., and Sevastjanova, R. 2023. "The performance of international organizations: A new measure and dataset based on computational text analysis of evaluation reports." *Review of International Organizations* 18(4): 753-776.
- Eilers, Y., Kluve, J., Langbein, J. and Reiners, L., 2025. "Volume, risk, complexity: What makes development finance projects succeed or fail?" *The World Bank Economic Review*, p.lhaf001.
- Feeny, S., and Vuong, V. 2017. "Explaining aid project and program success: Findings from Asian Development Bank interventions." *World Development* 90: 329-343.
- Heinzel, M., Cormier, B., and Reinsberg, B. 2023. "Earmarked funding and the control-performance trade-off in international development organizations." *International Organization* 77(2): 475-495.
- Honig, D. 2019. "When reporting undermines performance: The costs of politically constrained organizational autonomy in foreign aid implementation." *International Organization* 73(1): 171-201.
- Honig, D. 2020. "Information, power, and location: World Bank staff decentralization and aid project success." *Governance* 33(4): 749-769.
- Honig, D., Lall, R., and Parks, B.C. 2023. "When does transparency improve institutional performance? Evidence from 20,000 projects in 183 countries." *American Journal of Political Science* 67(4): 1096-1116.
- Independent Evaluation Group (IEG). 2022. World Bank Project Ratings. https://ieg.worldbankgroup.org/sites/default/files/Data/IEG_ICRR-PPAR_Ratings_Q4FY22.xlsx Accessed June 23, 2023.
- Independent Evaluation Group (IEG). 2025. World Bank Project Ratings. https://ieg.worldbankgroup.org/sites/default/files/Data/IEG_ICRR_PPAR_Ratings_2025-01-07.xlsx Accessed March 3, 2025.
- Kaufmann, D. and Wang, Y. 1995. "Macroeconomic policies and project performance in the social sectors: A model of human capital production and evidence from LDCs." *World Development*, 23(5): 751-765.

- Kersting, K., and Kilby, C.. 2019. "The rise of supplemental lending at the World Bank." *Canadian Journal of Economics* 52(4): 1655-1698.
- Kilby, C. 2000. "Supervision and performance: The case of World Bank Projects." *Journal of Development Economics* 62(1): 233-259.
- Kilby, C. 2013. "The political economy of project preparation: An empirical analysis of World Bank projects." *Journal of Development Economics* 105: 211-225.
- Kilby, C. 2015. "Assessing the impact of World Bank preparation on project outcomes." *Journal of Development Economics* 115: 111-123.
- Kilby, C. 2024. "Donor motives and aid effectiveness." In *Handbook on aid and development*, edited by R. M. Desai, S. Devarajan and J. Tobin, 174-186. MA: Edward Elgar Publishing.
- Kilby, C., and Michaelowa, K. 2019. "What influences World Bank project evaluations?" In *Lessons on foreign aid and economic development: Micro and Macro Perspectives*, edited by N. Dutta, and C. R. Williamson, 109-150. New York: Springer.
- Malik, R., and Stone, R.W. 2018. "Corporate influence in World Bank lending." *The Journal of Politics* 80(1), 103–118.
- Mubila, M.M., Lufumpa, C., and Kayizzi-Mugerwa, S. 2000. "A statistical analysis of determinants of project success: Examples from the African Development Bank." Abidjan: African Development Bank.
- Shin, W., Kim, Y., and Sohn, H.-S. 2017. "Do different implementing partnerships lead to different project outcomes? Evidence from the World Bank project-level evaluation data." *World Development* 95: 268-284.
- Stone, R. W. 2024. "Rational choice: actors, preferences and power." In *The Elgar companion to the World Bank*, edited by A. Vetterlein and T. Schmidtke, 74-84. MA: Edward Elgar Publishing.
- United Nations. 2025. *United Nations Digital Library*. <https://digitallibrary.un.org/>
- Vreeland, J.R. 2019. "Corrupting international organizations." *Annual Review of Political Science* 22(1): 205-222.
- Watkins, M. 2022. "Undermining conditionality? The effect of Chinese development assistance on compliance with World Bank project agreements." *Review of International Organizations* 17(4), 667-690.
- Winters, M.S. 2019. "Too many cooks in the kitchen? The division of financing in World Bank projects and project performance." *Politics and Governance* 7(2): 117-126.
- World Bank 2025A. *World Development Indicators*.
<https://databank.worldbank.org/reports.aspx?source=world-development-indicators>
Accessed April 29, 2025.
- World Bank. 2025B. *World Bank Project Database*.
<https://search.worldbank.org/api/projects/all.xls> Accessed March 16, 2025.

Table 1: Measuring Political Factors at Approval

	(1)	(2)	(3)	(4)	(5)	(6)
Loan amount	0.102*** (3.59)	0.103*** (3.61)	0.102*** (3.59)	0.102*** (3.58)	0.135*** (4.89)	0.145*** (5.17)
PPAR	-0.000399 (-0.01)	0.00333 (0.04)	0.00348 (0.05)	0.00185 (0.02)	0.0788 (0.99)	0.0704 (0.89)
Population	0.0835 (1.53)	0.0870 (1.58)	0.0797 (1.43)	0.0797 (1.43)	0.317 (0.82)	0.309 (0.77)
GDP	-0.0296 (-0.56)	-0.0281 (-0.52)	-0.0240 (-0.45)	-0.0244 (-0.46)	0.127 (0.82)	0.0824 (0.48)
Area	-0.0370 (-1.45)	-0.0410 (-1.63)	-0.0359 (-1.41)	-0.0355 (-1.38)		
Foreign-born leader	0.235* (1.94)	0.215** (2.09)	0.248** (2.10)	0.247** (2.10)	0.0550 (0.46)	
Distance at approval	d-0.0000221 (-0.60)		-0.0000240 (-0.64)	-0.0000199 (-0.53)	0.0000392 (1.07)	0.0000491 (1.13)
Vote with US at approval		-0.0391 (-0.40)	-0.0364 (-0.37)	0.0154 (0.12)	0.0602 (0.52)	0.102 (0.85)
Vote against US at approval		-0.310** (-2.15)	-0.312** (-2.18)	-0.297 (-1.10)	-0.286 (-1.22)	-0.235 (-0.89)
Distance × Vote with US at approval				-0.0000658 (-0.54)	0.00000469 (0.04)	-0.0000507 (-0.42)
Distance × Vote against US at approval				-0.0000201 (-0.09)	0.0000700 (0.39)	0.00000483 (0.02)
Observations	2051	2052	2051	2051	2051	1906
Geographic fixed effects	Region	Region	Region	Region	Country	Country
# Countries	126	126	126	126	126	121

Dependent variable: IEG project performance rating. t-statistics based on country-clustered SEs; * 0.1 ** 0.05 *** 0.01. All specifications include unreported evaluation year dummies; (6) Sample excludes cases with foreign-born leader. Loan amount, Population, GDP and Area are logged and measured at time of project approval. Ratings (ranging from 1 to 6) are most recent available; PPAR=1 if rating is from IEG's Project Performance Assessment Report. Foreign-born leader=1 if the leader of the country's government at the time of project approval was born outside the current boundaries of the country (accounting for large Distance values). Distance and voting variables measured at time of project approval; see text for detailed discussion.

Table 2: Measuring Political Factors during Project

	(1)	(2)	(3)	(4)	(5)	(6)
Loan amount	0.0945*** (3.07)	0.0962*** (3.16)	0.0961*** (3.16)	0.0991*** (3.25)	0.134*** (4.54)	0.145*** (4.89)
PPAR	-0.0471 (-0.56)	-0.0412 (-0.50)	-0.0417 (-0.50)	-0.0390 (-0.48)	0.0342 (0.41)	0.0467 (0.54)
Population	0.0904 (1.58)	0.0933 (1.60)	0.0883 (1.51)	0.0914 (1.58)	0.248 (0.58)	0.364 (0.77)
GDP	-0.0426 (-0.78)	-0.0415 (-0.73)	-0.0366 (-0.64)	-0.0368 (-0.66)	0.0959 (0.72)	0.0911 (0.61)
Area	-0.0351 (-1.28)	-0.0422 (-1.57)	-0.0361 (-1.34)	-0.0381 (-1.39)		
Foreign-born leader	0.435*** (4.59)	0.412*** (4.29)	0.438*** (4.52)	0.449*** (4.92)	0.207 (1.55)	
Distance during project	-0.0000392 (-0.77)		-0.0000370 (-0.70)			
Vote with US during project		-0.195 (-0.53)	-0.190 (-0.51)	-0.790*** (-2.66)	-0.639** (-2.34)	-0.672** (-2.37)
Vote against US during project		-0.242 (-0.45)	-0.240 (-0.45)	0.740 (0.95)	0.479 (0.57)	0.496 (0.57)
Distance × Vote with US during project				0.000800** (2.33)	0.00102*** (3.11)	0.00100*** (2.87)
Distance × Vote against US during project				-0.00117** (-2.38)	-0.000547 (-1.07)	-0.000702 (-1.47)
Distance × not UNSC during project				-0.0000588 (-1.13)	-0.0000202 (-0.37)	0.00000641 (0.13)
Observations	1821	1821	1821	1821	1821	1661
Geographic fixed effects	Region	Region	Region	Region	Country	Country
# countries	125	125	125	125	125	120

Dependent variable: IEG project performance rating. t-statistics based on country-clustered SEs; * 0.1 ** 0.05 *** 0.01. All specifications include unreported evaluation year dummies. (6) Sample excludes cases with foreign-born leader. Loan amount, Population, GDP and Area are logged and measured at time of project approval. Ratings (ranging from 1 to 6) are most recent available; PPAR=1 if rating is from IEG's Project Performance Assessment Report. Foreign-born leader, distance and voting variables measured during project; see text for detailed discussion.

Variable Name, Description, and Source

Name	Description	Source
Rating	Latest IEG 1-6 project performance outcome rating	IEG (2023, 2025)
PPAR	=1 if Rating from Project Performance Assessment Report	
Loan amount	World Bank loan amount in millions	World Bank (2025B)
Population	Population in millions	World Bank (2025A)
GDP	GDP in billions of 2015 USD	
Area	Land area in millions of square kilometers	
Foreign-born leader	=1 if leader born in foreign country	Bomprezzi et al. (2025)
Distance at approval	Average distance from project locations to leader birthplace	Bomprezzi et al. (2025); World Bank (2025B)
Distance during project	Weighted average distance from project locations to leader birthplace(s)	
Vote with US during project	=1 if nonpermanent member of UNSC and not yet voted against US	Dreher et al. (2022); United Nations (2025)
Vote against US during project	=1 if nonpermanent member of UNSC and has voted against US	
not UNSC during project	=1 if not a nonpermanent member of UNSC	

Table A1: Descriptive Statistics for Table 1 (Measuring Political Factors at Approval)

	mean	sd	min	max
Rating	4.095	1.042	1	6
Loan amount (in millions)	99.776	156.269	0.0000111	2754
Loan amount (logged)	3.907	1.252	-11.4	7.92
PPAR	0.096	0.294	0	1
Population (millions)	214.927	418.956	0.158	1403
Population (logged)	3.554	1.985	-1.85	7.25
GDP (billions of 2015 \$)	690.958	1835.056	.165	13493
GDP (logged)	4.202	2.290	-1.8	9.51
Land area (millions of sq. km)	1.937	3.170	.0003	16.4
Area (logged)	-0.729	1.903	-8.11	2.8
Foreign-born leader	0.070	0.256	0	1
Distance at approval	566.230	699.797	0.0000193	8799
Vote with US at approval	0.058	0.233	0	1
Vote against US at approval	0.021	0.143	0	1
Evaluation year	2014	6.766	1998	2024
# Observations: 2051				

Table A2: Descriptive Statistics for Table 2 (Measuring Political Factors during Project)

	mean	sd	min	max
Rating	4.094	1.039	1	6
Loan amount (in millions)	99.522	156.607	0.0000111	2754
Loan amount (logged)	3.909	1.251	-11.4	7.92
PPAR	0.100	0.301	0	1
Population (millions)	217.827	422.040	0.158	1396
Population (logged)	3.553	1.997	-1.85	7.24
GDP (billions of 2015 \$)	694.395	1829.430	0.165	12640
GDP (logged)	4.227	2.290	-1.8	9.44
Land area (millions of sq. km)	1.950	3.179	0.0003	16.4
Area (logged)	-0.722	1.906	-8.11	2.8
Foreign-born leader	0.055	0.198	0	1
Distance during project	542.090	611.231	0	8678
Vote with US during project	0.055	0.128	0	1
Vote against US during project	0.019	0.068	0	.841
Distance × Vote with US during project	37.807	122.596	0	1526
Distance × Vote against US during project	15.983	77.815	0	1499
Distance × not UNSC during project	488.301	566.624	0	8678
Evaluation year	2014	6.644	1999	2024
# Observations: 1821				