

# The political economy of greening foreign aid

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## Abstract

Greening foreign aid is a vital step in the fight against climate change. Policymakers and scholars highlight the importance of international investments in environmentally friendly projects; however, much less is known about the fate of “brown,” environmentally costly aid projects. Withdrawing support for these projects is one attractive strategy for international donors to align their funding with their international priorities. However, I argue that greening foreign aid through withdrawal can create both domestic backlash and support for environmental policies. Removing international funding invites distributional conflicts that can alter domestic political economies in recipient states. I use a spatial difference-in-differences design to show that the withdrawal of international support for a coal plant altered voting patterns for pro-environmental parties; coal-producing areas vote disproportionately against this party in the wake of withdrawal while places with potential for investment in renewables vote for the party. While international organizations can incentivize climate-friendly policies in developing nations, these interventions reshape the distribution of economic benefits. In the global fight against climate change, aid withdrawal is necessary but costly tool.

## 1 Introduction

Foreign aid is often used to induce policy change in recipient countries in line with donor priorities (?). However, donor priorities are not always constant. Political shifts in donor

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countries may alter the composition of power and preferences for aid donations (???). Fluctuations in the global economy could generate different demands for aid across sectors (???). Technological change can affect the cost-benefit analysis of different forms of interventions (??). When prior donor funding is at extreme odds from current donor preferences and capacity, withdrawing support for previous projects is one method of advancing these priorities (???).

The case of climate aid is both substantively important and analytically useful for understanding shifts in donor priorities leading to aid withdrawal. The threat that climate change poses to the world and to developing countries in particular has changed donor preferences towards aid (??). While the ratio of environmentally friendly to “dirty” aid has increased over the last several decades (?), donors continue to fund projects that produce negative local and global environmental externalities. In contrast to other priorities, such as human rights or democratization, supporting climate-friendly policies is more likely to require donors to reverse existing aid policies aimed at economic growth. The World Bank, for example, sets a threshold at which the economic growth benefits of an aid project must be greater than the environmental costs of a project in order to proceed with any non-climate-friendly projects. As donors put more weight on the cost of environmental damage against potential project benefits, support for previously tenable projects may reverse entirely. Aid withdrawal seems a particularly effective tool for speeding the shift away from fossil fuels in aid.

I first demonstrate empirically that aid withdrawal is a significant phenomenon. I present the first comprehensive data set of aid withdrawal events using monthly project data from the World Bank. These data show that aid withdrawal occurs frequently (roughly ten percent of proposed projects are withdrawn) and especially salient in the energy sector, which features higher-than-average withdrawal rates.

But does aid withdrawal induce policy change in recipient countries? I argue that the distributional consequences of aid withdrawal affect the long-term ability of donors to in-

fluence policy in recipient countries. Just as the presence of aid often creates winners and losers, so too may aid’s withdrawal. Winners from aid projects may be less likely to accept future deals with donors after withdrawal due to their new priorities, while losers from the aid projects may ally themselves closer with donors to capture future economic benefits. In the same vein, winners and losers from aid projects, and projects’ subsequent withdrawal, may reward or punish parties whose preferences align with the international community’s new priorities. Donors may lose direct influence through blame dynamics and indirectly as their domestic allies lose political support.

A challenge in studying aid withdrawal is selection into withdrawn projects; often donors withdraw funding for projects in part because of the political or economic situation in a recipient country. I use an exogenous shock to international financing, the decreasing cost of renewable energy in comparison to fossil fuels, to study the case of aid withdrawal in a World Bank-supported coal power plant in Kosovo. The internationally supported project was the subject of intense international public scrutiny after the World Bank pledged to stop funding coal power in 2013, but continued its support for the Kosovo plant until 2018.<sup>1</sup> The World Bank pulled back from the project after more than ten years of planning due to changes in the organization’s environmental standards and falling prices of renewable energy. Using a spatial difference-in-differences design, I find that communities that benefitted from the power plant disproportionately voted against pro-environment parties in subsequent elections. In communities embedded in renewable energy production, however, this pattern is reversed: voters exposed to renewable energy support the pro-environment party at higher levels in the wake of aid withdrawal from the coal plant. In a subsequent information experiment, I confirm that communities with ties to coal expect jobs in the fossil fuel sector to increase, and jobs in renewables to decrease, when internationals invest in dirty energy

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<sup>1</sup> *Reuters*. “World Bank pulls out of Kosovo coal power plant project.” 10 October 2018. <https://www.reuters.com/article/worldbank-kosovo/world-bank-pulls-out-of-kosovo-coal-power-plant-project-idUKL8N1WQ518>

production. The signal sent by international investment, or lack thereof, in different energy forms affects perceptions of economic growth in these sectors.

Finally, I discuss the implications of these results for the domestic political economy of foreign aid. While international agencies have practical and normative incentives to change aid policies in line with global shifts in priorities and technological advancements, the sunk costs of existing aid projects may cause friction in these transitions for aid recipients. This is particularly salient in the case of climate change mitigation efforts. While international aid organizations have made adding additional climate adaptation and mitigation aid a priority, I demonstrate that failure to consider the consequences of altering or abandoning projects developed in less climate-friendly periods may cost international actors allies in prospective recipient countries. This finding notably unites the foreign aid and climate transition literatures by illustrating the link between lost employment prospects and lower support for climate change mitigation amongst transition “losers”—as well as increased support for the international community amongst those exposed to renewable energy generation (???). This is both substantively and theoretically significant as lower support for the international ally party as a result of potential employment losses associated with their preferred policy suggests significant barriers to international, top-down efforts for policy changes, particularly climate change mitigation. However, I also show that investing in alternative energy sources may boost local economies and reverse this pattern. The spatial and economic distribution of these costs and benefits may alter the domestic balance of power in recipient countries, potentially shifting environmental and energy policy as a result. This paper offers caution and hope for donor-led climate policy by drawing close attention to the distributional consequences of aid withdrawal.

## 2 A domestic political economy of aid withdrawal

Donor countries often use foreign aid to influence policy in recipient countries (??). Aid withdrawal removes a “carrot” intended to induce donor-preferred behavior in target states (?). Strategically, aid withdrawal is a low-cost method through which donors can alter policy in recipient countries. Taking away funding signals donor disapproval; indeed, non-specific aid withdrawal is often used to punish recipients for pursuing goal misaligned with donors. In the wake of Tanzania’s 2018 anti-gay laws, for example, many Western donors suspended aid programs in the country in protest (?). General aid withdrawal is considered a form of economic sanction (??). On the other hand, recipient governments may change their preferences and remove cooperation from donors to ensure that these priorities are reflected in domestic aid projects. Transitions from one government to the next often result in cancelled aid projects amongst donors such as the World Bank who work closely to align projects to recipient priorities.

The recipient government bears responsibility for many occasions of aid withdrawal. However, donors have many reasons for rescinding promised funding *independent* of recipient politics. Economic shocks to donor countries may drive withdrawal from aid commitments. In the wake of the Great Recession, for example, many donors reduced their aid budgets. A bevy of studies on aid volatility argue that these fluctuations have negative effects on the stability of recipient governments (?????). While the overall level of cuts to aid funding may be exogenous to recipient behavior, decisions to cut particular programming reflects donor geopolitical priorities and recipient characteristics. Indeed, aid withdrawal is counted as a form of economic sanction by policymakers, politicians, and the public (??). In these cases, the effect of aid on political preferences of and towards recipient and donor countries is deeply entangled with the actions that led to sanctions in the first place. Aid withdrawal may isolate recipients from the donor and its priorities when blame is easily and openly

assigned to donor-recipient relationships.

I argue that, in order to understand aid withdrawal as a distinct geopolitical phenomenon, it is necessary to examine how removing aid functions outside of its use as punishment. Withdrawing aid is an important indicator of donor-recipient relationships even when it does not occur as a result of tumult in the relationship. Aid withdrawal affects three areas of interest to donors: 1) the priority itself, 2) direct donor influence, and 3) indirect donor influence. First, aid withdrawal can signal donor concern for a particular area. In line with prospect theory, people are more sensitive to losses than gains. Donors can credibly signal their commitment to an issue by removing their support for a prior commitment. This signal is stronger if donors have previously invested heavily in time, funds, or labor for the project.

Second, donors may directly lose influence through public opinion and recipient resentment of withdrawal. In countries with alternative donors, withdrawal may be accompanied by realignment (?). Specifically with regard to energy aid, fears that China could step in to fund projects with “even fewer environmental safeguards” are rampant within the aid industry despite calls to reduce funding for fossil fuel projects.<sup>2</sup> One of the most notorious World Bank projects, the Narmada Dam project in India, was withdrawn due to global environmental activism and local resistance to displacement; however, the Indian government planned to go forward with the project without the Bank’s support, and with less attention to environmental damage (?). Reductions in US aid to Afghanistan threatened American credibility in the region; one aid coordinator bemoaned, “People think they will keep cutting and then desert us.”<sup>3</sup> Donors choosing to withdraw aid may lose their ability to influence policy long-term in recipient states as their promises become less credible.

Finally, aid withdrawal opens up donor allies in recipient countries to political criticism for

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<sup>2</sup><https://www.washingtonpost.com/news/wonk/wp/2013/06/27/the-u-s-will-stop-subsidizing-coal-plants-ov>

<sup>3</sup><https://www.nytimes.com/2011/12/06/world/asia/us-withdrawal-from-afghanistan-worries-aid-groups.html>

failing to secure aid. In many aid-dependent countries, acquiring aid is seen as a key feature of holding office and politicians are rewarded for doing so (?).<sup>4</sup> Aid withdrawal directly threatens the credibility of not only donors but their associates in recipient countries. The United Kingdom’s cuts to its official development assistance in 2021 are widely believed to have threatened the futures of its allies in nations including Afghanistan; one senior development official noted “the cuts could undermine local actors who are trying to build resilience against the drivers of fragility and violence.”<sup>5</sup>

Aid withdrawal shifts the distribution of benefits within the economic pie as well as the pie itself. Individual projects, or aid targeted at specific sectors, benefit particular populations more than others. Reducing support for these existing projects empowers rival factions. In the case of energy aid, the size and division of the pie is particularly relevant because energy production requires government or international guarantees of a market in order for investments in new fossil fuel or renewable plants to be profitable. International funding to increase renewable energy production in Indonesia, for example, has stalled, according to the solar industry, because the government “has a price cap that keeps coal prices artificially low.”<sup>6</sup> In addition, an international deal to wean Indonesian’s economy off of coal plants has created opportunities for political selection of which plants are still allowed to operate as many of the country’s elite have close ties to coal.<sup>7</sup> The UK’s Department for International Development (DFID) reportedly tried to “ensure that the withdrawal of aid does not fuel tensions between rival factions or social groupings” when closing its program in Burundi.<sup>8</sup>

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<sup>4</sup>Or even being perceived as acquiring aid; see ?.

<sup>5</sup><https://www.theguardian.com/global-development/ng-interactive/2021/aug/23/devastating-how-cuts-in-uks-foreign-aid-could-hurt-the-worlds-poorest>

<sup>6</sup><https://www.npr.org/2023/02/05/1152823939/despite-billions-to-get-off-coal-why-is-indonesia-still-b>

<sup>7</sup>“The green park that plans to build new coal plants is a project of coal billionaire Garibaldi Thohir, whose brother, Erick Thohir, is Minister of State Owned Enterprises.”<https://www.npr.org/2023/02/05/1152823939/despite-billions-to-get-off-coal-why-is-indonesia-still-building-new-coal-plants>

<sup>8</sup><https://publications.parliament.uk/pa/cm201012/cmselect/cmintdev/1134/1134.pdf>

While withdrawing support aligns donor priorities with their aid funding portfolio, whether or not these priorities are adopted by recipient countries depends on the political distribution of costs and benefits from the withdrawal.

Descriptively, determining the frequency, and causes, of aid withdrawal is a challenge due to poor aid disbursement data quality (?), political incentives to mislabel<sup>9</sup>, and bureaucratic incentives to downplay problematic projects (?). I collect novel data from the World Bank's Monthly Operational Summaries (MOS) to provide a lower bound of the frequency and form of aid withdrawal.

These data report progress on proposed projects in recipient countries each month. The frequency and consistency of reporting on project progress allows me to pinpoint exact dates at which projects are withdrawn or approved. Once the projects are officially approved by the World Bank, they are removed from reporting. The projects enter the data in the preparation stage; the average project remains in the preparation stage for four years. A substantial amount of bureaucratic labor and capital are expended on project preparation by both the Bank and recipient countries. Both sides have clear incentives to move forward with proposed projects. However, I provide the first evidence (to my knowledge) of the rate at which aid projects are withdrawn in Figure 1. On average, ten percent of proposed World Bank projects are withdrawn.

The characteristics of withdrawn projects vary dramatically from approved projects. For withdrawn projects, the preparation stage lasts an average of ten years. Withdrawn projects are not evenly spread across World Bank sectors; energy (18%), trade (17%), and agriculture (22%) projects are particularly likely to be withdrawn (Figure 2). These large projects may be particularly complex and therefore likely to face problems, but they are also highly

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<sup>9</sup>For example, US President Donald Trump claimed to have suspended aid to Ukraine due to corruption when, in fact, phone transcripts showed his own political reasons.



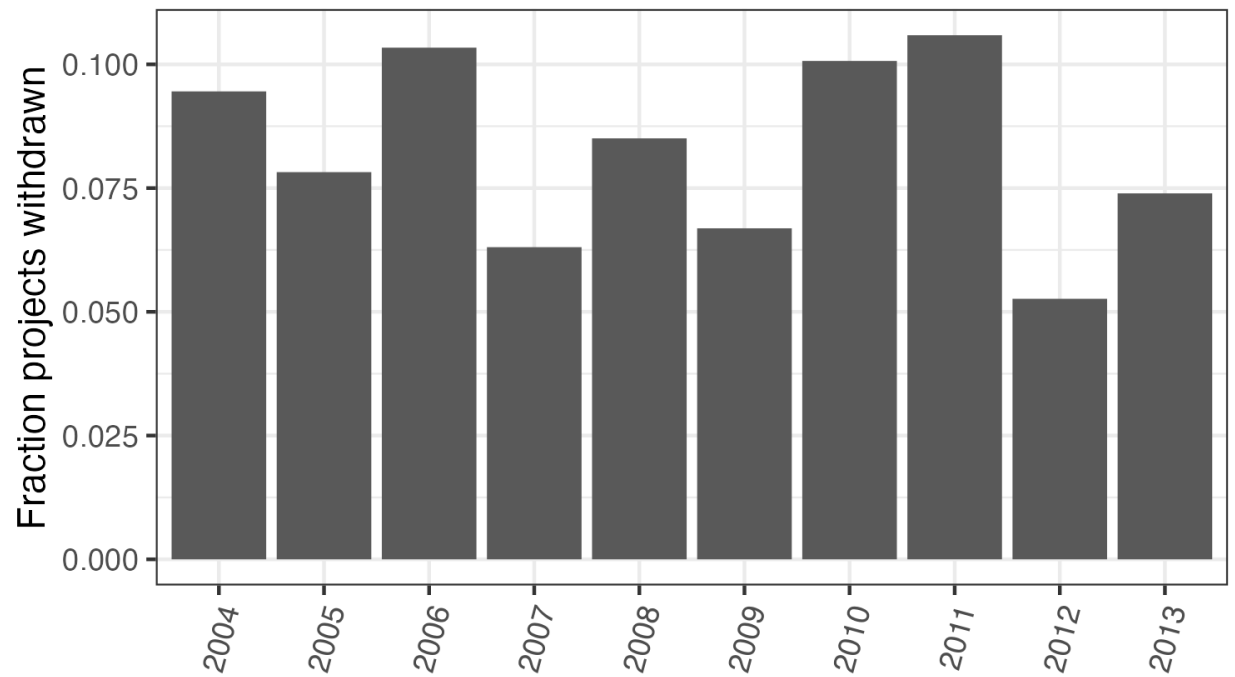


Figure 1: *Aid withdrawal rates by year*: Proportion of projects started from 2004 to 2013 withdrawn. Data collected by author from World Bank Monthly Operational Summaries.

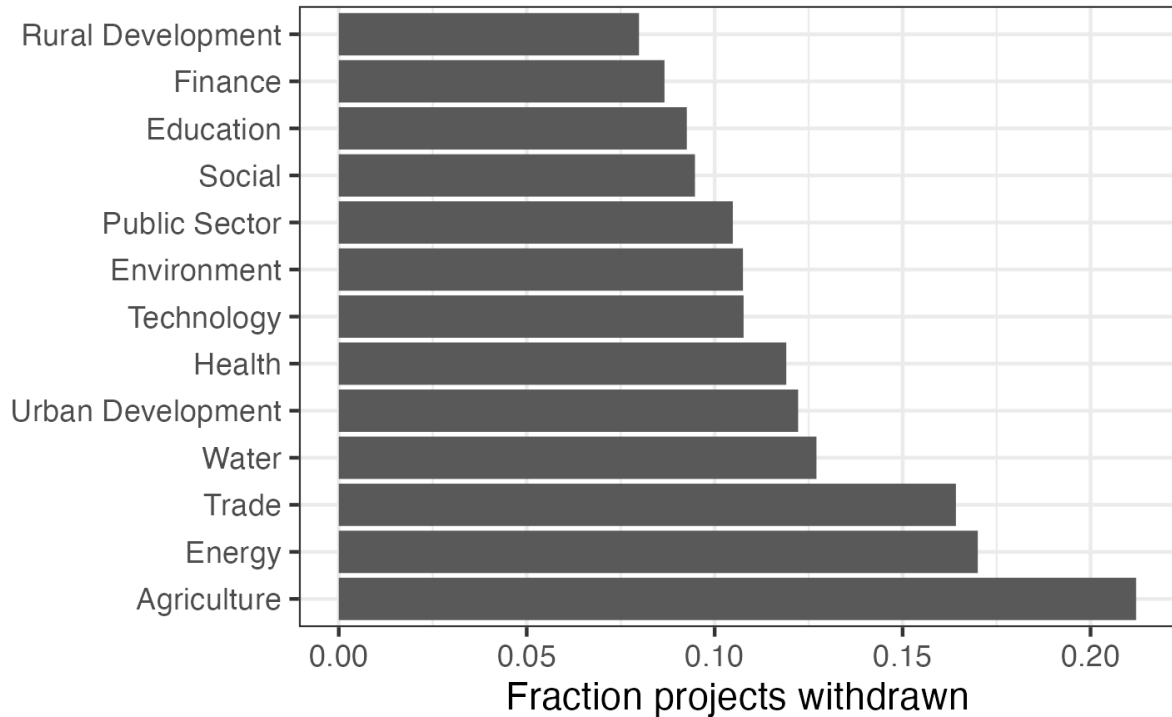


Figure 2: *Aid withdrawal rates by sector*: Aggregated by sector from projects started from 2004 to 2013. Data collected by author from World Bank Monthly Operational Summaries.

politicized, visible, and salient to recipient publics (??).<sup>10</sup>

Donor preferences for climate policy may be especially likely to generate aid withdrawal events as environmental standards are directly weighed against other benefits of aid projects. When climate-based concerns become more salient than other types of concerns, projects that otherwise align with donor priorities may too be costly to fund. The World Bank, for example, developed stronger environmental protections after high-profile incidents of infrastructure projects, particularly large dams and road projects, came under severe criticism from local activists, NGOs, and the US Congress in the late 1980s and early 1990s, leading to a shift in the types of projects sponsored by the Bank from heavy infrastructure to social

<sup>10</sup>While the MOS occasionally describe the reasons for withdrawal, from economic crises in recipient countries to security concerns to the formation of new governments, more often than not the project is described as “no longer in the current lending program” without further elaboration. The data may tell us the frequency of overall withdrawal, but not why the projects were withdrawn.

and environmental projects (????). In the case of energy projects, it is more possible for support *within a given project* to reverse. Focusing on environmental standards may reverse support for established projects rather than support for aid in a country more generally; a donor may put more weight on democratization one year than another, but is unlikely to have supported a project that is deliberately authoritarian in the past and have to pull funding upon valuing democratization.

Unlike sanctions, in which target countries are punished by restricting access to certain forms of international transactions (????), foreign aid is a positive inducement towards preferred donor policies (?). Aid withdrawal is another tool states can use to affect policy change in target states. Aid withdrawal removes a “carrot” in target states and these funds (theoretically) can be reallocated elsewhere (?). Where aid withdrawal differs from sanctions for target states is the active removal of planned projects based on expected aid flows. A large literature notes the negative effects of aid fluctuations on recipient countries’ ability to effectively plan long-term policies (????????).<sup>11</sup> Aid withdrawal as international policy induces these costs for recipient countries in order to alter domestic politics.

Aid withdrawal from specific projects leaves recipients without established funding to complete the projects. What are the distributional effects of this shift in donor priorities? I theorize that people in recipient countries who live close to the proposed projects, particularly infrastructure projects, disproportionately benefit from the projects due to local boosts in employment. When aid is withdrawn, these same communities bear greater costs from the loss of funding compared to communities further from the planned projects. However, some locations may benefit from priority shifts that generate new projects or increase support for existing projects in other communities.

The political effects of the distributional consequences of aid withdrawal will depend on

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<sup>11</sup>Recipient countries have adapted to the variability of aid flows from donors by internally placing a discount on committed funds to help absorb these shocks (?).

how voters perceive party platforms as in alignment with donor priority shifts or opposed to them. Parties may polarize around donor priorities for various reasons. Incumbent parties that are in power when the aid is withdrawn have clear incentives to move forward with projects in order to avoid breaking promises to their constituents (??). Parties without clear ties to the project should be less inclined to pursue the continuation of the project (or compensate losers) because they do not bear political costs of the project's failure. In line with work on political targeting of aid projects, parties not associated with the project also may not be actively courting the voters who would benefit most from the project. Parties with clear connections to the international community may develop a reputation amongst their constituents for acquiring aid (??) or for general affinity with international norms and preferences (?). These parties also are likely to value their relationship with internationals and see this as a selling point for their voters, reducing incentives to threaten that relationship by publicly blaming internationals for aid project failures. Parties *without* clear ties to the international community are not constrained by their reputation amongst citizens or donors in their ability to shift blame to internationals. In fact, this may be an optimal strategy given that their non-alignment towards, or even alignment against, the international community may be a selling point for voters in the aftermath of aid withdrawals.

Party incentives to shift blame towards the international community may delegitimize donor actions among citizens affected by aid withdrawal (???). This, in turn, may pose difficulties for international action in recipient countries if citizens object to the presence of donors. Pro-environmental donors may face additional challenges in promoting this agenda if blame dynamics close off their ability to influence political outcomes in recipient states. The delegitimization of one donor may also open the door to influence from other donors with varying levels of commitment to environmental issues (???).

If parties have different policy responses to donor priority shifts, voters should respond by rewarding the parties in line with how they expect to benefit, or lose, from the shift in prior-

ities. Individual exposure to aid withdrawal should increase support for parties that oppose the international community's decision to withdraw (?). In contrast, exposure to emerging donor priority sectors should increase support for parties that support the international community's shift. Particularly in the case of climate transitions, communities that are in proximity to existing renewable energy or are environmentally well-suited for investments in solar, wind, hydropower, or other renewable energy sources may expect to disproportionately benefit from international disinvestment in fossil fuels. Reversals in international support not only signal a change in donor priorities, but alter the competition between beneficiaries potential policies. If donors discontinue funding for one project, this opens up space for rival projects to capture greater market share.

Geographically, however, some areas are more suited to some types of aid projects than others. The spatial distribution of potential energy generation, in particular, affects which populations can benefit from jobs created by the transition to renewables. Donors may not be able to target renewable energy investments at the populations that lose jobs in fossil fuel extractive industries if the environment in which the original project was planned is unsuitable for other forms of energy production. Depending on the relative size of the winners and losers from policy changes, donors' attempts to shift recipient priorities in line with their own could undermine not only their own influence, but that of their political allies. I explore this dynamic in the case of Kosovo.

### **3 The World Bank and coal power in Kosovo**

Kosovo is a case of extreme dependence on the international community for both economic support and security. Kosovo was released from Serbian rule in 1999 after an unsuccessful Albanian insurgency, a Serbian attempt at ethnic cleansing, and several months of NATO bombings of Belgrade. The nascent state declared independence in 2008 after almost a

decade of provisional rule by the United Nations Mission in Kosovo. In the years since the NATO bombings, Kosovo has been one of the biggest beneficiaries of international aid per capita.<sup>12</sup> Given Kosovo's proximity to the EU, Western donors have a vested interest in ensuring the stability and growth of the country (??). The power asymmetry between Kosovo and its international donors and creditors makes it a convenient case study for the domestic political consequences of aid withdrawal.

The energy sector in Kosovo faced challenges after the war because it lacked safe, existing energy infrastructure and political disagreements with its neighbors, primarily Serbia, prevented easy import of energy. Blackouts and shortages were common in the decade leading up to independence and continue to this day. Two central power plants, Kosovo A and Kosovo B, continue to provide the majority of electricity to citizens despite running on coal. In the words of the *New York Times*, "Coal plants don't come much dirtier than Kosovo A."<sup>13</sup> The idea of building a new power plant in lieu of or in addition to the renovation of the existing power plants was supported by the Government of Kosovo<sup>14</sup> and all of its international partners due to the economic and social costs of irregular power supplies.<sup>15</sup> While the international community had reservations about the environmental costs of the proposed power plant, these concerns were outweighed by the benefits to economic and security stability offered by a domestic power source.

In 2006, the World Bank partnered with Kosovo to address the demands on the country's

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<sup>12</sup>The OECD puts Kosovo in the top 25% of aid recipients on a per-capita basis.

<sup>13</sup><https://archive.nytimes.com/www.nytimes.com/cwire/2011/07/11/11climatewire-us-on-both-sides-of-new-html?pagewanted=all>

<sup>14</sup>Before 2008, the Government of Kosovo was known as the Provisional Institutions of Self-Government, or PISG.

<sup>15</sup>"Based upon data provided by the KEK [Kosovo Energy Company] Capacity Management Department, the percentage of unserved demand (the ratio of unserved energy to supplied energy plus unserved energy) was 14.03% in 2006."(iv) "Korporata Energjetike e Kosoves (KEK) Network and Supply Project 2007 to 2013 Final Report: USAID Contract Number EPP-I-04-03-00008-00." July 2013. Produced by Tetra Tech ES. [https://pdf.usaid.gov/pdf\\_docs/PBAAA300.pdf](https://pdf.usaid.gov/pdf_docs/PBAAA300.pdf)

electric grid.<sup>16</sup> The World Bank did not require policy concessions from Kosovo; the goals of the investors and grant recipient were in line. In proposing the power plant, dubbed “Kosova e Re” [“New Kosovo”]<sup>17</sup>, the World Bank had to balance concerns about funding coal power in the 21st century and providing a stable source of electricity for Kosovars. From 2006 to 2017, the World Bank argued that coal was the most viable source of energy for Kosovo and therefore an exception to its own ban on funding coal power. Support for the plant continued even after the World Bank pledged to fund no more coal plants in 2013. World Bank president Dr. Jim Jong Kim stated in 2014, “Climate change and the coal problem is one thing, but the humanitarian issue is another, and we cannot turn our backs on the people of Kosovo who face freezing to death if we do not move.”<sup>18</sup> The cost of developing renewables exceeded that of coal, even when environmental and health spillover effects were included.<sup>19</sup> Kosovo frequently cited the World Bank’s, and other international actors’, support for the use of coal as justification for the project; the Minister of Economic Development noted in early 2018 that “the ‘New Kosovo’ TPP is one of the few exceptions in the world that the

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<sup>16</sup><https://projects.worldbank.org/en/projects-operations/project-detail/P097635>

<sup>17</sup>Originally the plant was called “Kosovo C” in reference to the existing Kosovo A and B plants but was rebranded to increase the distance between the unpopular and pollutant-generating plants and the new, “cleaner” plant. “Pas 11 vitesh plane, fillon ndërtimi i termocentralit “Kosova e Re.” *Telegrafi* 12 June 2015. <https://telegrafi.com/pas-11-vitesh-plane-fillon-ndertimi-i-termocentralit-kosova-e-re/>

<sup>18</sup>“Kosova C: A është ndonjëherë thëngjilli investim i pastër?” *Zeri*. 15 January 2016. <https://zeri.info/ekonomia/71994/kosova-c-a-eshte-ndonjehere-thengjilli-investim-i-paster/>

<sup>19</sup>“It is undisputed that the World Bank is no great proponent of coal energy, but it is also correct that Kosovo is an exception. Even though it is not a large country, it has the world’s fifth-largest lignite reserves. It is estimated that at least 10.9 billion tons are exploitable, which means that, with current consumption, there is enough coal for the next 1,500 years. At the same time, the preconditions for generating electricity from wind and hydro sources are unfavorable.” “An Example of How Things Should Not Be Done.” *World Bank News*. 7 August 2014. <https://www.worldbank.org/en/news/opinion/2014/08/07/example-how-things-should-not-be-done>

World Bank has made to finance it, which will generate electricity from lignite.”<sup>20</sup>

However, the World Bank officially withdrew its support for the power plant in October 2018, twelve years after it had first agreed to work with Kosovo to develop it.<sup>21</sup> The least-costly option for energy in Kosovo, when factoring in environmental and health costs, had become renewable sources, whose price had plummeted since the plant had first been proposed.<sup>22</sup> The Kosovan government pledged to continue with the plant with other international or domestic funding but this decision faced pushback from civil society and parliamentary opposition parties.

In the wake of the withdrawal, and prior to the 2019 parliamentary elections, political parties in Kosovo coalesced around responses to the withdrawal in line with their relationships to the international community. The incumbent party, PDK (henceforth *incumbent* party), campaigned on promises of moving forward with the project despite lack of international support. LV (henceforth, *populist* party), a populist opposition party known for its anti-elite and anti-international rhetoric, opposed building the plant even before the international community withdrew its support. The international community’s favored party, LDK (henceforth, *internationalist* party), did not develop a clear stance on the continuation or discontinuation of the project.

The election primarily focused on issues of corruption and economic development in

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<sup>20</sup> “Lluka flet për rëndësinë e termocentralit “Kosova e Re”.” *Koha*. 22 April 2018. <https://www.koha.net/arberi/88769/lluka-flet-per-rendesine-e-termocentralit-kosova-e-re/>. Kosovo authorities say they have strong World Bank support for the construction of the “New Kosovo” power plant, and have warned that the project is in the final stages of finalization. The statements followed the World Bank’s letter sent to the Economic Development Minister confirming that ‘support in principle is conditional on meeting all the necessary technical, economic, environmental, social, legal and financial criteria of the World Bank Group’. “Termocentrali i ri drejt finalizimit, Banka Botërore kërkon përmbushjen e kushteve.” *Radio Evropa e Lire*. 22 June 2017. <https://www.evropaelire.org/a/28325140.html>

<sup>21</sup> “World Bank pulls out of Kosovo coal power plant project.” *Reuters*. 10 October 2018. <https://uk.reuters.com/article/worldbank-kosovo/world-bank-pulls-out-of-kosovo-coal-power-plant-project-idUKL8N1WQ518>

<sup>22</sup> “Energy in Kosovo.” *World Bank*. October 2018. <https://www.worldbank.org/en/country/kosovo/brief/energy-in-kosovo>



Kosovo.<sup>23</sup> In the wake of a polarized and highly personal campaign, the opposition defeated the ruling party handily in the October 2019 elections. The populist party made major gains in political power at the expense of the incumbent party and formed a governing coalition with the internationalist party.<sup>24</sup>

Ultimately, the World Bank rescinded its support because of an exogenous drop in alternative energy pricing, not because of actions or lack thereof on the part of Kosovo. The initial issue of the need for domestic energy generation has never been in dispute in Kosovo politics, but the World Bank’s initial support for the power plant led the governing party to make the plant a salient issue in its campaign messaging. The visibility and importance of the project for governing party supporters created an opening for the opposition party to take a stance against the project in-line with its anti-imperialist message while the more centrist incumbent opted to move forward with the power plant to avoid blame for the project’s failure. In contrast, the party with the closest ties to the international community refused to criticize the withdrawal of international support. The 2019 election campaign in Kosovo demonstrates how party platforms evolve to incorporate the events of aid withdrawal in line with international alignment.

## 4 Empirics

I use observational and experimental data to understand how withdrawing energy aid affects donors, domestic allies, and policy predictions amongst recipients. First, I use a spatial difference-in-differences strategy to identify the effect of aid withdrawal on party vote share

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<sup>23</sup> “Kosovo Elections: Education, Health, Environment and Rights.” *Balkan Insight*. 3 October 2019. <https://balkaninsight.com/2019/10/03/kosovo-elections-education-health-environment-and-rights/>

<sup>24</sup> “Kosovo Final Election Result Confirms Vetevendosje Victory.” *Balkan Insight*. 7 November 2019. <https://balkaninsight.com/2019/11/07/kosovo-final-election-result-confirms-vetevendosje-victory/>



Figure 3: *Locations of polls and ‘Kosova e Re’*: Geolocated polling stations are represented by black dots. Location of planned ‘Kosova e Re’ plant depicted with a red triangle.

amongst individuals close to and farther from the planned project. Then, I field a survey experiment to explore citizens’ political expectations in the wake of aid withdrawal.

## 4.1 Observational evidence

I put together a novel dataset of geolocated polling stations in Kosovo from 2010-2021.<sup>25</sup> In total, I observe 818 polling stations across five national elections. I calculate the absolute distance from each polling station to the planned Kosovo B power plant. Figure 3 shows the individual polling station locations as well as the location of the planned power plant.

I estimate the difference in the change in vote share for each major political party after the World Bank’s 2018 withdrawal of support from the power plant for polling stations close

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<sup>25</sup>Polling station-level electoral results are only available from 2010 onwards from the Kosovo Central Election Commission.

to and further from the proposed plant.<sup>26</sup> A key assumption in the difference-in-differences design is that the control units are not affected by treatment. In the case of the power plant, all units are treated by both the *information content* of the withdrawal and the *national benefits and costs* of access to energy from the power plant. All people in Kosovo received the campaign information from political parties about the power plant and all Kosovans would benefit from the energy stability created by the power plant and pay the associated fiscal and pollution costs of self-funding it. However, only people voting at polling stations close to the power plant benefit from the employment opportunities offered by the plant. Treatment, then, is the access to potential power plant employment, which can be considered excludable from the further control units. Figure 4 shows the main difference-in-difference results for exposure to aid withdrawal by party. The main model specification uses a fifteen kilometer bandwidth around the location of the proposed plant to determine whether a given polling station is considered affected.

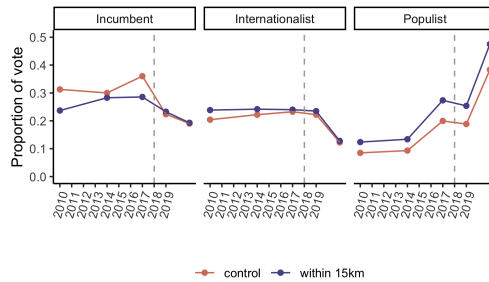


Figure 4: *Difference-in-differences for ‘Kosova e Re’*: Vote share by party using 15km bandwidth around planned coal plant.

Table 4 shows difference-in-difference results for proximity to the planned ‘Kosova e Re’ power plant with a 15 kilometer bandwidth determining “closeness” to the affected plant. Models 1-3 depict results for each main party with no fixed effects or controls. Models 4-6 include municipal fixed effects while models 7-9 include both municipal fixed effects

<sup>26</sup>When major parties run in coalitions with other parties, I use the vote share of the coalition as the outcome. This reporting only occurs when coalitions are formed prior to the election, not post-electoral coalitions. In all other circumstances, the party’s vote share is reported.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Intl.	Pop.	Inc.	Intl.	Pop.	Inc.	Intl.	Pop.	Inc.
Close	0.02 (0.06)	0.05 (0.04)	-0.05 (0.06)	0.07** (0.02)	0.25*** (0.02)	0.06** (0.02)	-0.61 (0.52)	0.94 (0.98)	0.15 (1.09)
Post-2019	-0.04*** (0.01)	0.15*** (0.01)	-0.11*** (0.01)	0.03** (0.01)	0.11*** (0.01)	-0.08*** (0.02)	-0.004 (0.05)	0.15 (0.10)	-0.02 (0.10)
Close*	-0.01 (0.03)	0.03 (0.02)	0.06** (0.02)	-0.04 (0.03)	0.02 (0.03)	0.05* (0.02)	-0.01 (0.02)	0.01 (0.01)	0.05* (0.02)
Poll*Year FE	-	-	-	✓	✓	✓	✓	✓	✓
Covs	-	-	-	-	-	-	✓	✓	✓
Adj. R <sup>2</sup>	0.03	0.20	0.06	0.84	0.83	0.84	0.86	0.85	0.81
Num. units.	818	818	818	818	818	818	790	792	792
N Clusters	37	37	37	37	37	37	37	37	37

\*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.10$

Table 1: *Proximity to planned coal plant*: Difference-in-differences models estimating effect of proximity to the planned ‘Kosova e Re’ power plant on vote share for different parties. Dependent variable is percent vote share for a given party. Robust standard errors clustered by municipality.

and control variables. The control variables, all at the municipal level, include `Population`, `Population density`, `Nighttime lights`, `Temperature (average)`, `Wind speed (average)`, `Solar exposure (average)`, and `Elevation`. `Population` and `Population density` account for municipal labor characteristics and `Nighttime lights` considers municipal development. The environmental variables control for the suitability of a given municipality for different types of power projects, including renewable sources.

Appendix A reports results for the same models with bandwidths of 5km, 10km, 20km, and continuous distance from the planned power plant. As only eleven polling stations are located within five kilometers of the power plant, the results for the five kilometer bandwidth are substantively the same but statistically insignificant across all parties. The ten kilometer bandwidth closely mirrors the main results while the twenty kilometer bandwidth holds the same direction at lower levels of significance, consistent with a model of access to highly localized employment. Continuous measures of exposure also substantively replicate, but

hold traditional levels of significance only when accounting for spatial autocorrelation.

As parallel trends do not hold for each party, I use a synthetic difference-in-differences model (?) to fit pre-trends. The synthetic difference-in-differences method is particularly useful given its ability to differentially weight time periods (using time period fixed effects). Three parties incumbent formed a pre-election coalition in the third time period in the study (2017), with the internationalist party and a third incumbent party forming a second pre-election coalition, and therefore the parties individually in this period receive a much higher vote share, as we should expect from a coalition of the top parties.<sup>27</sup> Mechanically, we should expect these coalitions to receive fewer votes due to smaller constituent bases; the drop in the incumbent party's vote share in 2019 and 2021 overall may be related to both their performance and the absence of coalition partners. With synthetic differences-in-differences, we can algorithmically upweight periods in the pre-trends that are more similar to the post-treatment period and down-weight exceptionally different periods. This method dominates the synthetic control method for the study at hand because the synthetic control uses unweighted treatment period averages which are helpful in the case at hand due to the aforementioned changes in electoral coalitions. Figure 5 shows the resulting coefficients for the synthetic difference-in-differences results. The results are substantively similar: The incumbent party's vote share increases by four percentage points ( $SE = 0.008$ ), the internationalist party's decreases by two ( $SE = 0.005$ ), and populist party's decreases by less than one ( $SE = 0.006$ ).

The theory of donor priority shifts predicts a decrease in vote share for parties that adhere to donor politics at the expense of local economic concerns. However, if donor priority shifts are in line with local economic concerns, parties affiliated with donor policies should benefit. I examine locations in Kosovo that should benefit from greater donor commitment to renewable energy in the wake of withdrawal from the planned coal power plant. Compared to

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<sup>27</sup>See Appendix Table ?? for a full accounting of pre- and post-electoral coalitions.

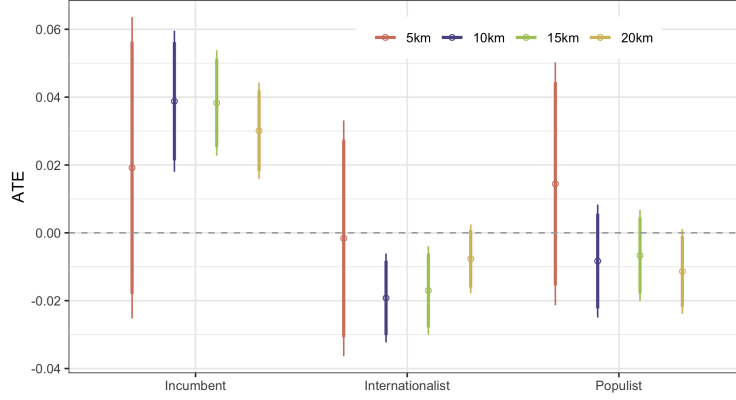


Figure 5: *Coal energy synthetic difference-in-differences*

areas that are not likely to experience investment in renewable energy, people in municipalities with high potential for solar power should be aware of the benefits of renewable energy for both the local workforce and environmental protection. As electricity generated by the specified renewable sources is distributed through the national electric grid, proximity to these potential projects does not ensure greater stability of energy supply but may support the local economy through job provision and increased local demand. As a member of the Energy Community Treaty (EnCT), a commitment between states in southern Europe and European Union member states to expand access to European energy, Kosovo has set up a funding mechanism to support investment in renewable energy along with international funding <sup>28</sup>.

I use a difference-in-differences strategy to estimate the effect of proximity to potential renewable energy sources on vote share for different parties in the wake of the withdrawal of international support for the ‘Kosova e Re’ power plant. Figure 6 depicts the geographic suitability for solar plants in Kosovo.

Figure 7 shows the main difference-in-differences results for exposure to the potential for renewable energy on party support post aid-withdrawal. I initially use the municipality in

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<sup>28</sup>Specifically, renewable projects will be supported by a feed-in tariff funding mechanism which ensures that renewable energy will be purchased before oil and gas in order to maintain steady demand.

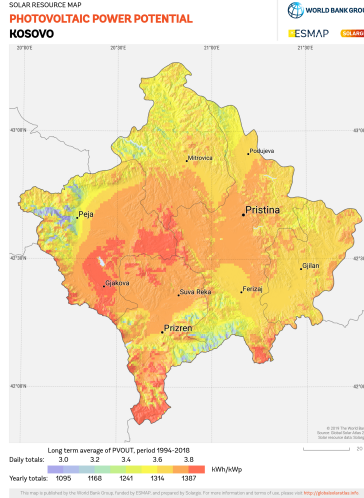


Figure 6: *Locations suitable for renewable energy*: World Bank map of photovoltaic potential in Kosovo.

which a polling station is located to determine exposure. The cutoff is operationalized by the extent to which the municipality is suitable for solar energy: if a municipality is in the top X percentile of municipalities in photovoltaic potential, it is considered exposed to potential renewable energy. My main specification is the 75th percentile, though I use the 60th, 70th, 80th, and 90th percentiles for robustness.

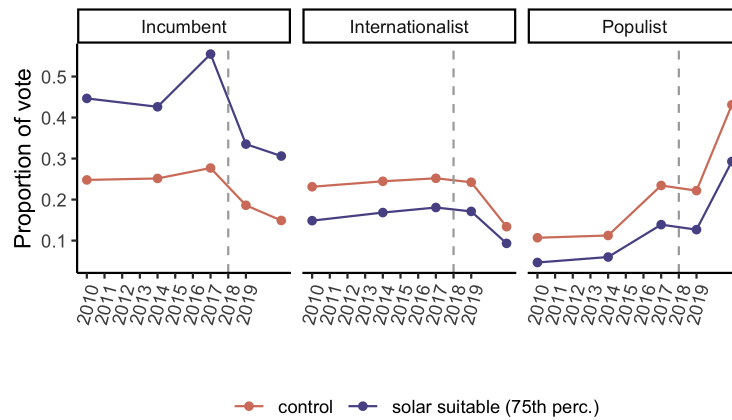


Figure 7: *Difference-in-differences for solar-suitable locations*: Vote share by party in polling stations with high capacity for solar energy.

Table 2 depicts full results for the difference-in-differences specifications for different par-

	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
	Intl.	Pop.	Inc.	Intl.	Pop.	Inc.	Intl.	Pop.	Inc.
Solar	−0.08 (0.04)	−0.08** (0.02)	0.20* (0.08)	−0.20*** (0.01)	−0.08*** (0.01)	0.15 (0.02)	0.31 (0.55)	0.02 (0.96)	1.11 (0.79)
Post-2018	−0.06*** (0.01)	0.15*** (0.01)	−0.10*** (0.01)	−0.11*** (0.01)	0.31*** (0.02)	−0.09*** (0.02)	−0.03 (0.06)	0.19 (0.10)	0.06 (0.10)
Solar*	0.02 (0.02)	−0.05* (0.02)	−0.06 (0.03)	0.02 (0.01)	−0.04* (0.02)	−0.06 (0.03)	0.03 (0.02)	−0.05* (0.02)	−0.06 (0.04)
Post-2018									
R <sup>2</sup>	0.08	0.20	0.19	0.89	0.89	0.88	0.90	0.89	0.88
Num. obs.	3193	3193	3193	3193	3193	3193	3193	3193	3193
N Clusters	38	38	38	38	38	38	38	38	38

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

Table 2: *Suitability of location for renewable energy*: Difference-in-differences models estimating effect of suitability of location for solar plants on vote share for different parties. Dependent variable is percent vote share for a given party. Robust standard errors clustered by municipality.

ties. Models 1-3 show the raw results, 4-6 include two-way fixed effects, and 7-9 add in municipal covariates. Across all models, the internationalist party sees a statistically significant increase in vote share equivalent to two to three percentage points. The populist party’s vote share decreases by two to three percentage points, but the results are not meaningfully distinct from zero. In contrast, the results for the incumbent party are inconclusive and fluctuate in sign and magnitude between models.

I adjust for the inconsistent parallel trends using the synthetic difference-in-differences model. Under this model, seen in Figure 8, the incumbent party’s support drops by five percentage points ( $SE = 0.008$ ) while LV’s drops by one percentage point ( $SE = 0.006$ ) in municipalities in the 80th percentile of photovoltaic potential. In contrast, the internationalist party’s increases by two percentage points ( $SE = 0.005$ ). These results are largely consistent with the original difference-in-differences specification.



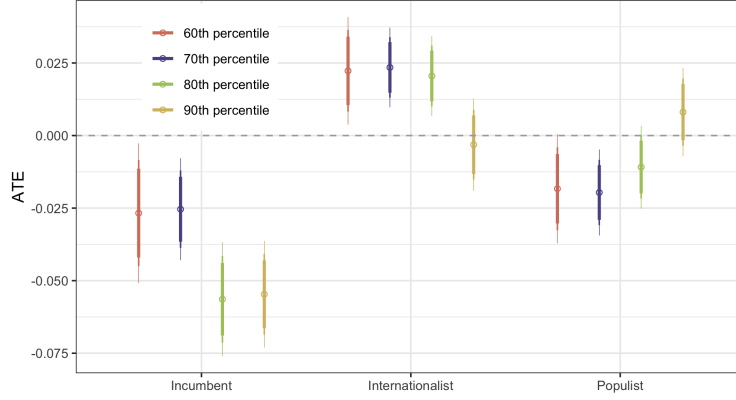


Figure 8: *Potential locations of renewable energy synthetic difference-in-differences*

Table 3: Vignette treatments and text

Receive aid	Receive and withdraw aid	No information
Now imagine that the European Bank for Reconstruction and Development (EBRD) has committed to support a large natural gas production plant in Kosovo. Now please answer a few questions about your thoughts on Kosovo politics.	Now imagine that the European Bank for Reconstruction and Development (EBRD) has committed to support a large natural gas production plant in Kosovo. Years after this commitment, EBRD withdraws its funds for the power plant. Now please answer a few questions about your thoughts on Kosovo politics.	Now please answer a few questions about your thoughts on Kosovo politics.

## 4.2 Experimental evidence

I ran a 1500 person survey in Kosovo with a local firm, Riinvest, using computer-assisted personalized interviews (CAPI) in March 2023. After a battery of covariates, respondents were randomly assigned with equal probability to one of three conditions: *no information*, *receive aid*, and *receive and withdraw aid*. Table 3 displays the text of each treatment. The respondents then answered questions about political and economic outcomes.

Aid and aid withdrawal affected respondents' perceptions of national economic trajec-

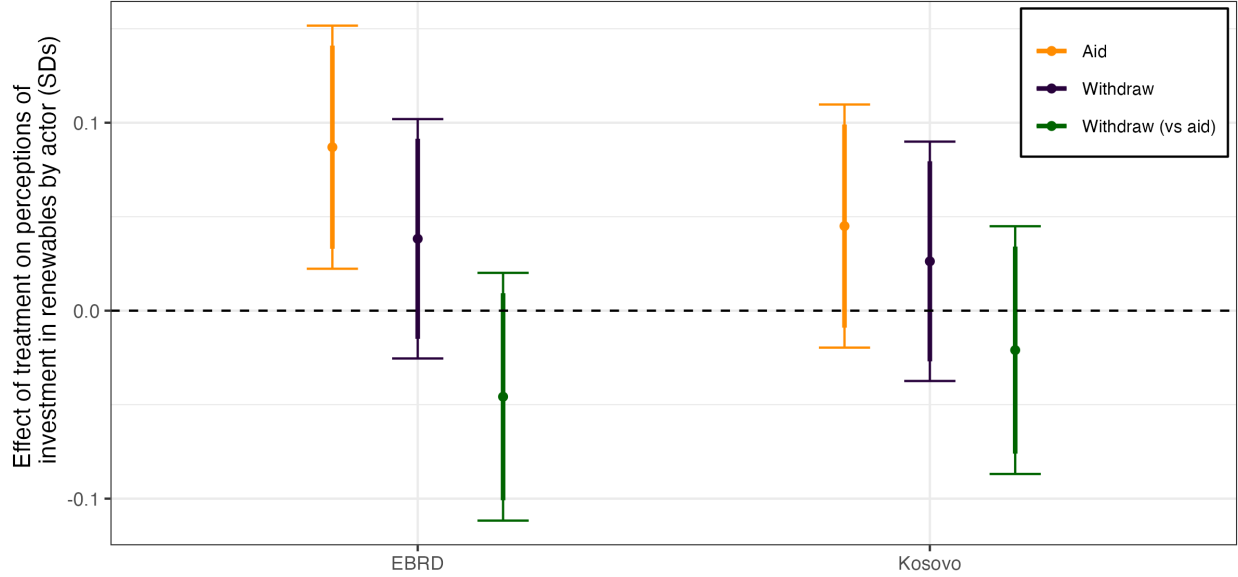


Figure 9: *Effect of treatment on perceptions of renewable investment*: Average treatment effects of information about receiving and withdrawing aid on perceptions of future investment in renewable energy by the EBRD and by the Kosovo government. Orange represents the aid treatment (compared to no information), dark blue the withdrawal (compared to no information), and dark green the effect of withdrawal relative to aid as a baseline. Regressions specified with OLS, robust standard errors, and basic covariates (gender, age, income, education, employment status).

tories. Figure 9 shows the effect of treatment on respondents' expectations of future energy investment. Information about aid for fossil fuels increased perceptions that the EBRD would invest in renewable energy. This counter-intuitive finding suggests that, broadly, respondents view international investment in energy as fungible across sectors. Respondents do not see aid as spurring future investment in renewables from the Kosovar government.

Figure 10 confirms this relationship: most respondents see fossil fuel aid as increasing growth in both fossil fuel *and* renewable sectors. However, for respondents in mining municipalities, effects are in line with theoretical expectations. Fossil fuel aid is perceived to increase the number of jobs in the fossil fuel sector and decrease jobs in renewables. The concentration of effects in respondents who have been directly exposed to international investment in, and withdrawal from, fossil fuel plants suggests that the salience of the issue

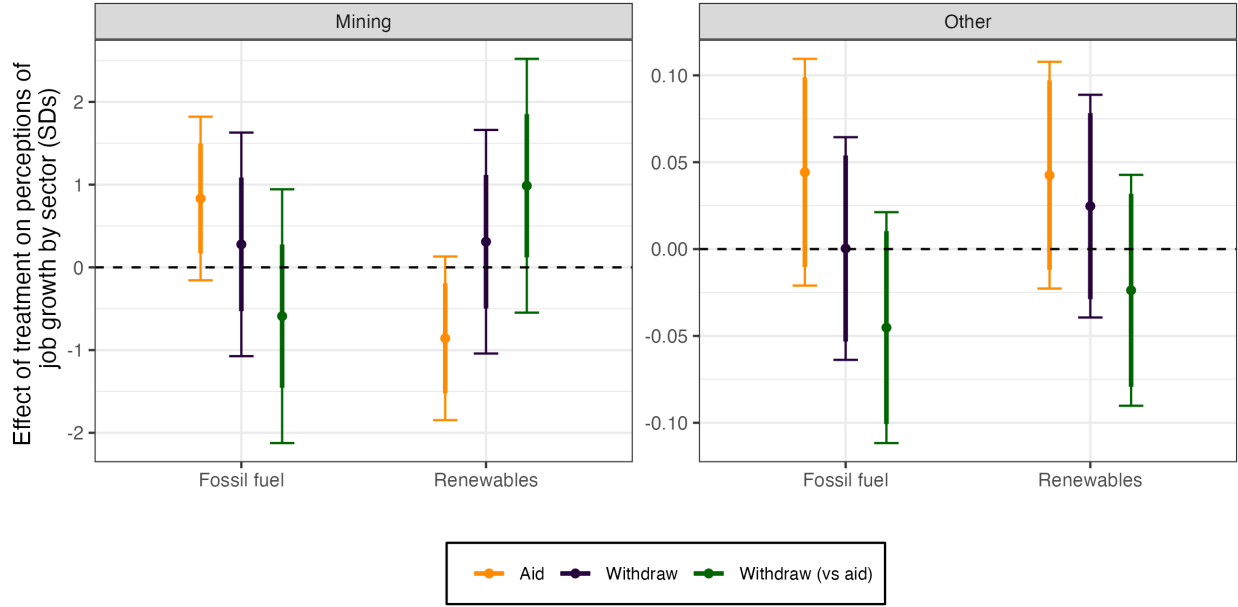


Figure 10: *Effect of treatment on job growth perspectives by location:* Average treatment effects of information about receiving and withdrawing aid on perceptions of future job growth in renewable and fossil fuel sectors. Respondents are split into two groups by residence in a municipality with coal mines or not. The left panel reports point estimates for perceptions of job growth amongst mining municipalities; the right all other municipalities. Orange represents the aid treatment (compared to no information), dark blue the withdrawal (compared to no information), and dark green the effect of withdrawal relative to aid as a baseline. Regressions specified with OLS, robust standard errors, and basic covariates (gender, age, income, education, employment status).

conditions responses to new information.

Finally, Figure 11 shows the proportion of respondents concerned about climate change by treatment condition. Information about aid and its withdrawal do not move perceptions of climate as a priority for the Kosovar government. This may be a ceiling effect as almost 40% of respondents across all treatment conditions rate climate as a ten on the government's priority scale. Personal climate concerns, however, do seem to be affected by information about withdrawal of support for fossil fuels. Withdrawal increases concern by 1.4 standard deviations ( $p = 0.14$ ). These results are in line with a theory of international signaling of the severity of the climate crisis by withdrawing aid from fossil fuels.

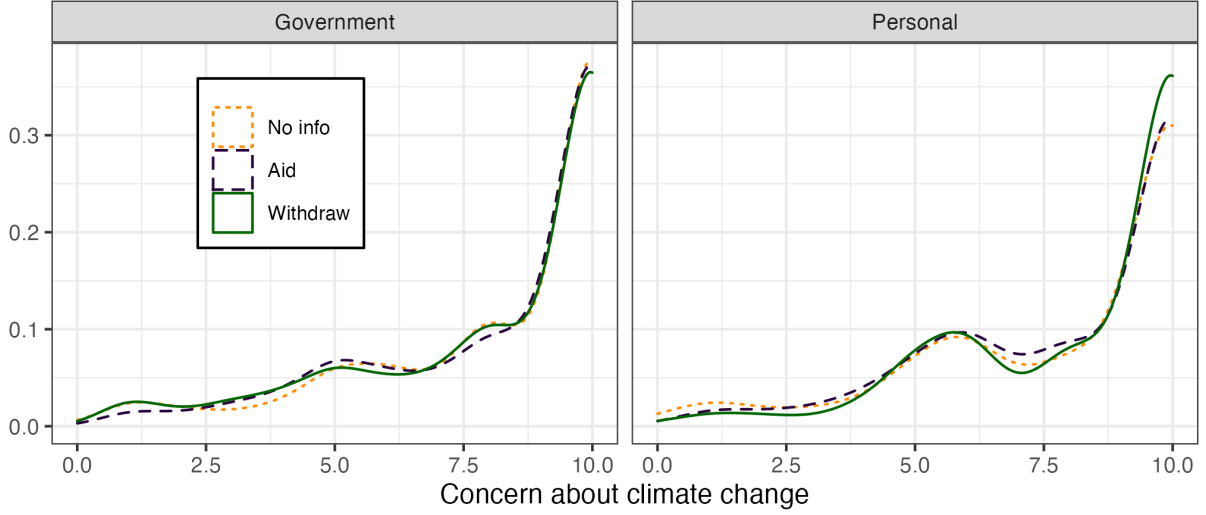


Figure 11: *Concern about climate change*: Density plots of respondents' personal concern about climate change and expectations of government concern by treatment condition. Orange represents no information, dark blue aid, dark green withdrawal. Withdrawal increases concern about climate change

## 5 Discussion and Conclusion

Aid withdrawal events, and recipient country parties' subsequent responses, affect political support for parties in areas exposed to the withdrawal. In the case of Kosovo, localities that expected to benefit from the coal-powered plant subsequently supported the party that aimed to continue the plant despite lack of international support. These areas decreased their support for internationally affiliated parties that would not continue construction of the plant. Parties with countervailing affiliations—both anti-internationalist and anti-proposed project—see no change in vote share in exposed localities. The findings here are consistent with the theoretical claims that party vote share is a function of the expected distributional effect of aid withdrawal on exposed communities.

Evidence from renewable energy plants supports the idea of distributional benefits as well as costs to aid withdrawal. Voters in the vicinity of solar and wind energy production increase their support for the party most tied to the international community when the World Bank

withdraws funding for the coal plant. The party that vowed to continue the plant receives a lower vote share amongst polling stations close to renewable energy plants. In parallel with the results for the anti-internationalist, anti-coal power plant party in the main model, this party sees little to no reduction in vote share. The voting patterns of voters near renewables directly contrast with those of voters close to the proposed power plant.

Together, this evidence suggests that aid withdrawal may be a powerful tool for donors to affect policy in recipient countries, but that its effects may generate political costs for international allies in the donor country. The distributional consequences of aid withdrawal can shape the contours of post-withdrawal politics in ways that may be favorable or unfavorable to donor priorities. Aid withdrawal as a tool of policy change can effectively reverse donor commitments to projects no longer aligned with donor priorities, but may have longer-term costs on donor influence in a given state.

This study also has clear implications for international involvement in mitigating climate change in developing countries. International commitment to climate change mitigation and adaptation is reshaping international institutions, and foreign aid, both bilateral and multilateral, follows these same trends (???). In the energy sector, donors and recipients balance the humanitarian and development concerns of recipients in coal-, oil-, and natural gas-abundant nations against the environmental costs of burning fossil fuels. Environmental groups have successfully instituted policies for development agencies to evaluate the environmental risks of development projects, requiring implementors to assess the potential pollution or agricultural degradation that may result from implementing projects.

However, the development projects negotiated when the energy-environment balance was skewed towards fossil fuels did not disappear with the emergence of new environmental standards. While projects going forward will start from the premise of renewables being both more cost-effective and climate-friendly than fossil fuels, international aid agencies are faced with the prospect of either moving forward with a number of ongoing or planned

fossil fuel-intensive projects against their internal protocols, altering the projects to be more climate-friendly, or dropping the projects altogether. International aid organizations choose between the direct environmental costs of continuing less-climate-sensitive aid programs and undermining their own bargaining power in recipient contexts in which internationals withdraw or alter the composition of benefits for planned or ongoing aid projects.

This study also demonstrates that the international community was close to not achieving its objective in preventing the construction of the power plant. The incumbent party campaigned on a promise to continue with the project despite the environmental, and now fiscal, costs of the project. In localities close to the proposed project, the incumbents saw an increase in vote share despite being in power when international support for the project was withdrawn. These results are consistent with voters prioritizing employment opportunities over climate costs (??).

This dynamic points to the limits of international coercion on climate change mitigation and adaptation in developing contexts. While foreign aid can be a tool for environmental progress, new commitments to climate-friendly policies may fail to take into consideration the costs of transitioning from fossil fuel projects. International aid agencies must decide between poisoning the well literally with continued support for polluting projects and metaphorically by losing domestic political support for themselves and their allies in recipient polities.

## A Bandwidths

	Intl	Pop	Inc	Intl	Pop	Inc	Intl	Pop	Inc
Close (5k)	−0.06 (0.02)	−0.12 (0.06)	−0.12 (0.06)	−0.06* (0.00)	0.21* (0.01)	0.11* (0.01)	−0.29 (0.11)	0.33 (0.20)	−0.06 (0.20)
Post-2019	−0.05*** (0.01)	−0.11*** (0.01)	−0.11*** (0.01)	0.02* (0.01)	0.11*** (0.01)	−0.07*** (0.02)	−0.01 (0.06)	0.15 (0.10)	0.02 (0.10)
Close (5k) *	−0.00 (0.01)	0.04 (0.01)	0.04 (0.01)	−0.02 (0.01)	0.01 (0.01)	0.02 (0.01)	−0.00 (0.01)	0.01 (0.02)	0.01 (0.02)
Poll & Year FE	-	-	-	✓	✓	✓	✓	✓	✓
Covs	-	-	-	-	-	-	✓	✓	✓
R <sup>2</sup>	0.03	0.06	0.06	0.88	0.86	0.87	0.89	0.89	0.86
Num. obs.	3904	3904	3904	3904	3904	3904	3096	3096	3096
N Clusters	38	38	38	38	38	38	37	37	37

\*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$

Table 4: 5 km bandwidth

	Intl	Pop	Inc	Intl	Pop	Inc	Intl	Pop	Inc
Close (10k)	0.02 (0.08)	-0.10 (0.05)	-0.10 (0.05)	0.27** (0.03)	0.15** (0.02)	-0.06 (0.02)	0.31 (0.24)	-0.04 (0.41)	0.27 (0.28)
Post-2019	-0.05*** (0.01)	-0.11*** (0.01)	-0.11*** (0.01)	0.03* (0.01)	0.11*** (0.01)	-0.07*** (0.02)	-0.01 (0.06)	0.15 (0.10)	-0.00 (0.10)
Close (10k) *	-0.01 (0.04)	0.06* (0.02)	0.06* (0.02)	-0.03 (0.02)	0.02 (0.02)	0.05 (0.02)	-0.01 (0.02)	0.00 (0.01)	0.04 (0.02)
Poll & Year FE	-	-	-	✓	✓	✓	✓	✓	✓
Covs	-	-	-	-	-	-	✓	✓	✓
R <sup>2</sup>	0.03	0.07	0.07	0.88	0.86	0.87	0.89	0.89	0.86
Num. obs.	3904	3904	3904	3904	3904	3904	3096	3096	3096
N Clusters	38	38	38	38	38	38	37	37	37

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

Table 5: 10 km bandwidth

	Intl	Pop	Inc	Intl	Pop	Inc	Intl	Pop	Inc
Close (20k)	0.02 (0.05)	-0.02 (0.07)	-0.02 (0.07)	-0.14*** (0.02)	-0.02 (0.02)	0.53*** (0.02)	0.56 (0.23)	0.10 (0.41)	0.37 (0.29)
Post-2019	-0.05*** (0.01)	-0.12*** (0.01)	-0.12*** (0.01)	0.03* (0.01)	0.11*** (0.01)	-0.08*** (0.02)	-0.01 (0.06)	0.15 (0.10)	-0.02 (0.11)
Close (20k) *	-0.00 (0.02)	0.06* (0.02)	0.06* (0.02)	-0.01 (0.02)	0.01 (0.02)	0.04 (0.02)	-0.01 (0.01)	0.00 (0.01)	0.05* (0.02)
Poll & Year FE	-	-	-	✓	✓	✓	✓	✓	✓
Covs	-	-	-	-	-	-	✓	✓	✓
R <sup>2</sup>	0.03	0.06	0.06	0.88	0.86	0.87	0.89	0.89	0.86
Num. obs.	3904	3904	3904	3904	3904	3904	3096	3096	3096
N Clusters	38	38	38	38	38	38	37	37	37

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

Table 6: 20 km bandwidth



## B Synthetic difference-in-differences

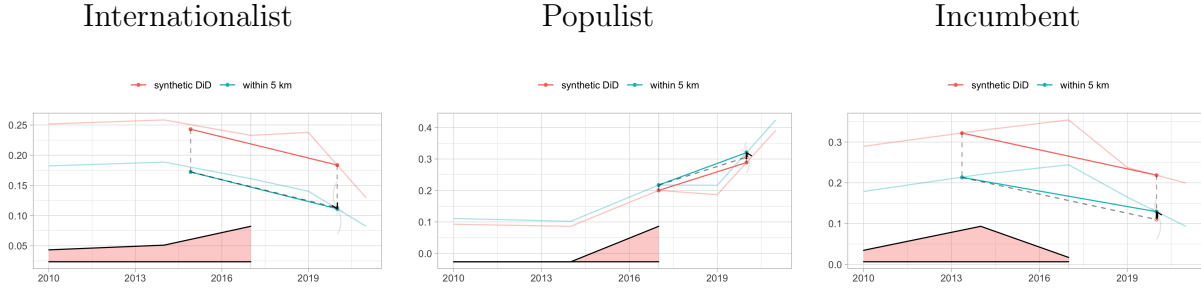


Figure 12: ‘Kosova e Re’ synthetic difference-in-differences (5k): Vote share by party using 5km bandwidth. Blue line depicts the treatment group, red the synthetic control. The shaded pink area underneath the trends shows the temporal weighting of different pre-treatment periods. More volume indicates larger weights. The dotted black line depicts the potential outcome of the treatment group if it had not been treated.

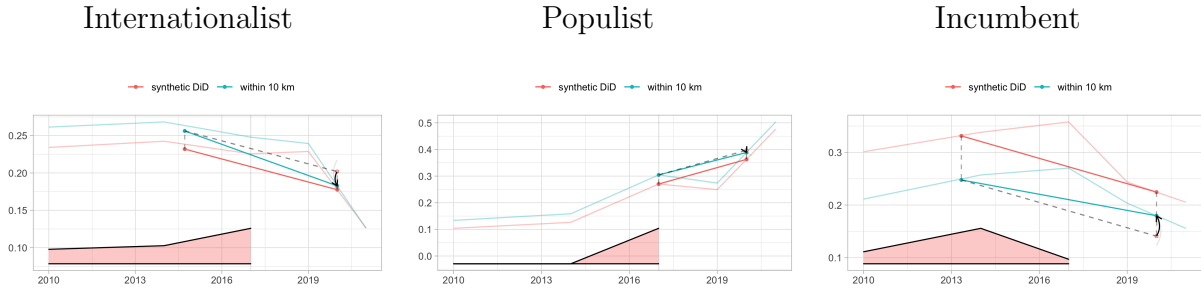


Figure 13: ‘Kosova e Re’ synthetic difference-in-differences (10k): Vote share by party using 10km bandwidth. Blue line depicts the treatment group, red the synthetic control. The shaded pink area underneath the trends shows the temporal weighting of different pre-treatment periods. More volume indicates larger weights. The dotted black line depicts the potential outcome of the treatment group if it had not been treated.

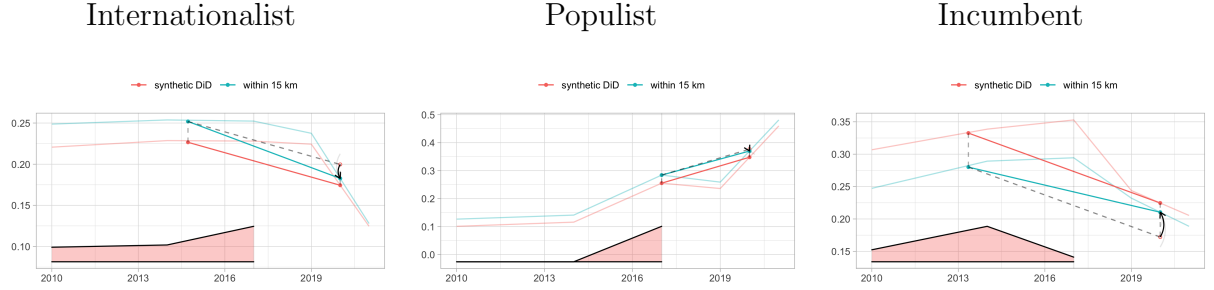


Figure 14: ‘Kosova e Re’ synthetic difference-in-differences (15k): Vote share by party using 15km bandwidth. Blue line depicts the treatment group, red the synthetic control. The shaded pink area underneath the trends shows the temporal weighting of different pre-treatment periods. More volume indicates larger weights. The dotted black line depicts the potential outcome of the treatment group if it had not been treated.

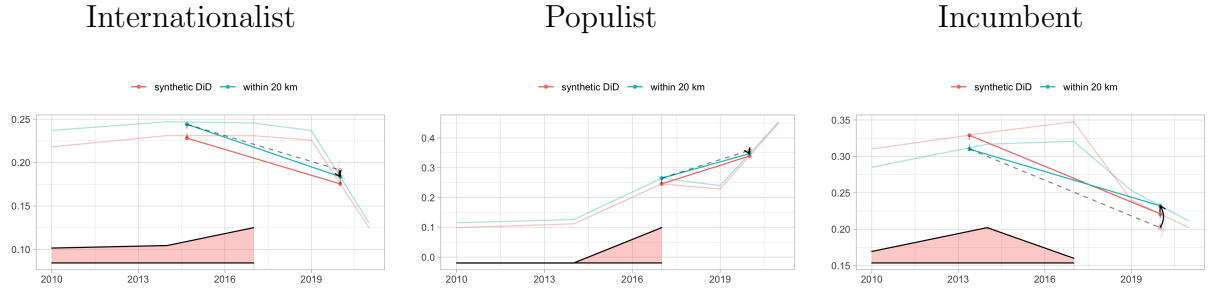


Figure 15: ‘Kosova e Re’ synthetic difference-in-differences (20k): Vote share by party using 20km bandwidth. Blue line depicts the treatment group, red the synthetic control. The shaded pink area underneath the trends shows the temporal weighting of different pre-treatment periods. More volume indicates larger weights. The dotted black line depicts the potential outcome of the treatment group if it had not been treated.

## B.1 Existing renewable energy

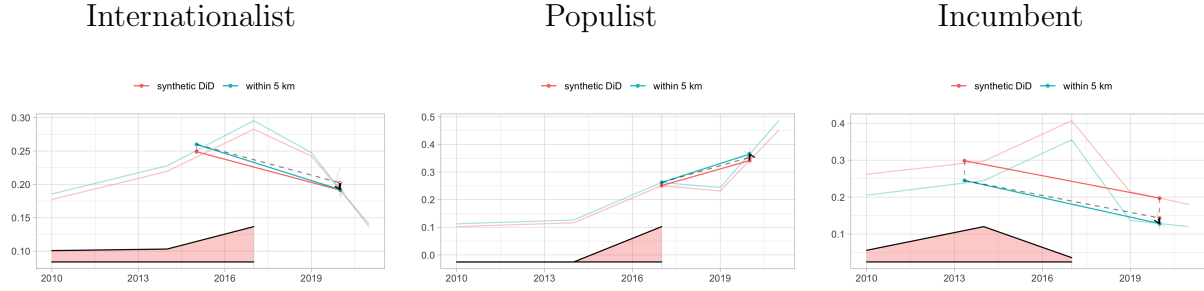


Figure 16: *Renewable synthetic difference-in-differences (5k)*: Vote share by party using 5km bandwidth. Blue line depicts the treatment group, red the synthetic control. The shaded pink area underneath the trends shows the temporal weighting of different pre-treatment periods. More volume indicates larger weights. The dotted black line depicts the potential outcome of the treatment group if it had not been treated.

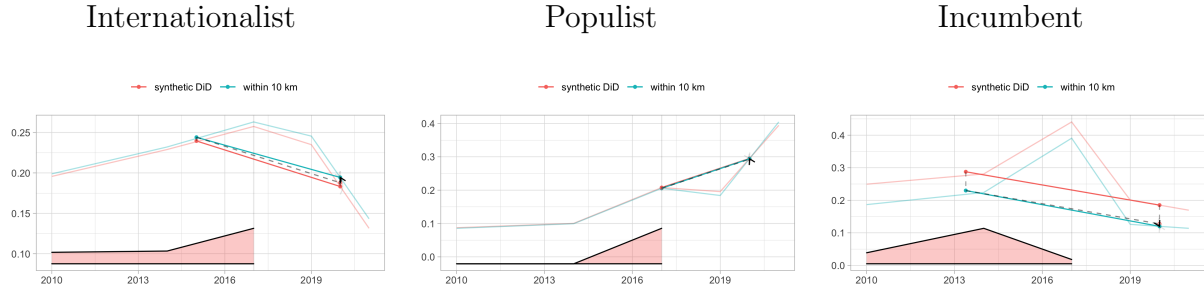


Figure 17: *Renewable synthetic difference-in-differences (10k)*: Vote share by party using 10km bandwidth. Blue line depicts the treatment group, red the synthetic control. The shaded pink area underneath the trends shows the temporal weighting of different pre-treatment periods. More volume indicates larger weights. The dotted black line depicts the potential outcome of the treatment group if it had not been treated.

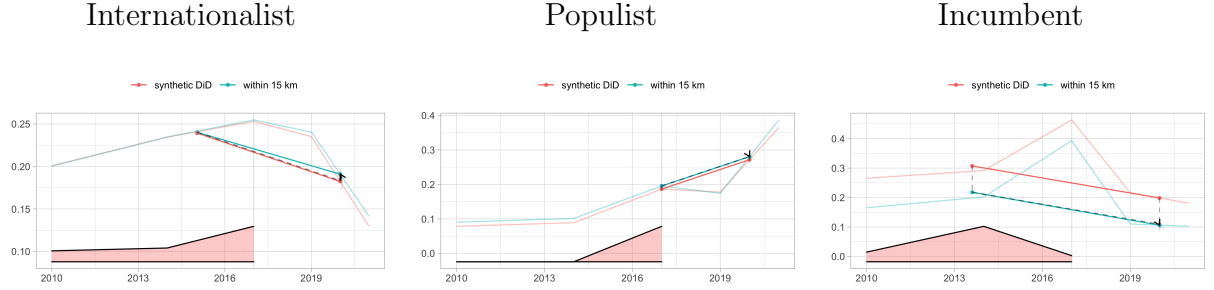


Figure 18: *Renewable synthetic difference-in-differences (15k)*: Vote share by party using 15km bandwidth. Blue line depicts the treatment group, red the synthetic control. The shaded pink area underneath the trends shows the temporal weighting of different pre-treatment periods. More volume indicates larger weights. The dotted black line depicts the potential outcome of the treatment group if it had not been treated.

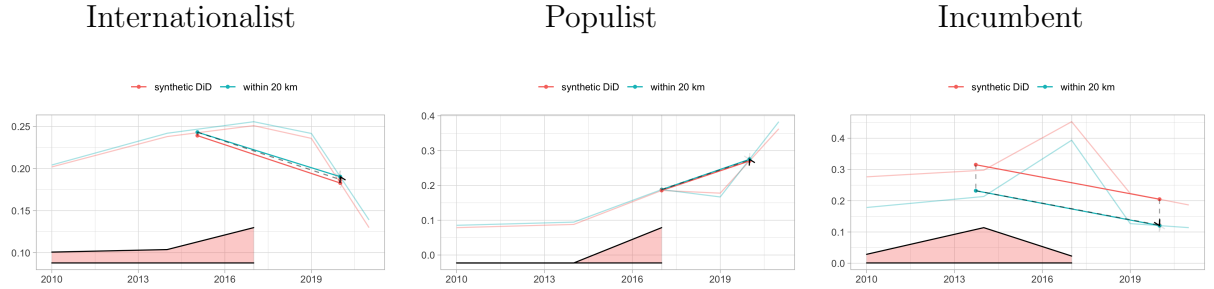


Figure 19: *Renewable synthetic difference-in-differences (20k)*: Vote share by party using 20km bandwidth. Blue line depicts the treatment group, red the synthetic control. The shaded pink area underneath the trends shows the temporal weighting of different pre-treatment periods. More volume indicates larger weights. The dotted black line depicts the potential outcome of the treatment group if it had not been treated.

Company	Renewable	Municipality	City	Year im- plemented	Installed capac- ity (kilowatts)
LED Light Tech- nology Kosova	Solar	Klina	Gjugjevik	2015	102.00
ONIX Spa	Solar	Istog	Banja e Pejes	2016	500.00
Birra Peha	Solar	Gjakova	Madanaj - Ry- paj, ZK Kusar	2018	3000.00
Frigo Food Kosova	Solar	Gjakova	Madanaj - Ry- paj, ZK Kusar	2018.00	3000.00
Eling	Solar	Peja	Llabjan	2019	480.00
Solar Green En- ergy	Solar	Kamenica	Novoselle	2019	3000.00
Kitka	Wind	Kamenica	Policka	2019	32,400.00

Table 7: Renewable energy projects in Kosovo (active in 2019)

## C Renewable energy by plant

Figures 20 through 26 depict different plants (in reverse chronological order)—the top panel of each figure shows the synthetic difference-in-differences results for the individual plant at different bandwidths while the bottom panel shows the raw difference-in-difference data at the 15km bandwidth. Table 7 reports the information on each plant. Table ?? shows pre- and post-electoral coalitions for each election. PDK is the incumbent in 2019, LDK the internationalist party, and LV the populist party. Table ?? categorizes each party by their international orientation and response to the aid withdrawal event.

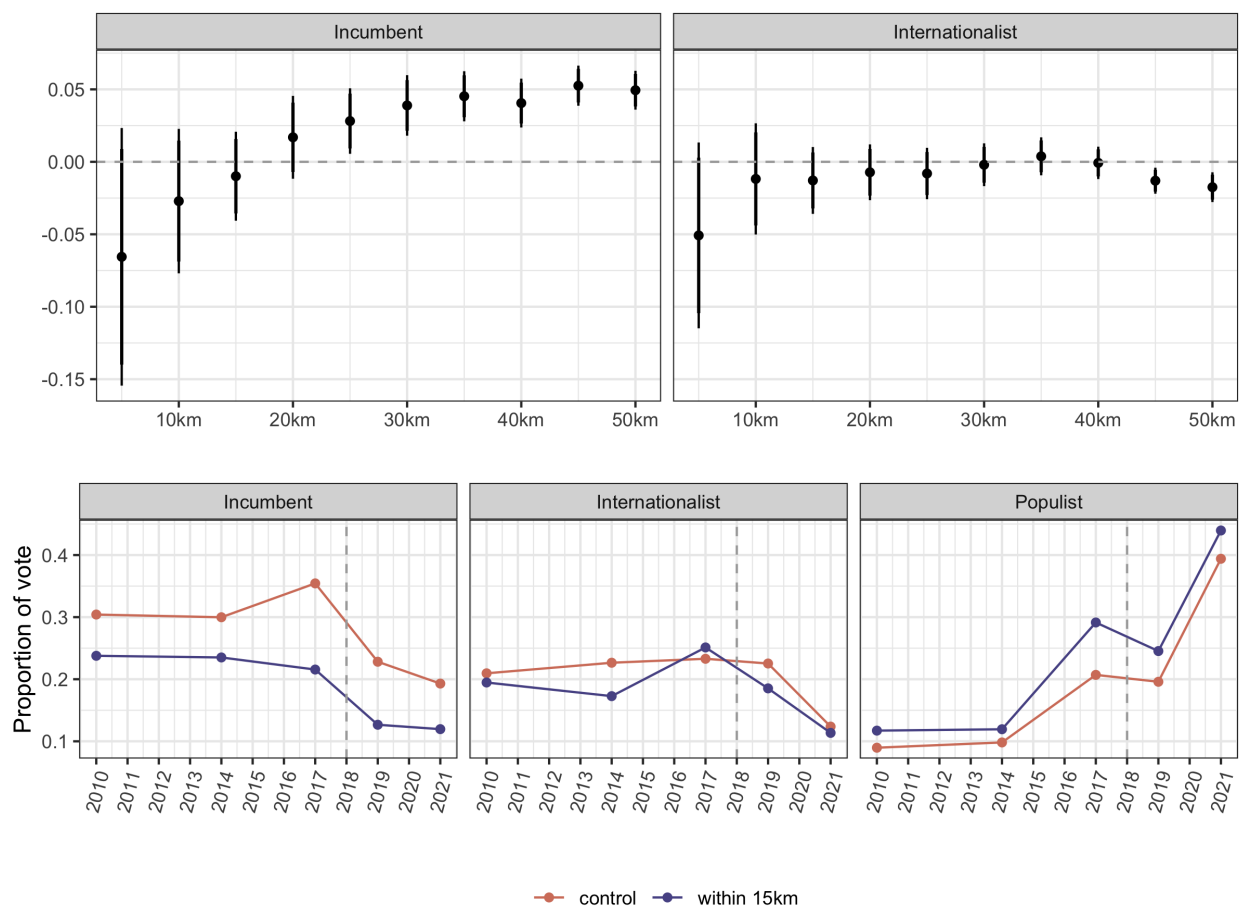


Figure 20: Kitka (2019, wind)  
 Incumbent: current incumbent  
 Location: Kamenica  
 Local incumbent in 2018: populist  
 Local incumbent in 2019: populist

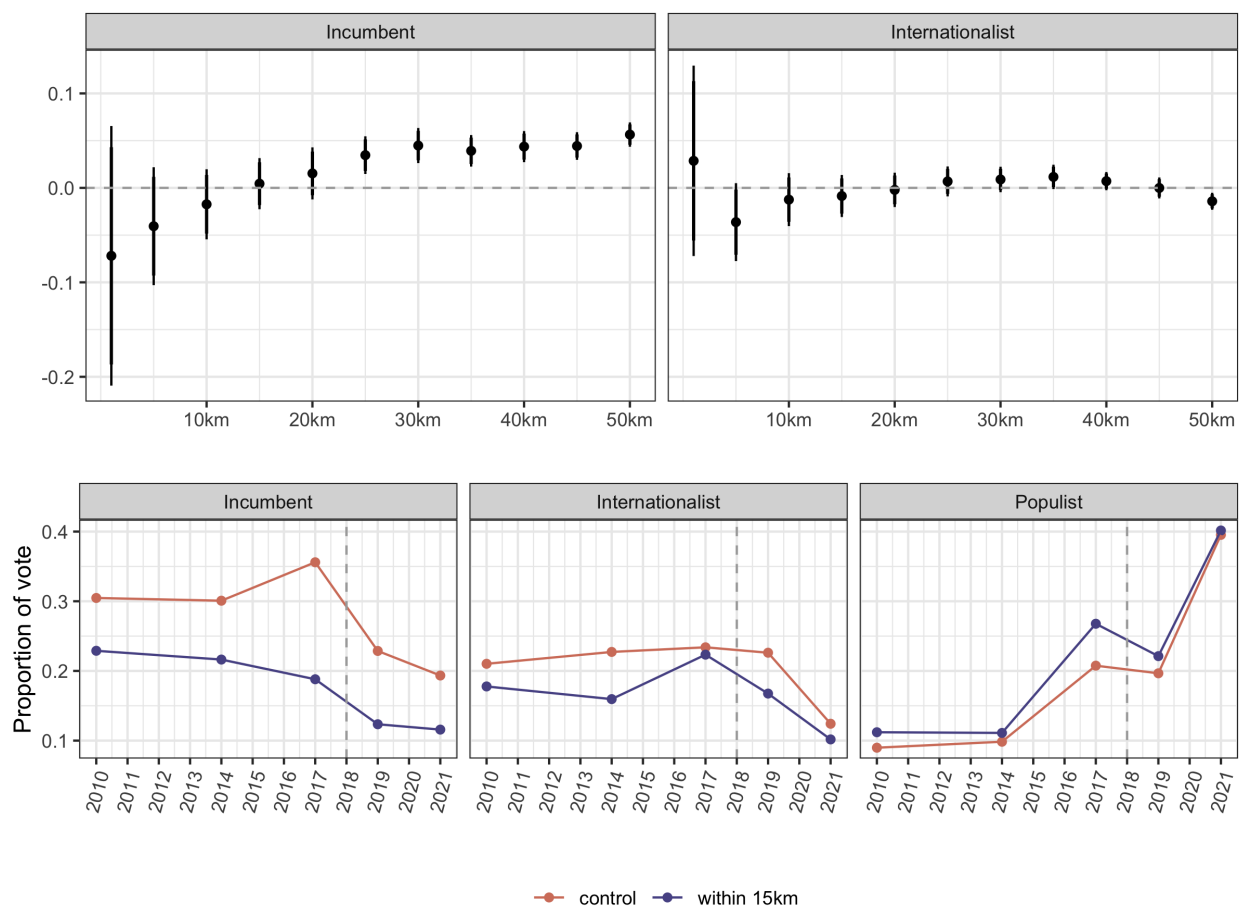


Figure 21: Solar Green Energy (2019, solar)

Incumbent: current incumbent

Location: Kamenica

Local incumbent in 2018: populist

Local incumbent in 2019: populist

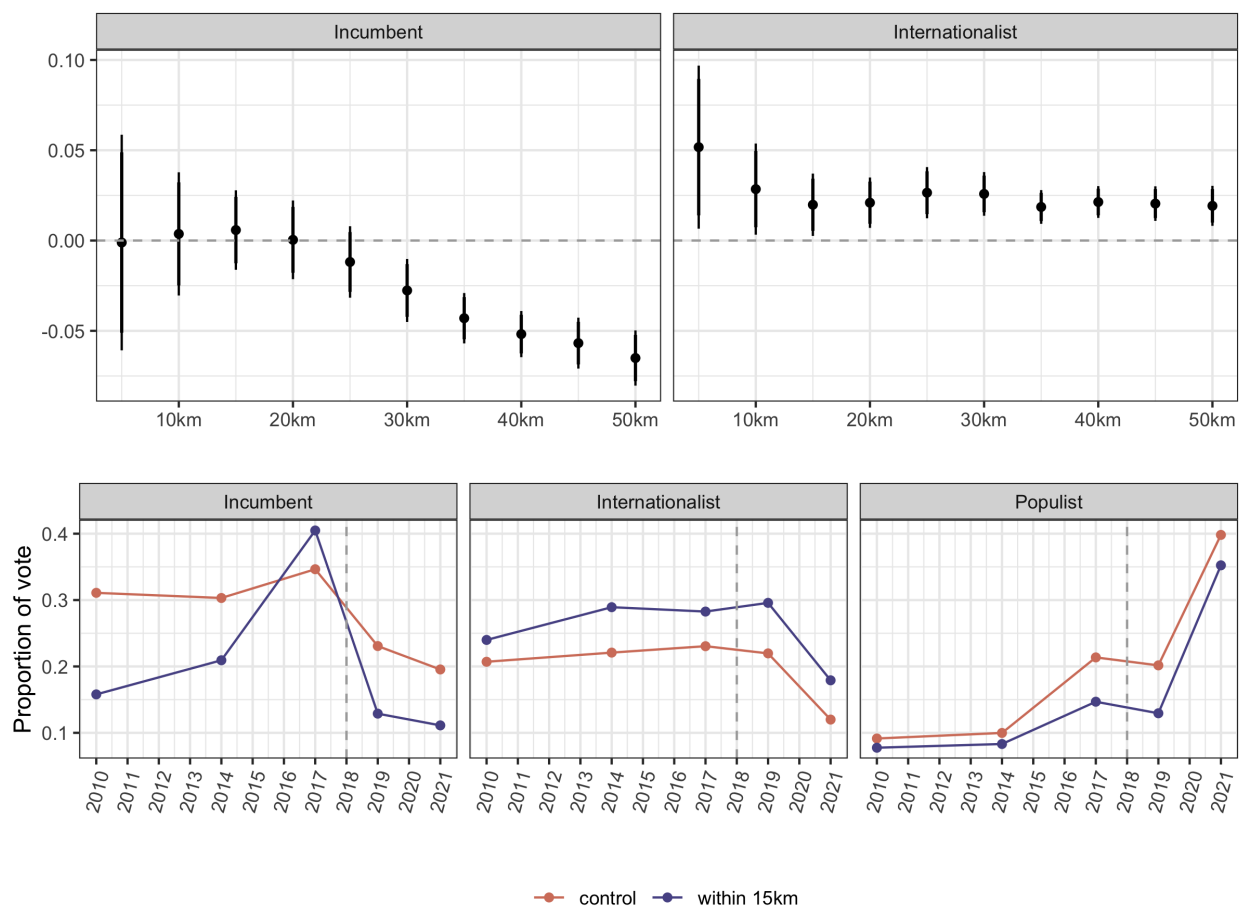


Figure 22: Eling (2019, solar)  
Incumbent: current incumbent  
Location: Peja  
Local incumbent in 2018: internationalist  
Local incumbent in 2019: internationalist



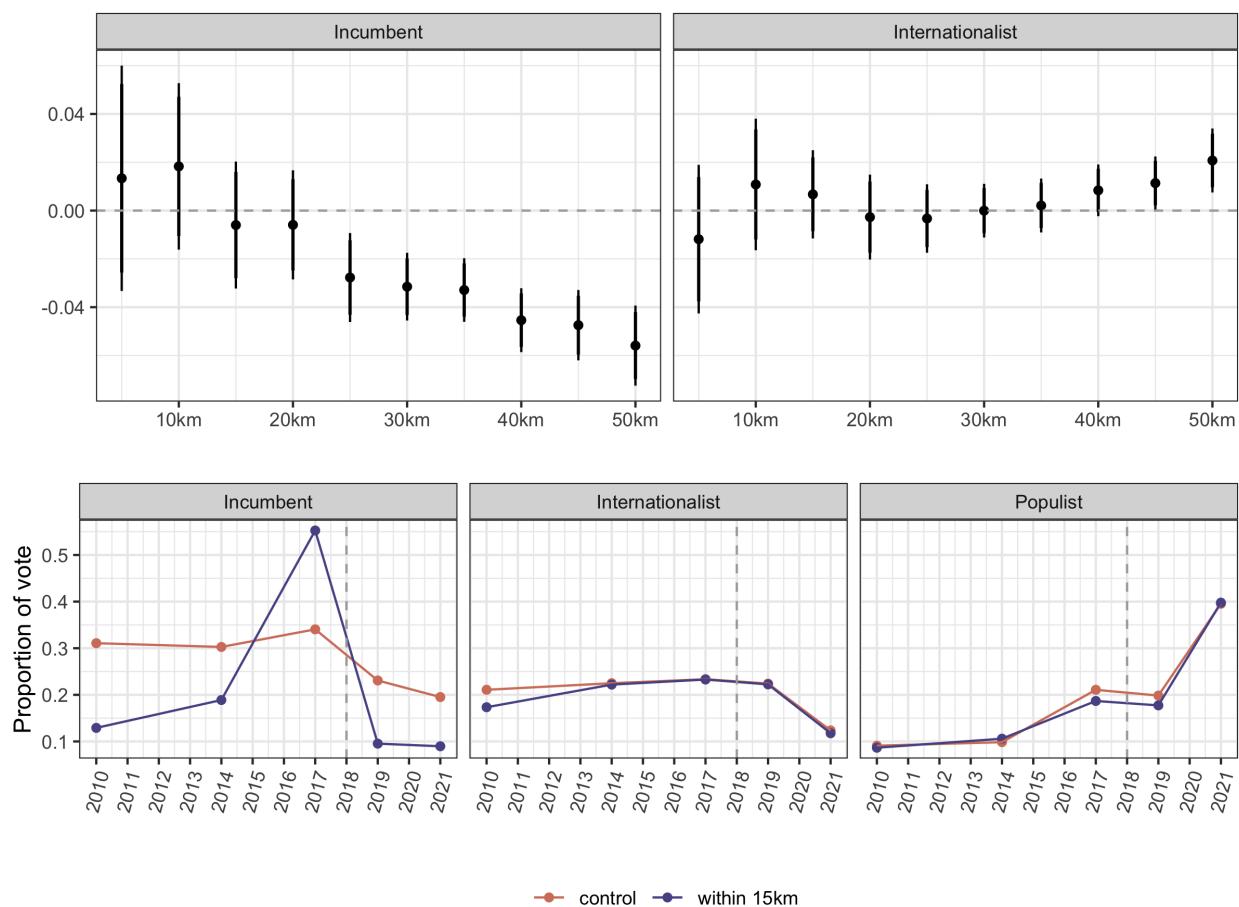


Figure 23: Frigo Food Kosova (2018, solar)

Incumbent: current incumbent

Location: Gjakova

Local incumbent in 2018: party affiliated with current incumbent

Local incumbent in 2019: party affiliated with current incumbent

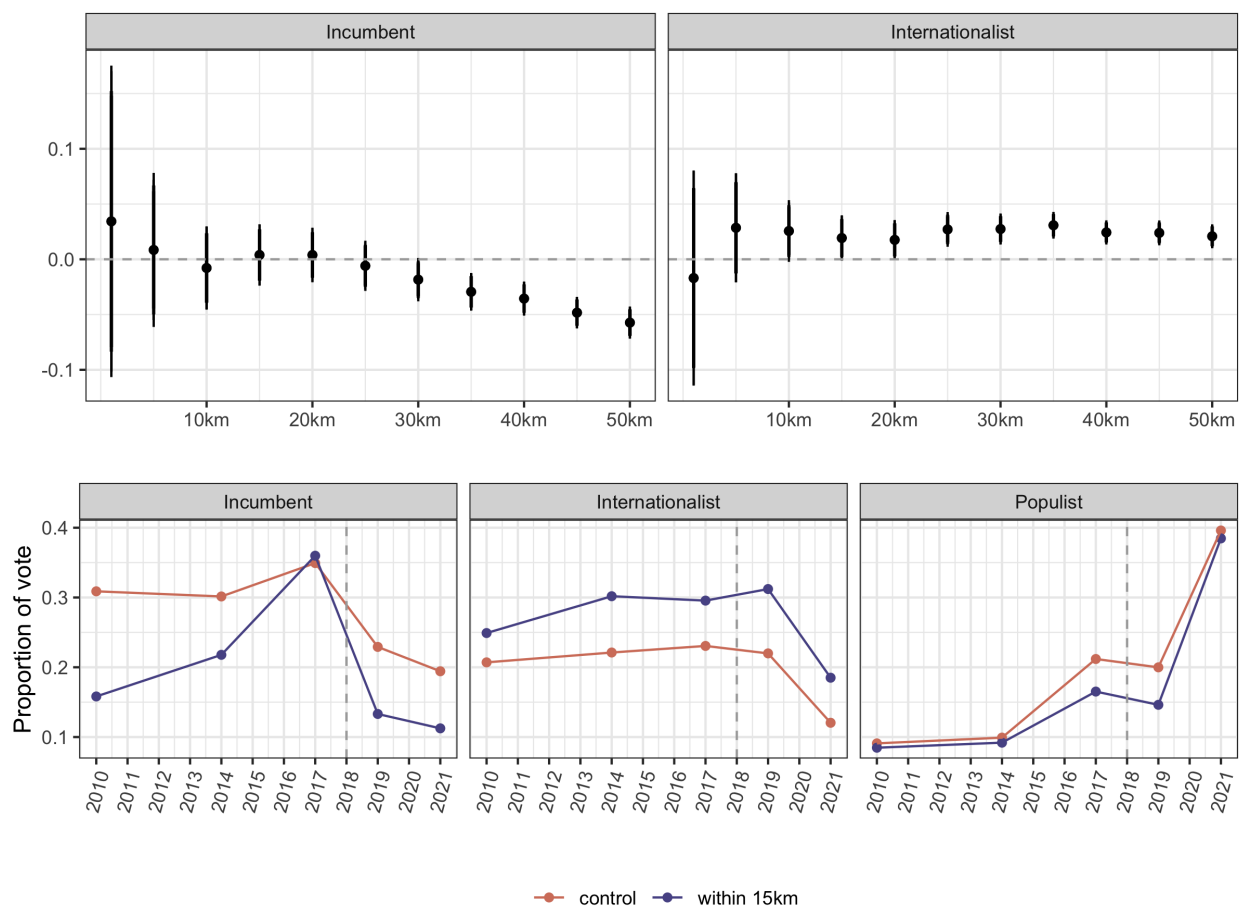


Figure 24: ONIX Spa (2016, solar)  
 Incumbent in 2016: current incumbent, internationalist  
 Location: Istog  
 Local incumbent in 2016: internationalist  
 Local incumbent in 2019: internationalist

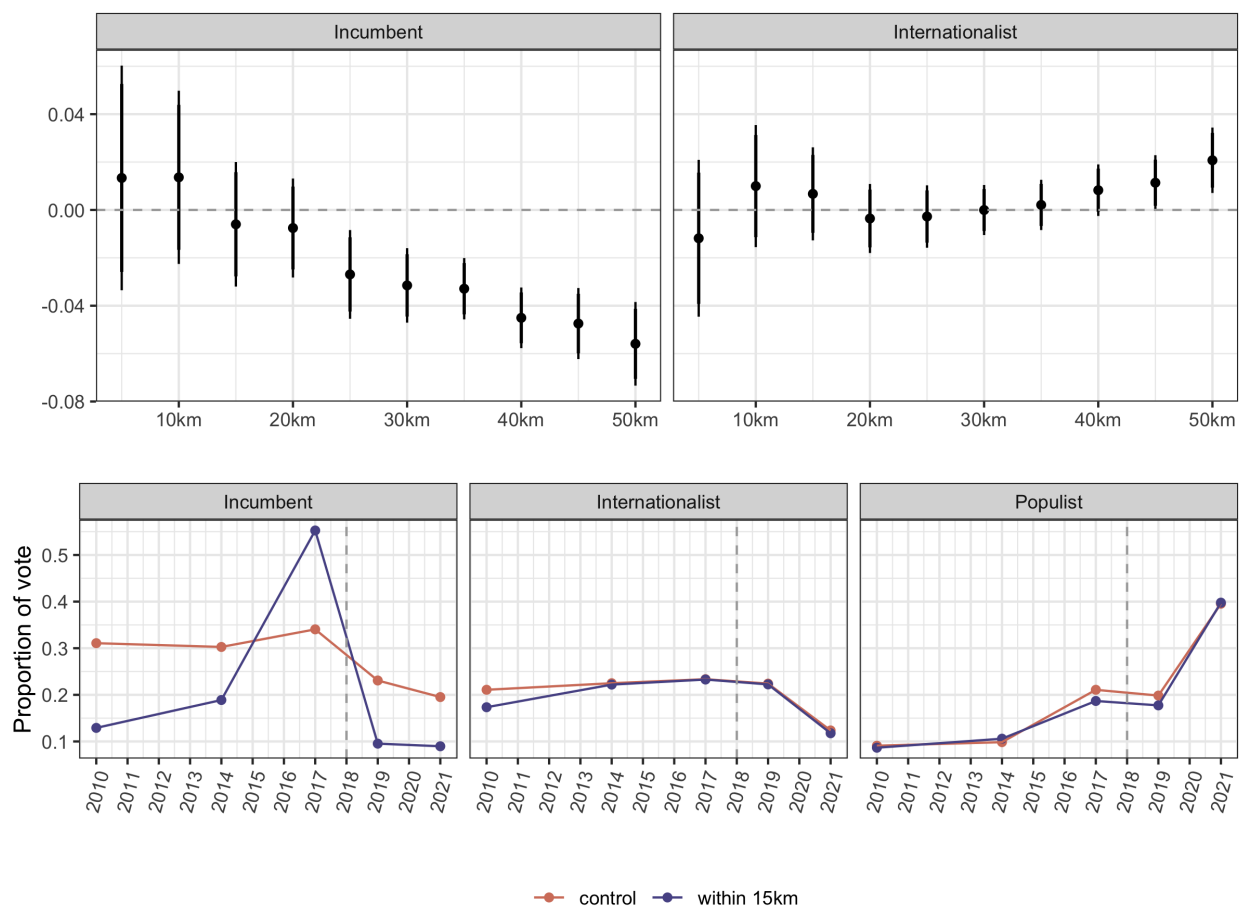


Figure 25: Birra Peja (2016, solar)

Incumbent in 2016: current incumbent, internationalist

Location: Gjakova

Local incumbent in 2016: party affiliated with current incumbent

Local incumbent in 2019: party affiliated with current incumbent

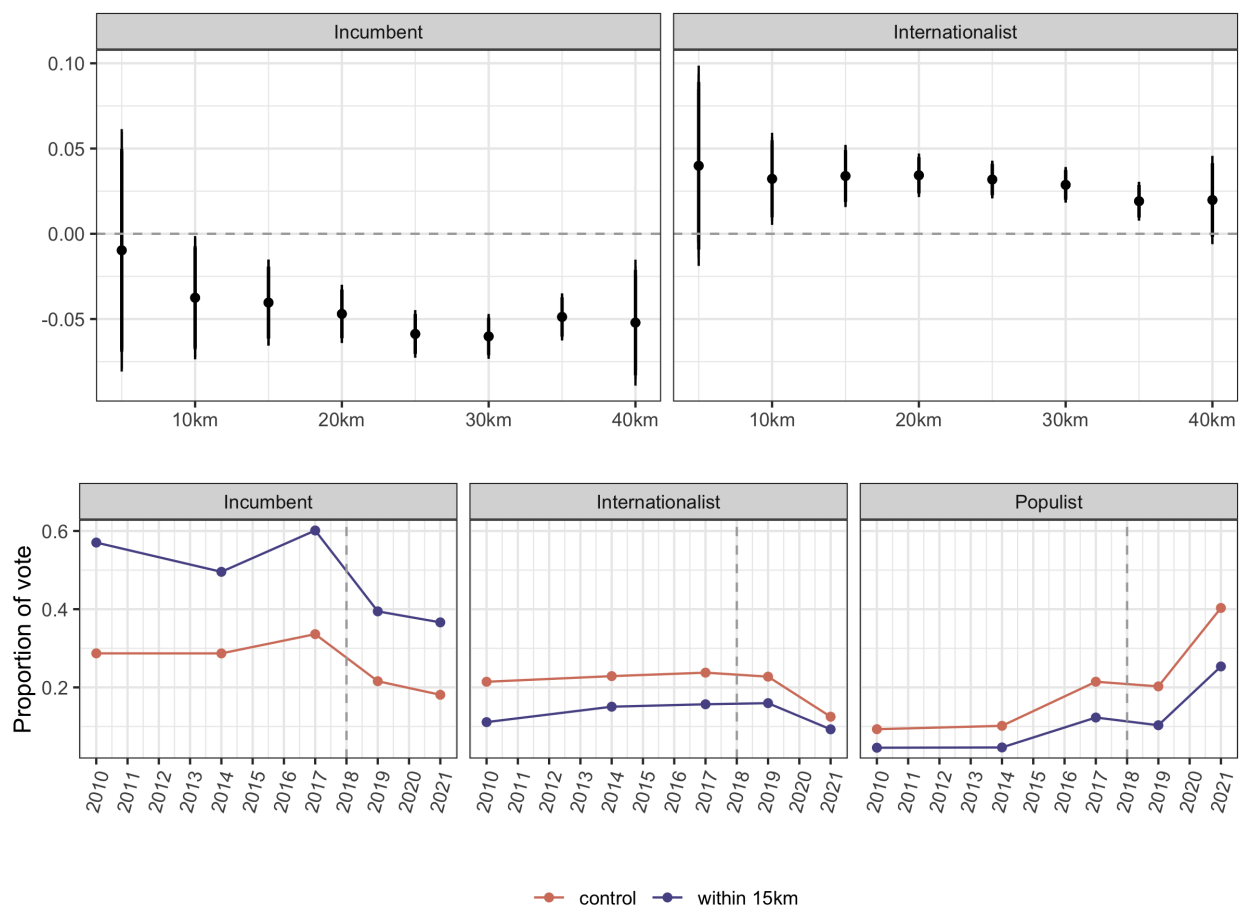


Figure 26: LED Light Technology Kosova (2015, solar)

Incumbent in 2015: current incumbent, internationalist

Location: Klina

Local incumbent in 2015: current incumbent

Local incumbent in 2019: party affiliated with current incumbent

	No info (N=492)		Aid (N=508)		Withdraw (N=537)	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
age	2020.9	816.3	2036.3	919.9	2038.7	892.0
gender	1.5	0.5	1.5	0.5	1.5	0.5
ethnicity	1.3	1.6	1.3	1.4	1.2	1.4
income	3.5	1.2	3.5	1.2	3.5	1.2
education	4.8	1.6	4.8	1.7	4.9	1.7

Figure 27: Covariate balance

## D Survey

### D.1 Summary statistics

	Unique (#)	Missing (%)	Mean	SD	Min	Median	Max
age	57	0	33.1	11.6	17.0	30.0	90.0
gender	4	0	1.5	0.5	1.0	1.0	4.0
ethnicity	9	0	1.3	1.5	1.0	1.0	10.0
income	6	0	3.5	1.2	1.0	3.0	6.0
education	8	0	4.8	1.7	1.0	5.0	8.0
employed	2	0	1.4	0.5	1.0	1.0	2.0

Table 8: Covariate distribution

## D.2 Consent script

You are invited to participate in a research study that will take approximately 15 minutes to complete. You will be asked to answer some questions about yourself and your preferences. There is no known or anticipated risk to you for participating in it. Participation in this study is entirely voluntary. You are free to decline participation, terminate it at any time for any reason, or refuse to answer any individual question without penalty or loss of compensation. The researcher will not know your name and no identifying information will be associated in any way with your survey responses. Therefore, the survey is anonymous. If at any time you have questions or concerns about the study or your rights or well-being as a research subject, contact Cleo O'Brien-Udry at [cleo.obrien-udry@yale.edu](mailto:cleo.obrien-udry@yale.edu). If you would like to speak to someone other than the researchers to discuss problems or concerns, to discuss situations where a member of the research team is unavailable or to discuss your rights as a research participant, you can contact the Committee of Yale University Human Subjects, 203-785-4688, [human.subjects@yale.edu](mailto:human.subjects@yale.edu). Additional information is available at <https://your.yale.edu/research-support/human-research/research-participants/rights-research-participant>. Do you accept?

## D.3 Outcome questions

Climate priority:

- On a scale of 1-10, where 1 is not at all concerned and 10 is extremely concerned, how concerned are you about climate change?
- On a scale of 1-10, where 1 is not at all important and 10 is extremely important, how important do you think environmental protection should be for the Kosovar government?

Investment in renewables:

- How likely do you think the following actors are to invest in renewable energy in Kosovo? [EBRD, Kosovo government]

Sectoral growth:

- How do you expect the number of jobs in the following sectors in Kosovo to change over the next year? [Renewables, fossil fuel]