

# First Impressions: How Leader Changes Affect Bilateral Aid

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## Abstract

This paper investigates a new mechanism to explain politically induced changes in bilateral aid. We argue that shifts in the foreign policy alignment between a donor and a recipient country following leadership changes induce reallocation of aid. Utilizing data from the G7 and 130 developing countries between 1975 and 2012 and employing high dimensional fixed effects and control function models, we show that incoming leaders in recipient countries, which politically converge towards their current donors, receive more aid commitments, compared to those that diverge. Additionally, accounting for donor leader change, we find that incumbent recipient leaders have an opportunity to get even more aid when political change in donor countries moves them closer to the donor's foreign policy position. Thus, leadership turnover in recipient and donor countries makes otherwise inconsequential deviations in foreign policy alignment highly consequential for aid provision.

*Keywords:* Dyadic leader change, UNGA voting realignment, development aid

*JEL Classification:* D72, F35, F53, O19

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# 1. Introduction

Official Development Assistance (ODA) is an important source of financial liquidity for developing countries.<sup>1</sup> If funds run dry, countries face severe economic repercussions. As aid is not exclusively granted based on need, both the size and the volatility of aid flows are subject to politics.<sup>2</sup> Long-term relations, such as colonial ties or geopolitical considerations (e.g., [Alesina and Dollar, 2000](#); [Collier and Dollar, 2002](#)) and short-term shifts in the political importance of recipients, such as membership in the United Nations Security Council (UNSC) (e.g., [Kuziemko and Werker, 2006](#); [Dreher et al., 2009a,b](#)), affect bilateral ODA flows. Apart from a recipient's international standing, its political positions matter as well. Disagreement between donors and recipients on policies significantly lowers aid flows, especially if issues are highly relevant for donors ([Andersen et al., 2006](#); [Dippel, 2015](#); [Vreeland and Dreher, 2014](#)). Donors even adjust access to liquidity strategically in order to influence elections in recipients countries. They increase bilateral aid to political friends during election years, thereby bolstering re-election prospects, while they decrease aid to political opponents ([Faye and Niehaus, 2012](#)).<sup>3</sup> Given the fact that donors actively try to use aid to keep their friends in power, it is surprising that we know only little about changes in aid allocation when this strategy fails, i.e. after leadership turnover: how do donors adjust aid provision following leader change?

We expect that incoming leaders in developing countries receive more aid where political accord with a donor's foreign policy objectives increases; countries receive less aid when political animosity builds up. Since the pursuit of foreign policy is usually the prerogative of the executive branch, leader change opens the door for large-scale shifts in foreign policy. New leadership does not automatically guarantee improved bilateral relations between donors and recipients, as foreign policy re-alignment can go in both directions. Leadership turnover is thus a source of uncertainty regarding the prospective

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<sup>1</sup>We will use aid synonymous with ODA for the reminder of the paper.

<sup>2</sup>The various motives that influence aid allocation also pose challenges for the estimation of the causal effect of aid on various outcomes, such as consumption, investment, or trade ([Temple and de Sijpe, 2017](#)).

<sup>3</sup>Similarly, the United States use their power in the International Monetary Fund to provide lax conditions on credits ([Dreher and Jensen, 2007](#)) and in the World Bank to provide quicker loan disbursement ([Kersting and Kilby, 2016](#)) for political friends in the run-up to elections.

behavior in the international arena. Hence, the consequences of leader change for aid allocation are ambiguous *ex ante*. Changes in foreign policy following leader turnover may work as an important source of information on which donors base their decisions regarding aid allocation. In taking foreign policy positions announced by recipient country governments under increased scrutiny, donor country governments reward convergence to their own positions, but punish divergence.

If turnover of recipient country leaders opens the door for large-scale changes in bilateral foreign relations, then donor leadership change should be equally important. After all, political relationships between countries are reciprocal. We establish that the effect of political re-alignment on aid allocation is not only present after leadership turnover in recipient countries, but similarly after leader changes in donor countries. We test both mechanisms focusing on alignment changes that occur after leadership change in dyadic donor-recipient leader pairs, between leaders from the G7<sup>4</sup> and 130 developing countries from 1975 to 2012. To capture shifts in foreign policy objectives, we rely on comparable measures of voting alignment in the United Nations General Assembly (UNGA) (Voeten, 2000). Employing high dimensional fixed effects models, we show that yearly alterations of foreign policy alignment have no significant effect on aid commitments from donors, unless they occur after leader change. When leaders change, however, donors reward higher alignment, but punish dis-alignment. Leadership turnover in recipient and donor countries thus makes otherwise inconsequential deviations in foreign policy alignment highly consequential for aid provision.

The two mechanisms are qualitatively different in substance and size. Leader changes in donor countries represent a ‘window of opportunity’ that recipient countries can use to attract gains in development aid. To the contrary, leader changes in recipient countries predominantly open a ‘window of dis-opportunity’ to forgo aid cutbacks. Further analyses show that it is indeed foreign relations and not changes in domestic economic policy that drive aid provision. In light of these findings, our study reinforces the notion that an exclusive focus on monadic leadership changes in recipient countries is not able to capture

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<sup>4</sup>Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.

essential variation in the allocation of aid induced by leadership changes. Leader turnover in administration dyads can represent a confounding variable, as such changes are not captured by the inclusion of country fixed effects. Since leader change in both recipient and donor countries pronounce usually inconsequential actions in the international arena, our study also highlights that recipient country leaders have to decide early on how to align themselves with international aid providers; first impressions matter a great deal.

We proceed as follows: [Section 2](#) presents our theoretical argument linking dyadic leadership change, political alignment, and aid allocation. [Section 3](#) describes the data. [Section 4](#) discusses our empirical strategy and the main results. [Section 5](#) summarizes our robustness tests. [Section 6](#) concludes.

## 2. Leader Change and Aid

Donor countries have vested interests in political alignment with developing countries and thus care about which recipient leader is in power ([Dreher and Jensen, 2007](#); [Faye and Niehaus, 2012](#)). As a consequence, leadership turnover in recipient countries affects donors' interests, as it sets the stage for new foreign policy agendas. After inauguration a new recipient country government can adjust its foreign policy towards donors in three ways: keep relations unchanged, converge towards a common position on international issues, or diverge. Because a new leader in a recipient country has the potential to change bilateral relations and the direction of this change is unclear ex ante, donor countries face uncertainty about the behavior of the recipient leader in the international arena, especially in the aftermath of leadership change.<sup>5</sup>

As a reaction to changes in political alignment, we argue that donors reevaluate the current financial support they provide to a recipient country. Canada, for instance, takes recipients' foreign policy positions into account when it comes to aid provision. The Canadian International Development Agency (CIDA) explicitly states that they base aid disbursement on recipients' "needs, their capacity to manage development

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<sup>5</sup>Incoming political leaders have a wide range of effects, for instance regarding trade ([McGillivray and Smith, 2004](#)), economic growth ([Jones and Olken, 2005](#)), or democratization ([Jones and Olken, 2009](#)).



programs, and their alignment with Canadian foreign policy priorities” ([CIDA, 2010](#), 3). Under such circumstances, a donor country possesses two options to alter its development cooperation: reward (incoming) political friends with external revenues or deprive (potential) opponents of political and economic benefits.

Donors, in addition, have an incentive to bind new leaders early on by granting more development aid. In light of budget constraints, they have a rationale to only reward politically aligned leaders with additional aid, however. To the contrary, donors hamper new recipient country leaders by cutting aid if they perceive the latter as hostile. This deprives unaligned recipient countries of fungible revenues and handicaps their popularity and reelection prospects early on. Ghana, for example, has always received sizable amounts of aid from Canada ([Global Affairs Canada, 2015](#)), but experienced a sharp decrease in 2009. Interestingly, this drop coincides with a change in leadership following the 2008 general elections. John Atta Mills defeated Nana Akufo-Addo in the second round run-off election held on December 28, 2008 by a margin of about 0.5% and was declared president on January 3, 2009. Uncertainty was high about the leadership’s policy positions, which was further increased by the fact that Atta Mills had distanced himself from his mentor, former president Jerry Rawlings, during the campaign ([Encyclopaedia Britannica, 2017](#)). More importantly, alignment in the United Nations General Assembly between Canada and Ghana decreased substantially, indicating less support for Canada’s foreign policy stance, which in turn was followed by cuts in aid.

Whether a country under new leadership is a political friend or foe is difficult to evaluate in advance. Relying on ex ante characteristics, such as the foreign policy stance of leaders in the run-up to elections, may provide only an incomplete picture of an administration’s foreign policy agenda. Past observable behavior should be heavily discounted as political candidates for the office of head of the executive have private information that shape their foreign policy preferences as well as incentives to conceal their true intentions (e.g., [Fearon, 1995, 1997](#)). Additionally, audience costs change in conjunction with leadership turnover, effectively altering incentive structures for the

leader after an election.<sup>6</sup> Lastly, the new leader may only imperfectly be bound to path-dependence or even have come to power by opposing the existing policy platform. Hence, the reaction of the donor hinges on the ex post conduct of foreign policy of the new leadership in the recipient country.

We argue that donor countries observe the behavior of new recipient country leaders during their first year in office, among other things via voting alignment in the UNGA. Such votes cover a wide array of issues that allow political actors to estimate alignment and are thus a “record of how the state wants to be seen by others, the international norms it finds acceptable, and the positions it is willing to take publicly” (Mattes et al., 2015, 283). Voting in line with (or against) a donor’s interests thus constitutes a cost effective source of information that the donor can observe and use to determine if the other leader is more likely to be a friend or foe in the future.<sup>7</sup> In addition, voting behavior also offers information in situations where there already is prior information. A donor might have already had talks with the new recipient leader and have come to a common understanding on foreign policy, before the majority of votes in the UNGA occurs during the last quarter of a year. Revealing such preferences by behaving accordingly further reinforces a recipient country government’s credibility.<sup>8</sup> In both cases, the initial trajectory of bilateral foreign relations should matter for politically motivated payments the donor chooses to make (Kuziemko and Werker, 2006; Bueno de Mesquita and Smith, 2010).<sup>9</sup>

*H1: The effect of recipient country leader change on aid flows is conditional on the political alignment new leaders establish towards donors during their first year in power. Closer alignment with the donor increases aid flows; dis-alignment decreases aid flows.*

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<sup>6</sup>Arguably, a sitting leader wants to stay in power and is internally constrained by his domestic support groups (Moravcsik, 1997; Putnam, 1988; Bueno de Mesquita et al., 2003).

<sup>7</sup>Accordingly, UNGA voting patterns have frequently been used to proxy for political closeness between countries (e.g., Thacker, 1999; Barro and Lee, 2005; Bailey et al., 2017). In line with that, studies suggest that changes in heads of executive make a difference when it comes to foreign policy proximity (Dreher and Jensen, 2013; Mattes et al., 2015). Yet, research has focused exclusively on either leadership changes in recipient countries only, or monadic (non-directed) position changes.

<sup>8</sup>This line of reasoning is closely linked to arguments developed by Vreeland and Dreher (2014) for voting in the UNSC.

<sup>9</sup>Such information becomes even more important if there is no prior observable behavior of an actor.

The very nature of political alignment is reciprocal. Therefore, the importance of foreign policy realignment should not solely originate from recipient country leadership changes. Changes in the leadership of donor countries also increase uncertainty by discounting past behavior and therefore expectations about future relations. Changes in the foreign policy positions of donors should prompt a reaction on the part of incumbent recipient country leaders. New donor leaders base aid disbursement on the respective alignment or dis-alignment of existing recipient country governments with donors' new foreign policy objectives. This implies that the direction should again depend on the foreign policy shifts of recipient countries towards donors. Recipient countries receive more aid when they align themselves closer to a new donor government, and vice versa.

Reacting to changes in donor countries might even be in the interest of recipient countries. Internal constraints for heads of executive emanating from the preferences of the support group are fixed in the short run. Leaders are usually not able to change their support group – the electorate in democracies or the selectorate in autocracies – because the associated costs endanger their hold on power ([Bueno de Mesquita et al., 2003](#)). Changes in a donor's foreign policy that emanate from leadership change thus open a window of opportunity for recipient countries to alter bilateral relations. If a donor country leader enforces a new set of foreign policy objectives, the repercussions from this change influence a recipient country's ability to pursue and implement its own policy goals. Thus, the pursuit of foreign policy goals is further confined by external constraints that arise from the behavior and power of other countries. This means that foreign policy alignment to a new donor leadership usually implies following suit, which is rewarded. Staying out or even shying away from a new donor foreign policy objective, in turn, is punished via aid cutbacks.

Consider that newly elected US presidents attempt to accomplish international success rather quickly. Barack Obama, for example, vowed to reset relations with the Middle East and reduce US interference in his Cairo speech, held shortly after his 2009 inauguration ([New York Times, 2009](#)). Donor leaders observe the reactions from the developing world and consider them as approval or dis-approval for their own policy position. A recipient

country can either show willingness to work together or take a stance and openly oppose the new foreign policy agenda of the donor. In this sense, a change in donor leadership can provide other countries with the opportunity to reset relations or withdraw loyalty, respectively. If leaders welcome a new president and signal that they will work with them, they receive additional aid as part of a charm offensive. If a new leader in a donor country receives hostile signals from a recipient country’s political leadership, aid flows decrease. In both cases we argue that first impressions matter a great deal and should influence the allocation of aid.

*H2: Recipient country convergence towards a donor’s foreign policy position after donor country leadership change increases aid flows; divergence decreases aid flows.*

### 3. Data and Operationalization

Our dependent variable is official development aid. In line with [Faye and Niehaus \(2012\)](#), we use ODA commitments instead of disbursements,<sup>10</sup> since disbursements in a given year might originate from projects granted earlier. Commitments on the other hand are targeted to a specific country in a given year. Hence, we can directly link them to shifts in political alignment between countries following leadership turnover. We take ODA commitments from the Development Assistance Committee (DAC) database of the [OECD \(2015\)](#).<sup>11</sup> Because aid commitments are highly skewed, we use log-transformed values. We focus mainly on country dyads with positive aid flows to avoid arbitrary log-

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<sup>10</sup>Aid commitments are measured in millions of constant 2013 US\$.

<sup>11</sup>ODA is defined as those “flows to countries and territories on the DAC list of ODA recipients and to multilateral institutions which are: i. provided by official agencies, including state and local governments, or by their executive agencies; and ii. each transaction of which: a) is administered with the promotion of the economic development and welfare of developing countries as its main objective; and b) is concessional in character and conveys a grant element of at least 25 per cent (calculated at a rate of discount of 10 per cent)” ([OECD, 2015](#)). Over the years the DAC has refined the ODA reporting rules to ensure accuracy and consistency among donors. The boundary of ODA has been carefully delineated, including: 1. Military aid: No military equipment or services are reportable as ODA. Anti-terrorism activities are also excluded. The cost of using donors’ armed forces to deliver humanitarian aid is eligible. 2. Peacekeeping: Most peacekeeping expenditures are excluded in line with the exclusion of military costs. Some closely defined developmentally relevant activities within peacekeeping operations are included. 3. Nuclear energy: Reportable as ODA, provided it is for civilian purposes. 4. Cultural programs: Eligible as ODA if they increase cultural capacities, but one-off tours by donor country artists or sportsmen, and activities to promote the donors’ image, are excluded.

transformations. Nevertheless, we control for the inclusion of zeros as well as for selection effects in the robustness section.<sup>12</sup>

Our first independent variable is leadership turnover. We use data from the updated Archigos dataset (Goemans et al., 2009) to identify the heads of executive of each recipient and donor country. We code a change in leadership if the leader of country  $i$  in year  $t$  differs from the leader of country  $i$  in year  $t - 1$ . If several leaders were in power in a country in a given year, we focus on the leader that has spent the highest fraction of days in office over the course of the respective year. As such, we assume that more days in office increase the capacity of a country’s leader to shape foreign policy within a given year.<sup>13</sup> Assuming that foreign policy is ‘high politics’ and extensively influenced by the person running the executive branch, we define the head of the executive as the country’s leader. In a next step, we use information on leadership changes in recipient and donor countries to construct dyadic leader changes. Our unit of analysis is a leader dyad. To illustrate this approach, consider that former President Barack Obama and former President Dilma Rousseff had formed the dyad between the United States and Brazil until May 12, 2016, until she was replaced by Michel Temer.<sup>14</sup>

Our analysis includes 130 recipient countries (see Table A-1 in the Appendix) that – in tandem with the G7 donor countries – form 675 country dyads that engage in development cooperation over the 1975-2012 period. The panel is unbalanced since some recipient countries enter after 1975. Similarly, some donors only engage in development cooperation with a selected set of recipients. Given these limitations, our dataset includes 5927 donor-recipient-leader-pairs and 5008 dyadic leader changes. The median leader dyad lasts about five years. By construction, the shortest period is one year. The most durable leader dyads are between Germany under Helmut Kohl and several recipient countries with a duration of 16 years; the time Kohl was in office. All G7 countries

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<sup>12</sup>23% of the observations on bilateral aid flows are zero. This is partly driven by the complete absence of development cooperation between Japan and several developing countries.

<sup>13</sup>This approach differs from Mattes et al. (2015) who use information on the leader who is in power in December for the entire year.

<sup>14</sup>We would code a change for 2016 since Michel Temer has occupied more days in office than Dilma Rousseff. If he would have stepped down early and another person would have held office also for a shorter time than Mrs. Rousseff, we would have coded the change in 2017.

form administration dyads lasting longer than 10 years, with the exception of the United States, due to presidential term limits.

The second independent variable is the change in foreign policy alignment between countries. We proxy changes of bilateral relations, using voting alignment in the United Nations General Assembly. Focusing on the UNGA has several advantages: data availability is generally very high because all sovereign countries have voting rights. Votes in the UNGA furthermore cover a wide array of issues that allow to proxy general alignment tendencies instead of ad hoc political liaisons (Mattes et al., 2015). Voting alignment has thus often been used to proxy political closeness. We measure voting alignment changes as the difference in the percentage of common yes and no votes between any two countries in one administration dyad between  $t-1$  and  $t$  (Thacker, 1999; Faye and Niehaus, 2012). The data is provided by Voeten et al. (2009). Although this difference ranges empirically from -94 to +67 percentage points, such radical changes in bilateral relations are rather uncommon (Voeten, 2004; Hillman and Potrafke, 2015). Nevertheless, we test whether our results are sensitive to radical changes by restricting the scope of the alignment change in the robustness section. In addition, we make use of different measures that also include vote abstentions (Barro and Lee, 2005). Note also that Häge and Hug (2016) show that UNGA affinity scores are sensitive to the inclusion of consensus votes that systematically increase voting alignment between all country pairs. As we use changes in voting alignment, this should not affect our measure if the number of consensus votes does not change dramatically from year to year. In the main models, we use all votes because general foreign policy preferences are arguably more reliably revealed by all votes, as compared to only important votes (Andersen et al., 2006). Nonetheless, we test the robustness of our results and also include regular votes – votes that reoccur over UNGA sessions – and key votes (Kilby, 2009; Kersting and Kilby, 2016).

From our dyadic viewpoint, we find that the median recipient leader in his/her time in office (5 years) faces around two new leaders on average per donor country, or around 15 incoming G7 donor leaders in total. Recipients meet about half of the new donor leaders with closer alignment and the other half with dis-alignment. The median donor leader

experiences a total number of 118 recipient leader changes during his/her time in office (3 years), which is slightly less than one leader change on average per recipient country (130 in total). Again, political convergence is as likely as political divergence. Furthermore, we do not find evidence that political alignment changes much within administrative dyads over time (see Appendix B-2 for details).

To isolate initial changes in foreign policy alignment from general long- and short-term alignment or dis-alignment tendencies between donor and recipient over time, we further include two variables into our baseline specification: In line with [Faye and Niehaus \(2012\)](#), we control for alignment between the former recipient and former donor leader. We use average alignment over the past leader pair dyad, instead of recipient leader dyads, to proxy for the previous bilateral relationship of a dyad. This limits the maximum average alignment to 16 years, whereas [Faye and Niehaus \(2012\)](#) have cases where the alignment is averaged over nearly their entire sample period. For example, Muammar al-Gaddafi ruled Libya from 1977 to 2011 and essentially covered the entire spectrum of political relationships with several G7 countries over those years. We argue that our dyadic measure of previous alignment is better able to capture past alignment, as it does not blur the current state of affairs with political relations from other administrations that were established decades ago. The effect of past mean alignment thus captures how well the previous administration dyad has worked with each other and explains path dependence in current bilateral relations. Moreover, we also include the lagged bilateral alignment level in  $t - 1$  since it mechanically determines the possible range of re-alignment between  $t$  and  $t - 1$ . Descriptive statistics of all variables used in the study are reported in Table A-2; sources and definitions are reported in Table A-3.

## 4. Empirical Strategy and Findings

In our baseline specification (see Equation 1) we regress the natural logarithm of ODA commitments at time  $t$  from donor country  $j$  to recipient country  $i$  on dyadic leader change, alignment changes, and their interaction. Alignment change is defined as the

difference in common votes between two countries from  $t - 1$  to  $t$ . The coefficient of interest is  $\theta$  from the interaction between leader change and changes in voting alignment, i.e. the corresponding change in voting alignment in the UNGA from  $t - 1$  (the last year of the outgoing leader in either one of the two countries) to  $t$  (the first year of the new leader in either one of the two countries). We expect a positive interaction effect of  $\theta$  implying that positive alignment changes during years of leadership turnover increases aid flows, while dis-alignment decreases aid flows.  $\phi$  captures the effect of the lagged bilateral alignment. As such, it controls for the recent past of UNGA alignment in a dyad  $d$ , which determines the possible range of the change in voting alignment.  $\psi$  controls for the past mean alignment of the previous administration dyad, to capture the overall relations between the two countries.<sup>15</sup>  $\mathbf{X}'$  is a vector including a set of additional donor and recipient control variables, such as GDP and population.  $\alpha_{ij}$  are donor-recipient fixed effects capturing unobserved time-invariant heterogeneity for specific country dyads. Additionally,  $\gamma_t$  are year fixed effects to control for any global shocks that affect global alignment, and aid commitments across all countries.

$$\begin{aligned} \ln ODA_{ijt} = & \beta \cdot leader_{ijt} + \delta \cdot \Delta alignment_{ijt} + \theta \cdot (leader_{ijt} * \Delta alignment_{ijt}) \\ & + \phi \cdot alignment_{ijt-1} + \psi \cdot meanalignment_{ijd-1} + \mathbf{X}'_{ijt}\boldsymbol{\eta} + \alpha_{ij} + \gamma_t + \epsilon_{ijt} \end{aligned} \quad (1)$$

Table 1 displays the results of this empirical strategy, phasing in the different components of the regression model. Column 1 only includes dyadic leadership change. It shows that there is no unconditional effect of leadership turnover on ODA commitments from donor to recipient in a given donor-recipient pair;  $\beta$  is not statistically significant. Hence, the pooled leader change effect from either recipient or donor country does not affect aid allocation in a systematic way. In column 2, we only include the yearly change of voting alignment in the UNGA. The statistically significant positive effect highlights that convergence generally induces more aid. In column 3, we include our main independent variable – the interaction between changes in political alignment and leadership change.

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<sup>15</sup>Lagged bilateral alignment and the mean alignment of the past administration dyad are the same if the last administration dyad lasted only for one year. This is the case in 10 percent of cases. Here, no additional information is provided by the inclusion of the mean alignment variable.



TABLE 1  
Dyadic Leader Changes

	Dependent variable: <i>ln ODA commitments</i>				
	(1)	(2)	(3)	(4)	(5)
Leader change	-0.027 (0.024)		-0.020 (0.024)	-0.005 (0.079)	0.012 (0.073)
$\triangle$ alignment		0.501** (0.209)	-0.015 (0.214)	-0.012 (0.350)	-0.245 (0.345)
Leader change $\times$ $\triangle$ alignment			1.393*** (0.317)	1.288*** (0.382)	1.020*** (0.371)
Last year alignment	0.577*** (0.218)	1.006*** (0.329)	0.712** (0.324)	0.887* (0.528)	0.064 (0.505)
Past mean alignment	1.099*** (0.267)	0.813*** (0.271)	1.211*** (0.292)	0.838* (0.446)	0.726* (0.433)
Log GDP donor	2.301*** (0.649)	2.286*** (0.649)	2.283*** (0.647)		
Log GDP recipient	-0.136 (0.132)	-0.135 (0.133)	-0.131 (0.132)		
Log population donor	0.147 (1.017)	0.278 (1.028)	0.459 (1.032)		
Log population recipient	0.804** (0.340)	0.806** (0.340)	0.810** (0.341)		
Adjusted R-squared	0.043	0.044	0.045	0.786	0.819
Fixed Effects	DR,Y	DR,Y	DR,Y	DR,R,Y,DY,	DR,R,Y,DY
Linear-time-trend (Dyad)	-	-	-	-	Yes
# of observations	16928	16928	16928	18571	18571
# of dyads	668	668	668	681	681

*Notes:* Fixed effects: donor-recipient (DR), year (Y), recipient-year (RY), donor-year (DY). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

Dyadic leader changes with constant bilateral relations as well as yearly fluctuations in alignment in years without leadership turnover are both statistically insignificant. Importantly, the interaction term is, as expected, positive and statistically significant. UNGA voting convergence after either a donor or a recipient leader change is rewarded with more ODA commitments, while divergence is punished with aid cutbacks. Thus, the significant unconditional convergence effect is solely due to alignment changes after leader change. These findings show that leadership turnover itself does not change aid allocation patterns, if bilateral UNGA voting alignment is stable. Change in leadership only becomes consequential if it simultaneously changes the trajectory of foreign relations between countries.

In column 4, we further exploit the dyadic structure of our data by employing donor-

recipient-pair, donor-year and recipient-year fixed effects. This approach enables us to control for other factors that vary on either donor or recipient countries over time and explain ODA allocation. Hence, unobserved heterogeneity is reduced to variables that vary within the dyads over time and are not explained by variables varying over donor and recipient by year, such as GDP or population size. A further benefit of this approach is that we do not decrease our sample size due to data availability of the control variables. Although the results show that the magnitude of the conditional alignment effect  $\theta$  decreases slightly if we control for donor-year and recipient-year-specific factors, this does not affect our interpretation of the conditional alignment effect after leader change.<sup>16</sup> The same holds true if we add a linear time trend for each dyad (see, column 5).

## A. Differences between Recipient and Donor Leader Changes

In a next step, we investigate the conditional effect of leadership change and foreign policy realignment on the allocation of ODA commitments by differentiating between foreign policy changes that emanate either after a recipient or donor leader change (see Equation 2).<sup>17</sup>  $\beta_1$  captures the effect of recipient leader change for constant alignment ( $\Delta alignment_{ijt} = 0$ ) and  $\beta_2$  the corresponding effect for donor leader change at constant alignment. The results are displayed in Table 2.

$$\begin{aligned} \ln ODA_{ijt} = & \beta_1 \cdot recipient_{it} + \beta_2 \cdot donor_{jt} + \delta \cdot \Delta alignment_{ijt} \\ & + \theta_1 \cdot (recipient_{it} * \Delta alignment_{ijt}) + \theta_2 \cdot (donor_{jt} * \Delta alignment_{ijt}) \\ & + \phi \cdot alignment_{ijt-1} + \psi \cdot meanalignment_{ijd-1} + \mathbf{X}_{ijt}'\boldsymbol{\eta} + \alpha_{ij} + \gamma_t + \epsilon_{ijt} \end{aligned} \quad (2)$$

Column 1 illustrates that the specific type of leader change matters for aid allocation. While leadership changes in donor countries are statistically insignificant, leadership changes in recipient countries lead to less ODA on average. Taken at face value, this would imply that donors are cautious towards leaders that take over power in recipient

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<sup>16</sup>The difference between columns 3 and 4 is not driven by the increasing sample size.

<sup>17</sup>Note that  $\beta$  and  $\theta$  have been changed to  $\beta_1$  and  $\beta_2$  as well as  $\theta_1$  and  $\theta_2$ . Although theoretically possible, we do not include mutual leader changes as a separate category because they are empirically too infrequent.

countries. However, the results in column 3 further qualify this effect. The interactions between voting alignment change and both recipient and donor leader change are positive and statistically significant. Furthermore, the sizable interaction effect offsets the negative effect of recipient leader change without voting alignment change. Hence, convergence gets rewarded while divergence leads to a reduction in ODA commitments, regardless whether voting re-alignment is a reaction of recipient countries to a new leader in a donor country or a re-alignment of foreign policy after domestic leader change.<sup>18</sup>

Furthermore, the effects remain stable when we include donor-recipient-pair, donor-year and recipient-year fixed effects (column 4). A downside of this specification is that we cannot draw conclusions regarding the effect of leader change in instances where voting alignment is constant, since the fixed effects absorb the unilateral change variables. Again, our results remain qualitatively unchanged if we add a linear time trend on the dyad to capture any bilateral trends over time (column 5).<sup>19</sup> The results are also robust to excluding the past alignment level controls and more conservative models including lagged ODA commitments or the similarity indexes (Helpman, 1987) of GDP and population size (see Table A-4). The idea behind the inclusion of those indexes is that countries more similar in GDP or population size might agree more on trade or other issues potentially discussed in the UNGA, or vice versa. We remain agnostic to both possibilities.<sup>20</sup> Taken together, these results strongly support our hypotheses.

How consequential are these effects for recipient's revenue streams? To answer this question, we estimate the predicted change of ODA commitments in percentage points

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<sup>18</sup>To test for autocorrelation, we reran all the models in Table 2 including lagged ODA commitments (results not reported). The lagged commitments are statistically significant, and have a point estimate up to 0.4 in the HDFE specification. A test for first order autocorrelation (Wooldridge, 2010; Drukker, 2003) cannot reject the null of no autocorrelation. Furthermore, a Fisher-test for a unit root in panel data using the Dickey-Fuller approach (Choi, 2001), utilizing up to 3 lags, neglects the presence of a unit root. We also included donor and recipient change and their respective interactions in separate regressions (results not reported). This leads to an increase in the magnitude and statistical significance of the single effects. Hence, our results are not driven by the simultaneous inclusion of both types of changes.

<sup>19</sup>The results are also robust to different forms of clustering (Cameron et al., 2011), such as clustering on donor, recipient and year or donor-recipient-pair and year. Since we only have 7 donors and our baseline results are stable, we cluster on the donor-recipient pair in the rest of our specification.

<sup>20</sup>The similarity indexes are defined as follows:  $SimilarityIndex(GDP)_{ijt} = 1 - (\frac{GDP_i}{GDP_i * GDP_j})^2 - (\frac{GDP_j}{GDP_i * GDP_j})^2$  and  $SimilarityIndex(Population)_{ijt} = 1 - (\frac{Pop_i}{Pop_i * Pop_j})^2 - (\frac{Pop_j}{Pop_i * Pop_j})^2$ . Results of the specification are reported in column 2 of Table A-4.

TABLE 2  
Dis-aggregate Leader Changes

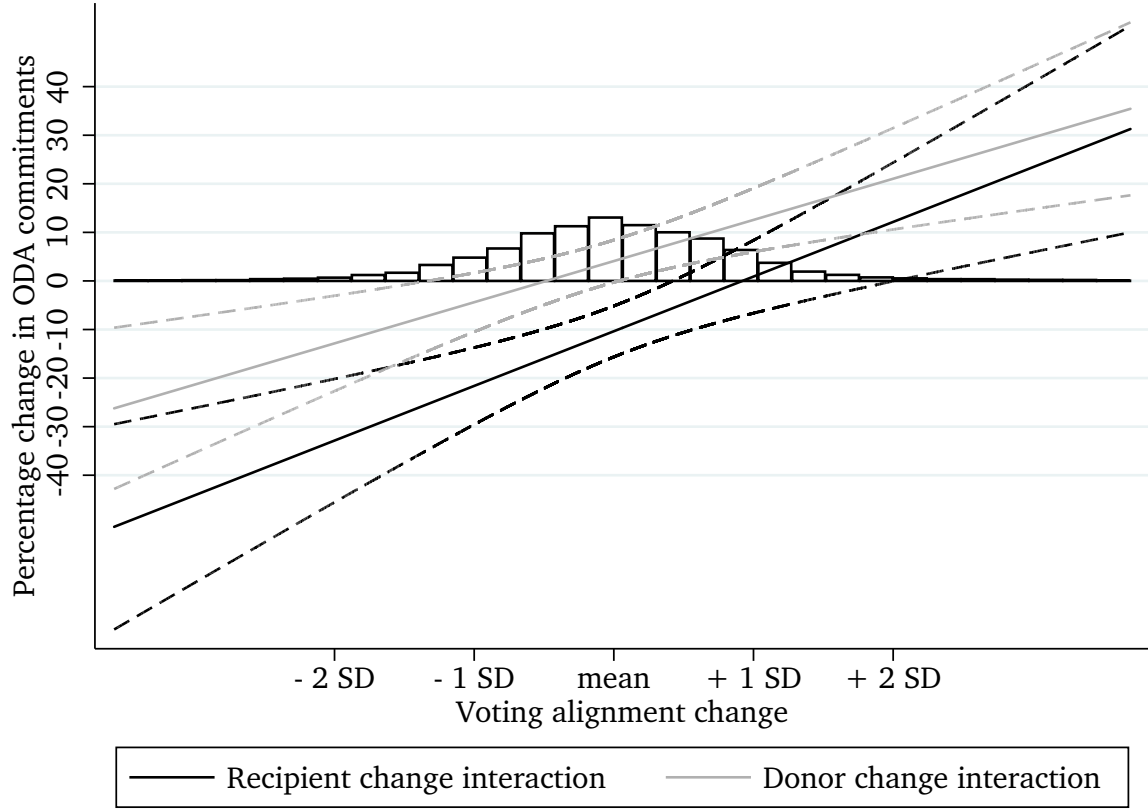
	Dependent variable: <i>ln ODA commitments</i>				
	(1)	(2)	(3)	(4)	(5)
Recipient change	-0.104*** (0.032)		-0.098*** (0.032)		
Donor change	0.033 (0.026)		0.045* (0.027)		
$\Delta$ alignment		0.501** (0.209)	0.002 (0.219)	0.034 (0.350)	-0.240 (0.344)
Recipient change $\times$ $\Delta$ alignment			1.370*** (0.406)	1.186** (0.502)	1.000** (0.485)
Donor change $\times$ $\Delta$ alignment			1.031*** (0.334)	0.877* (0.472)	0.810* (0.448)
Last year alignment	0.572*** (0.218)	1.006*** (0.329)	0.735** (0.326)	0.937* (0.529)	0.086 (0.505)
Past mean alignment	1.082*** (0.266)	0.813*** (0.271)	1.127*** (0.284)	0.730* (0.434)	0.665 (0.424)
Log GDP donor	2.254*** (0.648)	2.286*** (0.649)	2.246*** (0.646)		
Log GDP recipient	-0.141 (0.132)	-0.135 (0.133)	-0.136 (0.132)		
Log population donor	0.170 (1.017)	0.278 (1.028)	0.412 (1.030)		
Log population recipient	0.794** (0.340)	0.806** (0.340)	0.792** (0.341)		
Adjusted R-squared	0.044	0.044	0.045	0.786	0.819
Fixed Effects	DR,Y	DR,Y	DR,Y	DR,R,Y,DY	DR,R,Y,DY
Linear-time-trend (dyad)	-	-	-	-	Yes
# of observations	16928	16928	16928	18571	18571
# of dyads	668	668	668	681	681

*Notes:* Leader change variables in column 4 are omitted due to fixed effects. Fixed effects: donor-recipient (DR), year (Y), recipient-year (RY), donor-year (DY). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

with respect to the change in voting alignment and the type of leadership turnover (based on model 3 in Table 2). The results are plotted in Figure 1. At the mean alignment change, representing marginal dis-alignment (see Table A-2), new recipient leaders receive 9.7% less ODA commitments in their first year. In the opposite case of donor leader change, they receive 3.8% more ODA commitments.

If a newly inaugurated recipient leader chooses to dis-align by one standard deviation – which is approximately an 8 percentage point decrease in voting alignment from one year to another – ODA commitments to this country shrink by 19.6%. Hence, decreasing

FIGURE 1  
Marginal Effect of Leader Change, Conditional on Alignment Change



*Notes:* The figure presents the marginal effects of column 3 Table 2, together with the respective 95% confidence intervals. The bars are the histogram of the alignment change variable.

political proximity with donor countries in the UNGA increases the negative effect of domestic leader change by about 10 percentage points for aid recipients. In case of donor leader change, dis-alignment seems to have only a negligible substantial effect. Yet, foreign policy convergence gets rewarded with additional aid. A move towards the donor country by one standard deviation results in 9.1% more ODA commitments. In substantial terms, these numbers show that political accord or animosity matters a great deal in times of leader change in bilateral relations, especially with regard to the economic implications of politically granted development aid.<sup>21</sup> Consider for example that the median aid recipient in our sample receives around \$100m in development aid from the G7 annually. According to our results, if a new recipient country leader were

<sup>21</sup>The size of the alignment change effect is much more pronounced in case of recipient leader change than for donor leader change. This is due to the fact that all donor countries react to recipient leader change at once, while only the affected donor reacts after donor leader change.

to alter their foreign policy proximity to international aid providers by one standard deviation, the country would face a cut of 19.6%, i.e. almost \$20m.

Summing up, political re-alignment after leader change is highly consequential for recipient countries. While new recipient leaders can mainly forgo cutbacks by aligning themselves with donors, existing recipient country leaders have an opportunity to secure additional aid commitments when a new donor leader enters office.<sup>22</sup>

## B. Timing

How lasting is the conditional alignment effect? If our argument were correct, future leader changes and their initial foreign policy shifts should not predict aid today. Nor should the initial foreign policy position taken by a new leader predict all future aid commitments. Instead, we would expect that the initial behavior becomes less relevant as soon as the donor-recipient pair gets a good estimate about how their relations actually are. To explore the time structure, we re-estimate the high dimensional fixed effect estimation (Table 2, column 4) using several leads and lags of our dependent variable.<sup>23</sup> Figure 2 plots the point estimates and their 90% confidence intervals of the recipient and donor leader interactions with UNGA voting changes.

Both interaction effects are not statistically different from zero before the year of the actual leader change  $t$ .<sup>24</sup> This makes us confident that it is indeed the initial foreign policy change of a new leader that has an effect on aid commitments rather than a general change in bilateral relations that is only accompanied by leader change. We can also reject the possibility that donors simply wait until new ODA commitments are made, or that our results are driven by some administrative hurdles resulting from leader change (see Appendix B-3). Likewise both interactions lose statistical significance two years after the respective leader change. Hence, the direct effect is, as expected, rather short lived.<sup>25</sup>

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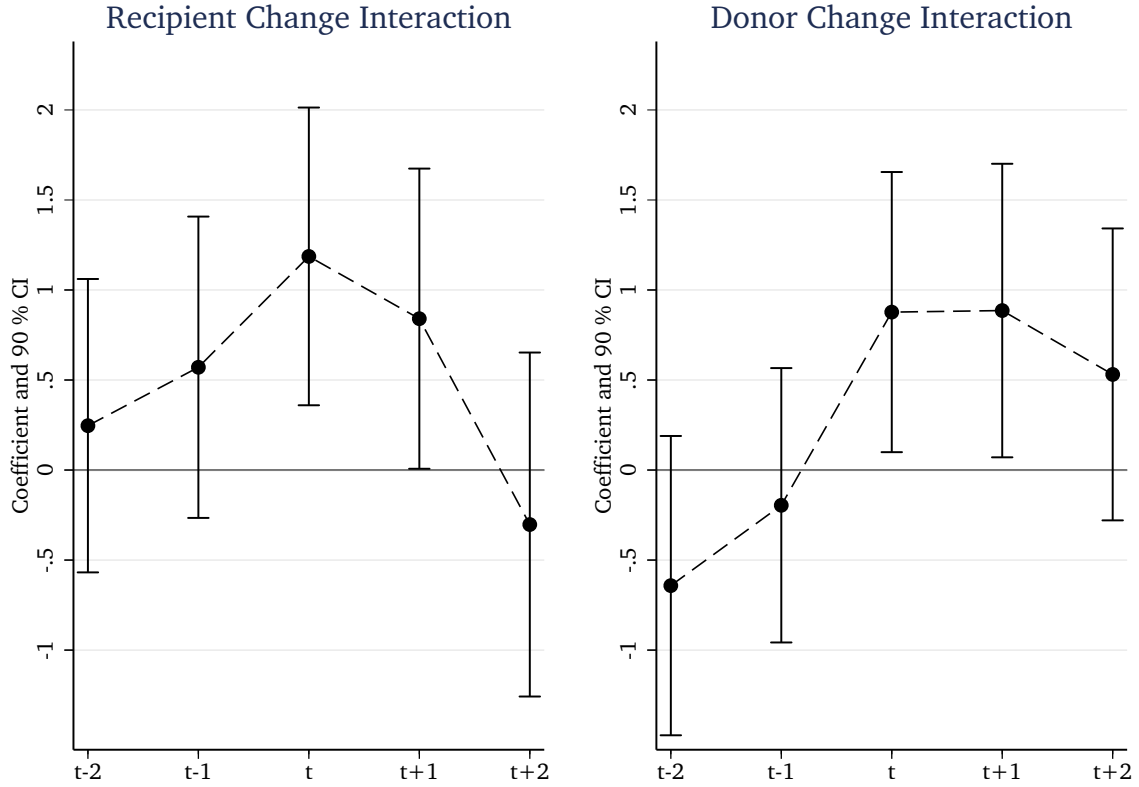
<sup>22</sup>We find the same qualitative effect for the different interactions if we spline the alignment change in convergence and divergence (see Table A-5).

<sup>23</sup>Because the median duration of the leader pair dyad is five years, we use two years prior to and after each leader change, in addition to the contemporaneous specification.

<sup>24</sup>Note that the results for  $t - 2$  and  $t - 1$  are placebo tests, which we can reject.

<sup>25</sup>While the direct effects are short term, they are relatively sizable compared to the payoff of long established bilateral relationships, measured as longer lasting bilateral leader dyads in general (see Appendix B-1). We also show that while changes in alignment regularly occur following leader change,

FIGURE 2  
Timing of the Conditional Alignment Effect



*Notes:* The underlying regression specifications are reported in Table A-6 in the Appendix. Standard errors are clustered at the donor-recipient dyad. The interaction between recipient leader change and alignment change at time  $t$  is statistically significant at the 5% level, the interaction between donor leader change and alignment change is significant at the 10% level.

For longer term effects consider the significant alignment level effect of Table 2, which is comparably small.<sup>26</sup>

To further rule out spurious correlation that covaries with the leader change interactions within the dyads over time, we follow [Hsiang and Jina \(2014\)](#) and conduct a randomization test over all dimensions of our panel (see the description of this approach in Appendix B-4). The estimated interaction terms using the real data exceed the obtained coefficient distributions obtained from these hypothetical scenarios. All randomization procedures produce a distribution of point estimates centered around zero. The  $p$ -values range between 0.0159 to 0.0187 for the recipient change interactions and 0.0622 and 0.0708

there is only slight regression to the mean following the initial alignment change (see Appendix B-2).

<sup>26</sup>For example, the change in the alignment level induced by regular dis-alignment would permanently reduce aid between 0.2% and 6% compared to the immediate reduction of roughly 10% to 20% due to the conditional alignment change effect after recipient leader change.

for the donor interactions. These results reaffirm the timing structure of our proposed mechanism and indicate that our results are not driven by any spurious correlation, either within or between panels. Hence, we are confident that it is indeed the leader change interacted with foreign policy alignment that drives changes in ODA commitments between donors and recipients.

## C. Scope

To evaluate the scope of the conditional alignment effect, we investigate how different institutional settings and types of leader transitions affect the conditional alignment mechanism. We employ nested models starting by differentiating between legal and illegal leadership change. If donors care about the rule of law, they should oppose power grabs by cutting financial support. We code illegal changes as irregular entries into office, for example via coups (Goemans et al., 2009). We do so only for recipient countries, as there are no illegal changes in the G7 countries in our sample. The results in Table 3 column 1 show a positive and statistically significant alignment change effect in both cases. Furthermore, a t-test fails to reject that the coefficients are equal.

In column 2, we interact our model with a proxy for political struggle, operationalized as years during which a country has had three or more heads of executive.<sup>27</sup> In such cases, the alignment change interaction becomes insignificant. This might point to the fact that donors are incapable of gaining enough information during very short executive tenures in recipient states. Thus, they are unable to figure out who exactly they are dealing with and thus revert to their default aid allocation.

In column 3, we test whether domestic support-group change in addition to leader change amplifies the effects from changes in voting alignment. Domestic support-group changes follow the same logic as changes in the political orientation of the government (Potrafke, 2017). If the domestic support-group changes, it is likely that different societal interests are primarily considered by the government.<sup>28</sup> Mattes et al. (2015) highlight that

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<sup>27</sup>About 1.6% of recipient change dyads fall under this classification.

<sup>28</sup>While domestic support group changes tell us little about the political orientation of the government, they tell us if switches in aggregated preferences occurred, thus highlighting our uncertainty argument. Another upside of domestic support group changes in comparison to changes in ideology is that the latter



TABLE 3  
Scope of the Conditional Alignment Effect

Dependent variable: <i>ln ODA commitments</i>					
			<i>Mattes et al. 2015</i>	<i>Dreher and Jensen 2013</i>	<i>Carter and Stone 2015</i>
	(1)	(2)	(3)	(4)	(5)
Last year alignment	0.745** (0.328)	0.392 (0.295)	0.405 (0.292)	0.677** (0.315)	0.659** (0.314)
Past mean alignment	1.104*** (0.284)	0.629** (0.301)	0.568* (0.299)	0.923*** (0.289)	0.889*** (0.285)
	<i>Legal change</i>	<i>Without struggle</i>	<i>Support constant</i>	<i>During Cold War</i>	<i>Autocracy</i>
Recipient change	-0.092*** (0.034)	-0.091*** (0.031)	-0.129** (0.057)	-0.129** (0.062)	-0.104** (0.044)
Donor change	0.045* (0.027)	0.040 (0.026)	0.090** (0.045)	0.027 (0.054)	0.040 (0.031)
$\Delta$ alignment	0.039 (0.220)	-0.139 (0.206)	-0.100 (0.199)	-0.288 (0.356)	-0.033 (0.220)
Recipient change $\times$ $\Delta$ alignment	1.030** (0.445)	1.277*** (0.393)	1.193* (0.675)	1.328* (0.712)	0.896* (0.535)
Donor change $\times$ $\Delta$ alignment	1.023*** (0.333)	0.629** (0.315)	0.449 (0.718)	0.761 (0.551)	1.148*** (0.365)
	<i>Illegal change</i>	<i>Struggle year</i>	<i>Support change</i>	<i>After Cold War</i>	<i>Democracy</i>
Recipient change	-0.172** (0.073)	-0.159 (0.177)	-0.067* (0.036)	-0.077** (0.036)	-0.095*** (0.036)
Donor change			0.042 (0.037)	0.054* (0.032)	0.056 (0.045)
$\Delta$ alignment				0.374 (0.363)	0.184 (0.368)
Recipient change $\times$ $\Delta$ alignment	1.196* (0.724)	-1.772 (1.276)	1.595*** (0.466)	1.082** (0.474)	1.702*** (0.561)
Donor change $\times$ $\Delta$ alignment			0.701* (0.368)	1.241*** (0.390)	0.305 (0.579)
Adjusted R-squared	0.045	0.031	0.034	0.054	0.054
Fixed Effects	DR,Y	DR,Y	DR,Y	DR,Y	DR,Y
# of observations	16928	18571	18571	17477	17607
# of dyads	668	681	681	667	672

*Notes:* Each column represent the results from a nested specification. Column 1 includes GDP and population controls. Column 2 includes no additional controls. See Table A-7 for information on control variables in columns 3 to 5. Fixed effects: donor-recipient (DR), year (Y), recipient-year (RY), donor-year (DY). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

changes in the domestic support-groups are the main driver of significant foreign policy re-alignment.<sup>29</sup> We adapt their specification by including their core set of control variables

are hard to grasp for a lot of recipient countries.

<sup>29</sup>According to [Mattes et al. \(2015\)](#) a change in support group concerns the societal foundation of the current leader's rule. In democracies, for example, a leadership change that involves a change in

in our dyadic setting (see Table A-7).<sup>30</sup> We find evidence in favor of our argument regardless of a simultaneous change in the support group of the leader – the interaction term is positive and statistically significant in both cases. At first glance the magnitude of the point estimate is higher in the case of domestic support group change. A t-test, however, indicates no difference between the coefficients. Thus, alterations in the conditions surrounding leader change do not reduce the importance of first impressions.

We further differentiate between different eras as well as institutional settings. In column 4, we adopt the [Dreher and Jensen \(2013\)](#) specification and differentiate between the Cold War and post-Cold War period,<sup>31</sup> but use all votes in the UNGA instead of focusing on key votes alone. In column 5, we subdivide the sample into democracies and autocracies. [Carter and Stone \(2015\)](#) have shown that donors actually prefer to provide political side payments to fellow democracies, since their own constituencies are more skeptical of financial support to autocracies compared to democracies. The interaction terms between leader change and changes in political proximity show the expected results, but reveal interesting variation in terms of effect size and statistical significance. For example, the donor change interaction is only significant in the post-Cold War period and for autocratic recipient countries. The recipient interactions are however not statistically different from one another between time periods. Interestingly, the point estimate of the interaction effect is about twice as large for democratically elected leaders. The presence of the interaction effects for both democratic and autocratic countries increases our confidence that we have not simply picked up lagged election effects ([Faye and Niehaus, 2012](#)), since many of the autocratic countries in our sample do not hold competitive elections. Again, there is no difference between the interactions of recipient leader change and alignment changes between autocracies and democracies. We attribute this in part to an imprecise estimate in the autocratic setting, driven by

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the partisan composition of government is considered as a change in the support group. If leadership turnover occurs, but the new leader comes from the same party, no alteration of the societal foundation of a leader's rule has taken place.

<sup>30</sup>Due to space restrictions, we do not report the coefficients of the additional control variables. They are in line with the findings of previous research.

<sup>31</sup>[Voeten \(2000\)](#) has shown that voting blocks are less stable after the end of the Cold War. [Qian and Yanagizawa \(2009\)](#) highlight that alliances have a higher importance for the US during the Cold War compared to the afterwards.

relatively few leader changes.

## D. Alternative Channels

Are changes in aid in fact driven by a political reaction to changes in bilateral foreign relations in the wake of leader change or are they driven by commercial as well as domestic political considerations? Two alternative channels immediately come to mind. First, ODA could react to changes in bilateral trade, which would not be captured by any of our fixed effects. Second, in case of recipient leader change donors could react differently to domestic reforms introduced by new recipient leaders which might be correlated with bilateral voting alignment.<sup>32</sup>

Regarding commercial interests it is important to acknowledge that the bulk of bilateral trade between the G7 and other countries is driven by private firms that should care more about country specific issues, such as property rights (absorbed by recipient-year fixed effects), and less about political alignment. Hence, we expect trade not to impair our mechanism with regard to aid, nor do we expect any effect of foreign policy realignment after leader change on bilateral trade. Table 4 tests both possibilities. We include the natural logarithm of bilateral imports as additional controls in columns 1 & 2, and regress the donor and recipient imports on our model in columns 3 & 4. The findings show that trade does not provide an alternative mechanism for our argument. We do not find that including bilateral donor and recipient imports change our conditional alignment effect (columns 1 & 2), neither does our mechanism explain changes in bilateral trade (columns 3 & 4).<sup>33</sup>

Another issue that could explain political convergence between donor and recipients is domestic reform within recipient countries. While changes in domestic policy, e.g., financial liberalization, are generally captured by recipient-year fixed effects, they could still be correlated with political convergence or divergence during leader change. Here,

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<sup>32</sup>While domestic reforms would be captured by recipient-year fixed effects a differential evaluation of those reforms by different donors would not.

<sup>33</sup>Testing for other economic channels is more difficult, as data availability is not sufficiently high for our sample. Remittances, for example, are only available on the recipient country level and not bilaterally before 2005.

TABLE 4  
Alignment Changes and Trade

	<i>ln. ODA commitments</i>	<i>Imports Don.</i>	<i>Imports Rec.</i>	
	(1)	(2)	(3)	(4)
Recipient change	-0.098*** (0.032)			
Donor change	0.046* (0.026)			
$\Delta$ alignment	-0.011 (0.218)	0.041 (0.349)	-0.744 (0.550)	-0.630 (0.449)
Recipient change $\times$ $\Delta$ alignment	1.392*** (0.406)	1.200** (0.502)	-0.772 (0.746)	0.280 (0.417)
Donor change $\times$ $\Delta$ alignment	1.049*** (0.332)	0.872* (0.472)	0.569 (0.604)	0.476 (0.471)
Last year alignment	0.712** (0.326)	0.951* (0.530)	-1.426 (1.026)	-1.273* (0.731)
Past mean alignment	1.131*** (0.283)	0.732* (0.434)	0.293 (0.564)	1.204** (0.547)
Donor Imports (Log)	0.003 (0.005)	0.015 (0.010)		
Recipient Imports (Log)	-0.005 (0.003)	-0.006 (0.009)		
Adjusted R-squared	0.713	0.786	0.975	0.986
Fixed Effects	DR,Y	DR,RY,DY	DR,RY,DY	DR,RY,DY
# of observations	16923	18571	18571	18571
# of dyads	663	681	681	681

*Notes:* All dependent variables are log-transformed. Fixed effects: donor-recipient (DR), year (Y), recipient-year (RY), donor-year (DY). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

it could be the case that donors react to domestic reform efforts rather than political alignment changes.

Comprehensive data for domestic reform effort is scarce for a lot of recipient countries. The most comprehensive dataset to our knowledge is from [Giuliano et al. \(2013\)](#), who develop an indicator of economic liberalization covering the period between 1960 and 2004 for most countries in our sample.<sup>34</sup> We include the domestic reform effort (or deregulation) as well as its interaction with leader changes as additional variables in our core models, to test if domestic reform effort is a potential alternative explanation for our observed effects. Results are presented in Table 5. Columns 1 & 3 replicate

<sup>34</sup>Sectors considered in the liberalization indicator are banking, product markets, agriculture, and trade, among others. For details, see [Giuliano et al. \(2013\)](#).

TABLE 5  
Alignment Changes and Domestic Reforms

	Dependent variable: <i>ln ODA commitments</i>			
	(1)	(2)	(3)	(4)
Recipient change	-0.090*** (0.033)	-0.110* (0.063)		
Donor change	0.052 (0.032)	0.019 (0.058)		
$\Delta$ alignment	0.150 (0.237)	0.168 (0.237)	0.472 (0.423)	0.477 (0.424)
Recipient change $\times$ $\Delta$ alignment	0.858** (0.421)	0.838** (0.421)	1.296** (0.656)	1.314** (0.656)
Donor change $\times$ $\Delta$ alignment	0.335 (0.391)	0.319 (0.393)	0.600 (0.599)	0.587 (0.601)
Recipient change $\times$ dom. deregulation		0.066 (0.126)		
Donor change $\times$ dom. deregulation		0.093 (0.140)		0.140 (0.155)
Dom. deregulation		0.495** (0.222)		
Last year alignment	1.079*** (0.356)	1.090*** (0.355)	0.986 (0.652)	0.989 (0.653)
Past mean alignment	0.160 (0.324)	0.121 (0.324)	0.576 (0.521)	0.581 (0.520)
Adjusted R-squared	0.046	0.048	0.792	0.792
Fixed Effects	DR,Y	DR,Y	DR,R,Y,DY	DR,R,Y,DY
# of observations	11401	11401	11400	11400
# of dyads	544	544	543	543

*Notes:* Columns 1 and 2 include the log of GDP and population for both recipient and donor countries. Fixed effects: donor-recipient (DR), year (Y), recipient-year (RY), donor-year (DY). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

our preferred high-dimensional fixed effects specification for the reduced sample. Note that we lose statistical significance on the donor interaction, but the recipient change interaction remains statistically significant and comparable in magnitude. This sample effect is expectable, since we find the donor interaction loads primarily on the post Cold War period (column 5 Table 3. Columns 2 & 4 show that including domestic deregulation in recipient countries as well as the interactions leaves our estimates of interest virtually unchanged.<sup>35</sup> Hence, we are confident that both alternative channels (bilateral trade

<sup>35</sup>Deregulation enters positively in column 2. G7 donors are usually in favor of more deregulation, as domestic regulations and barriers have historically been high in many developing countries. However, the interaction with leader change is statistically insignificant. In addition, the recipient change  $\times$  domestic deregulation interaction in column 4 is absorbed by the recipient-year fixed effects, while even our conservative fixed effects cannot capture if donor countries care more about domestic reform effort

and domestic policy reform) do not provide a rivaling explanation for our conditional alignment effect.

## 5. Robustness Tests

The results presented so far clearly point towards our theoretically expected conditional alignment effect. That is, donor countries reward convergences after leadership turnover with more aid, but cut aid when political animosity builds up. We perform several additional tests to assess the robustness of our findings.<sup>36</sup> We start by testing whether our findings are robust to perturbations of the dependent variable (Appendix C). To rule out selection effects, we include donor-recipient dyads with zero aid flows, which allows us to test whether leader change leads to new development cooperation. We find that our mechanism exclusively affects ODA commitments on the intensive margin (Table C-1), i.e., foreign policy alignment after leader change is only consequential for recipients countries that have already received ODA. We also find that our main finding is not driven by small changes in ODA commitments (Table C-2). Additionally, we find the same, albeit somewhat weaker effects, when focusing on ODA disbursements instead of ODA commitments (Table C-3).

Our main finding is also not driven by recipients switching alignment between different donors, nor by changes in the definition of the independent variables (Appendix D). Analyzing ideal positions in the UNGA (Bailey et al., 2017), we find that most of our recipients usually occupy policy positions within the UNGA to the 'left' of all donors. Our results remain substantially similar and statistically significant regarding the conditional alignment effect when focusing only on regular votes in the UNGA or only on votes that the US State Department deems important, when excluding extreme values of alignment change, or when counting vote abstentions (Table D-1). Table D-2 further shows that our results are robust to several alternative definitions of leader change.

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during leader change within them. The coefficient in column 4, does not allow us to reject that they do not put more emphasis on domestic reforms during donor leader change.

<sup>36</sup>Here, we only briefly summarize the main robustness checks and results. We prove a detailed discussion of each robustness test – including the rationale, potential problems, and exact results – in the Online Appendix.

Appendix E probes whether our results are driven by outliers, i.e., by specific recipients, donors, dyads, or years. We find no evidence that any particular donor-recipient dyad drives our core results (Figure E-1). Neither are our results driven by any individual recipient country (Figure E-2 and Figure E-3). Furthermore, we investigate if the G7 donors react differently. Table E-1 shows that our results are not driven by any individual donor country. However, the U.S., the U.K., Canada, and Germany seem to exhibit a substantially more powerful effect with regard to the recipient leader interaction, while the U.K., Canada, Germany, and Japan drive the donor change interaction.

Lastly, we address the potential of reversed causality in Appendix F. We use plausible exogenous variation provided by natural deaths of leaders and regular scheduled elections to instrument for leader changes in a control function approach. The results from the control functions support our hypotheses (Table F-1 and Table F-2). Furthermore, we do not find that leader changes interacted with ODA commitments can predict changes in the bilateral voting alignment changes in a Granger causality test (Table F-3).

Summing up, our main finding is robust to changes in the dependent variable and to changes in the measurement of the independent variables. Furthermore, the conditional alignment effect is not driven by specific countries or dyads between countries. Last but not least, we find evidence that reversed causality is unlikely.

## 6. Conclusion

In this study, we analyze a new mechanism through which donor countries induce political aid cycles in recipient countries. We argue that donor country governments place higher scrutiny on recipient countries' behavior in the UNGA after both donor and recipient leader change. In the aftermath of leadership turnover, otherwise inconsequential yearly fluctuations in voting alignment between recipients and donors lead to substantial effects on aid commitments.

We find that new recipient leaders that converge to a donor during their first year in office receive substantially more aid commitments compared to those that diverge from

positions that donors take in the UNGA. We consistently find this conditional alignment effect in case of both recipient and donor leader change. The substantial size of the effect differs, however. While new recipient leaders mainly face the prospect of sizable cutbacks in case they dis-align from a donor, stronger alignment towards a new donor leader is seemingly an important strategy to increase ODA commitments. For the bulk of the alignment changes following leader change (around 78%) cutbacks range between 9.7% and 19.6% for dis-aligning new recipient leaders and amount to between 3.8% and 9.1% in increases for recipients that align themselves with a new donor leader.

Moreover, aid increases after leader change are only short term as the alignment effect vanishes two years after leader change. Hence, the initial change in foreign policy of a new recipient leader – the first impression – determines bilateral aid provision that a recipient country will receive from its donors only in the short term. We conclude that new recipient leaders must warily consider their first appearance on the international stage at the beginning of their incumbency. As donors put their foreign policy positions under increased scrutiny, usually inconsequential changes in foreign policy result in sizable alterations in aid commitments.

We provide evidence of an important mechanism explaining the volatility of development aid, beyond the effect of elections (Faye and Niehaus, 2012) or political importance due to temporary membership in the UNSC (Kuziemko and Werker, 2006). Politically motivated aid has been shown to be less effective in promoting growth (Dreher et al., 2016) and politically committed aid increases aid volatility that induces a heightened risk of civil conflict (Nielsen et al., 2011). Our results thus highlight that more scrutiny is required to dis-entangle development aid from politically motivated side payments that may have detrimental effects for developing countries. Furthermore, we show that studies that analyze development aid on the right hand side, should test if their left hand side variables have different effects during times of leader changes in recipient or donor countries, since the conditional effect of bilateral control depending on leader change will not be captured by even the most conservative fixed effects.



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# First Impressions: How Leader Changes Affect Bilateral Aid – Online Appendix –

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## Abstract

This paper investigates a new mechanism to explain politically induced changes in bilateral aid. We argue that shifts in the foreign policy alignment between a donor and a recipient country following leadership changes induce reallocation of aid. Utilizing data from the G7 and 130 developing countries between 1975 and 2012 and employing high dimensional fixed effects and control function models, we show that incoming leaders in recipient countries, which politically converge towards their current donors, receive more aid commitments, compared to those that diverge. Additionally, accounting for donor leader change, we find that incumbent recipient leaders have an opportunity to get even more aid when political change in donor countries moves them closer to the donor's foreign policy position. Thus, leadership turnover in recipient and donor countries makes otherwise inconsequential deviations in foreign policy alignment highly consequential for aid provision.

*Keywords:* Dyadic leader change, UNGA voting realignment, development aid

*JEL Classification:* D72, F35, F53, O19

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## A. Supporting Information

TABLE A-1  
List of Recipient Countries, in Alphabetical Order

Afghanistan, Albania, Algeria, Angola, Argentina, Armenia, Azerbaijan, Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belize, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Brunei Darussalam, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, Chile, China, Colombia, Comoros, Congo-Brazzaville, Costa Rica, Croatia, Cuba, Cyprus, Djibouti, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Ethiopia, Fiji, Gabon, Gambia, Georgia, Ghana, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, India, Indonesia, Iran, Iraq, Ivory Coast, Jamaica, Jordan, Kazakhstan, Kenya, Korea (North), Kuwait, Kyrgyzstan, Laos, Lebanon, Lesotho, Liberia, Libya, Madagascar, Malawi, Malaysia, Maldives, Mali, Malta, Mauritania, Mauritius, Mexico, Moldova, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Niger, Nigeria, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Qatar, Rwanda, Saudi Arabia, Senegal, Serbia, Sierra Leone, Singapore, Solomon Islands, Somalia, South Africa, Sri Lanka, Sudan, Suriname, Swaziland, Syria, Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, Uruguay, Uzbekistan, Venezuela, Vietnam, Yemen, Zambia, Zimbabwe.

TABLE A-2  
Descriptive Statistics

	N	Min	Mean	Max	SD
ODA commitments	18,571	0.01	67.49	19,721.40	251.32
ODA commitments (Log)	18,571	-4.61	2.18	9.89	2.37
Administration dyads	18,571	1.00	–	7,507	–
Administration change	18,571	0.00	0.27	1.00	0.44
Recipient change	18,571	0.00	0.13	1.00	0.34
Donor change	18,571	0.00	0.20	1.00	0.40
$\triangle$ alignment	18,571	-0.94	-0.00	0.67	0.08
Voting Alignment	18,571	0.00	0.62	1.00	0.23
Past mean voting alignment	18,571	0.00	0.62	1.00	0.22
Administration dyad duration	18,571	1.00	5.93	16.00	3.65
Donor GDP (log)	17,401	20.09	21.45	23.30	0.81
Recipient GDP (log)	16,928	11.51	16.72	22.97	1.82
Donor population (log)	17,401	10.08	11.21	12.65	0.71
Recipient population (log)	17,095	4.95	9.06	14.10	1.70
Similarity Index (GDP)	16,928	0.00	0.06	0.50	0.11
Similarity Index (Population)	17,095	0.00	0.21	0.50	0.16
(Donor) Imports in million USD (Log)	18,571	-13.82	-2.88	13.00	8.99
(Recipients) Imports in million USD (Log)	18,571	-13.82	-5.58	12.13	9.42
Idealpoint recipients	18,571	-1.91	-0.46	1.70	0.53
Idealpoint donors	18,571	0.56	1.76	3.06	0.57
Domestic reform	12,213	0.00	0.38	0.92	0.25

TABLE A-3  
Variables and Sources

Variable	Source
ODA commitments	OECD (2015)
ODA commitments (Log)	OECD (2015)
Administration dyads	Archigos (Goemans et al., 2009)
Administration change	Archigos (Goemans et al., 2009)
Recipient change	Archigos (Goemans et al., 2009)
Donor change	Archigos (Goemans et al., 2009)
Administration dyad duration	Archigos (Goemans et al., 2009)
Alignment change	Voeten et al. (2009)
Voting Alignment	Voeten et al. (2009)
Past mean voting alignment	Voeten et al. (2009)
Donor GDP (log)	PWT 7.1 (Heston et al., 2012)
Recipient GDP (log)	PWT 7.1 (Heston et al., 2012)
Donor population (log)	PWT 7.1 (Heston et al., 2012)
Recipient population (log)	PWT 7.1 (Heston et al., 2012)
(Donor) Imports in million USD (Log)	UN Comtrade (2017)
(Recipients) Imports in million USD (Log)	UN Comtrade (2017)
GDP per Capita (Log)	PWT 7.1 (Heston et al., 2012)
Democracy	Polity IV (Marshall et al., 2016)
Political System Transition	Polity IV (Marshall et al., 2016)
Military Alliance (United States)	Mattes et al. (2015)
Military Alliance (Russia)	Mattes et al. (2015)
Domestic Support Group Change (Donor)	Mattes et al. (2015)
Domestic Support Group Change (Recipient)	Mattes et al. (2015)
Same Political Colour Dummy	DPI (Beck et al., 2001)
Natural Death of a Leader (Recipient)	Jones and Olken (2005)
Executive Elections (Donor)	NELDA (Hyde et al., 2012)
Executive Elections (Recipient)	NELDA (Hyde et al., 2012)
Legislative Elections (Donor)	NELDA (Hyde et al., 2012)
Legislative Elections (Recipient)	NELDA (Hyde et al., 2012)
Presidential Term Limits (USA)	NELDA (Hyde et al., 2012)
Idealpoints	Bailey et al. (2017)
Domestic reforms (econ. liberalization)	Giuliano et al. (2013)

TABLE A-4  
Baseline Results with Different Sets of Control Variables

	Dependent variable: <i>ln ODA commitments</i>				
	(1)	(2)	(3)	(4)	(5)
Recipient change	-0.099*** (0.032)	-0.095*** (0.032)			
Donor change	0.057*** (0.027)	0.049* (0.027)			
$\Delta$ alignment	-0.414*** (0.143)	0.436** (0.208)	-0.455** (0.221)	0.216 (0.356)	-0.267 (0.306)
Recipient change * $\Delta$ alignment	1.107*** (0.402)	1.126*** (0.399)	1.047*** (0.496)	1.043** (0.493)	0.954** (0.455)
Donor change * $\Delta$ alignment	0.816** (0.329)	0.718** (0.323)	0.729 (0.466)	0.721 (0.461)	0.777* (0.423)
Last year alignment		1.611*** (0.317)		1.304** (0.538)	0.316 (0.391)
Past mean alignment					0.950** (0.371)
<i>ln ODA commitments (lagged),</i>					0.338*** (0.017)
Similarity Index (GDP)					3.386 (2.077)
Similarity Index (Population)					1.742 (2.849)
Adjusted R-squared	0.711	0.713	0.786	0.786	0.813
Fixed Effects	DR, Y	DR, Y	DR, RY, DY	DR, RY, DY	DR, RY, DY
# of observations	16923	16923	18571	18571	17858
# of dyads	663	663	681	681	673

*Notes:* Columns 1 and 2 include the log of GDP and population for both recipient and donor countries. Fixed effects: donor-recipient (DR), year (Y), recipient-year (RY), donor-year (DY). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .



TABLE A-5  
Dis-aggregate Leader Changes (Splined Alignment Change)

Dependent variable: <i>ln ODA commitments</i> (1)	
Recipient change	-0.071 (0.046)
Donor change	0.050 (0.052)
Recipient change $\times$ converge	0.862 (0.773)
Recipient change $\times$ diverge	-1.815*** (0.647)
Donor change $\times$ converge	1.359*** (0.520)
Donor change $\times$ diverge	-0.623 (0.446)
Converge	-0.588 (0.372)
Diverge	-0.612 (0.375)
Last year alignment	0.696** (0.326)
Past mean alignment	1.152*** (0.283)
Adjusted R-squared	0.046
Fixed Effects	DR,Y
# of observations	16928
# of dyads	668

*Notes:* Diverge are negative alignment changes  $\times$  -1 while positive and no changes are set 0, converge are positive alignment changes in which negative and no changes are set 0. Fixed effects: DR are donor-recipient, Y are year fixed effects. Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE A-6  
Timing of the Conditional Alignment Effect

<i>Leader change-alignment interaction</i>	Dependent variable: <i>ln ODA commitments</i>				
	<i>2 years prior</i>	<i>1 year prior</i>	<i>leader change</i>	<i>1 year after</i>	<i>2 years after</i>
$\Delta$ alignment	0.7876* (0.4014)	0.5832 (0.3987)	0.0342 (0.3497)	0.3903 (0.3446)	0.5907 (0.3742)
Recipient change $\times$ $\Delta$ alignment	0.2464 (0.4947)	0.5709 (0.5081)	1.1865** (0.5020)	0.8407* (0.5061)	-0.3027 (0.5800)
Donor change $\times$ $\Delta$ alignment	-0.6419 (0.5046)	-0.1957 (0.4626)	0.8773* (0.4723)	0.8859* (0.4949)	0.5312 (0.4921)
Last year alignment	1.3252** (0.6232)	1.1019* (0.5932)	0.9370* (0.5288)	1.3890** (0.5431)	1.5363*** (0.5779)
Past mean alignment	0.1643 (0.4321)	0.1839 (0.4198)	0.7297* (0.4342)	0.2997 (0.4201)	0.0633 (0.4092)
Adjusted R-squared	0.783	0.785	0.786	0.791	0.794
Fixed Effects	DR,R,Y,DY	DR,R,Y,DY	DR,R,Y,DY	DR,R,Y,DY	DR,R,Y,DY
# of observations	17103	17858	18571	17322	16568
# of dyads	681	681	681	681	681

*Notes:* Fixed effects: donor-recipient (DR), year (Y), recipient-year (RY), donor-year (DY). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

TABLE A-7  
Additional Variables in Table 3

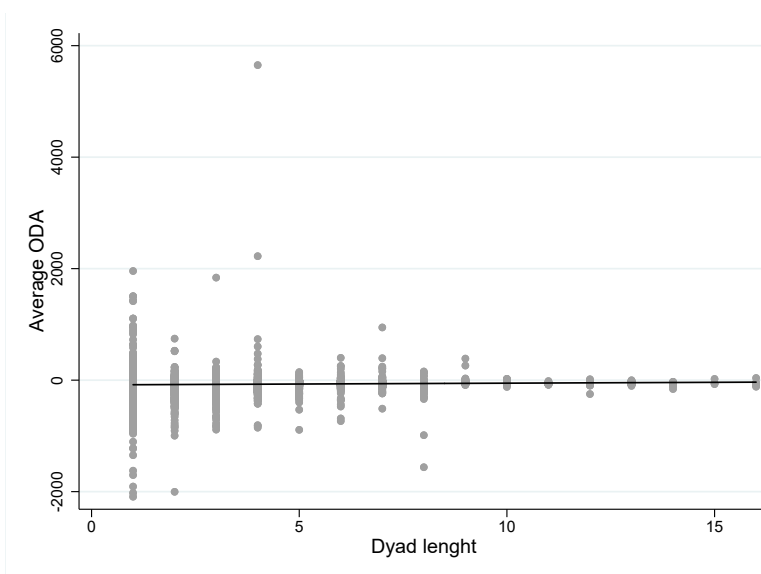
Specification	Variables	Source
<a href="#">Mattes et al. (2015)</a>	Democracy (if PolityIV $\geq 6$ )	<a href="#">Teorell et al. (2013)</a>
	Political system transition	<a href="#">Teorell et al. (2013)</a>
	USA defense pact	<a href="#">Gibler (2009)</a>
	RUS defense pact	<a href="#">Gibler (2009)</a>
<a href="#">Dreher and Jensen (2013)</a>	Donor GDP per capita	<a href="#">Heston et al. (2012)</a>
	Recipient GDP per capita	<a href="#">Heston et al. (2012)</a>
	Political color	<a href="#">Beck et al. (2001)</a>
<a href="#">Carter and Stone (2015)</a>	Democracy dummy	<a href="#">Teorell et al. (2013)</a>
	Donor GDP per capita	<a href="#">Heston et al. (2012)</a>
	Recipient GDP per capita	<a href="#">Heston et al. (2012)</a>
	Same political color	<a href="#">Beck et al. (2001)</a>

## B. Additional Timing Issues

### B-1. Working Relationships

Is there a payoff for working relationships, i.e., administration dyads that persist for longer periods of time? We investigate this relationship in two ways. First, we check a simple correlation between administration dyad length and average ODA commitments to see whether ODA commitments are on average higher in longer lasting administration dyads. Second, we investigate whether ODA commitments increase during administration dyads over time. For both exercises, we first de-mean our ODA measure by the recipient-donor country dyad<sup>1</sup> and donor-year.<sup>2</sup> The correlation between the average demeaned ODA commitments and dyad length turns out to be positive. Dyads that last one year longer receive \$3m more aid commitments, on average. The correlation is statistically different from zero at the 5% significance level. The average administration dyad lasts around 5 years and receives around \$67m in total. Thus, for a dyad that last one year longer aid increases by about 4.5% compared to the average administration dyad. The short term conditional alignment effect amounts to roughly 4-9% for donor leader change and 10-20% for recipient leader change. Thus, the effect of working relationships equals the short-term donor change effect for a dyad lasting 1 to 2 years (or 20% to 40%) longer than the average dyad, while it is equal to the short-term recipient leader change effect after lasting 2 to 5 years longer than the average dyad (or 40% to 100%).

FIGURE B-1  
Admin-dyad-length and aid



*Note:* The figure reports the average aid commitments per dyad-length. ODA commitments are demeaned by donor-recipient dyad and donor-year.

<sup>1</sup>This takes care of bilateral time invariant strategic relationships such as colonial past.

<sup>2</sup>To capture yearly variations in donor aid budgets.

To understand how ODA commitments develop over time within dyads, we plot the average ODA commitments within administration dyads over time in Figure B-1. The figure shows essentially a flat line, highlighting that additional years within dyads are not a good predictor of ODA commitments. However, we observe that the variation in ODA commitments decreases over time. Hence, there seems to be evidence that longer lasting or ‘working’ relationships lead to higher stability in bilateral ODA commitments. This is in line with our argument. Deviations in behavior should matter less in longer lasting relationships as uncertainty about behavior in the international arena decreases, which also decreases the likelihood that ODA gets adjusted in response.

## B-2. Stability of Initial Alignment Changes

How stable is political alignment over time, conditional on initial alignment changes? Does initial convergence or divergence in political alignment fade out over time, or is it indicative of the general relations. We explored this issue in Figure B-2, where we divide the sample into two groups. In the first group, we included only dyads that saw political convergence after leader change. In the second group, we included only dyads that experienced divergence after leader change. We then plot the alignment level within dyads over years passed within the administrative-dyad.<sup>3</sup> For both groups we observe a slight regression to the mean; i.e. a negative trend in alignment levels for dyads that initially converged and a positive trend for dyads that initially diverged. This regression to the mean, however, does not offset the initial change in alignment within the average dyad length (five years after leader change). Hence, country pairs might eventually come to some understanding of their general relations, but it has not necessarily to be an amicable one.

## B-3. Waiting

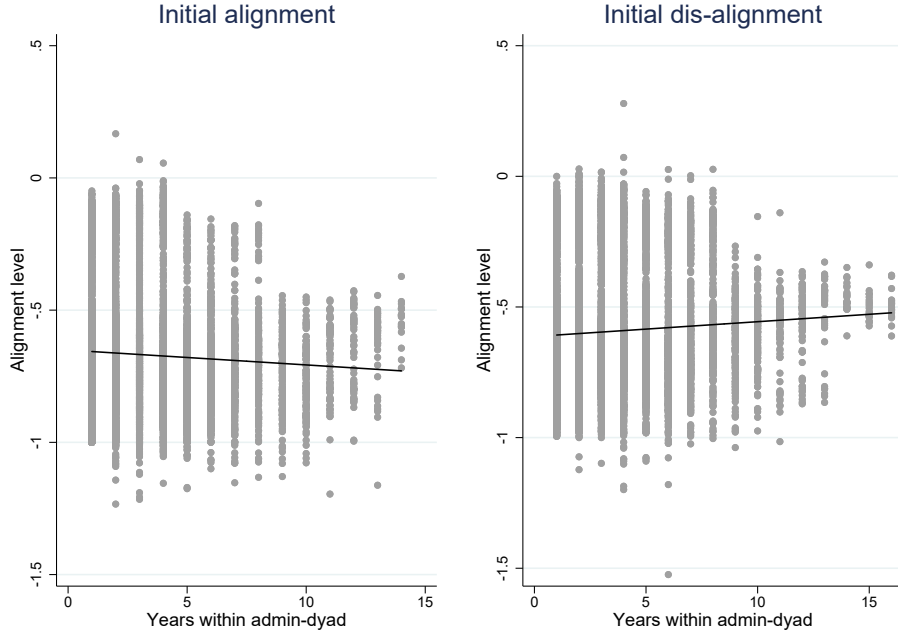
We expect and do indeed find short-term conditional alignment effects, which poses the question whether donor country administrations simply postpone ODA commitments during recipient leader changes, for instance due to technical issues.<sup>4</sup> If this were true, we would expect to find significantly more ODA commitments later on during the recipient administration. In fact, the effects could offset each other, which would imply that our proposed mechanism reduces to a temporal distortion in ODA commitments that has nothing to do with political alignment. In order to test for the possibility of ‘waiting’ or ‘backlog’ effects, we exclusively focus on recipient leader administration changes. Note that we cannot extend the time frame in our standard model, since regular donor leader

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<sup>3</sup>The alignment level is demeaned by dyad and the initial value of the alignment level.

<sup>4</sup>Note that we find this less plausible in the case of donor leader change, since development agencies usually keep most of their staff.

FIGURE B-2  
Alignment levels within dyads over time



*Notes:* The figure plots the alignment levels demeaned by the initial level of the dyad and the average level of the dyads, over the years within a dyad. The left panel plots this relationship for dyads that experience a positive alignment change during the first year. The right panel plots the relationship for dyads that experience a negative alignment change during the first year.

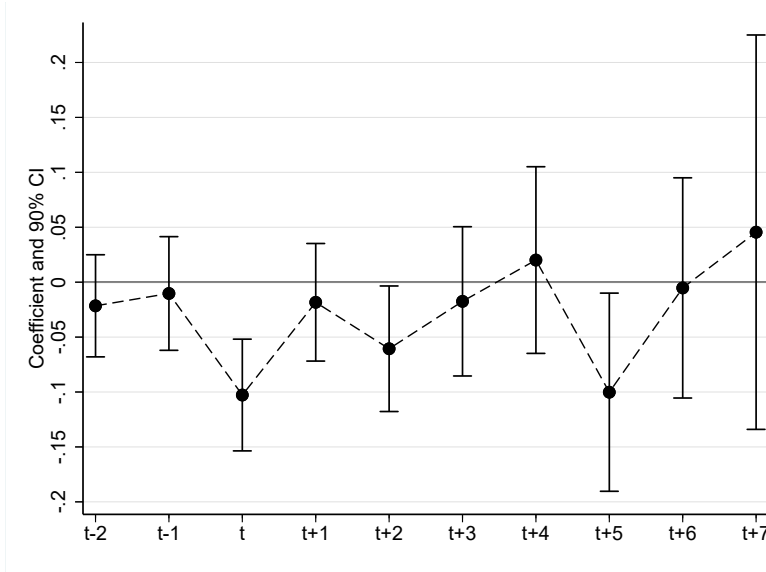
changes prohibit long bilateral administration dyads in most cases. We simply regress ODA commitments on our standard model excluding donor-leader change as well as the donor and recipient leader change interactions, but we include donor-year fixed effects alongside the bilateral fixed effects to absorb the level effect of donor leader changes. The coefficient of interest in this setting is the recipient leader change dummy.

Figure B-3 plots the resulting point coefficients. We still observe the negative level effect in the year of the recipient leader change. Note, however, that this is now an unconditional effect and not the effect if alignment stays constant. Given that the majority of alignment changes is slight disalignment during recipient leader changes, it is not surprising that we find a negative point estimate. We also observe a negative effect 5 years after the change, which is likely to be some statistical noise, since it could coincide with the next recipient leader change. Importantly, we do not observe any positive effects over time. Thus, the estimates depicted in Figure B-3 seem not to support ‘waiting’ or ‘backlog’ as an alternative explanation for our core result.

#### B-4. Spurious Correlation

Even though the analysis of the timing structure of the conditional alignment effect supports our argument, it might still be the case that our results are driven by spurious

FIGURE B-3  
Recipient leader change timing

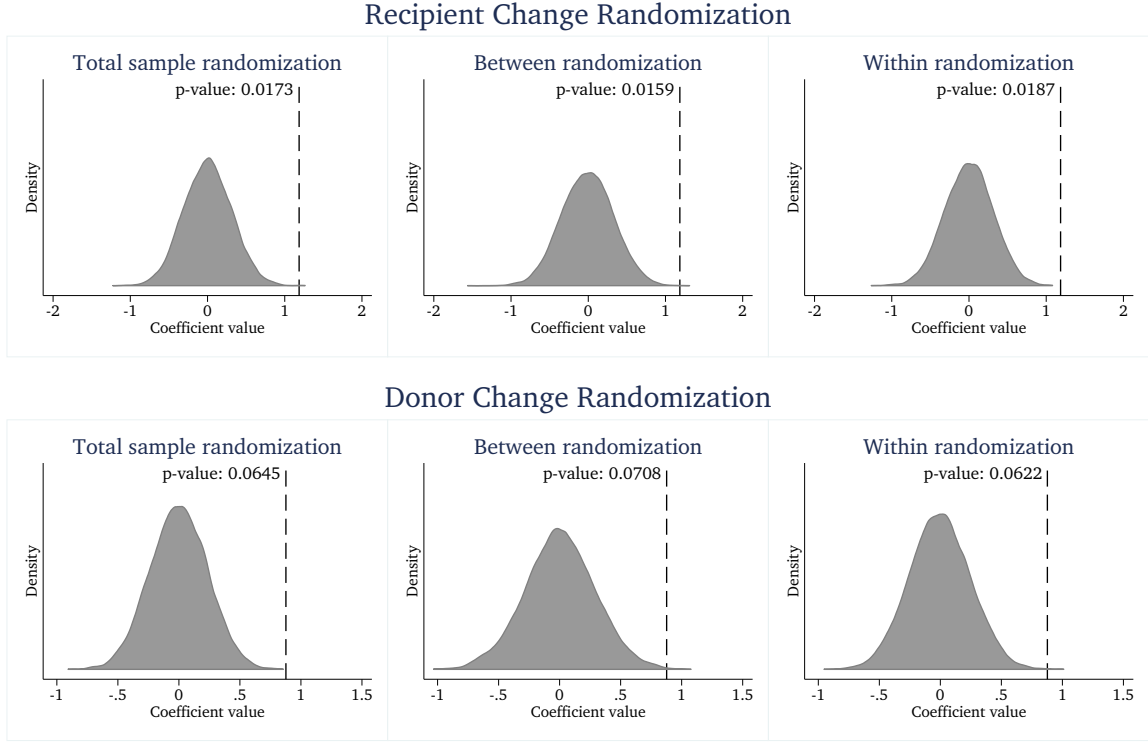


*Notes:* Based on regressions, including donor-recipient and donor-year fixed effects. Standard errors are clustered at the donor-recipient dyad.

correlation that covaries with the leader change interactions within the dyads over time. In order to test for this, we follow [Hsiang and Jina \(2014\)](#) and conduct a randomization test over all dimensions of our panel. More specifically we conduct three randomizations of our respective interaction terms on the basis of model 4 in Table 2: First, we randomize leader changes over the entire sample. Hence, a leader change in Kenya in 2000 can potentially be assigned to Indonesia in 1990. Second, we randomize between dyads, thus keeping the time structure of the leader changes constant, which means that the entire leader change pattern of Kenya is, for example, assigned to Indonesia. This tests for spurious correlation arising from country or regional time trends, for example because the US closely monitors countries' voting behavior in the Middle East at the time of the wars in Iraq. Third, we randomize leader changes within each dyad, but not across dyads. Thus, leader changes in Kenya are shuffled around within Kenya. This randomization allows us to test if any unobserved dyadic-specific circumstances that vary over time drive the results, for instance conflicts over trade between countries that covary with the leader changes within dyads or covert operations between donors and recipients, such as CIA interventions ([Berger et al., 2013](#)). We expect that all randomization procedures produce a distribution of point estimates centered around zero and that we should not reject the null more often than in our corresponding regression using the real data.

Figure B-4 presents the kernel density function of the resulting point coefficients of the recipient leader and donor leader change interactions for each of the three randomization exercises, resulting from 10,000 randomization iterations. The recipient change results are reported in the upper panel, while the donor change interaction results are plotted

FIGURE B-4  
Randomization of Leader Change



*Notes:* Distribution of point estimates for the interaction between recipient change and alignment change, based on Table 2, column 4. Each distribution corresponds to the different dependent-independent variable pairs, for the three different randomization procedures. Each distribution is constructed by repeating the randomization and estimation procedure 10000 times. The point coefficient of the actual estimation is depicted as a vertical line.

in the lower panel. The dotted line represents the obtained point coefficient from the actual data based on column 4 in Table 2. The reported Monte Carlo  $p$ -values report fraction of  $t$ -statistics from the randomized data that exceed the absolute  $t$ -values for our coefficients of interest using the real data. In all cases, the estimated interaction terms using the real data exceed the obtained coefficient distributions obtained from the hypothetical scenarios. The  $p$ -values range between 0.0159 to 0.0187 for the recipient change interactions and 0.0622 and 0.0708 for the donor interactions. Thus they reaffirm the timing structure of our proposed mechanism. It is also further evidence that our results are not driven by any spurious correlation, either within or between panels. Hence, we are confident that it is indeed the leader change interacted with foreign policy alignment that drives changes in ODA commitments between donors and recipients.

## C. Dependent Variable

### C-1. Selection on the Dependent Variable

Due to the log-transformation, our results relate only to recipient countries that have already received aid from a donor. To rule out selection effects, we thus include donor-recipient pairs without previous aid flows, allowing us to test whether leader change can lead to the establishment of new development cooperation between a developing and a G7 country or to the complete abandonment of it, respectively.

Ideally we would run a proper two-stage model, but unfortunately we lack an instrument for the selection equation. Hence, we estimate an onset specification, in which the dependent variable is a dummy that is 1 if a country receives a positive amount of ODA commitments and zero otherwise (see Table C-1, column 1). The sample consists only of donor-recipient dyads where there have been no ODA commitments in the last period. Concerning our variables of interest, only donor leader change has a statistically significant effect on the establishment of development cooperation with recipient countries if voting alignment stays constant. Most importantly, the interaction terms are not statistically significant. Political convergence after leadership turnover does lead to ODA commitments if they have been zero in the past period.<sup>5</sup> We further test whether aid is cut completely between a donor and a recipient induced by alignment change after leader turnover (see Table C-1, column 2). In this specification, none of the core variables is statistically significant. Hence, we conclude that the voting alignment mechanism after leadership change has no effect on the extensive margin of ODA commitments between donors and recipients.

Although we find no selection effects, we replicate columns 3 and 4 from Table 2 including zero ODA commitments (see Table C-1, columns 3 and 4).<sup>6</sup> The main results support our argument. Nevertheless, the substantive as well as statistical significance decreases compared to the results in Table 2. This is however not surprising. If the interaction of leader change and the political alignment does not have an effect on the extensive margin, including zeros biases the results for the intensive margins downward. Thus, foreign policy realignment is more important for recipients that already have established development cooperation.

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<sup>5</sup>We also test if our mechanism induced any development cooperation in cases where a donor has never given aid to a recipient in the past. We do not find any effect on the interactions, but a small effect on the unconditional recipient change indicator. The unconditional alignment change is also statistically insignificant in those cases.

<sup>6</sup>In order to log-transform this variable, we add \$1 to each observation.



TABLE C-1  
ODA Selection and Zero ODA Commitments

	Dependent variable:			
	<i>ODA onset</i> (1)	<i>ODA cont.</i> (2)	<i>ln ODA commitments</i> (3)	(4)
Recipient change	0.010 (0.015)	0.003 (0.003)	-0.049** (0.020)	
Donor change	0.023** (0.011)	0.001 (0.004)	0.029* (0.017)	
Alignment change	0.061 (0.083)	0.031 (0.028)	0.313** (0.145)	0.193 (0.206)
Recipient change $\times$ realignment	-0.278 (0.191)	0.052 (0.055)	0.500* (0.275)	0.788** (0.312)
Donor change $\times$ realignment	0.064 (0.114)	-0.002 (0.044)	0.356 (0.220)	0.184 (0.249)
Last year alignment	-0.137 (0.107)	0.058* (0.034)	0.727*** (0.211)	0.676** (0.339)
Past mean alignment	0.110 (0.111)	-0.000 (0.033)	0.681*** (0.187)	0.427* (0.249)
Donor GDP (ln)	0.116* (0.065)	-0.009 (0.025)	1.358*** (0.426)	
Donor population (ln)	0.189 (0.224)	0.181*** (0.060)	1.338* (0.697)	
Recipient GDP (ln)	-0.026 (0.021)	-0.011 (0.009)	-0.094 (0.085)	
Recipient population (ln)	-0.029 (0.045)	-0.011 (0.020)	0.179 (0.200)	
Adjusted R-squared	0.037	0.013	0.053	0.843
Fixed Effects	DR,Y	DR,Y	DR,Y	DR,R,Y,DY
# of observations	4745	16938	21683	24176
# of dyads	426	673	745	768

*Notes:* Leader change variables in column 4 omitted due to fixed effects. Fixed effects: donor-recipient (DR), year (Y), recipient-year (RY), donor-year (DY). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

## C-2. Size of ODA Changes

In a next step, we test whether the results regarding the intensive margin are driven by small changes in ODA commitments. To this end, we recode the dependent variable and include a threshold for ODA changes. Table C-2 reports our core specification but replaces the log of ODA commitments with a categorical variable that is  $-1$  if ODA commitments decrease by more than  $x\%$ ,  $+1$  if they increase by more than  $x\%$ , and  $0$  otherwise. Table C-2 shows that the statistical significance of our main variable is not driven by small changes in ODA commitments.<sup>7</sup> The interaction terms between alignment change and

<sup>7</sup>What is more, we can run this specification on the full sample. As expected, the coefficients decrease in magnitude but keep their statistical significance. Results not reported, but available upon request.

either recipient or donor country leader change remain positive in all specifications.

TABLE C-2  
Magnitude of ODA Changes

	Dependent variable: <i>ln ODA commitments</i>				
	$\Delta$ 5%	$\Delta$ 10%	$\Delta$ 15%	$\Delta$ 20%	$\Delta$ 30%
	(1)	(2)	(3)	(4)	(5)
Recipient change	-0.051** (0.022)	-0.047** (0.021)	-0.059*** (0.020)	-0.052*** (0.020)	-0.054*** (0.018)
Donor change	-0.032 (0.024)	-0.030 (0.023)	-0.013 (0.022)	-0.020 (0.021)	-0.019 (0.019)
$\Delta$ alignment	-0.231 (0.166)	-0.224 (0.164)	-0.181 (0.155)	-0.214 (0.152)	-0.139 (0.137)
Recipient change $\times$ $\Delta$ alignment	0.578** (0.287)	0.533* (0.274)	0.535* (0.272)	0.496* (0.264)	0.633** (0.247)
Donor change $\times$ $\Delta$ alignment	0.583** (0.234)	0.557** (0.228)	0.530** (0.218)	0.559*** (0.213)	0.436** (0.195)
Last year alignment	0.121 (0.166)	0.068 (0.162)	0.109 (0.157)	0.074 (0.149)	0.101 (0.136)
Past mean alignment	-0.052 (0.163)	0.022 (0.159)	0.009 (0.154)	-0.007 (0.148)	-0.085 (0.138)
Adjusted R-squared	0.010	0.010	0.009	0.009	0.009
Fixed Effects	DR,Y	DR,Y	DR,Y	DR,Y	DR,Y
# of observations	16928	16928	16928	16928	16928
# of dyads	668	668	668	668	668

*Notes:* All columns include the log of GDP and population for both recipient and donor countries. Fixed effects: donor-recipient (DR), year (Y), recipient-year (RY), donor-year (DY). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

### C-3. Disbursements

Next, we check if our results only pick up cheap talk, which could be the case by simply announcing aid commitments, or if donors actually change their ODA disbursements, which refers to actual money spent. We replicate Table 2 using net ODA disbursements instead of ODA commitments. Table C-3 shows that the obtained effects largely hold for aid disbursements as well, although the point coefficients become smaller and have reduced statistical significance. Note that the donor leader change interaction loses its statistical significance in the high dimensional fixed effects model in column 4.

TABLE C-3  
Net ODA Disbursements

	Dependent variable: <i>Log net ODA disbursements</i>			
	(1)	(2)	(3)	(4)
Recipient change	-0.070** (0.029)		-0.066** (0.029)	
Donor change	0.065*** (0.022)		0.073*** (0.023)	
$\Delta$ alignment		0.389** (0.188)	0.077 (0.207)	0.468 (0.326)
Recipient change $\times$ $\Delta$ alignment			0.798** (0.389)	0.785* (0.445)
Donor change $\times$ $\Delta$ alignment			0.701** (0.308)	0.153 (0.469)
Last year alignment	0.675*** (0.200)	1.000*** (0.303)	0.835*** (0.305)	1.246** (0.528)
Past mean alignment	0.671** (0.262)	0.488* (0.273)	0.663** (0.291)	0.692 (0.430)
Adjusted R-squared	0.052	0.051	0.052	0.811
Fixed Effects	DR,Y	DR,Y	DR,Y	DR,R,Y,DY
# of observations	15853	15853	15853	17218
# of dyads	661	661	661	670

*Notes:* Leader change variables in column 4 are omitted due to fixed effects. Columns 1 to 3 include GDP and population controls for donors and recipients. Fixed effects: donor-recipient (DR), year (Y), recipient-year (RY), donor-year (DY). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

## D. Independent Variable

### D-1. Positioning of Recipients

One concern regarding foreign policy alignment and the resulting alignment change measurement is that they are not independent between donor-recipient dyads. If voting in line with one donor country means not voting in line with another country, the effects on aid disbursement might cancel each other out. A perfect example for such a case are the shifting alliances in the International Whaling Commission, in which recipients either oppose the United Kingdom and France, or Japan (Dippel, 2015). Unlike the International Whaling Commission, the UNGA covers a myriad of different votes, which makes it much harder to test if there is such a trade-off between voting in line with different donors during the year. The best we can do is to inspect if recipients seem to be in general to the ‘left’, ‘right’, or ‘middle’ of different donors using the idealpoint measure developed by Bailey et al. (2017). The idealpoint measure aggregates the voting behavior of all countries into a one dimensional policy space, where positive values reflect the overall support for ‘Western’ values (e.g., free trade, human rights, and democracy).<sup>8</sup> It also corrects for some differences in the voting agendas between years.<sup>9</sup> Figure D-1 plots the idealpoint positions for all donors and recipients in our sample over time.

Figure D-1 shows that the absolute majority of recipient countries are constantly to the ‘left’ of the G7 donors. While this is no definite proof that recipients do not face costly votes in which they have to decide with which donor they want to align themselves, it supports the idea that this is not the case in the aggregate and for the vast majority of recipient country governments. Thus, aligning to one donor after leadership turnover does on average and in all likelihood not entail dis-alignment from another in terms of overall foreign policy positions.<sup>10</sup>

### D-2. Alignment Change Measurement

In a next step, we test if our results are driven by the measurement of foreign policy realignment. First, we employ regular votes instead of all votes. This measure is based on recurring votes and therefore not dependent on the yearly fluctuations of the UNGA voting agenda (Bailey et al., 2017; Häge and Hug, 2016). Second, we focus only on key votes – votes deemed important by the US State Department – to test if recipients and

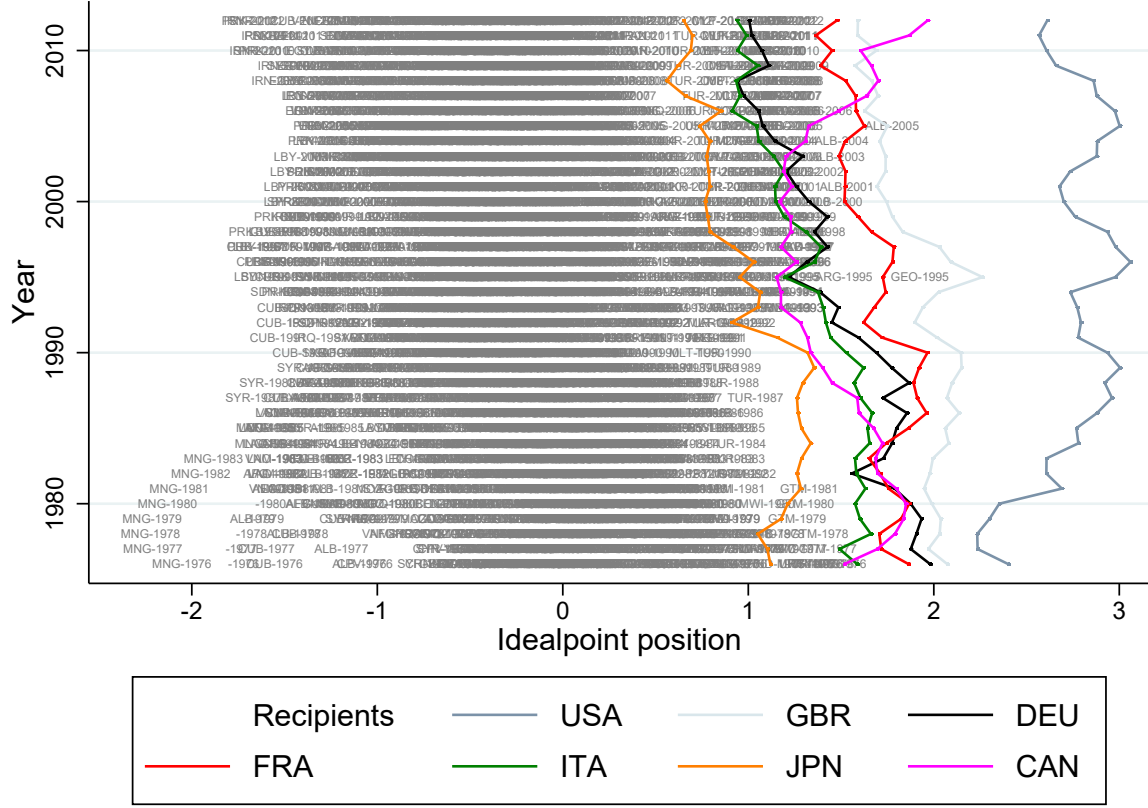
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<sup>8</sup>This measure is monadic by construction, which is the primary reason we do not use it in our preferred specifications. Furthermore, we do not want to filter the information donors might receive from voting behavior by reducing a multidimensional policy space to a single dimension.

<sup>9</sup>This should not be an issue in our setting, since the fixed effects should take care of any differences in the voting agenda over time.

<sup>10</sup>We will return to this issue in Appendix E where we test for differences between single G7-donors. Furthermore, as we show in Appendix E, our results are not dependent on specific recipients, implying that the few recipient leaders that in fact face a trade-off do not render our results meaningless.

FIGURE D-1  
Aggregated recipient and donor policy positions



Notes: The figure plots the idealpoint positions (Bailey et al., 2017) of the recipients and the G7 donors over time.

donors act differently to issues considered as strategically important by the United States (Kersting and Kilby, 2016).<sup>11</sup> Third, we test if our results are driven by extreme shifts in foreign policy and run a trimmed least squares regression dropping the bottom and top 5% of the voting change observations. Lastly, we include vote abstentions into the UNGA voting alignment counting abstentions .5 (Barro and Lee, 2005).

The results largely support the robustness of the previous findings (see Table D-1). The interaction between recipient leader change and the change in voting alignment is positive and statistically significant in all but one model. Only in case of key votes is the coefficient not statistically significant. At first sight this might seem puzzling. Yet, key votes are based on votes deemed important by the United States and might therefore always carry consequences, as suggested by the alignment change coefficient. The donor interaction effect in turn might be driven by the fact that other G7 leaders follow the US to different degrees.<sup>12</sup> Furthermore, key votes often cluster around certain events, like

<sup>11</sup>Key votes are only available after 1984.

<sup>12</sup>Note that this is not a sample size effect. We replicated our base specification (Table 2, column 3) on the reduced key-vote sample – 1984 onwards – and obtain stable results.

TABLE D-1  
Alternative Alignment Change Specifications

	Dependent variable: <i>ln ODA commitments</i>				
	<i>Regular votes</i> (1)	<i>Key votes</i> (2)	<i>TLS 10%</i> (3)	<i>Vote abstentions</i> (4)	(5)
Recipient change	-0.091*** (0.032)	-0.070** (0.034)	-0.094*** (0.033)	-0.101*** (0.032)	
Donor change	0.048* (0.027)	0.068** (0.027)	0.058** (0.027)	0.046* (0.027)	
$\Delta$ alignment	0.320 (0.200)	0.667*** (0.159)	-0.142 (0.305)	-0.058 (0.294)	0.058 (0.460)
Recipient change $\times$ $\Delta$ alignment	1.208*** (0.399)	-0.103 (0.143)	1.217** (0.616)	1.646*** (0.539)	1.283* (0.681)
Donor change $\times$ $\Delta$ alignment	0.943*** (0.334)	0.289* (0.159)	2.970*** (0.522)	0.972** (0.457)	0.471 (0.629)
Last year alignment	1.341*** (0.309)	1.179*** (0.159)	0.928** (0.394)	0.595 (0.443)	0.984 (0.784)
Past mean alignment	0.970** (0.390)	-0.116 (0.178)	0.987*** (0.328)	0.882** (0.387)	0.699 (0.614)
Log GDP recipient	-0.131 (0.132)	0.051 (0.135)	-0.071 (0.142)	-0.137 (0.133)	
Log GDP donor	2.225*** (0.647)	1.769*** (0.677)	2.479*** (0.613)	2.309*** (0.652)	
Log population recipient	0.799** (0.341)	0.589 (0.364)	0.842** (0.351)	0.804** (0.343)	
Log population donor	-0.074 (1.018)	3.186** (1.277)	0.299 (1.020)	-0.109 (1.028)	
Adjusted R-squared	0.044	0.054	0.048	0.041	0.786
Fixed Effects	DR,Y	DR,Y	DR,Y	DR,Y	DR,R,Y,DY
# of observations	16900	13495	15315	16928	18571
# of dyads	662	661	668	668	681

*Notes:* Regular votes (reoccurring votes) in column 1. Key votes in column 2. Top and bottom 5% of realignment excluded in columns 3. Alignment change includes vote abstentions in columns 4 and 5. Leader change variables in column 5 omitted due to fixed effects. Fixed effects: donor-recipient (DR), year (Y), recipient-year (RY), donor-year (DY). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

the Iraq War. Recipient country leaders might come to power and, simply by chance, not be able to signal alignment via key votes.<sup>13</sup> The interaction between donor leader change and the foreign policy alignment change is positive and statistically significant as long as we do not count abstentions. All in all, we find that our results are not driven by large changes in voting alignment alone and robust to different measures of UNGA

<sup>13</sup>Since key votes are solely determined by the US, we rerun column 2 using only the US as a donor and utilize a simple time trend instead of the year fixed effects. Note that year fixed effects would absorb the US leader changes in this setting. In this case both interactions lose their statistical significance while yearly alignment changes enter significant (results not reported). This is not surprising, since [Carter and Stone \(2015\)](#) have shown that the USA uses aid to influence voting behavior on key votes, thus introducing problems of endogeneity.

voting alignment.

### D-3. Leader Change Measurement

We also put the other part of our interactions under further scrutiny. So far we assigned a leader to a country year if he or she holds the majority of days in office during that year. While we believe this choice to be the most appropriate it is by no means the only justifiable approach. [Mattes et al. \(2015\)](#), for example, make the argument that the leader in power during the last three months of a year is most likely to influence UNGA alignment, since most of the votes are cast during that period (roughly 90% of the votes).<sup>14</sup> Thus we recode the leader in office variable in several ways. First we exclusively consider leaders in power for the majorities of days during December. Second we focus on leaders in power during November and December. Third we only take leaders into account during the last three month of any year. Lastly, we ignore all but the first or last leader during the last quarter. The correlation between the resulting recipient leader changes and our definition are between 0.60 and 0.76<sup>15</sup> and 0.64 and 0.86 for the donor leader changes, respectively.<sup>16</sup> Note that the different leaders we consider here only change the set of leaders in the sample, not the way we code changes. The change variable is still unitary if the last years leader is not the current year's leader. Let us highlight this approach using two examples. First, in case of the U.S. the alternative coding of December leaders vs. the majority of days definition does change anything. U.S. presidents always enter office in January and thus leader changes coded either using the majority of days in office or the in power during December definition are identical. Germany is different in this regard. German chancellors usually enter office during November. Thus the December leader coding will move the leader change to an earlier date. While we have a leader change in 1999 with the transition of leadership from Kohl to Schroeder following the majority of days in office definition, we code a change in office in 1998 using the December definition.

The results of the specifications using this alternative assignment of leader change are presented in Table D-2.<sup>17</sup> Columns 1 to 3 show that the obtained effects decrease in both magnitude and statistical significance compared to column 3 of Table 2, which is the corresponding specification using the majority of days in office definition (during the entire year, rather than the specific month) to identify leader changes. In fact the interaction results vanish completely if we focus solely on the leader in power during December. If

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<sup>14</sup>They highlight that the majority of votes between 1946 and 2008 occur during December (around 75%), followed by November (roughly 15%) and October (approximately 4%).

<sup>15</sup>Specifically, 0.6032 for the December definition, 0.6389 for the November and December definition, 0.7191 for the last quarter definition, 0.7588 for the first leader during the last quarter and 0.7221 for the last leader during the last quarter.

<sup>16</sup>More specifically, the correlation coefficients are 0.6401, 0.6975, 0.7976, 0.8559, and 0.7976.

<sup>17</sup>Note that we recoded the past mean alignment variable in each case, since the duration of administration pairs changes as soon as we redefine the leaders which are in power in a specific year.

TABLE D-2  
Leader Change Definitions

	Dependent variable: <i>ln ODA commitments</i>				
	Majority in Office		<i>Last Leader</i>		<i>Newest Leader</i>
	<i>December</i>	<i>Nov. and Dec.</i>	<i>Last Quarter</i>	<i>Last Quarter</i>	<i>Last Quarter</i>
	(1)	(2)	(3)	(4)	(5)
Recipient change	-0.061* (0.035)	-0.060* (0.033)	-0.096*** (0.032)	-0.097*** (0.032)	-0.091*** (0.032)
Donor change	0.004 (0.026)	0.022 (0.025)	0.037 (0.027)	0.072** (0.028)	0.037 (0.027)
$\triangle$ alignment	0.573*** (0.210)	0.544*** (0.208)	0.499** (0.208)	0.461** (0.209)	0.487** (0.209)
Recipient change $\times \triangle$ alignment	0.453 (0.364)	0.894** (0.391)	0.864** (0.391)	0.974** (0.405)	0.975** (0.385)
Donor change $\times \triangle$ alignment	0.411 (0.326)	0.285 (0.320)	0.486 (0.323)	0.578* (0.326)	0.478 (0.323)
Last year alignment	1.627*** (0.317)	1.627*** (0.318)	1.630*** (0.318)	1.624*** (0.318)	1.629*** (0.318)
Past mean alignment	-0.470 (0.409)	0.196 (0.356)	0.248 (0.386)	-0.150 (0.399)	0.039 (0.368)
Adjusted R-squared	0.043	0.043	0.044	0.044	0.044
Fixed Effects	DR, Y	DR, Y	DR, Y	DR, Y	DR, Y
# of observations	16928	16928	16928	16928	16928
# of dyads	668	668	668	668	668

*Notes:* All specifications include GDP and population controls. Fixed effects: donor-recipient (DR), year (Y). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

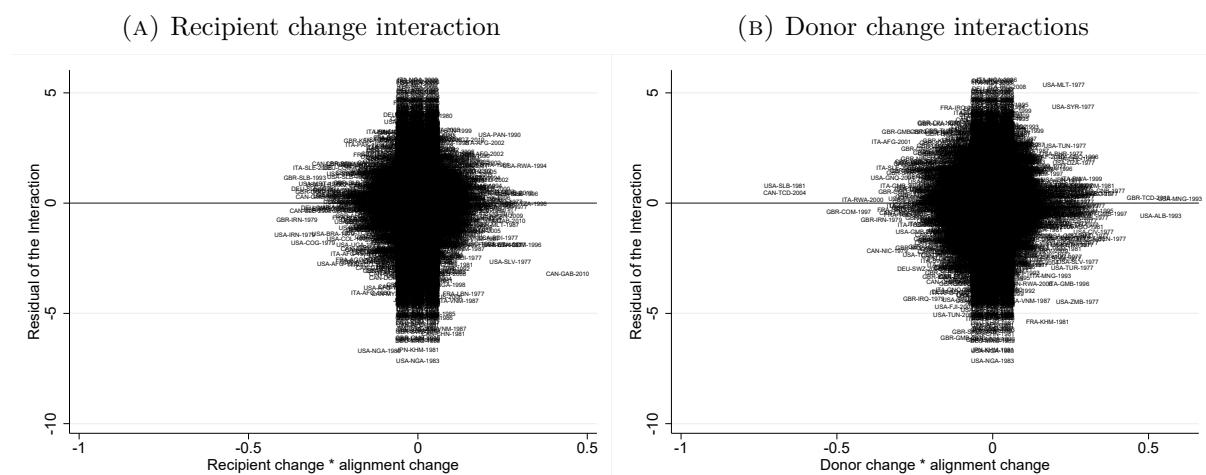


we consider only the first or last leader during the last quarter results are similar to column 3. The donor change interaction in turn gains only statistical significance when we use the first leader of the last quarter definition. There are two likely explanations for these results. First, it is plausible that new administrations coming in during the last two months of a year are not able to communicate their foreign policy preferences succinctly during the year in question. The second explanation is that UNGA voting alignment works more in the way of revealed preferences. Hence, alignment changes that coincide with leader changes at the end of the year are less consequential, since they proxy insufficiently for the relations during that year. The fact that the effect reconstitutes as we move closer to the majority of days in office definition for relevant leaders increases our confidence in the proxy character of the alignment measure.

### E. Influential Donors and Recipients

There is ample evidence that donors differ in the way they commit and disburse aid (Alesina and Dollar, 2000; Dietrich, 2016). The United States are famous for using aid to achieve geo-strategic goals, while France focuses prominently on former colonies. Thus, there remains the possibility that our core results are driven by specific donor-recipient pairs. We investigate if our specification does a particularly bad job in explaining our proposed mechanism, by plotting the partial residuals of our interaction terms over the recipient  $\times$  alignment change and donor  $\times$  alignment change interactions in Figure E-1.<sup>18</sup>

FIGURE E-1  
Partial residuals of interaction effects



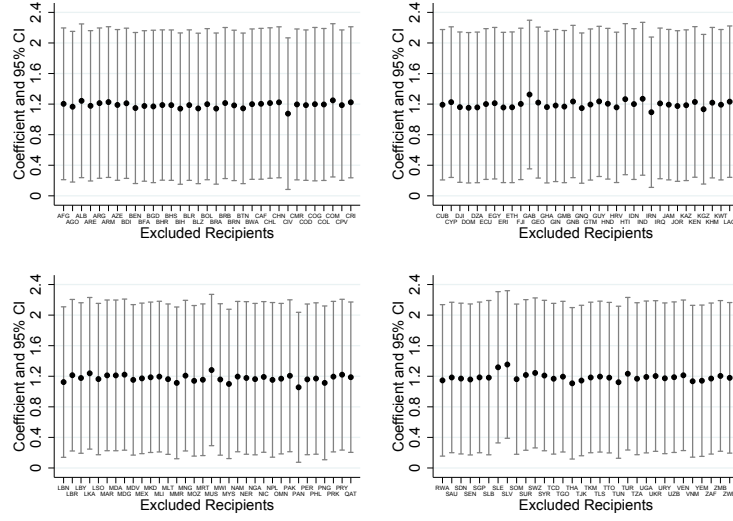
*Notes:* Panel A reports the partial residuals of the recipient leader \* alignment change interactions. Panel B reports the partial residuals of the donor leader \* alignment change interactions.

Figure E-1 shows that while there are some observations that seem to be not very well explained in our model, there is no systematic donor-recipient pair that drives the results. Yet, while we cannot observe a specific donor-recipient pair, it might still be the case that individual recipients drive our results. Afghanistan, for example, features quite prominently in the top 10 most influential recipient interactions following a dfbeta test, although with different donors and in different years. To test if our results are driven by individual recipient countries, we perform leave-one-out tests. Here, we rerun the specification from column 4 in Table 2 excluding every recipient country once at a time.

The point estimates of the recipient change-alignment interaction are plotted in Figure E-2. All effects are positive and statistically significant. From this we can conclude that no single recipient has enough leverage to drive our main finding. Additionally, Figure E-3 plots the corresponding donor change-alignment interaction. Apart from two exceptions, the results remain the same.

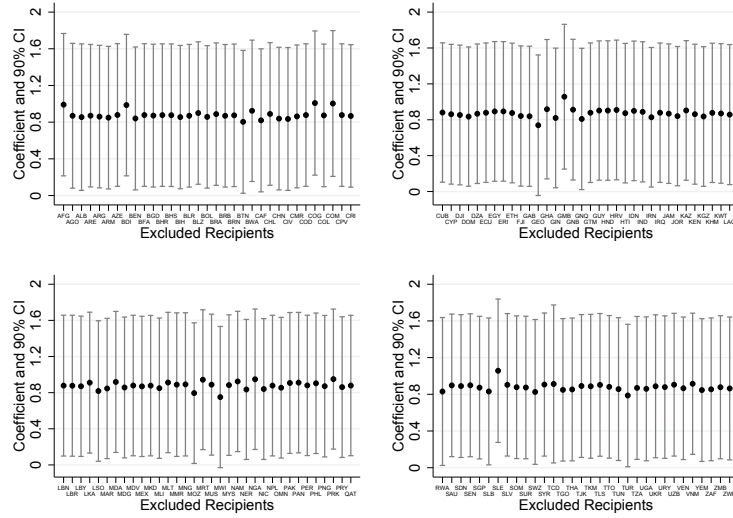
<sup>18</sup>Based on the model in column 3 in Table 2.

FIGURE E-2  
Leave-one-out Test for Recipient Change Interaction



*Note:* Reported are point coefficients of the interaction between recipient change and alignment change and the corresponding 95% confidence intervals, based on column 4 in Table 2.

FIGURE E-3  
Leave-one-out Test for Donor Change Interaction



*Note:* Reported are point coefficients of the interaction between donor change and alignment change and the corresponding 90% confidence intervals, based on column 4 in Table 2.

Finally, there is a chance that individual donors might drive our results, e.g., the U.S. as the biggest donor in our sample. This is closely related to the question whether changes in aid commitments of individual donors are due to the changes in the average alignment with the G7 in general or whether the results are truly driven by the dyad-specific changes in political proximity. We test the two issues jointly by including the average change in voting alignment with the G7 as an additional control and fully interacting our baseline

model for the different donors (see Table E-1).<sup>19</sup>

Regarding the interaction between recipient change and foreign policy alignment, we find that Canada, Germany, Great Britain, and the United States are the main drivers behind the reward and punishment mechanism following recipient leader change.<sup>20</sup> In case of alignment changes after donor leader change, we find statistically significant results for Canada, Germany, Great Britain, and Japan, while the rest of the G7 donors seem to exhibit no such behavior. France does not react to realignment after leader change, which is consistent with France’s focus on former colonies ([Alesina and Dollar, 2000](#)). Despite not reacting to conditional signaling, Italy nevertheless goes along with the rest of the G7; the effect of average G7 realignment is positive and statistically significant. Although we do not find the same effects for every donor, we also do not find evidence against our theoretical argument. None of the interaction terms are negative and statistically significant. Rather, the results emphasize that different donors seem to vary with regards to the importance they place on realignment after leadership turnover. Most importantly, the results are not driven by a single donor.

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<sup>19</sup>We keep the time dummies separate, since they would overload the specification and absorb the donor change variable. Hence they only control for global shocks concerning all donors and recipients.

<sup>20</sup>This is surprising since both the UK and the US have been shown to have a tendency to bypass aid in the first place ([Dietrich, 2016](#)), which should make them less responsive to our proposed mechanism.

TABLE E-1  
Differences between Donor Countries

	Dependent variable: <i>ln ODA commitments</i>						
	<i>CAN</i>	<i>FRA</i>	<i>GER</i>	<i>GBR</i>	<i>ITA</i>	<i>JAP</i>	<i>USA</i>
Recipient change	-0.098 (0.072)	0.023 (0.076)	0.020 (0.020)	0.179** (0.077)	0.281** (0.125)	0.060 (0.122)	0.076 (0.063)
Donor change	-0.066 (0.070)	0.052 (0.074)	-0.094 (0.106)	-0.150** (0.076)	-0.058 (0.063)	-0.129* (0.077)	-0.010 (0.057)
Alignment change	-2.008*** (0.725)	0.837 (0.525)	0.907 (0.684)	1.253*** (0.480)	-1.229 (1.193)	0.514 (1.512)	0.273 (0.437)
Recipient change $\times$ realignment	2.258* (1.192)	1.412 (0.988)	2.020*** (0.642)	2.546*** (0.742)	-3.395 (2.390)	1.291 (1.951)	1.238* (0.713)
Donor change $\times$ realignment	2.812*** (0.985)	0.310 (0.798)	3.487** (1.775)	1.564* (0.865)	1.385 (1.251)	3.742* (2.045)	0.737 (0.624)
Average G7 realignment	1.119 (0.724)	-0.489 (0.599)	-0.954 (0.698)	-1.148** (0.531)	2.625*** (0.851)	-0.595 (0.974)	-0.332 (0.307)
Last year alignment	0.639 (0.735)	1.338** (0.569)	1.644** (0.731)	1.548** (0.738)	0.842 (1.315)	-0.234 (1.374)	0.901* (0.510)
Past mean alignment	2.302*** (0.689)	3.224*** (0.669)	2.333** (0.974)	3.147*** (0.870)	-4.239*** (1.486)	8.659*** (2.802)	0.563 (0.430)
Adjusted R-squared	0.085						
Fixed Effects	DR, Y						
# of observations	16900						
# of dyads	662						

*Notes:* GDP and population of donor and recipient countries are not reported. Fixed effects: donor-recipient (DR), year (Y). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

## F. Instrumental Variables Strategy

Studies point to the fact that donors engage in vote buying (Dreher and Sturm, 2012; Carter and Stone, 2015), intervene in or influence elections in recipient countries (Faye and Niehaus, 2012), or use other means to oust unfavorable political leaders and regimes in order to achieve political and commercial objectives.<sup>21</sup> Hence, political convergence (or divergence) between a recipient and donor may depend on commitments (or threats) made by donors prior to leader turnover in a recipient country. The same problem applies to leader turnover in donor countries. A new US president may alter aid commitments made to recipients directly after inauguration, thus driving recipients to change their alignment strategies.

To tackle this issue we utilize an instrumental variables framework. Ideally, we would instrument donor and recipient leader change as well as foreign policy alignment. Unfortunately, we lack instruments for foreign policy alignment and can only instrument leader changes. Bun and Harrison (2014), however, indicate that the interaction term between an exogenous and an endogenous variable is itself exogenous as long as there is no contemporaneous reversed causality, anticipation effects, and the degree of endogeneity of the endogenous variables does not depend on the values of the exogenous one.

We follow Annen and Strickland (2017) and instrument donor leader changes with regular (executive and legislative) elections in donor countries. In addition, we include presidential term limits.<sup>22</sup> We instrument recipient leader changes using natural deaths of executive leaders (Jones and Olken, 2005) as well as legislative and executive elections.<sup>23</sup> The election data is taken from the National Elections Across Democracy and Autocracy (NELDA) database (Hyde et al., 2012).<sup>24</sup> Note that we only include ‘regular’ elections, which are elections that occur at their scheduled date and not elections that have been postponed or held after regular elections have been tempered with.<sup>25</sup>

Our identifying assumption is that none of these variables affects ODA commitments besides their effect via actual leader change and the foreign policy alignment that occurs

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<sup>21</sup>Berger et al. (2013) provide a comprehensive list of United States’ CIA interventions into the domestic politics of developing countries during the Cold War.

<sup>22</sup>Term limits are only available for the US. France introduced presidential term limits in 2008, but they have no predictive power for leader change in our sample that runs only until 2012.

<sup>23</sup>We depart from previous studies that exclusively focus on natural leader deaths. Despite the fact that such instances constitute exogenous variation, it is likely that a deceased leader’s successor comes from the same party platform, was personally close to the former leader, and thus has little incentive to alter foreign policy dramatically. Hence, especially in cases of leadership turnover that occur after leader death, our mechanism is least likely to manifest. On top of that, no donor leader has died a natural death in office within our sample. Hence, we cannot use natural deaths as an instrument for donor leader change.

<sup>24</sup>For detailed information on the data see Hyde et al. (2012) and the original application in Annen and Strickland (2017).

<sup>25</sup>Since we always code the leader with the most days in office during a year as the current leader, we lead elections occurring after July 1 by one year. By definition a new leader would not be coded for the current year and the change would occur in the following year.

TABLE F-1  
Instrumental Variables: First Stages

Dependent variables: <i>Leader Changes</i>				
	(1)	(2)	(3)	(4)
	<i>Recipient</i>	<i>Donor</i>	<i>Recipient</i>	<i>Donor</i>
	<i>change</i>	<i>Change</i>	<i>change</i>	<i>change</i>
			<i>*alignment</i>	<i>*alignment</i>
Alignment change	-0.105** (0.052)	0.281*** (0.050)	0.125*** (0.011)	0.192*** (0.015)
Last year alignment	-0.284*** (0.068)	0.145** (0.058)	0.067*** (0.009)	0.128*** (0.013)
Past mean alignment	0.261*** (0.068)	0.257*** (0.058)	-0.088*** (0.009)	-0.148*** (0.011)
<i>Instruments</i>				
Natural death of recipient leader	0.933*** (0.009)	0.020 (0.030)	0.001 (0.001)	-0.002 (0.004)
Executive election (Recipient)	0.204*** (0.027)	0.036** (0.015)	0.002 (0.002)	0.001 (0.002)
Legislative election (Recipient)	0.018 (0.015)	0.022** (0.011)	-0.001* (0.001)	-0.001 (0.001)
Leader term limit (Donor)	-0.019 (0.026)	1.194*** (0.009)	0.004* (0.002)	-0.009*** (0.001)
Executive election (Donor)	-0.006 (0.012)	0.048** (0.020)	0.001 (0.001)	0.008*** (0.001)
Legislative election (Donor)	0.009 (0.007)	0.172*** (0.007)	-0.000 (0.000)	-0.007*** (0.001)
<i>Instruments*alignment change</i>				
Natural death of recipient leader	0.180** (0.080)	-0.518* (0.279)	0.869*** (0.014)	0.030 (0.063)
Executive election (Recipient)	0.504** (0.238)	0.131 (0.231)	0.084** (0.042)	0.114 (0.081)
Legislative election (Recipient)	-0.319*** (0.121)	-0.120 (0.144)	0.005 (0.021)	-0.021 (0.031)
Leader term limit (Donor)	-0.087 (0.239)	0.633*** (0.105)	0.019 (0.040)	0.764*** (0.019)
Executive election (Donor)	-0.055 (0.142)	2.194*** (0.170)	-0.007 (0.025)	0.000 (0.050)
Legislative election (Donor)	0.034 (0.074)	-1.613*** (0.100)	0.023 (0.015)	0.213*** (0.027)
Adjusted R-squared	0.093	0.320	0.228	0.427
Fixed Effects	DR,Y	DR,Y	DR,Y	DR,Y
# of observations	15581	15581	15581	15581
# of dyads	668	668	668	668

*Notes:* Each column represents one of the first stages of model 1 Table F-2. The Kleibergen-Paap F-stats over the 4 first stages are reported in Table F-2. All specifications include GDP and population controls. Fixed effects: donor-recipient (DR), year (Y). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

in tandem. While this assumption is rather straight-forward in case of term limits, natural deaths, and election dates in donor countries, it could be more problematic for recipient countries. For one, [Faye and Niehaus \(2012\)](#) show that donors increase aid commitments to friendly regimes during election years, while they reduce aid to hostile regimes. Yet, their mechanism is conditional on alignment, for which we control. Hence, the conditional independence assumption should hold as long as we control for lagged alignment. We are also confident that the potential endogeneity in alignment should not depend on the values of our instrumented leader changes. Leader changes due to natural death should for example not affect the degree of potential endogeneity between alignment changes and ODA commitments within a given donor-recipient dyad.

Table F-1 presents the four first stages of our 2SLS specification. Note that our instruments perform better in predicting donor leader change than recipient leader change, as shown by the adjusted R-squared in Table F-1. This is not surprising, since elections in many recipient countries are not as competitive as in donor countries. Hence, they have less power in predicting leader change. Moreover, we cannot include donor and recipient year fixed effects since our instruments vary only by donor and recipient year.

Table F-2 presents the second stage results of our instrumental variables approach. We report both 2SLS and control function results. Using regular 2SLS in column 1, we find that the donor-change interaction is positive and statistically significant. It increases in size compared to the original effect (see column 3 in Table 2). The interaction between recipient country leader change and foreign policy alignment is not statistically significant. Note, however, that the recipient leader change interaction is estimated very imprecisely, and the interacted instruments do not really add exogenous variation (see the first stage results).<sup>26</sup>

Since our instrument interactions do not add exogenous variation on the first stage, we focus on a control function approach, which increases efficiency, given mild assumptions ([Wooldridge, 2010, 2015](#)). Control functions do not need the residuals of our interaction instruments in order to produce consistent estimators. An obvious problem would, however, occur if our instrumented leader changes predict alignment change. In such a case it seems unlikely that the level residual can capture the endogeneity of leader changes in the levels as well as in the interactions. Column 1 of Table F-3 shows that neither of our instrumented leader changes predicts alignment changes. We are thus confident that the conditional independence assumption holds for the interaction as well.<sup>27</sup> Column 2 reports the control function estimates, where the standard errors are obtained from

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<sup>26</sup>Nonetheless, the Hansen J-test of over-identification is rejected with a test statistic of 12.964 (p-value 0.1131).

<sup>27</sup>The non-findings also have implications for potential endogeneity in the alignment change variable. If we assume that our instrumented leader changes are indeed exogenous with respect to ODA commitments and, as Table F-3 shows, do not predict alignment changes, then the endogeneity of alignment should not depend on the value of the instrumented leader changes, which is a necessary condition to identify the interaction following [Bun and Harrison \(2014\)](#).



TABLE F-2  
Instrumental Variables: Second Stages

	Dependent variable: <i>ln ODA commitments</i>		
	(1)	(2)	(3)
	<i>2SLS</i>	<i>Control Function</i>	<i>Control Function</i>
Recipient change	-0.224*	-0.232*	-0.225*
	(0.116)	(0.120)	(0.119)
Donor change	0.032	0.013	0.027
	(0.054)	(0.053)	(0.054)
Alignment change	-0.064	-0.101	-0.282
	(0.398)	(0.244)	(0.241)
Recipient change $\times$ realignment	-0.291	1.423***	1.402***
	(1.787)	(0.423)	(0.418)
Donor change $\times$ realignment	1.840**	1.065***	0.927***
	(0.900)	(0.344)	(0.333)
Last year alignment	0.613	0.601*	0.234
	(0.376)	(0.344)	(0.345)
Past mean alignment	1.226***	1.263***	0.889**
	(0.354)	(0.311)	(0.312)
<i>Control function Residuals</i>			
Recipient change (residual)		0.155	0.142
		(0.125)	(0.124)
Donor change (residual)		0.042	0.040
		(0.062)	(0.064)
Within R-squared	0.047	0.050	0.039
Fixed Effects	DR,Y	DR,Y	DR,Y
F-stat IV (Kleibergen-Paap)	237.8	237.8	209.1
# of observations	15576	15581	15581
# of dyads	663	668	668

*Notes:* Columns 1 and 2 include GDP and population controls. Fixed effects: donor-recipient (DR), year (Y). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

999 bootstraps.<sup>28</sup> In this case both the donor and recipient interactions are positive, statistically significant, and comparable in size to the previous results. In addition, we follow Angrist and Pischke (2008) and exclude our control variables from the control function, since neither GDP, nor population should add to the conditional independence between our instruments and leader change (Table F-2, column 3). Again, the results support our argument. All in all, it is not surprising that the obtained LATE does not differ much from the original results since donors do not seem to care too much about the circumstances surrounding recipient leader changes.

Lastly, because the identification of our interaction variables rests on the absence of anticipation effects of the alignment change (Bun and Harrison, 2014), we reestimate our core models with alignment change as the dependent variable and use lagged ODA

<sup>28</sup>If we include the residuals of the interaction terms, which is not necessary in a control function, we obtain the same coefficients as in column 1.

TABLE F-3  
Granger Causality

	Dependent variables: <i>Alignment Change</i>			
	<i>2SLS</i> (1)	<i>OLS</i> (2)	<i>OLS</i> (3)	<i>OLS</i> (4)
Lagged ODA			0.0003 (0.0004)	0.0005* (0.0003)
Recipient change	-0.0026 (0.0059)		-0.0033* (0.0020)	
Donor change	-0.0013 (0.0031)		-0.0037** (0.0016)	
Recipient change $\times$ lagged ODA			0.0004 (0.0006)	0.0000 (0.0003)
Donor change $\times$ lagged ODA			0.0011** (0.0005)	-0.0004 (0.0003)
Last year alignment	-0.8423*** (0.0223)	-0.8320*** (0.0213)	-0.8378*** (0.0218)	-0.8713*** (0.0358)
Past mean alignment	0.5272*** (0.0205)	0.5185*** (0.0197)	0.5224*** (0.0200)	0.2101*** (0.0238)
Donor GDP (log)	-0.0132 (0.0099)	-0.0143 (0.0093)	-0.0090 (0.0095)	
Recipient GDP (log)	0.0005 (0.0030)	-0.0002 (0.0023)	-0.0004 (0.0024)	
Donor population (log)	-0.2580*** (0.0207)	-0.2496*** (0.0195)	-0.2617*** (0.0201)	
Recipient population (log)	0.0030 (0.0063)	-0.0008 (0.0061)	0.0012 (0.0062)	
Adjusted R-squared	0.5476	0.5621	0.5655	0.8909
Fixed Effects	DR,Y	DR,Y	DR,Y	DR,DY,R,Y
# of observations	15576	16337	16337	17858
# of dyads	663	668	662	673

*Notes:* Fixed effects: donor-recipient (DR), year (Y), recipient-year (RY), donor-year (DY). Robust standard errors in parentheses, clustered on donor-recipient dyad. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

commitments as well as interactions of leader change with lagged ODA commitments as independent variables (see columns 2 and 3 in Table F-3). We obtain a small level-coefficient of lagged ODA commitments on the alignment change, no effect for the recipient interaction with lagged ODA, and a small effect of the interaction between donor change and lagged ODA, which is consistent with the findings of [Annen and Strickland \(2017\)](#). None of these interaction effects is statistically significant if we include donor-year and recipient-year fixed effects. We are thus confident to conclude that problems of selection and endogeneity do not bias our main results in a systematic way.

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