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ABSTRACT

Geopolitics, Aid and Growth*

We investigate the effects of short-term political motivations on the effectiveness of foreign aid. Donor countries' political motives might reduce the effectiveness of conditionality, channel aid to inferior projects, reduce the aid bureaucracy's effort, and change the power structure in the recipient country. We investigate whether geopolitical motives matter by testing whether the effect of aid on economic growth is reduced by the share of years a country has served on the United Nations Security Council (UNSC) in the period the aid has been committed, which provides quasi-random variation in commitments. Our results show that the effect of aid on growth is significantly lower when aid has been granted for political reasons. We derive two conclusions from this. First, short-term political favoritism reduces growth. Second, political interest variables are invalid instruments for aid, raising doubts about a large number of results in the aid effectiveness literature.

JEL Classification: F35, F53, O11 and O19
Keywords: aid effectiveness, economic growth, political instruments, politics and aid and United Nations Security Council membership

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"UNSC membership offers a quasi-experiment to assess the impact of unconditional aid."

(Bueno de Mesquita and Smith 2010)

1. Introduction

For a new paper investigating the impact of aid on economic growth it may be good practice to begin with an apology for adding to such an immense literature. However, the debate on whether or not foreign aid is effective in promoting growth in recipient countries is ongoing and heated, arguably because the literature lacks an accepted identification strategy. While we do not offer recipes to estimate a causal effect of all aid on growth, we propose a test to distinguish the effects of politically motivated aid from the effects of all aid in terms of achieving higher growth. While the effect of favoritism on how aid promotes growth is interesting in its own right, our study thus offers important insights for those studies in the aid effectiveness literature that use political alignments to identify the effects of aid.

The previous literature relies on one of three strategies to identify the effect of aid on growth. First, researchers use instruments for aid that mainly rely on the recipient country's population size. Second, they employ internal instruments in the context of difference or system GMM estimations. And third, they base the analysis on instruments that proxy for the geopolitical importance of a recipient country to the donor. The first two estimation strategies violate the exclusion restriction. Clearly, population size and lagged aid can affect growth through channels other than contemporaneous aid.

The third strategy requires assuming that the effects of aid are independent of the donors' motives for granting it. This might be reasonable. Donors who have already committed a certain amount of aid might be keen to achieve developmental outcomes, independent of the motive for granting aid in the first place (Rajan and Subramanian 2008). Kilby and Dreher (2010), however, raise doubt about this homogeneity assumption. Their results show a significantly different effect of aid given for developmental reasons compared to overall aid.[1] Arguably, if a donor is motivated by pure self-interest, its allocation decision does not depend

[1] A handful of studies consider the impact of donor behavior on aid effectiveness (Bobba and Powell 2007, Headey 2008, Bearce and Tirone 2010, Minoiu and Reddy 2010, Bermeo 2011).

on the way the recipient uses the aid. Thus, the recipient might choose not to use disbursed aid for developmental policies, resulting in on average inferior outcomes. If geopolitical aid is less effective than overall aid,[2] the literature using political connections as instruments would not provide evidence of the ineffectiveness of overall aid, but rather of politically motivated aid only. Kilby and Dreher (2010) do not directly test whether aid allocated for geopolitical reasons reduces the effectiveness of aid, leaving an important gap in the literature on aid effectiveness. In this paper, we aim to fill this gap and disentangle the effect of geopolitical aid from that of overall aid.

Temporary membership on the United Nations Security Council (UNSC) allows us to distinguish between overall aid and exclusively geopolitically motivated increases in aid caused by membership. We investigate whether this additional aid given for short-term geopolitical reasons is less effective than the average aid in terms of promoting growth. In measuring the amount of aid received by a country that is motivated by short-term political interests, we connect to the recent literature investigating the effects of temporary membership on the UNSC. Bueno de Mesquita and Smith (2010) show that temporary members grow more slowly while serving on the UNSC (and in the two subsequent years). They attribute this to the adverse consequences of development aid, given that these temporary members receive substantial additional inflows of aid (Kuziemko and Werker 2006, Dreher et al. 2009a, 2009b). However, the results in Bueno de Mesquita and Smith reflect the effects of membership per se, and seem to be independent of the amount of aid received (Bashir and Lim 2013).[3] It thus remains unanswered whether aid granted during temporary UNSC membership results in different developmental outcomes than aid given at other times.

Dreher et al. (2013) is most closely related to our paper. They investigate the effect of temporary UNSC membership on the evaluation of World Bank projects. The results show that project evaluations are not inferior, on average, for projects granted to countries while being on the UNSC. Only in times of macroeconomic crisis does politically motivated aid reduce the

[2] Overall aid is composed of an (unknown) share of politically motivated aid and, arguably, some share exclusively given for developmental purposes, among others.

[3] As pointed out by Bueno de Mesquita and Smith (2013), the effects of "easy money" can take many routes, among them, as they show, loans to the temporary UNSC members.

probability of a positive evaluation.[4] However, Dreher et al. focus on one (multilateral) donor only and investigate the effect of geopolitics on self-assessed project outcomes rather than on more objective policy measures or economic growth.

We take a broader approach and reconsider recent models of aid effectiveness separating aid given for short-term geopolitical considerations from aid granted for other, possibly including long-term strategic, reasons. In contrast to Dreher et al. (2013), we look at overall aid and relate these aid flows to economic growth. In contrast to Bueno de Mesquita and Smith (2010) and Bashir and Lim (2013), we do not relate UNSC membership per se to the variables of interest, but exploit the quasi-random variation of aid granted while countries were temporary members of the UNSC, and investigate if the effectiveness of these specific flows is different from that of overall aid.

We find that the effect of aid on growth is reduced by donors' geopolitical motives, augmenting Clemens et al.'s (2012) permutations of Burnside and Dollar (2000) and Rajan and Subramanian (2008). This result holds when we focus on the model of Bueno de Mesquita and Smith (2010). It is more pronounced in autocratic recipient countries and holds if we restrict the sample to Africa, which follows the strictest norm of rotation on the UNSC and can thus most reliably be regarded as exogenous. Overall, we find that political favoritism reduces growth. This renders political variables invalid as instruments for aid.

The next section presents our theory on the channels through which political motivations change the effectiveness of development aid. Section 3 describes how we exploit temporary membership on the UNSC to identify the effects of political motives. In section 4, we outline our data and method of estimation, and present our results. The final section draws policy implications and concludes the paper.

[4] Kilby (2011, 2013) examines possible transmission channels. He shows that politically motivated projects have shorter preparation periods, while shorter preparation reduces the probability that projects receive a successful evaluation.

2. A theory of politically motivated aid

How might political favoritism change the impact of foreign aid? It seems intuitive to assume that politically motivated aid is less effective than aid mainly given to promote development.[5] As Rajan and Subramanian (2008: 655) point out, however, "to characterize strategic aid as "bad" aid is mixing motives and consequences." According to Dreher et al. (2013), there are indeed good reasons why politically motivated aid may be just as effective as other forms of aid. Cold War donors, for example, may have wanted not only to curry favor with their client states, but also to help their allies succeed economically. A case in point, the East Asian Tigers received tremendous amounts of politically motivated assistance during the Cold War that does not appear to have impeded their economic development (Dreher et al. 2013).

Moreover, once an aid allocation decision has been made, aid must be delivered by the aid bureaucracy. The bureaucratic agents may want to implement effective programs regardless of the motivations of the donor. When deciding how to allocate economic aid to Pakistan to increase political support for anti-Taliban operations, for example, a US aid official said, "[w]e had to choose a method of funding that was most likely to produce results efficiently and effectively" (Perlez 2009). Thus, the existence of political favoritism in the allocation of aid need not imply its ineffectiveness. What is more, at any given time there may be a plethora of unfunded investment projects with similar potential effectiveness. Choosing among these projects according to political criteria, as opposed to developmental ones, may not necessarily reduce the average effectiveness of aid.

However, Dreher et al. (2013) stress that there are also strong reasons to expect that politically motivated aid is less effective than average aid. The first is that a politically motivated allocation of aid may result in the approval of lower-quality aid projects in favored countries instead of more promising projects in other countries. This presumes that the

[5] Consider as example Morgenthau (1962: 303, as cited in Werker 2012): "Bribery disguised as foreign aid for economic development makes of giver and recipient actors in a play which in the end they may no longer be able to distinguish from reality. In consequence, both may come to expect results in terms of economic development which in the nature of things may not be forthcoming."

allocation decision is made in the presence of declining marginal returns and political motivation results in projects with lower returns getting priority.[6]

A second argument supporting the hypothesis of ineffective political aid is that politically motivated projects reduce the motivation of the donor and/or recipient to invest as much in the success of the project as they would otherwise. On the donor side, bureaucrats will arguably take account of their employer's incentive structure to some extent, as that might help them to advance in their careers. To the extent that developmental outcomes do not enter the employer's utility function, less effort might be spent on the ground to promote developmental objectives. Favoritism might thus allow projects to be pursued where important preconditions are not met or might reduce time and resources devoted to the preparation of a project (Kilby 2011, 2013). From the recipients' perspective, aid inflows may delay important policy reforms that would, among other things, also promote economic growth. Focusing on the IMF and the World Bank, Stone (2008), Kilby (2009) and Nooruddin and Vreeland (2010) suggest that political favoritism undermines the credibility of conditionality, rendering it ineffective.[7] Dreher and Jensen (2007) find that the conditions attached to loans given to political allies of the IMF's most important shareholders are softer and less restrictive. The results of Nielsen (2013) show that donors punish human rights violations of non-allies by reducing aid, but not those of their political allies.

This does not imply that politically important countries necessarily follow unsound economic policy. Sometimes donors and recipients agree on policy; some recipient governments even invite policy conditionality (Vreeland 2003). Other times, governments may follow a different policy course than that recommended by the donor and still be successful. Still other times, however, politically important recipient countries may be unable or unwilling to follow

[6] Note that this is different from assuming that larger amounts of aid reduce its effectiveness. For any given amount of aid, we assume politically important recipients will be able to extract projects that would otherwise not be granted because of quality concerns.

[7] Nooruddin and Vreeland (2010) show that democratic countries under IMF programs increase public wages and salaries when they serve on the UNSC, while governments without UNSC-related political leverage have to reduce the wage bill. This suggests that politically important countries can avoid tough conditionality. Stone (2004) and Kilby (2009) show that IMF and World Bank conditions, respectively, are not rigorously enforced for politically important recipient countries (measured by UNGA voting patterns, among others).

the donor's conditions even though their economy could require adjustment. Because of political interests, however, the donor might refrain from stopping aid flows to the partner country and thus allows the recipient to postpone the necessary and unpopular adjustments (Dreher et al. 2013). Note that this channel might be particularly hard to measure empirically, because it could imply that softer conditions are attached to politically motivated-aid from the outset, but also that compliance is less strictly monitored when a country is politically important at the time the aid is disbursed (rather than committed).

A further channel through which politically motivated aid could reduce the effectiveness of aid is subtle: Faye and Niehaus (2012) show that such aid might help facilitate political business cycles, as incumbent political allies of the donors receive more aid prior to an election. Aid thus helps incumbent governments to distort their economy, which might reduce growth rates directly (after the immediate stimulating effect of expansionary electoral policies evaporates). More importantly, this type of aid makes it more difficult for voters to select the "best" politicians, as they receive distorted signals of competence. What is more, aid can be a valuable prize to get, increasing the number of political actors who try to get access to the fungible part of aid by entering the political stage or even leading to coup d'états (Werker 2012). This will on average lead to less competent politicians and might thus reduce growth rates.

Finally, Bobba and Powell (2007) suggest that aid-receiving allies might feel more obliged to spend politically motivated aid in the donor country than recipients of developmentally-oriented aid, even if goods and services could be bought at a lower price or with higher quality elsewhere.

In summary, there are good reasons to expect that political aid may be less effective, or just as effective, as aid intended to promote development. We therefore turn to the empirics to answer this question.

3. Measuring political motives in the allocation of aid

As Alesina and Dollar (2000: 7) suggest, "it is not easy to test whether politically motivated aid does not work as well" because "it is hard to find natural variation in the amount of politically motivated aid that is not correlated with its underlying potential effectiveness." Bearce and Tirone (2010: 840) equally stress that "it is hard to find a single variable which neatly and concisely measures the strategic content of Western foreign aid." Scholars have proposed several such variables. Among them are voting patterns in the UN General Assembly (Thacker 1999, Alesina and Dollar 2000, Bobba and Powell 2007, Faye and Niehaus 2012), formal alliances or military support (Kim and Urpeleinen 2012, Bermeo 2013), colonial relationships (Rajan and Subramanian 2008), stronger geopolitical constraints during the Cold War-period compared to more recent years (Dunning 2004, Berthélemy and Tichit 2004, Bräutigam and Knack 2004, Headey 2008, Bearce and Tirone 2010), ad hoc classifications of "good" versus "other" or "bad" donors (Minoiu and Reddy 2010, Werker et al. 2009, Bermeo 2011), and membership in international committees (Kuziemko and Werker 2006, Kaja and Werker 2009).

The first set of variables may be problematic. UNGA voting and formal alliances vary little and slowly over time, so that most of the variation in these measures comes from the cross-sectional dimension (Dreher et al. 2013). Most colonial relationships are stable during the time period considered in aid effectiveness studies. The post-Cold War period is different in many respects, unrelated to the donors' geostrategic motives.[8] In order to derive causal estimates from largely or exclusively cross-sectional variation, clever instruments are needed that are correlated with politically motivated aid to a meaningful degree, but have no direct effect on the second-stage outcome, i.e., economic growth. This is a rather demanding requirement. Ad hoc classifications of donors as "good" or "bad" likely suffer from endogeneity. Those donors who are more successful ex post are more likely to be perceived as "good donors." What is more, the consequences of geopolitical aid can hardly be separated from other differences in the way these groups of donors allocate their aid.[9]

[8] As one example, donors might have learned from past mistakes, so aid given more recently might be more successful than aid given during the Cold War-period.

[9] Werker et al. (2009) investigate the effects of aid by Arab donors, which they argue is in large parts given for political reasons and do not find this aid to significantly impact economic growth. However, as

Among the potential variables to proxy political influence, temporary membership on the UNSC poses the fewest problems.[10] This is because membership positions are scarce, the nature of service is temporary and not immediately renewable and the selection process is, though not random, exogenous to aid (Bueno de Mesquita and Smith 2010, Dreher et al. 2014).[11]

We therefore focus on a crisply coded dichotomous measure that has been shown in previous research to induce political favoritism: temporary membership on the UN Security Council. The importance of temporary Security Council membership for the allocation of aid was first shown by Kuziemko and Werker (2006). Its role for aid is not entirely surprising: The UNSC is the most important organ of the United Nations. Its actions are visible to the public, sometimes receiving considerable press coverage, and its competence includes authorizing military action. Members of the UNSC are given a prominent voice on the most pressing issues of international security.

While five members of the UNSC (China, France, Russia, the United Kingdom, and the United States) serve on a permanent basis, ten temporary members are elected by the United

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Werker et al. point out, this aid likely had developmental motives also and thus provides no sharp test. Minoiu and Reddy (2010) use different groups of donors whose aid allocation they expect to be more or less developmentally oriented, based on the previous literature. Bermeo (2011) finds that aid from democratic donors improves democracy, while aid from autocratic donors does not. These results could reflect any differences between the different donors, including geostrategic motives, but also any other type of differences.

[10] Kaja and Werker (2010) instead focus on the World Bank's Executive Directors and find that countries being represented on the Board of Directors receive substantially more aid than other countries, controlling for other relevant determinants of World Bank support (see also Morrison 2013). Berger et al. (2013) show that successful CIA interventions also increase the amount of foreign aid a government receives. Representation on the Board of Directors or CIA interventions can hardly be considered to be exogenous, however.

[11] For our work, the importance of previous research on what determines election to the UNSC cannot be over-emphasized. If selection to the UNSC depends on those same variables that also affect aid and economic growth, our results would be biased. For example, countries might become politically or economically more important over time, potentially at the same time increasing the amount of aid they receive and their rates of economic growth. Countries being temporary members of the UNSC might be able to draw the world's attention to their legitimate developmental needs, giving them access to additional funds that are unrelated to political motives. Bueno de Mesquita and Smith (2010) and Dreher et al. (2014) test for this possibility. They find that election to the UNSC is clearly not related to the variables that also affect the amount of development aid a country receives. Thus, controlled for the variables we include in our models, UNSC membership can be considered as an exogenous instrument whose variation we can use to identify the temporary geopolitical importance of a country for exactly its two years of membership. See also Besley and Persson (2012).

Nations General Assembly. These elected members serve two-year terms. While not random, membership appears to be largely idiosyncratic, with varying regional norms (Dreher et al. 2014): African nations typically rotate; Latin America and Asia hold competitive elections where regional hegemons win election most often; Western Europe mixes rotation and competitive elections; and since the Cold War, Eastern Europe shows no systematic pattern. The two-year not immediately-renewable term reinforces the exogeneity of the selection process.

UNSC decisions on substantive matters require a majority of nine votes, with the five permanent members having the power to veto (non-procedural) decisions. Despite the low voting power of temporary members (O'Neill 1996), there are convincing arguments why their votes are considered important. Additional votes may be sought to ensure an oversized coalition (see, e.g., Volden and Carrubba 2004) or to increase the international legitimacy or domestic support for the proposal considered (Voeten 2001, 2005, Chapman and Reiter 2004, Hurd and Cronin 2008), as discussed in more detail in Dreher et al. (2009a, b).[12]

There is also plenty of evidence that important aid donors favor temporary members of the UNSC: during their terms they receive more aid from both the United States and the United Nations (Kuziemko and Werker 2006). They are more likely to receive a loan, and with fewer conditions, from the International Monetary Fund (Dreher et al. 2009b, 2013). UNSC membership also increases by 10 to 25 percent the number of World Bank projects awarded to a country (Dreher et al. 2009a). Additionally, temporary UNSC members receive larger loans from the Asian Development Bank (Lim and Vreeland 2013) and from Germany (Dreher et al. 2013).[13] Besley and Persson (2012) find that total aid disbursements by all DAC-donors – which we will focus on in this paper – are significantly related to temporary UNSC membership.[14] For

[12] For example, Chapman and Reiter (2004: 886) show that "Security Council support significantly increases the rally behind the president (by as many as 9 points in presidential approval)."

[13] To the contrary, UNSC membership does not affect loans by the Inter-American Development Bank (Bland and Kilby 2012, Hernandez 2012).

[14] Besley and Persson show aid to increase with UNSC membership during the Cold War period and to decrease thereafter. When we regress (log) aid disbursements on dummies for the years of temporary UNSC membership, two years before, and two years after (as in Kuziemko and Werker 2006) in a specification similar to theirs, but excluding the interaction with the Cold War, we find a positive effect of UNSC membership in the second year of membership, significant at the ten-percent level. We separately investigate the Cold War-period and the time thereafter, as detailed in footnote 44.

these reasons, we consider temporary membership on the UNSC to be a good measure of a country's short-term geopolitical importance to the major donors.

Indeed, temporary membership has been used to test for the effects of development aid before. Bueno de Mesquita and Smith (2010) find that temporary members of the UNSC have lower rates of economic growth, and reduce their level of democracy and freedom of the press during membership and in the two subsequent years. They argue that these effects must be attributed to development aid, given that temporary membership is idiosyncratic, and has been shown to substantially increase the amounts of aid a country receives. However, Bueno de Mesquita and Smith do not directly test for the effect of aid and simply *assume* that the significant effects of temporary UNSC membership they find are largely due to aid. As they clarify in Bueno de Mesquita and Smith (2013), the effects of membership can well capture other benefits, like any type of easy money associated with it. Temporary membership has been shown to have other effects besides increasing development aid.[15] Indeed, Bashir and Lim (2013) re-investigate the question and include aid among the variables used to match temporary UNSC members to non-members with similar characteristics. Given that aid is accordingly held constant, increased aid amounts cannot be responsible for the persistent negative effect of UNSC membership. However, Bashir and Lim do not test whether a given level of aid becomes less effective if granted for political reasons.[16]

Dreher et al. (2013) are most closely related to this paper. They provide the blueprint for our identification strategy. Dreher et al. investigate whether political motives affect the evaluation of World Bank projects. Their main measure of political motivation is whether the recipient country has a temporary seat on the UNSC, and their quality measure is the Bank's

[15] For example, Frey et al. (2013) find that temporary membership on the UNSC increases the number of a country's sites on the UNESCO's World Heritage List. Besley and Persson (2012) show that UNSC membership is related to political violence; Qian and Yanagizawa-Drott (2010) use it to show that the United States' strategic interests lead to underreporting of human rights violations during the Cold War. Arguably, reporting on human right violations might affect the level of violations and, thereby, indirectly affect economic growth as well.

[16] They argue that, holding aid constant, the effect of UNSC membership cannot reflect the consequences of political motives. However, as we argue, political motives can have many effects, unrelated to the sheer amount of aid. These channels can easily explain that the effect of membership on growth remains negative controlling for the level of aid.

internal evaluation procedure. They propose to test for the impact of political motives on the effectiveness of aid by investigating whether projects that have been approved in years where the recipient was a UNSC member are of lower quality than the average project. The argument we use is the following: During temporary UNSC membership, a country will receive additional aid, which arguably is mainly politically motivated. The aid approved in such years will thus be an average of aid the country would have received anyway (including developmental aid, but potentially also aid given for other strategic reasons) and aid given in addition because the country is a temporary member of the UNSC. The share of geopolitically motivated aid is thus higher. If short-term geopolitical motivations reduce the effectiveness of aid, the average effectiveness of aid received during UNSC years would then be lower than those of the average aid received in non-UNSC years.

Dreher et al. (2013) find that the average World Bank project is not of lower quality if received while being on the UNSC. However, they find that in times of crises project quality is lower for politically motivated aid. That is, political motivations matter in specific circumstances only. We use their method to test whether donors' political motivations reduce the effectiveness of aid looking at broader developmental outcomes and overall amounts of aid.

4. Data, method, and main results

A substantial amount of literature investigates the question of whether and to what extent aid affects growth. Many of the contributors to this literature are divided into different camps, with groups of supporters finding that aid is effective, while skeptics point to the lack of robustness of these results to the choice of control variables, samples, and methods of estimation (Doucouliagos and Paldam 2009). Rather than suggesting our own model, therefore, we closely follow the approach in Clemens et al. (2012), and add our variables of interest to some of their models. Clemens et al. show that the most prominent previous attempts to control for the potential endogeneity of aid rely on invalid instruments.[17] Instead of suggesting more valid

[17] As Bazzi and Clemens (2013) show in more detail, previous papers in the aid effectiveness literature rely on weak instruments – especially, but not exclusively, those relying on internal instruments using

ones, Clemens et al. address the potential endogeneity of aid by differencing the regression equation, using aid that is more likely to affect growth in the short-run, and lagging aid, so that it can reasonably be expected to cause growth rather than being its effect. Thus, they assume that the main (short-term) effects of aid on growth occur, on average, one period after its disbursement. We base our analysis on their permutations of Burnside and Dollar (2000) and Rajan and Subramanian (2008) – the two studies that arguably gained most attention in the recent literature on aid and growth. We also re-estimate Bueno de Mesquita and Smith (2010), which is closely related to the question we address here, and which gained considerable attention in the academic literature and the media alike.[18] While we believe (as do Clemens et al. 2012) that OLS regressions are superior to 2SLS with questionable instruments, we stress that our estimate of whether aid affects growth could be biased in either direction,[19] and we largely refrain from interpreting it in a causal way. We have, however, no reason to expect a systematic bias for our variable of interest, the interaction of aid with UNSC membership for any given level of aid.[20] We thus follow the regression-based OLS approaches of prominent previous analyses,[21] and add development aid and its interaction with temporary membership on the UNSC to these equations.[22]

"black box" GMM estimations. See also the literature cited in Bazzi and Clemens, in particular Hauk and Wacziarg (2009) and Acemoglu (2010).

[18] E.g., Hosli et al. (2011), Bashir and Lim (2013).

[19] For example, donors might grant more aid to a new reform-oriented government. Increased growth resulting from these reforms could then spuriously be attributed to the increases in aid. On the other hand donors might give more aid to countries where they anticipate shocks to reduce future growth rates.

[20] This is formally shown in Nizalova and Murtazashvili (2012). In the words of Nunn and Qian (2012), "interacting an arguably exogenous term (here: lagged UNSC membership) with one that is potentially endogenous (here: foreign aid), can be interpreted as exogenous since we directly control for the main effect of the endogenous variable." Nunn and Qian refer to section 2.3.4 of Angrist and Krueger (1999) for a technical discussion.

[21] Note that unlike Clemens et al. we cluster standard errors at the recipient country level. Our results are not affected by this.

[22] As an alternative approach, one could think of instrumenting for aid with temporary membership on the UNSC. We do not pursue this route for two reasons. First, temporary membership is rare – the instrument thus has low power. Most importantly, instrumenting aid with UNSC membership can only give us the Local Average Treatment Effect – in this case, the effect of aid motivated by short-term geopolitical considerations (see Kilby and Dreher 2010). However, we are interested in the difference of the effectiveness of strategic aid compared to all aid.

In terms of timing, it seems reasonable to assume that disbursed aid takes one four-year-period to become effective, in either increasing or decreasing economic growth, following Clemens et al. (2012).[23] We also assume that bottlenecks in the donor and recipient administrations prevent aid from being disbursed immediately, so that the bulk of aid committed in one four-year-period is disbursed one period later, on average.[24] Thus, based on the assumptions about the lagged growth effects of aid in Clemens et al. (2012), we are then interested in the growth rates two periods after UNSC membership. Regarding the potentially harmful consequences of geopolitical motives, this would imply that aid committed in period (t), which is disbursed in period (t+1), is less effective in promoting growth in period (t+2) the more years a country has spent on the UNSC in period (t). Arguably, UNSC membership can also have more instant, and even contemporaneous effects on growth, depending on the exact channel through which membership on the UNSC reduces growth.[25] We test for the possibility of different timings in a series of additional regressions.

Figures 1-3 provide a first impression of the data. The patterns are in line with our assumptions about the most likely timing. Figure 1 shows aid commitments in constant 2000 million US dollars from all DAC-donors in a specific four-year-period according to whether or not the recipient served (one or two years) on the UNSC. As can be seen, aid commitments are substantially larger for countries that have been temporary members on the UNSC, compared to countries that did not serve at all. They are also larger compared to commitments the UNSC members received in the period prior to serving, and compared to one period after serving

[23] As summarized in Headey (2008), aid affects growth most substantially 5-9 years after it has been disbursed, on average. If aid is disbursed evenly over time, the average positive distance between a dollar being disbursed and growth in the contemporaneous four-year-period is 16 months (Roodmann 2004, Headey 2008). Headey thus lags aid by one four-year-period, so that the average positive distance between disbursements and their potential effects is 5 years and 4 months.

[24] For example, a 1999 report of the British House of Commons' Select Committee on International Development reports a delay between European Commission aid commitments and disbursements at the end of the 1990s of almost five years (cited in Odedokun 2003: 7). See OECD (2003) for an in-depth discussion of reasons for delayed disbursements.

[25] The reduced effectiveness of conditionality (i.e., non-compliance) might potentially prevail for countries being UNSC member at the same time the aid is disbursed while the other channels we describe in the theory-section are more likely to affect growth with a lag (i.e., they dominate when a country has been a member of the UNSC at the time the aid has been committed).

(these differences are statistically significant at the one-percent level). Figure 2 shows net aid disbursements, also in constant 2000 million US dollars, conditional on UNSC membership, but lags membership by one four-year-period as suggested by our theory. The data support the assumed pattern: Commitments increase in the contemporaneous four-year-period of membership; the accompanying disbursements, however, increase mostly in the period following UNSC membership. Thus, aid commitments during UNSC membership seem to be disbursed on average one period later. For both commitments and disbursements, we observe that they move back to initial levels in periods (t+1) and (t+2) respectively. Overall, the effects coincide with UNSC membership, and disappear after the temporary member loses its geopolitical importance.

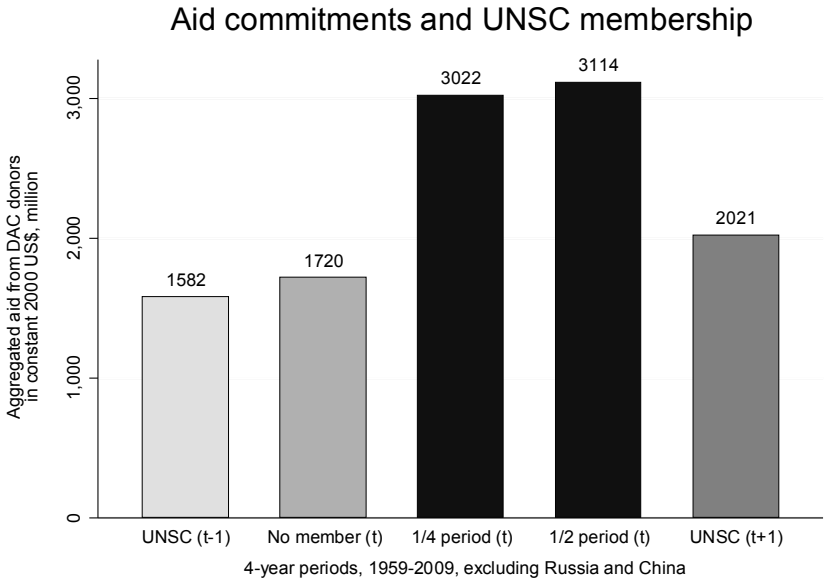

Figure 1: Aid commitments and UNSC membership (t)

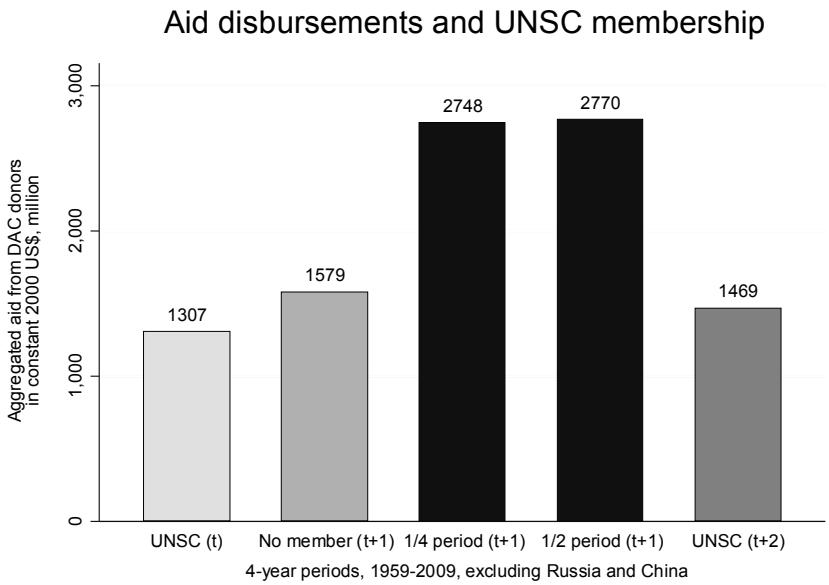

Figure 2: Aid disbursements and UNSC membership (t)

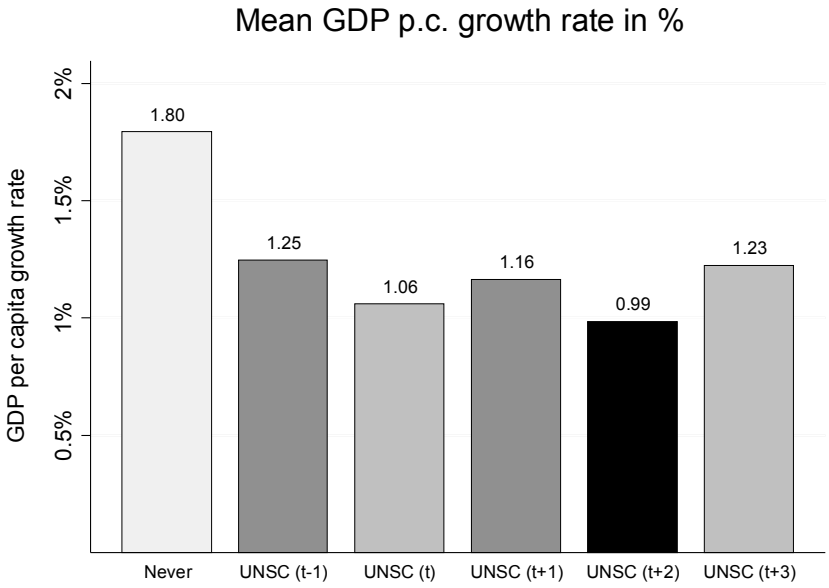

Figure 3: GDP per capita growth and UNSC membership

Figure 3 shows mean yearly growth rates of per capita GDP for different lags of UNSC membership. The first bar displays the growth rates for countries that have never been a member of the UNSC. The other bars show the growth rates for different lags of UNSC membership: Growth in countries that have served on the UNSC one period before, in the same

period, one period later, two periods later, and three periods later. The figure supports the notion that UNSC members subsequently experience lower growth rates, compared to countries that have never served on the UNSC. That is, in line with Bueno de Mesquita and Smith (2010), we find that UNSC membership comes with lower immediate growth rates. As our theory suggests, the lowest growth rates are experienced two periods after UNSC membership. This pattern supports our hypothesis that the increased aid committed in period (t) during UNSC membership (see figure 1), which is disbursed in large parts in period (t+1) (figure 2), has an adverse effect on growth in period (t+2) (figure 3).

Also note that growth rates increase to almost the level of the pre-UNSC period in the period after UNSC membership. It thus seems that the commitments made while being on the UNSC are not disbursed in sufficient amounts in the next period, on average, to substantially decrease growth in that period. While these descriptive statistics imply no causality, their pattern lends support to our story. We illustrate the timeline derived from our theoretical considerations in figure 4. While we think this timing is most plausible, we test for different timings further below.

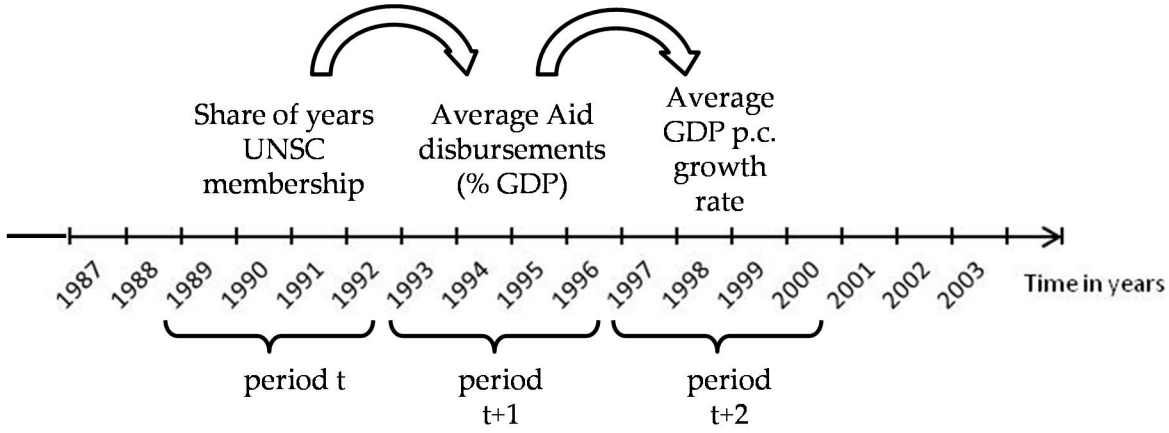

Figure 4: The proposed timeline

Next we turn to our econometric specifications. Following Clemens et al. (2012) our reduced-form empirical model is at the country-period level:

$$Growth_{i,t} = \alpha+\beta Aid_{i,t-1}+\gamma Aid^2_{i,t-1}+\delta UNSC_{i,t-2}+\zeta Aid_{i,t-1}*UNSC_{i,t-2}+\eta X_{i,t}+\varepsilon_{i,t} \quad (1)$$

where $Growth_{i,t}$ is a country i's average yearly GDP per capita growth in period t.[26] We denote the amount of aid as percent of GDP disbursed in the previous period as $Aid_{i,t-1}$.[27] $UNSC_{i,t-2}$ indicates the share of years country i was a temporary member of the UNSC two periods before as we are interested in aid that was committed while countries served their term on the UNSC. For now we assume aid commitments are disbursed, on average, one period later, but we also test a number of different specifications. When using lagged aid we therefore twice-lag temporary membership on the UNSC ($UNSC_{i,t-2}$). All regressions include the control variables used by the previous studies, which we denote $X_{i,t}$, and which we include contemporaneously.[28] Our preferred specification includes aid squared to test for decreasing returns to aid, again following Clemens et al. (2012). Finally, $\varepsilon_{i,t}$ is an error term.

Equation (1) is in levels and thus does not well address the potential endogeneity of aid to economic growth. We therefore base our conclusions mainly on a regression in first differences, as do Clemens et al. (2012). Equation (1) becomes:

$$\Delta Growth_{i,t} = \alpha+\beta\Delta Aid_{i,t-1}+\gamma\Delta(Aid^2_{i,t-1})+\delta UNSC_{i,t-2}+\zeta\Delta Aid_{i,t-1}*UNSC_{i,t-2}+\eta\Delta X_{i,t}+\varepsilon_{i,t} \quad (2)$$

[26] Note that we exclude the permanent UNSC members from the analysis.

[27] We focus on aid from all donors for two reasons. First, UNSC membership has been shown to be important for the allocation of aid from most of the largest donors (see Vreeland and Dreher 2014 for an overview). Given that these donors account for the bulk of aid we do not want to exclude some donors on an ad hoc basis. To the extent that these donors do not provide more aid to countries on the UNSC this does not bias our results. Second, aid by single donors, or a subset of them, is usually not sufficiently large to be measurable in terms of growth. Still, we replicated our results focusing on aid from the largest donor – the United States – separately, as we describe in more detail in footnote 40.

[28] To reduce clutter, we do not show them in all tables. Burnside and Dollar include: Initial GDP/capita, Assassinations, Ethnic fractionalization*assassinations, M2/GDP (lagged), Policy, and period dummies. Rajan and Subramanian: Initial GDP/capita, Initial policy, (log) Initial life expectancy, (log) Inflation, Initial M2/GDP, Budget Balance/GDP, Revolutions, and period dummies. The original studies also include time-invariant variables that are removed here and in Clemens et al. through taking differences. Appendix A reports the sources and definitions of all variables, while we show descriptive statistics in Appendix B. Appendix C reports the full specifications for the main regressions.

Again, we report specifications with and without a squared aid term. According to Clemens et al. (2012), the appropriate method to test for the effect of aid on economic growth has to account for the non-linear effect of aid, has to remove country fixed-effects through first-differencing, and has to lag aid by one period. As they argue, this specification minimizes potential misspecification due to reversed causality between aid and growth, and omitted variables bias.[29] This is our preferred estimation strategy.[30]

The regression of Bueno de Mesquita and Smith (2010) is a slightly different one.[31] The dependent variable in Bueno de Mesquita and Smith is again the growth rate of per capita GDP over a four-year-period. However, they compare the difference in growth over these four years for countries that have been a temporary member of the UNSC in the first year of a period to those countries that have not been members in the same period. Most importantly, rather than including a measure of aid, they estimate the effect of a dummy indicating whether a four-year-period starts while a country has been elected to the UNSC and attribute its effect to foreign aid (or other types of loose money, see Bueno de Mesquita and Smith 2013). We use their baseline

[29] In addition, they seem to prefer a measure of early-impact aid over all aid. This measure has been shown not to be a robust predictor of growth elsewhere (Rajan and Subramanian 2008, Bjørnskov 2013). Moroever, a major drawback with this measure is that disaggregated aid disbursements are not available for the entire period, so that disbursements have to be estimated based on commitments. Data on commitments in the earlier periods suffer from severe underreporting, too, which is not addressed in Clemens et al. (2012) (see OECD/DAC CRS Guide, Coverage Ratios, accessed on March 3, 2014: http://www.oecd.org/dac/stats/crsguide.htm). We therefore prefer to focus on overall aid. To the extent that parts of aid are not systematically related to growth the larger noise reduces the probability that we find a significant effect. As outlined above, we lag disbursements by one period to account for timing.

[30] In addition, it could be argued that UNSC membership should be interacted with aid squared as well. Political motivation would then not only change the level of the marginal effect of aid, but also its slope. Such an interaction effect is however not significant in our preferred specification (the p-value being 0.82 in the BD sample and 0.22 in the RS sample). Detailed calculations are available on request. One could also argue that UNSC membership should be included in differences instead of levels. To us, it seems intuitive that the level rather than changes in UNSC membership conditions the effectiveness of changes in aid. When we nevertheless first-difference UNSC membership, the results are similar. The interaction remains negative and significant, at the one-percent level in the BD sample and at the five percent level in the RS sample.

[31] Bueno de Mesquita and Smith (2010) also use a matching algorithm to test their hypothesis (and find support for it). Bashir and Lim (2013) show that the finding of a negative effect of UNSC membership on economic growth is robust to the inclusion of aid in the matching procedure. The negative effect of UNSC membership in Bueno de Mesquita and Smith could then not be (solely) due to the level of aid. Note however that the way Bashir and Lim built their control-group is controversial (Bueno de Mesquita and Smith 2013).

specification, and add the UNSC and aid variables, and the interaction of these variables to the equation. The lag structure replicates our approach above.[32]

Note that our test for effects of politically motivated aid on economic growth has a potentially strong bias against finding an effect from political motivation in a finite sample (Dreher et al. 2013). As with any comparable investigation, the data might be too rough to show significant patterns. In our analysis, only a certain share of aid agreed on during a country's tenure on the UNSC is likely to be motivated by short-term political interests, on average (Kuziemko and Werker 2006, Dreher et al. 2009a, b). Even if this aid is of lower quality, it might not reduce the average effectiveness enough to be observed amidst the mass of other flows that are unaffected by this political motive. A further issue relates to the timing of the negative consequences of politically motivated aid. As outlined above, negative effects of political interference may not only relate to the selection of inferior projects or less care in preparing a particular project, but may as well materialize over the course of the projects, if, e.g., projects of close allies are maintained even though it becomes obvious they went off track, or policy conditionality might not be enforced when necessary. Dreher et al. (2013) test for these possibilities and report that geopolitics measurably affects the evaluation of World Bank projects at the onset of a project only. We would thus like to know whether or not each individual dollar disbursed in the recipient country has been committed while the country has served on the UNSC. We do not have this information and can only use an estimated lag between the effect of aid disbursed in a certain period and political influences on aid commitments some time before. Because we have neither details about the actual disbursement rate of UNSC-related commitments nor the exact duration of implementation lags, this measurement error increases the attenuation bias and we are less likely to find a significant effect.

[32] We use the share of UNSC membership two four-year-periods lagged, aid disbursements as a percentage of GDP one period lagged, and their interaction. Consistent with the original setup, the four-year-periods in this specification can be understood as moving averages, i.e., growth over four years is regressed on aid in the four-year-period before and UNSC membership two four-year-periods before. For example, growth in the 1991-1994 period is related to aid disbursements in the 1987-1990 period.

Column 1 of Table 1 shows the results for the Burnside and Dollar (BD) regressions on the extended data of Clemens et al. (2012), covering the 1970-2005 period. All data are averaged over four years. The dependent variable is the average annual growth rate of real GDP per capita; aid is measured as net Official Development Assistance (ODA) in percent of GDP.[33] Column 2 focuses on Clemens et al.'s permutations of Rajan and Subramanian (RS) to test whether our results are due to the specific setup of the Burnside and Dollar specifications. These regressions use data averaged over five years, and the extended sample of Clemens et al. (2012) covers the 1971-2005 period.[34] Before we turn to testing specification (1) described above, we focus on the effect of contemporaneous aid disbursements, conditional on UNSC membership in the previous period, and omit aid squared. While the table reports the variables of interest only, we report the full model for our preferred specifications in Appendix C.

As can be seen in column 1, the interaction between aid and the share of years the recipient has been a temporary member of the UNSC in the previous period is not significant at conventional levels. This is intuitive, as we cannot expect the effect of disbursements on growth to be immediate (Clemens et al. 2012). However, the coefficient is significant at the ten-percent level according to column 2, suggesting a negative effect of political motivations even for contemporaneous aid. Part of the aid committed in the previous period might already be disbursed (and affect growth) in this one.

Columns 3 and 4 show how the timing of the aid-variable affects the outcome. When we lag aid by one period, we consequently lag the share of years a country is a member on the UNSC by two periods (as shown in equation (1) above, excluding aid squared). As Clemens et al. argue, this should substantially raise the coefficient of aid. While the coefficients of the aid variable are not significant at conventional levels, they indeed increase in magnitude. The resulting interaction between temporary UNSC membership and aid is negative and significant

[33] The original source for GDP per capita growth is the World Bank's World Development Indicators; ODA is total net ODA from Table 2 of the OECD's Development Assistance Committee in current US$ in percent of GDP in current US$, taken from the World Development Indicators (see the technical appendix to Clemens et al. 2012).

[34] The data for per capita GDP growth are originally calculated based on the Penn World Tables, updated by Clemens et al. for the year 2005 using the World Development Indicators. Net ODA is measured in the same way as in the Burnside-Dollar regressions (again see the technical appendix to Clemens et al. 2012).

at the ten-percent level in the Burnside-Dollar specification (column 3), but not significant at conventional levels in the model of Rajan and Subramanian (column 4).

Note that aid by itself has not been significant at conventional levels in any of the four specifications. This is in line with the results in Clemens et al. (2012) and clearly does not imply that aid is ineffective. If more aid is given to countries with low growth rates, the insignificant coefficients could result from a positive effect of aid on growth, but more aid being allocated to countries in greater need. If aid and growth are persistent over time, this holds whether or not we use lagged values of aid.

We next turn to our preferred estimations (explained above), which first-differences the dependent and the explanatory variables (except membership on the UNSC), as shown in equation (2). This specification reduces potential omitted variable bias by taking account of systematic time-invariant differences between members and non-members of the UNSC and their effect on growth. We report specifications excluding aid squared (columns 5 and 6) and including it (columns 7 and 8), accounting for potentially diminishing returns to aid.

The results support the hypothesis that politically motivated aid is less effective. When we do not account for diminishing returns to aid by including aid squared, the coefficient of the interaction term is negative and significant at the five-percent level in the Burnside-Dollar specification (column 5) and negative and significant at the ten-percent level in the Rajan-Subramanian specification (column 6). When we include aid squared,[35] the interaction becomes significant at the one- and five-percent level, respectively (columns 7 and 8).[36] Figures 5 and 6 report the corresponding marginal effects and their 90%-confidence intervals.[37]

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[35] Part of the literature on the effect of aid on growth argues that aid squared has to be included in a meaningful growth regression, e.g., Durbarry et al. (1998). However, see Doucouliagos and Paldam (2009) for a critique.

[36] We also tested whether the effect differs when we take only important years of UNSC membership into account, as suggested in Kuziemko and Werker (2006). The results for the BD specification remain unchanged; in the RS specification the interaction term becomes insignificant, however. This is not surprising given that their measure is based on US-newspapers and thus measures the importance of the UNSC predominantly for the United States rather than the average donor.

[37] We also used the Anderson-Hsiao estimator, instrumenting for the contemporaneous difference in initial GDP per capita with its lagged difference. The results for the BD specifications remain unchanged. In the RS specifications, the coefficient for the interaction term remains unchanged; however its standard error nearly doubles. In both cases the Hansen J statistic rejects the null-hypothesis of valid instruments,

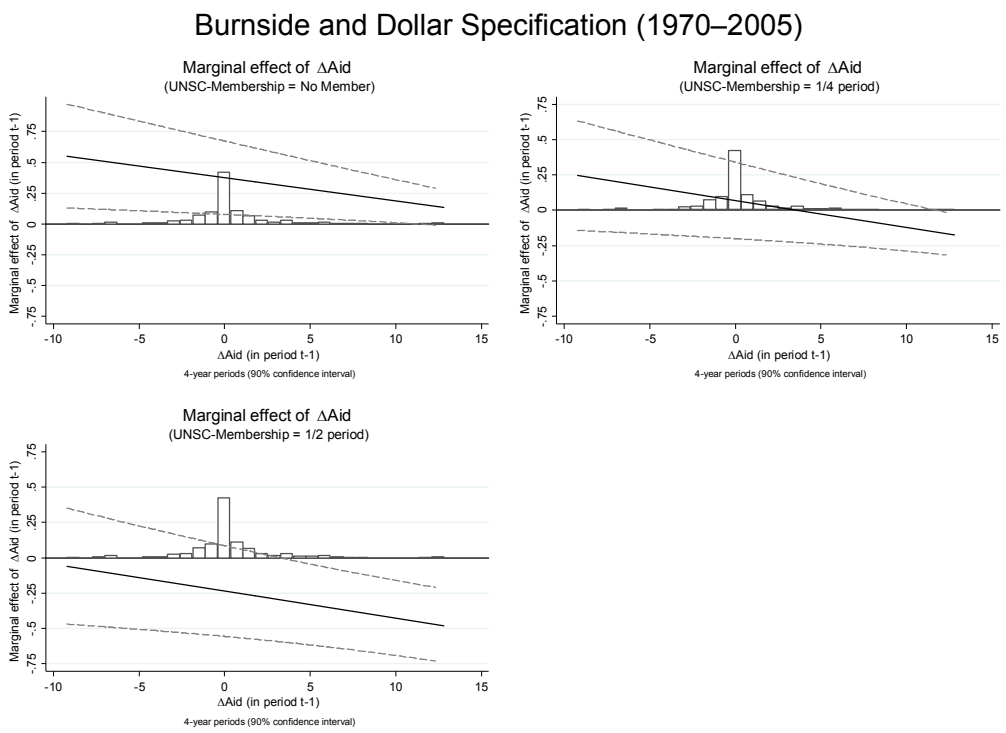

Figure 5: Marginal effect of changes in aid disbursements on economic growth conditional on changes in aid disbursements and varying UNSC membership (based on Table 1, column 7). The histogram shows the distribution of ΔAid in the regression sample. Note that the significant interaction term indicates that the marginal effects differ significantly from each other.

thus the estimator is not valid for our specification. We also replaced the continuous UNSC variable with a dummy for any membership on the UNSC in a certain period. The results for BD remain unchanged with the interaction being significant at the one-percent level. In the RS specification the coefficient of the interaction term remains negative, but becomes smaller and insignificant at conventional levels.

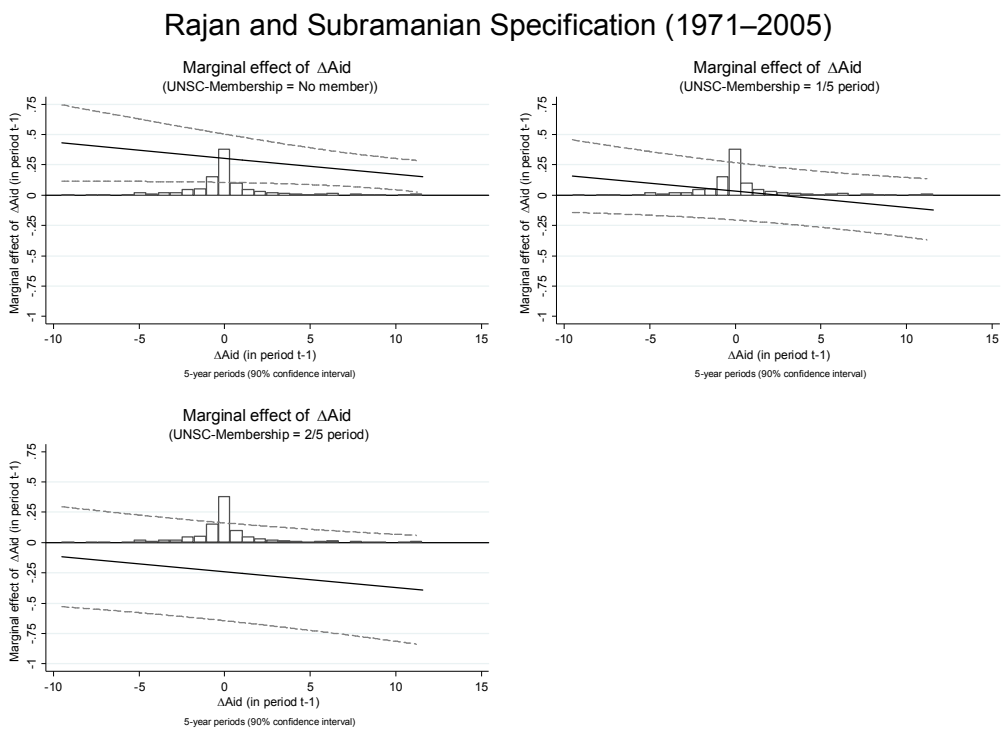

Figure 6: Marginal effect of changes in aid on economic growth conditional on changes in aid disbursements and varying UNSC membership (based on Table 1, column 8). The histogram shows the distribution of ΔAid in the regression sample. Note that the significant interaction term indicates that the marginal effects differ significantly from each other.

As can be seen in the figures, the marginal effect of changes in aid on growth depends on the magnitude of the change in aid and on membership on the UNSC. All figures show that the effect declines for higher values of ΔAid, reflecting diminishing returns to aid.[38] For any value of ΔAid, the effectiveness of aid decreases with the number of years the recipient country has spent on the UNSC two periods before (i.e., when the aid has been committed). According to figure 5, average yearly economic growth increases by 0.61 percentage points when aid in percent of GDP is increased by 1 percentage point and the recipient has not served on the UNSC compared to it having served two years (i.e., 1/2 of the four-year-period). The effect of changes in aid on growth is positive for countries not serving on the UNSC when the aid has been

[38] The marginal effect of a change in aid is linear in the lagged difference and in the twice-lagged level of aid (see Appendix D).

committed,[39] largely insignificant when the country served one year, and significantly negative for increases in aid exceeding 3 percent of GDP for countries that have served two years. Figure 6 shows a similar picture for the Rajan and Subramanian specification. Here, the difference in growth rates that can be attributed to aid (in percent of GDP) amounting to 1 percentage point is 0.55 percentage points when UNSC membership is increased from zero to serving for 2/5 of the period under consideration. Note that the marginal effect of aid depends again on the amount of aid being disbursed and the share of time the recipient has served on the UNSC. For countries not serving on the UNSC it is positive and significant, while it turns negative and insignificant for temporary members. Overall, the marginal effects illustrate that politically motivated aid is less effective in supporting growth.

Table 2 reproduces the regressions in first differences (and including aid squared) focusing on Africa only. The reason is that African nations follow the strictest norm of rotation on the UNSC among all regional election caucuses, so that the exogeneity of UNSC membership is particularly hard to challenge (Vreeland and Dreher 2014). The results are similar to those for all countries, as shown above. The coefficient on the interaction term is negative and significant at the five-percent level in the Burnside and Dollar regressions. The coefficients in the Rajan and Subramanian specification are, however, no longer significant at conventional levels, potentially due to the substantially smaller sample.[40]

In Table 3 we turn to the model of Bueno de Mesquita and Smith (BdM/Smith).[41] Column 1 includes fixed effects for years and regions, but not for countries. As can be seen,

[39] This holds unless the change in aid exceeds 10 percent of GDP.

[40] A substantial share of politically motivated aid inflows come from the United States. We therefore replicated the analysis focusing on US aid exclusively. This comes with two potential problems that might bias against finding a significant interaction: First, overall US aid might be politically motivated to a larger extent than ODA from all donors. It could then be difficult to identify differential growth-effects from short-term political motives. Second, it might not be possible to detect significant effects when focusing on aid from one donor exclusively as such aid might be insufficiently large to measurably affect growth. Our results are similar to those for all aid, but generally weaker: The interaction terms remain negative in the main regressions, but fail to be significant at conventional levels in the BD and RS specifications. They are significant at the one and ten-percent level respectively for autocratic countries and significant at the one-percent level in the BD specification in the Africa-sample.

[41] Their source for GDP per capita growth is the World Bank's World Development Indicators (2007), measured in constant 2000 US$. Aid is measured as net official development assistance in percent of GDP and comprises aid from all sources (also taken from the World Development Indicators 2007). All

countries that were temporary members of the UNSC at the beginning of a four-year-period do not experience significantly different rates of growth.[42] In column 2 we lag temporary membership on the UNSC by two periods. As can be seen, the twice-lagged effect of UNSC membership does not reduce growth at conventional levels of significance, indicating that UNSC membership per se does not hurt growth.

In accordance with our theory, we again assume that aid which is committed while a country is on the UNSC gets disbursed with a lag of about one period and affects economic growth on average yet one period later. Hence, our estimations follow the same theory as the specifications above, and should thus be comparable. Column 3 adds aid, lagged by one period, and its interaction with UNSC membership to the equation. Column 4 shows the same specification, but restricts the sample to Africa.[43] The results are in line with those above, with the interaction between UNSC membership and aid being negative and significant at the five and, respectively, one-percent level.

In columns 5-8 we replace the region-fixed effects with dummies for each country and add regional quartic time trends (as in Bueno de Mesquita and Smith 2010). It is thus the more rigorous specification, as it accounts for potential time-invariant omitted variables, different forms of regional trends, and common yearly shocks. The results are broadly in line with those above, but generally less significant. While the interaction between aid and membership on the UNSC is negative but not significant at conventional levels for the overall sample (column 7), it is negative and significant at the one-percent level in the regressions focusing on Africa (column 8). As explained above, African countries provide the most reliably exogenous variation in politically motivated aid; thus a causal interpretation of this result is most warranted. Overall,

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regressions include as explanatory variables: (log) population size, (log) per capita GDP, the level of democracy and its interaction with UNSC membership, as do the main specifications in Bueno de Mesquita and Smith (2010). Note that contrary to Bueno de Mesquita and Smith we exclude high-income countries (as defined by the World Bank) from the sample, as they do not receive any aid. Again, we restrict the table to the variables of main interest and report the full specification for our preferred model in Appendix C.

[42] This is contrary to the results of Bueno de Mesquita and Smith (2010). Unlike them, we cluster standard errors at the recipient country level. Without clustering, the negative coefficient is significant at the ten-percent level.

[43] Again, we test whether aid committed for political reasons in t-2 affects disbursements mainly in t-1, and potentially reduces growth in t.

our results support the hypothesis of an adverse effect of political interests on aid effectiveness. That is, politics matter.

In the next set of regressions we investigate the effect of politically motivated aid in democracies and autocracies separately, measured according to the indicator of Cheibub et al. (2010).[44] As Nooruddin and Vreeland (2010) argue, UNSC votes of democratic countries are more valuable than those of non-democratic ones, as they provide greater legitimacy. Democracies should thus have particular leverage while serving on the UNSC, potentially reducing the effectiveness of aid more strongly than aid given to autocracies. To the contrary, Bueno de Mesquita and Smith (2010) report the adverse effects of UNSC membership to be stronger in autocracies. As they explain, a large share of the increase in aid during UNSC membership is due to turning countries that did not previously receive aid into aid-recipient countries. They thus argue that autocratic countries, who would otherwise not receive any aid, receive larger increases in aid during their UNSC membership. As this is mainly due to political interests, the share of aid that is politically motivated should be particularly high in autocratic countries, and the higher variance makes it easier to identify a statistically significant effect. On average, the potential to misuse aid is also higher in autocracies. Hence, on balance, we expect a more pronounced interaction effect in autocracies.

Table 4 reports the results for the Burnside and Dollar and Rajan and Subramanian specifications, while Table 5 shows them according to the specification of Bueno de Mesquita and Smith. In table 4 we focus on those regressions that control for time-invariant omitted variables by first-differencing the equation. For the Burnside and Dollar sample the negative interaction is negative significant at the one-percent level in autocracies (columns 3 and 7). In democracies, the effect is negative, significant at the ten-percent level when aid squared is

[44] We also run separate regressions for the period of the Cold War and the post-Cold War period. As Berthélemy and Tichit (2004) show, the importance of colonial ties is diminished since the end of the Cold War. Headey (2008) also shows that bilateral aid became more effective after the end of the Cold War, in line with Dunning's (2004) analysis of how aid affected the spread of democracy. If donors gained greater leverage to enforce conditions after the end of the Cold War, and the accompanying risk of losing an ally to the opposing bloc, we would expect the effect of geopolitical aid to be particularly harmful during the Cold War era. However, we find no consistent differences for the two periods. We also tested whether politically motivated aid is particularly harmful in times of economic crises, as suggested in Dreher et al. (2013). We find no systematic difference.

included (column 5) and insignificant without aid squared (column 1). In both models, the coefficients are substantially larger in magnitude in autocracies. The Rajan and Subramanian specifications show positive effects for democracies and negative effects for autocracies, but all with insignificant coefficients.

Table 5 shows a similar picture, where only the interactions in autocracies have a negative coefficient. The negative effect is significant when we control for regional and time fixed effects (column 3), however, while still negative it turns insignificant when we add time trends and country fixed effects in column 4. In democracies the interaction turns *positive* and significant at the five-percent level when country fixed effects are excluded (column 1). Overall, effects other than the greater legitimacy of democratic countries' votes on the UNSC seem to dominate in our sample. Potentially, autocratic countries have less interest in promoting development, so the reduced pressure to use development aid for developmental purposes might be particularly harmful there. In addition, if autocratic countries receive larger increases in aid while being a UNSC member, as Bueno de Mesquita and Smith (2010) have argued, a larger share of aid is politically motivated. Thus, the adverse effects of political motivation on aid effectiveness seem to be particularly pronounced in autocracies. Given that these are, on average, countries where the potential role of the donor in pushing for change is most prevalent, the adverse consequences of politically motivated aid are particularly unfortunate.

The results so far provide some support for our proposed timeline. However, this does not preclude other timings to be potentially important either. Thus, Table 6 reports results from regressions which examine whether and to what extent other potential timings are supported by the data. We test if the effectiveness of aid disbursed in different periods is affected by UNSC membership in the same period, one period before, and two periods before (our timeline). For this matter, we replicate the regressions of Table 1, columns 7 and 8, for the Burnside and Dollar and, respectively, Rajan and Subramanian specifications. For Bueno de Mesquita and Smith we focus on the specification of column 7 in Table 3. Other timings are well possible. That aid disbursed during UNSC membership is less effective if the country has been on the UNSC in this same period, for example, would be likely if contemporaneous membership affects

compliance with conditions. The other regressions allow for a longer lag in the effectiveness of aid.

While Table 6 shows the coefficients and standard errors of the interaction terms only, note that the respective aid and UNSC variables are also included in each regression (as are the remaining control variables). We also report the coefficients following our previously proposed and theoretically most likely timeline (Aid_{t-1}*$UNSC_{t-2}$) for comparison. As can be seen, most of the other interactions are not significant at conventional levels. The exception is the specification following Bueno de Mesquita and Smith (column 3), when we include aid disbursed in the previous period, UNSC membership in the previous period, and their interaction. The table shows that the interaction is significant at the one-percent level, with a negative coefficient. The result for this specification implies that part of the aid committed during membership gets disbursed in the same period and is thus less effective one period later. Overall, and in particular for the BD and RS specifications that employ a more rigorous set of control variables than BdM, the regressions support our proposed timeline, and thus the theoretical considerations underlying it.

What can explain these results? As we outlined above, the previous literature identified a number of transmission channels for individual donors. Dreher et al. (2013) showed that political motives reduce the quality of World Bank projects. Also for the World Bank, Kilby (2011, 2013) reported that political allies are allowed to pursue projects where important preconditions are not met, and with inferior preparation. Stone (2008) found that political favoritism undermines the credibility of IMF conditionality. In order to test for these transmission channels in our sample of aid by all DAC donors, we would require data on aid conditionality and compliance with these conditions, project success, and time and resources invested in project preparation. These data do not exist for a broad sample of donors.

Data exist, however, on different aid modalities and the sectoral composition of aid across recipient countries on and off the UNSC. Previous research argues that the effectiveness of aid depends on the sector the aid is given to and the modalities through which it is delivered

(Cordella and Dell'Ariccia 2007, Clemens et al. 2012, Bjørnskov 2013). To the extent that UNSC membership affects composition and modalities, the effectiveness of aid would change.[45]

While a detailed analysis is beyond the scope of this paper, Table 7 reports the amount of aid committed to the individual sectors while countries have been member of the UNSC and at other times (in constant million 2011 US$). As can be seen, there are substantial differences between countries on and off the UNSC. Table 7 also reports a t-test for equality of a certain category's share in total aid committed to UNSC members and non-members. The results show that the increase is significant at conventional levels (and positive) in 7 of the 26 sectors, while aid significantly decreases in one sector. For example, UNSC members receive larger general budget support (increase of 46%), larger food aid (59%), and less emergency aid (39%). According to Nunn and Qian (2012), U.S. food aid increases the risk of civil conflict. Bjørnskov (2013) shows that a category of aid that includes emergency aid increases growth. Both increases in food aid and reductions in emergency aid are thus likely to reduce growth.

Strong differences also arise when we focus on the type of aid, as we show in Table 8. The results indicate increases in all types of aid for temporary members of the UNSC. In particular, budget aid increases by 192% during UNSC membership, while the increase in project aid is 95%. Loans increase by 137% and grants by 32%. These differences are all statistically significant at the one-percent level. To the extent that these different types of aid affect economic growth differently (e.g., Cordella and Dell'Ariccia 2007), the different composition of aid might be responsible for our results above.

While we leave further explorations of the exact channels that explain the lower aid effectiveness of politically motivated aid identified in this paper for future research, these results show striking differences in how certain types of aid and aid to specific sectors increase as a consequence of political motives.

[45] Bayer et al. (2012) provide initial evidence. Their results show that countries prefer to work with UN agencies rather than the World Bank in implementing projects under the Global Environment Facility while being on the UNSC.

5. Conclusions

In this paper we addressed the question of whether political motives reduce the effectiveness of aid. We made use of a straightforward proxy for the share of aid disbursed in a certain period that was given for political reasons. Specifically, we exploited the quasi-random variation in aid commitments resulting from the recipient being of extraordinary geopolitical importance during its temporary membership on the UNSC. The previous literature has shown that temporary members of the UNSC receive substantial and unusual increases in aid (Kuziemko and Werker 2006, Dreher et al. 2009a, 2009b). To the extent that political motives for the allocation of aid affect its consequences, the aid a country receives while serving on the UNSC should be less effective on average.

Rather than suggesting our own econometric model, we augmented three widely cited specifications from the literature (Burnside and Dollar 2000, Rajan and Subramanian 2008, Bueno de Mesquita and Smith 2010) with our measure of politically motivated aid. Our results show that aid committed while a recipient has been a member of the UNSC is less effective in terms of increased economic growth. This holds in particular in autocratically governed recipient countries. It also holds when we restrict our sample to African countries, which follow the strictest norm of rotation on the UNSC. That is, foreign aid granted for short-term geopolitical motives is less effective than other types of aid in those places where development would be most needed.

While we did not aim to rigorously test whether aid is effective, but rather, whether aid effectiveness is reduced by the short-term political motivations of donors, our findings have direct implications for the existing and future aid effectiveness literature. To the extent the reader accepts the regressions presented in Clemens et al. (2012) and Bueno de Mesquita and Smith (2010) as causal tests for the effectiveness of aid, our results imply that overall aid tends to increase growth, while politically motivated aid is insignificant, or even harmful to growth. In any case, politically motivated aid is less effective than average aid. When donors allocate a fixed aid budget according to different motives, political motives channel more aid to temporary UNSC members whose subsequent growth rates might increase to the extent that the

marginal effect of aid remains positive. This increase would however come at the cost of reduced aid and larger losses of growth elsewhere.

An important implication of our results relates to the identification strategy in the previous aid effectiveness literature, much of which tries to identify the causal effects of aid by instrumenting for aid using political variables. As already argued in Kilby and Dreher (2010) and Faye and Niehaus (2012), our results show that geopolitical variables are invalid as instruments for aid when "political aid" is different, as we find here.[46] The results of previous studies identifying the effect of aid on growth by relying on variation caused by changing political alliances thus have to be treated with caution.

In terms of increasing the effectiveness of aid, there are arguably two possibilities. First, foreign aid could be separated from political motives, so that it truly becomes "development aid." Given the incentives of donors to use aid to achieve their geopolitical goals this is unlikely to happen. Second, the exact channels by which geopolitical motives reduce the effectiveness of aid should be identified. The choice of a suitable remedy would depend upon which of the channels outlined above is responsible for the reduced effectiveness of aid. We leave such analysis for future research.

[46] See also Fleck and Kilby (2006), Headey (2008), Bearce and Tirone (2010), Minoiu and Reddy (2010).

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Table 1: Politically motivated aid and growth, 1970-2005, OLS, BD and RS

	Burnside and Dollar		Rajan and Subramanian	
	(1)		(2)	
	Coef.	Std. err.	Coef.	Std. err.
Aid (t)	0.010	(0.033)	-0.004	(0.040)
UNSC (t-1)	1.171	(0.888)	0.854	(1.283)
UNSC (t-1)*Aid (t)	-0.045	(0.116)	-0.361*	(0.203)
First difference?		No		No
Adj. R-Squared		0.30		0.32
Number of Observations		418		432
	(3)		(4)	
Aid (t-1)	0.056	(0.045)	0.005	(0.056)
UNSC (t-2)	0.255	(0.973)	-0.501	(1.058)
UNSC (t-2)*Aid (t-1)	-0.329*	(0.166)	0.010	(0.149)
First difference?		No		No
Adj. R-Squared		0.31		0.30
Number of Observations		418		432
	(5)		(6)	
Aid (t-1)	0.121	(0.095)	0.149*	(0.085)
UNSC (t-2)	-1.679*	(0.903)	-0.866	(1.420)
UNSC (t-2)*Aid (t-1)	-0.927**	(0.429)	-1.094*	(0.590)
First difference?		Yes		Yes
Adj. R-Squared		0.18		0.30
Number of Observations		361		351
	(7)		(8)	
Aid (t-1)	0.453**	(0.189)	0.356**	(0.148)
Aid (t-1) squared	-0.010**	(0.004)	-0.007	(0.004)
UNSC (t-2)	-1.649*	(0.992)	-0.947	(1.402)
UNSC (t-2)*Aid (t-1)	-1.222***	(0.369)	-1.365**	(0.647)
First difference?		Yes		Yes
Adj. R-Squared		0.29		0.31
Number of Observations		361		351

Notes: Dependent variable is growth of real GDP per capita. All "Burnside and Dollar" regressions include Initial GDP/capita, Ethnic Fractionalization, Assassinations, Ethnic Fractionalization*Assassinations, dummies for Sub-Saharan Africa and East Asia, Institutional Quality, M2/GDP (lagged), Policy, and period dummies. All "Rajan and Subramanian" regressions include Initial GDP/capita, Initial Policy, (log) Initial Life Expectancy, Geography, Institutional Quality, (log) Inflation, Initial M2/GDP, Budget Balance/GDP, Revolutions, Ethnic Fractionalization, and dummies for Sub-Saharan Africa and East Asia. Standard errors in parentheses (clustered at the recipient country level). * p<0.10, ** p<0.05, *** p<0.01.

Table 2: Politically motivated aid and growth in Africa, 1970-2005, OLS, BD and RS

	Burnside and Dollar		Rajan and Subramanian	
	(1)		(2)	
	Coef.	Std. err.	Coef.	Std. err.
Aid (t-1)	0.138	(0.105)	0.026	(0.126)
UNSC (t-2)	-1.243	(1.760)	-1.506	(3.905)
UNSC (t-2)*Aid (t-1)	-1.448**	(0.650)	0.092	(1.425)
First difference?	Yes		Yes	
Adj. R-Squared	0.15		0.31	
Number of Observations	103		94	
	(3)		(4)	
Aid (t-1)	0.239	(0.178)	0.247	(0.291)
Aid (t-1) squared	-0.002	(0.003)	-0.006	(0.005)
UNSC (t-2)	-1.242	(1.801)	-1.411	(3.937)
UNSC (t-2)*Aid (t-1)	-1.480**	(0.666)	-0.333	(1.527)
First difference?	Yes		Yes	
Adj. R-Squared	0.15		0.31	
Number of Observations	103		94	

Notes: Dependent variable is growth of real GDP per capita. All "Burnside and Dollar" regressions include Initial GDP/capita, Ethnic Fractionalization, Assassinations, Ethnic Fractionalization*Assassinations, dummies for Sub-Saharan Africa and East Asia, Institutional Quality, M2/GDP (lagged), Policy, and period dummies. All "Rajan and Subramanian" regressions include Initial GDP/capita, Initial Policy, (log) Initial Life Expectancy, Geography, Institutional Quality, (log) Inflation, Initial M2/GDP, Budget Balance/GDP, Revolutions, Ethnic Fractionalization, and dummies for Sub-Saharan Africa and East Asia. Standard errors in parentheses (clustered at the recipient country level). ** $p<0.05$.

Table 3: Politically motivated aid and growth, 1960-2005, OLS, BdM/Smith

	(1)		(2)		(3)		(4)	
	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.
UNSC (t)	-1.203	(1.316)						
UNSC (t-2)			-1.611	(1.287)	-0.307	(1.401)	3.420*	(1.979)
Aid (t-1)					0.493***	(0.159)	0.440**	(0.191)
UNSC (t-2)*Aid (t-1)					-0.199**	(0.097)	-0.381***	(0.120)
Sample	all		all		all		Africa	
Country Fixed Effects	No		No		No		No	
Region Fixed Effects	Yes		Yes		Yes		Yes	
Year Dummies	Yes		Yes		Yes		Yes	
Regional Trend Variables	No		No		No		No	
Adj. R-Squared	0.26		0.26		0.17		0.13	
Number of Observations	3516		3516		3378		1272	
	(5)		(6)		(7)		(8)	
UNSC (t)	-0.523	(0.999)						
UNSC (t-2)			-0.763	(1.180)	-0.93	(1.299)	2.774*	(1.568)
Aid (t-1)					0.273***	(0.103)	0.247	(0.170)
UNSC (t-2)*Aid (t-1)					-0.024	(0.077)	-0.175***	(0.060)
Sample	all		all		all		Africa	
Country Fixed Effects	Yes		Yes		Yes		Yes	
Region Fixed Effects	No		No		No		No	
Year Dummies	Yes		Yes		Yes		Yes	
Regional Trend Variables	Yes		Yes		Yes		Yes	
Adj. R-Squared	0.43		0.43		0.45		0.41	
Number of Observations	3516		3516		3378		1272	

Notes: Dependent variable is growth of real GDP per capita. All regressions include (log) Population Size, (log) GDP per capita, the level of Democracy and its interaction with UNSC Membership. Standard errors in parentheses (clustered at the recipient country level). * p<0.10, ** p<0.05, *** p<0.01.

Table 4: Politically motivated aid and growth, 1970-2005, OLS, BD and RS, by democracy

	Democracy				Autocracy			
	Burnside and Dollar		Rajan and Subramanian		Burnside and Dollar		Rajan and Subramanian	
	(1)		(2)		(3)		(4)	
	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.
Aid (t-1)	0.071	(0.115)	0.247*	(0.137)	0.171	(0.132)	0.082	(0.106)
UNSC (t-2)	-0.014	(0.994)	0.381	(1.500)	-2.315	(1.474)	-1.119	(2.062)
UNSC (t-2)*Aid (t-1)	-0.236	(0.412)	0.712	(1.235)	-1.106***	(0.328)	-0.781	(0.602)
First difference?	Yes		Yes		Yes		Yes	
Adj. R-Squared	0.31		0.35		0.14		0.26	
Number of Observations	122		115		195		230	
	(5)		(6)		(7)		(8)	
Aid (t-1)	0.521**	(0.208)	0.498*	(0.265)	0.440*	(0.249)	0.238	(0.170)
Aid (t-1) squared	-0.010**	(0.004)	-0.007	(0.005)	-0.009*	(0.005)	-0.005	(0.005)
UNSC (t-2)	-0.053	(0.994)	0.225	(1.500)	-2.249	(1.485)	-1.183	(2.046)
UNSC (t-2)*Aid (t-1)	-0.825*	(0.460)	0.174	(1.385)	-1.230***	(0.323)	-0.973	(0.649)
First difference?	Yes		Yes		Yes		Yes	
Adj. R-Squared	0.32		0.36		0.15		0.26	
Number of Observations	134		115		220		230	

Notes: Dependent variable is growth of real GDP per capita. All "Burnside and Dollar" regressions include Initial GDP/capita, Ethnic Fractionalization, Assassinations, Ethnic Fractionalization*Assassinations, dummies for Sub-Saharan Africa and East Asia, Institutional Quality, M2/GDP (lagged), Policy, and period dummies. All "Rajan and Subramanian" regressions include Initial GDP/capita, Initial Policy, (log) Initial Life Expectancy, Geography, Institutional Quality, (log) Inflation, Initial M2/GDP, Budget Balance/GDP, Revolutions, Ethnic Fractionalization, and dummies for Sub-Saharan Africa and East Asia. Standard errors in parentheses (clustered at the recipient country level). * p<0.10, ** p<0.05, *** p<0.01.

Table 5: Politically motivated aid and growth, 1960-2005, OLS, BdM/Smith, by democracy

	Democracy				Autocracy			
	(1)		(2)		(3)		(4)	
	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.
UNSC (t-2)	-2.518***	(0.810)	-2.307**	(0.973)	-0.057	(1.644)	0.009	(1.387)
Aid (t-1)	0.018	(0.056)	-0.034	(0.096)	0.359	(0.271)	0.288	(0.334)
UNSC (t-2)*Aid (t-1)	0.257**	(0.122)	0.064	(0.145)	-0.237*	(0.126)	-0.100	(0.093)
Country Fixed Effects	No		Yes		No		Yes	
Region Fixed Effects	Yes		No		Yes		No	
Year Dummies	Yes		Yes		Yes		Yes	
Regional Trend Variables	No		Yes		No		Yes	
Adj. R-Squared	0.50		0.75		0.17		0.50	
Number of Observations	889		889		2295		2295	

Notes: Dependent variable is growth of real GDP per capita. All regressions include (log) Population Size, (log) per capita GDP, the level of democracy and its interaction with UNSC Membership. Standard errors in parentheses (clustered at the recipient country level). * p<0.10, ** p<0.05, *** p<0.01.

Table 6: Politically motivated aid and growth, different timelines

	Burnside-Dollar		Rajan-Subramanian		Bueno de Mesquita-Smith	
	(1)		(2)		(3)	
	Coef.	Std. err.	Coef.	Std. err.	Coef.	Std. err.
Aid (t) *UNSC (t)	-0.432	(0.471)	0.074	(0.333)	0.050	(0.076)
Aid (t) *UNSC (t-1)	0.272	(0.475)	0.014	(0.507)	-0.042	(0.115)
Aid (t) *UNSC (t-2)	0.200	(0.165)	-0.217	(0.506)	0.021	(0.101)
Aid (t-1) *UNSC (t-1)	0.038	(0.418)	0.479	(0.482)	-0.196***	(0.058)
Aid (t-1) *UNSC (t-2)	-1.222***	(0.364)	-1.365**	(0.647)	-0.024	(0.077)
Aid (t-2) *UNSC (t-2)	-0.029	(0.469)	-0.079	(0.105)	-0.048	(0.090)

Notes: Dependent variable is growth of real GDP per capita. Columns 1 and 2 are based on Table 1, columns 7 and 8, respectively. Column 3 is based on column 7 in Table 3. All "Burnside-Dollar" regressions are in first differences and include Initial GDP/capita, Ethnic Fractionalization, Assassinations, Ethnic Fractionalization*Assassinations, dummies for Sub-Saharan Africa and East Asia, Institutional Quality, M2/GDP (lagged), Policy, and period dummies. The "Rajan-Subramanian" regressions are in first differences and include Initial GDP/capita, Initial Policy, (log) Initial Life Expectancy, Geography, Institutional Quality, (log) Inflation, Initial M2/GDP, Budget Balance/GDP, Revolutions, Ethnic Fractionalization, and dummies for Sub-Saharan Africa and East Asia. "Bueno de Mesquita-Smith" includes (log) Population Size, (log) per capita GDP, the level of Democracy and its interaction with UNSC Membership, country fixed effects, year dummies and regional trend variables. All regressions also include aid, aid squared and UNSC variable themselves. Standard errors in parentheses (clustered at the recipient country level). ** $p<0.05$, *** $p<0.01$.

Table 7: Aid and UNSC Membership according to sectors

Sectoral allocation of total aid committed, 1973-2011, constant million 2011 US$

	Mean			t-test
Sector	No UNSC member	UNSC member	Increase in %	p-value
Education	37.62	56.36	50%	0.74
Health	27.48	34.70	26%	0.07
Population	25.79	40.38	57%	0.85
Water and Sanitation	36.62	68.99	88%	0.10
Government /Civil Society	47.78	56.19	18%	0.01
Other Social Infrastructure	18.44	37.74	105%	0.01
Transport and Storage	62.16	93.57	51%	0.84
Communication	10.38	19.70	90%	0.96
Energy Generation and Supply	53.87	100.60	87%	0.73
Banking and Financial Services	13.30	16.93	27%	0.33
Business and other Services	10.14	11.15	10%	0.40
Agriculture and Fishing	53.73	138.60	158%	0.56
Industry/Mining	26.75	69.36	159%	0.22
Trade/Tourism	4.85	5.33	10%	0.58
Environment	14.48	37.49	159%	0.05
Other Multisector	32.96	45.04	37%	0.04
General Budget support	81.13	118.40	46%	0.04
Food Aid	29.10	46.36	59%	0.01
Other Commodity Assistance	33.78	64.37	91%	0.89
Debt	78.08	110.00	41%	0.72
Emergency Reponse	27.50	16.86	-39%	0.00
Reconstruction Relief	14.47	11.37	-21%	0.25
Disaster Prevention	3.26	1.95	-40%	0.24
Admin of Donors	1.73	2.12	23%	0.59
Refugees	3.33	1.92	-42%	0.22
Unspecified	7.03	12.79	82%	0.41

Notes: Differences in aid commitments by aid type for UNSC and Non-UNSC members. The t-value indicates significance of the difference between the shares of the respective aid type for UNSC and non-UNSC members. Data source: OCED DAC Creditor Reporting System (CRS) aid activities database.

Table 8: Aid and UNSC Membership according to type of aid

Allocation of total aid committed, 1973-2011, constant million 2011 US$

	Mean			t-test
Type of Aid	No UNSC member	UNSC member	Increase in %	p-value
Budget Aid	69.71	203.60	192%	0.00
Project Aid	240.20	469.40	95%	0.00
Tied Aid	66.44	121.20	82%	0.00
Partially tied Aid	85.40	181	112%	0.00
Untied Aid	275.10	489.50	78%	0.00
Loans	229.60	545.10	137%	0.00
Grants	268.80	354.60	32%	0.03

Notes: Differences in aid commitments by aid type for UNSC members and Non-members (No-UNSC member). The t-value indicates significance of the difference between the shares of the respective aid type for UNSC members and non-members. Data source: OECD DAC Creditor Reporting System (CRS) aid activities database.

Appendix A: Definitions and sources

Variable	Definition	Original Source
UNSC Membership	Share of years a country has served on the UNSC in a given period.	Dreher et al. (2009b)
US Bilateral Development Aid	Official Development Aid Disbursements from the US in % of GDP.	DAC (2012), Table DAC2a ODA Disbursements, February 2012
Democracy	Dummy that is 1 if the country is a Democracy during at least half the period under consideration.	Cheibub et al. (2010)
Dummy for Africa	Dummy that is 1 if the recipient is an African country.	World Bank (2012)
Burnside and Dollar specification (4-year periods)		
GDP p.c. growth	Average over annual growth rates of real GDP p.c. based on constant local currency.	World Bank (2007)*
Net ODA	ODA (OA) total net in % of GDP.	DAC (2007), Table DAC2a*
Region Dummies	Dummies for Sub-Saharan Africa and East Asia.	Clemens et al. (2012)
Log Initial GDP/capita	Logarithm of initial GDP p.c. in International prices.	Penn World Tables 6.2*
Budget Balance	Overall Budget Balance, including grants. Measured as cash surplus/deficit in % of GDP.	World Bank (2005, 2007), IMF (2005)*
Inflation	Natural log of (1+ Consumer Price Inflation).	World Bank (2005, 2007), IMF (2005)*
M2 (% of GDP)	Money and Quasi-Money (M2) in % of GDP.	World Bank (2007)*
Institutional Quality	First non-missing value of the ICRG composite index [0, 10].	ICRG*
Assassinations	Average number of Assassinations in a given phase.	Banks (2012, 2007)*

Ethnolinguistic Fractionalization	Ethnolinguistic Fractionalization in a country in a given period.	Easterly and Levine (1997), Roeder (2001)*
Assassinations x Ethnolinguistic Fractionalization	Interaction between Assassinations and Ethnolinguistic Fractionalization.	Banks (2012, 2007), Easterly and Levine (1997), Roeder (2001)*
Policy	Good Policy Index based on Budget Balance/GDP, Inflation and Trade Openness (cf. Burnside and Dollar 2000).	Clemens et al. (2012)
Openness	Wacziarg-Welch (2008) extension of the initial Sachs and Warner (1995) Openness Index.	Wacziarg and Welch (2008), updated by Clemens et al. (2012)*
Rajan and Subramanian specification (5-year periods)		
GDP p.c. Growth	Average annual growth rate of real GDP p.c. in constant International Dollars.	Penn World Tables 6.2 and World Bank (2007) for the year 2005*
Net ODA	ODA total net in % of GDP.	DAC (2007), Table DAC2a*
Log Initial GDP/capita	Logarithm of initial GDP p.c. in International Prices.	Penn World Tables 6.2*
Institutional Quality	Period averages of the sum of three components (Bureaucratic Quality, Rule of Law and Corruption) of the ICRG index, normalized to one.	ICRG*
Geography	Combination of the average number of frost days per month in winter and the fraction of a country's area in the tropics.	Bosworth and Collins (2003)*
Revolutions	Average number of Revolutions in a period.	Banks (2007)*
Initial Life Expectancy	Natural logarithm of first non-missing value in each period of Total Life Expectancy.	World Bank (2007)*
Inflation	Natural log of (1+consumer price inflation).	World Bank (2005, 2007), IMF (2005)*
Budget Balance	Overall Budget Balance, including	World Bank (2005, 2007),

	grants. Measured as cash surplus/deficit as % of GDP.	IMF (2005)*
Ethnolinguistic Fractionalization	Ethnolinguistic Fractionalization in a country in a given period.	Easterly and Levine (1997), Roeder (2001)*
Initial Policy	First non-missing value of the Wacziarg-Welch openness dummy.	Wacziarg and Welsh (2008)*
M2 (% of GDP)	Money and quasi-money (M2) in % of GDP.	World Bank (2007)*

Bueno de Mesquita and Smith specification

Democracy	POLITY IV Democracy Index, in the last year of the previous period, transformed to a [0,1] scale.	Marshall and Jaggers (2003)**
Democracy x UNSC Membership (t-2)	Interaction between Democracy Index and the share of years the country was on the UNSC in the respective period.	Dreher et al. (2009b), Marshall and Jaggers (2003)**
Population	Logarithm of Population Size.	World Bank (2007)**
Log Initial GDP	Logarithm of Initial GDP p.c. (in constant 2000 US$).	World Bank (2007)**
Aid	Total Aid (bilateral and multilateral) in % of GDP.	World Bank (2007)**
GDP p.c. growth	GDP p.c. growth rate over a four-year-period in constant 2000 US$.	World Bank (2007)**

Notes: DAC is the OECD's Development Assistance Committee; ICRG is the International Country Risk Guide.

* Our source is Clemens et al. (2012), http://www.cgdev.org/doc/Working%20Papers/CRBB-Replication-Files.zip, accessed 06.06.2012.
More details are provided in "Technical Appendix to Counting chickens when they hatch: Timing and the effects of aid on growth," http://www.cgdev.org/doc/Working%20Papers/counting_chickens_technical_appendix.pdf, accessed 06.06.2012.

** Our source is Bueno de Mesquita and Smith (2010), http://politics.as.nyu.edu/staging/IO/5347/PerniciousEffectUNSC.zip, accessed 08.12.2012.

Appendix B: Descriptive Statistics

Variable	Count	Mean	Standard deviation	Min.	Max.
Burnside and Dollar specification (4-year-periods)					
GDP p.c. growth	361	1.21	3.35	-12.96	17.05
Net ODA (% of GDP)	361	4.54	6.27	-0.13	42.52
Log Initial GDP/capita	361	8.03	0.78	6.14	9.96
Budget Balance	361	-0.08	0.65	-7.25	4.71
Inflation	229	0.28	0.45	-0.01	3.22
M2 (% of GDP)	361	0.28	0.14	0.02	1.02
Institutional Quality	361	4.35	1.49	1.58	8.14
Assassinations	361	0.49	1.35	0	11.50
Ethnolinguistic Fractionalization	361	0.46	0.30	0	0.93
Policy	361	1.45	1.41	-5.48	3.50
Openness	229	0.29	0.43	0	1
Rajan and Subramanian specification (5-year-periods)					
GDP p.c. growth	351	1.48	3.06	-12.30	9.36
Net ODA (% of GDP)	351	4.28	6.05	-0.06	40.27
Log Initial GDP/capita	351	8.16	0.85	5.85	10.27
Institutional Quality	351	4.57	1.68	1.58	9.50
Geography	351	-0.50	0.77	-1.04	1.53
Revolutions	351	0.26	0.42	0	2.60
Initial Life Expectancy	351	61.92	10.04	36.55	79.41
Inflation	351	0.23	0.49	0	4.19
Budget Balance	351	-0.09	0.52	-5.51	2.35
Ethnolinguistic Fractionalization	351	0.44	0.30	0	0.90
Initial Policy	351	0.45	0.50	0	1
M2 (% of GDP)	351	3.01	7.64	0	49.85

Bueno de Mesquita and Smith specification (4-year moving averages)

Democracy	3378	0.44	0.35	0	1
Population	3378	15.82	1.53	12.27	20.96
Log Initial GDP	3378	6.69	1.08	4.49	9.71
Total Aid (from all sources, % GDP)	3378	6.25	8.29	0	68.30
GDP p.c. growth	3378	6.89	17.81	-80.73	246.22

Appendix C: Full regression specifications

Table C.1: Burnside and Dollar & Rajan and Subramanian

	Burnside and Dollar (1)		Rajan and Subramanian (2)	
Aid (t-1)	0.453**	(0.189)	0.356**	(0.148)
Aid (t-1) squared	-0.010**	(0.004)	-0.007	(0.004)
UNSC (t-2)	-1.649*	(0.992)	-0.947	(1.402)
UNSC (t-2)*Aid (t-1)	-1.222***	(0.369)	-1.365**	(0.647)
GDP p.c. growth	-4.267*	(2.318)	-9.920***	(1.432)
Assassinations	-0.255	(0.230)		
Assassinations * Ethnolinguistic Fractionalization	0.439	(0.449)		
M2/GDP	0.801	(3.817)		
Policy	0.858***	(0.199)		
Initial Life Expectancy			-0.009	(0.079)
Initial Policy			0.675	(0.459)
Inflation			-1.486***	(0.368)
M2/GDP			-0.023	(0.034)
Budget Balance			0.131	(0.147)
Revolutions			-0.767**	(0.363)
First difference?	Yes		Yes	
Adj. R-Squared	0.29		0.31	
Number of Observations	361		351	

Notes: Dependent variable is growth of real GDP per capita. Full regression results corresponding to Table 1, columns 7 and 8. Note that time-invariant variables are dropped in the regressions using first differences. Standard errors in parentheses (clustered at the recipient country level). * p<0.10, ** p<0.05, *** p<0.01

Table C.2: Bueno de Mesquita and Smith

	(1)		(2)	
	Coef.	Std. err.	Coef.	Std. err.
UNSC (t-2)	0.273***	(0.103)	2.774*	(1.568)
Aid (t-1)	-0.93	(1.299)	0.247	(0.170)
UNSC (t-2)*Aid (t-1)	-0.024	(0.077)	-0.175***	(0.060)
Democracy	-4.634**	(2.221)	-1.671	(2.203)
Democracy* UNSC Membership (t-2)	0.343	(1.871)	-6.063	(4.494)
Population	-41.526***	(12.218)	-13.386	(15.991)
Log Initial GDP	-23.804***	(4.735)	-16.265***	(5.373)
Sample	all		Africa	
Country Fixed Effects	Yes		Yes	
Region Fixed Effects	No		No	
Year Dummies	Yes		Yes	
Regional Trend Variables	Yes		Yes	
Adj. R-Squared	0.45		0.41	
Number of Observations	3378		1272	

Notes: Dependent variable is growth of real GDP per capita. Full regression results corresponding to Table 3, columns 7 and 8. Standard errors in parentheses (clustered at the recipient country level). * p<0.10, ** p<0.05, *** p<0.01

Appendix D: Marginal effect of a change in aid

$$[Y_{i,t} - Y_{i,t-1}] = \beta_0 + \beta_1 * [Aid_{i,t-1} - Aid_{i,t-2}] + \beta_2 * [Aid_{i,t-1}{}^2 - Aid_{i,t-2}{}^2] + \beta_3 * UNSC_{i,t-2} + \beta_3 * UNSC_{i,t-2} + \beta_4 * [Aid_{i,t-1} - Aid_{i,t-2}] * UNSC_{i,t-2} + \beta_5 * [Controls_{i,t} - Controls_{i,t-1}] + \varepsilon_{i,t}$$

$$[Y_{i,t} - Y_{i,t-1}] = \beta_0 + \beta_1 * [Aid_{i,t-1} - Aid_{i,t-2}] + \beta_2 * [Aid_{i,t-1} + Aid_{i,t-2}] * [Aid_{i,t-1} - Aid_{i,t-2}] + \beta_3 * UNSC_{i,t-2} + \beta_4 * [Aid_{i,t-1} - Aid_{i,t-2}] * UNSC_{i,t-2} + \beta_5 * [Controls_{i,t} - Controls_{i,t-1}] + \varepsilon_{i,t}$$

$$[Y_{i,t} - Y_{i,t-1}] = \beta_0 + \beta_1 * [Aid_{i,t-1} - Aid_{i,t-2}] + \beta_2 * [Aid_{i,t-1} - Aid_{i,t-2} + Aid_{i,t-2} + Aid_{i,t-2}] * [Aid_{i,t-1} - Aid_{i,t-2}] + \beta_3 * UNSC_{i,t-2} + \beta_4 * [Aid_{i,t-1} - Aid_{i,t-2}] * UNSC_{i,t-2} + \beta_5 * [Controls_{i,t} - Controls_{i,t-1}] + \varepsilon_{i,t}$$

Replacing $Aid_{i,t-1} - Aid_{i,t-2} = \Delta Aid_{i,t-1}$:

$$[Y_{i,t} - Y_{i,t-1}] = \beta_0 + \beta_1 * [\Delta Aid_{i,t-1}] + \beta_2 * [\Delta Aid_{i,t-1} + Aid_{i,t-2} + Aid_{i,t-2}] * [\Delta Aid_{i,t-1}] + \beta_3 * UNSC_{i,t-2} + \beta_4 * [\Delta Aid_{i,t-1})] * UNSC_{i,t-2} + \beta_5 * [Controls_{i,t} - Controls_{i,t-1}] + \varepsilon_{i,t}$$

$$\frac{\delta[Y_{i,t} - Y_{i,t-1} y]}{\delta \Delta Aid_{i,t-1}} = \beta_1 + \beta_2 * 2 * Aid_{i,t-2} + \beta_2 * 2 * \Delta Aid_{i,t-1} + \beta_4 * UNSC_{i,t-2}$$

$$\frac{\delta[Y_{i,t} - Y_{i,t-1} y]}{\delta \Delta Aid_{i,t-1}} = \beta_1 + \beta_2 * 2 * Aid_{i,t-2} + \beta_2 * 2 * \Delta Aid_{i,t-1} + \beta_4 * UNSC_{i,t-2}$$