Political power and aid tying practices in the development assistance committee countries

Pincin, Jared

The King's College

1 August 2013

Political Power and Aid Tying Practices in the Development Assistance Committee Countries

This paper examines on a panel of 22 OECD Development Assistance Committee countries whether fragmentation of executive power and the degree of competition in the legislative branch of government increases the amount of tied aid over the 1979-2009 period. Fragmentation and competition are broadly defined as the degree to which the costs of a dollar of aid expenditure are internalized by decision makers and the relative strength of the government's position vis-à-vis legislative composition respectively. The empirical results show tied aid, both in levels and as a percentage of total aid, increases as the number of decision makers within the government increases and decreases as the proportion of excess seats a governing coalition holds above a simple majority increases.

I. Introduction

The allocation of foreign aid is influenced partly by the preferences, values, and domestic policies of donor countries (Noel and Therien 1995, Ruttan 1996, Feeny and McGillivray 2004, and Fleck and Kilby 2006). Aid donors often face pressure from economic and political interest groups when determining the volume and allocation of aid (Lahiri and Raimondos-Moller 2000 and Round and Odedokun 2004). Lobbying is common in the awarding of aid contracts since foreign aid is a lucrative business for many firms (ActionAid International 2005). Faced with these pressures, political leaders seek to improve their political position by strategic uses of aid (Hopkins 2000).

This paper empirically examines whether fragmentation of executive power and the degree of competition in the legislative branch of government increases the amount of tied aid commitments of 22 Development Assistance Committee (DAC) countries over the 1979-2009 period.[1] Fragmentation is broadly defined as the degree to which the costs of a dollar of aid expenditure are internalized by decision makers and is measured in two ways, the number of cabinet ministers and the number of political parties represented in the governing coalition. Competition is broadly defined as the relative strength of the government's position vis-à-vis legislative composition and is also measured in two ways, the excess number of seats held by the governing coalition and the number of political parties with representation in

---

[1] The DAC has 24 members but the European Union was excluded because it is not a unified country and South Korea was excluded because it was not a DAC member until January 1, 2010. The DAC countries included are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

government. This analysis of the link between donor-political institutional features fits in the larger aid allocation literature, which documents that donor economic and political characteristics are important determinants of aid flows (Alesina and Dollar 2000, Burnside and Dollar 2000, and Radelet 2006), and extends this literature by documenting the role internal political factors have in influencing the *type* of aid allocated. The empirical results show tied aid, both in levels and as a percentage of total aid, increases as the number of direct decision makers within the government increases and decreases as the proportion of excess seats a governing coalition holds above a simple majority increases.

The empirical analysis rests on two assumptions. First, government is not a single, benevolent, all-knowing actor. Instead, government is a coalition of political actors who respond to incentives and represent different factions. This assumption is important because most DAC countries are parliamentary democracies with varying degrees of government fragmentation and legislative competition, allowing individual government decision makers, political parties, and governing coalitions differing abilities in influencing aid allocation.

The second assumption is that aid allocation is similar to other budget allocations in that it is ultimately determined by government decision makers.[2] Both of these assumptions are seen in the awarding of foreign aid contracts. These contracts are often awarded through the political process, providing business and interest groups the incentive to lobby for these profitable opportunities. Examples include Swedish exporters pressuring for more private sector involvement in the disbursement of Swedish foreign aid (ActionAid International 2005) and Archer Daniels Midland Corporation, a U.S. agribusiness company, lobbying against cuts in U.S. foreign aid (Morgan 1995). In an attempt to satisfy these external pressures, sometimes policymakers directly lobby on behalf of specific companies, such as Alabama

---

[2] Huber et al. (1993) and Noel and Therien (1995) highlight this point by arguing that foreign aid is the international equivalent of domestic social spending, spending which is driven by government decision makers. However, one significant way foreign aid differs from domestic budget allocations is that the beneficiaries and financiers of foreign aid live in different countries. This gap increases the likelihood policymakers will put domestic interests before foreign interests in aid allocation (Svensson 2006).

Senator Jeff Sessions pressing USAID, the official U.S. development agency, to order condoms from Alatech Healthcare, an Alabama condom maker (Dugger 2006).[3]

These real-world examples help illustrate theoretical models that document how the economic and political interests of interest groups and legislators affect aid allocation (McGillivray and Oczkowski 1992, Murshed and Sen 1995, Lahiri and Raimondos-Moller 2000, and Villanger 2004). McGillivray and Oczkowski (1992) model British bilateral aid and find that aid eligibility and allocation decisions are based on the humanitarian, commercial, and political interests of Britain in the developing countries. Murshed and Sen (1995) develop a principal-agent model showing how competing interest groups lobby aid agencies. Lahiri and Raimondos-Moller (2000) construct a political-economic model of foreign aid allocation illustrating how donor governments accept political contributions from ethnic lobby groups and then directs aid to the ethnic lobbying groups' country or countries of choice. Villanger (2004) builds a 'triadic' model where donors weigh competing companies' relationships with aid recipients and then decide how to disburse aid. In addition, Svensson (2000) describes how aid policy, like other economic policies, is determined by competing social groups and shows that the expectation of aid may encourage rent dissipation, and Therien (2002), Fleck and Kilby (2006), and Milner and Tingley (2009) examine how donor countries' ideologies influence aid flows.

The theoretical rationale supporting the paper's two main assumptions follows from the political economy government fragmentation literature of Roubini and Sachs (1989) and the 'common pool problem' literature of Weingast et al. (1981) and Shepsle and Weingast (1981). Roubini and Sachs (1989) and the literature that follows emphasize how political competition through government fragmentation explains public sector expenditures. In general, this research finds that broad government coalitions are more susceptible to political pressure than one-party, majoritarian governments. The literature following Weingast et al. (1981) and Shepsle and Weingast (1981) describe the relationship between the number of decision makers and government expenditures. Individual groups, and indirectly the government decision

---

[3] Senator Sessions has received direct campaign contributions from employees of Alatech Healthcare. http://www.opensecrets.org/index.php

makers who represent their interests in formulating public policy, benefit from targeted expenditures while the cost of those expenditures fall on a widespread population. More formally, whereas the individual groups fully internalize the benefits of additional expenditures, they only internalize a fraction of $1/n$ of the costs. Therefore, expenditures increase as the number of n groups and their representatives increase.

The question remains how the fragmented government and 'common pool problem' literature relate to the hypothesis that the *type* of aid allocated is influenced by internal government fragmentation and the relative strength of competition of government participants. Specifically, why would the nominal value of tied aid increase with greater government fragmentation and greater competition since tied aid, like other budgetary appropriations, will have supporters (i.e. industry and agriculture) and detractors (i.e. development non-governmental organization [NGO's])? The Special Interest Effect of Public-choice analysis provides insight into this question. The Special Interest Effect states that organized, concentrated, and well-informed interest groups are able to effectively lobby policymakers. While development NGO's fit this description just as well as domestic industry and agricultural interest groups, the benefits of untying aid are widespread and distant (i.e. in developing countries) while the costs of untying aid are concentrated and local (i.e. the loss of losing a tied aid contract could affect a specific industry in a specific voting district). Therefore, policymakers, who are motivated by incentives, may be more inclined to listen to interest groups that are pro-tied aid rather than anti-tied aid.

This paper follows the research of Round and Odedokun (2004), Faini (2006), and Bertoli et al. (2008). These papers test the determinants of aid supply and find that political and economic characteristics of the aid country matter for aid allocation. While Faini (2006) and Bertoli et al. (2008) test how the political ideology of governing coalitions affects aid supply, Round and Odedokun (2004) test whether a greater lack of cohesion within governments leads to a greater need to make more budgetary allocations for aid, making it the most relevant paper to the current study. They hypothesize that the greater the opposition a governing party faces, the higher the aid effort (i.e. the more aid is used

to satisfy "the different veto wielding interest"). Their empirical results show that the larger the number of parties forming the governing coalition, the higher the aid effort and as the number of parties forming the opposition increases, the easier it is for the government to ignore the opposition when allocating aid.

This paper differs from Round and Odedokun (2004) in two ways. First, whereas Round and Odedokun test whether government fragmentation affects *how much* aid is allocated, this study tests whether government fragmentation influences the *type* of aid allocated. This paper also differs from Round and Odedokun by providing more precise definitions of government fragmentation in line with Volkerink and De Haan (2001) and Perotti and Kontopoulos (2002), two extensions of Roubini and Sachs (1989). These changes allow for a deeper picture of how donor-political institutional features influence the aid allocation process.

This paper proceeds as follows. Section two provides a brief discussion of tied aid. Section three describes the data and introduces the empirical specifications. Section four presents the basic econometric results and provides interpretation. Section five considers some sensitivity analyses and section six tenders concluding remarks.

II. Tied Aid

Aid tying, or the restrictions placed by donors on recipients for how aid may be used, has become *abeunt studia in mores* among DAC members, the largest donors of Official Development Assistance (ODA).[4] The amount of tied aid was 35 percent higher in 2009 than 1979 despite criticism from the aid community, suggesting donors receive utility from tied aid (Gounder 1999).[5] Donors' penchant for tied aid is not surprising considering tied aid's long history. Kanbur (2006) reports that tied aid was a key feature of both British and American foreign aid programs from the beginning of the modern aid movement (late 19th and early 20th century).

---

[4] Since 1960, DAC countries have given 74.5 percent of total ODA.
[5] The 1969 Pearson Commission and the 2005 Paris Declaration on Aid Effectiveness are two examples.

The aid literature generally cites commercial, political, and security reasons for why donors tie aid. Commercial reasons include stimulating employment, bolstering exports, and improving balance of payments problems (Jepma 1991). Political reasons include satisfying strong lobbying groups (Lahiri and Raimondos-Moller 2000) and reforming the internal governing of aid recipients (World Bank 1998 and Hermes and Lensink 2001). Security reasons involve expanding foreign policy influence (Zimmerman 1993 and Schraeder et al. 1998) and fighting terrorism (Harrigan et al. 2006). In addition, tied aid increases public support for aid in donor countries (Senanayake 2010) and helps overcome unreliable local suppliers, weak legal systems, and poor infrastructure in recipient countries (Melito 2009).

The success of using tied aid in meeting the commercial and political designs of donors is mixed. Wagner (2003) and Nowak-Lehmann et al. (2008) show aid flows have a positive impact on donor exports but Tajoli (1999) finds that a donor's export shares are not correlated to the degree of aid tying and that tied aid may be important to the exports of individual firms and sectors only, not to a country as a whole. Osei et al. (2004) find the real impact of tying on donors' exports is limited. Jepma (1991) and Clay et al. (2008) find no evidence that tied aid substantially increases donor country employment or significantly impacts a donor country's balance of payments, most likely because tied aid represents a small percentage of donor countries' exports. While Sowa and White (1997) argue "well-designed and effectively managed" tied aid could be efficient, particularly if the recipient would not receive aid otherwise, this is unlikely since aid distribution is mired in "a sea of bureaucracy" that suppresses critical feedback and prevents the "identification of the best channel of resources for different objectives" (Easterly 2002).

Tied aid enables donors to prioritize their own commercial and political concerns above recipient interests, reduces the real worth of aid, and results in welfare losses for recipients when compared to unrestricted aid transfers (Osei 2003, Quartey 2005, and Clay et al. 2008). Jepma (1991) estimates that tied aid increases the direct cost to aid recipients by an average of 15 to 30 percent while the excess costs of tying aid in the form of technical assistance or food aid is even higher (Williams et al. 2003 and Barrett

and Maxwell 2005). Baffour (2004) finds a significant mark-up on the prices of tied aid imports compared to the prices of non-aid imports. Tied aid can undermine local institutional capacity (Aryeetey et al. 2003) and encourage recipients to have a 'lack of ownership' attitude towards aid (Clay et al. 2008).

Tied aid is more common in countries that use aid to promote their own objectives. Australia, Canada, France, and the United States tie a larger proportion of their aid budget than the DAC average. In contrast, the Nordic countries of Norway, Denmark, and Sweden, often considered in the aid literature as more altruistic, development-friendly, and less geostrategically-inclined, tie a smaller proportion of their aid than the DAC average (Hendra 1987 and Gates and Hoeffler 2004).

III. Data and Estimation

The paper uses a panel of 22 DAC countries from 1979 to 2009. Data is unavailable for each variable in every year so the number of observations in each regression depends on the choice of explanatory variables. Appendix 1 includes a detailed variable description and summary statistics. The basic specification of the empirical model is:

$$\text{Tied Aid}_{i,t} = \alpha_i + \beta_1 \text{ Total Aid}_{i,t} + \beta_2 \text{ Political}_{i,t} + \beta_3 \text{Growth}_{i,t} + \beta_4 \text{Trade}_{i,t} + \eta_t + \varepsilon_{it} \quad (1)$$

where i and t are the country and year indices, respectively, α_i represents country fixed effects, and η_t represents time effects. The paper uses Least Squares Dummy Variable (LSDV) estimations. Fixed country effects are included as specified by the Hausman test. Time effects are included because the null hypothesis that all year coefficients are jointly equal to zero was rejected. Clustered standard errors at the country level are used to reduce idiosyncratic disturbances across countries through time.

The dependent variable (Tied Aid) is total bilateral ODA commitments tied in constant 2008 USD millions.[6] The explanatory variables are broken into economic and political groupings. The economic variables (Total Aid, GDP per capita, Population, and Trade) are included as measurements

---

[6] Bilateral aid is used because aid is fungible (Boone 1996) and multilateral aid is difficult to tie. Therefore, bilateral aid is easier for the donor to control.

capturing the reaction function of policymakers.[7] Total Aid is total bilateral ODA commitments in

constant 2008 USD millions and is included because Total Aid and Tied Aid are positively correlated in a

statistically significant way.[8] Donor GDP per capita is included because there is an "existence of

progressivity of aid in relation to donor income" (Round and Odedokun 2004) and aid is a superior good

that increases in relation to donor income (Bertoli et al. 2008). Population is the total population of a

country and is included because Round and Odedokun (2004) and Bertoli et al. (2008) find the fraction of

income given as aid is inversely related to the population of the donors. Trade is the sum of exports and

imports divided by GDP and is included because countries may give tied aid to improve their trade

balance (Jepma 1991).

The political explanatory variables follow the variables of government fragmentation and the

degree of competition in the legislative branch as used by Volkerink and De Haan (2001) and Perotti and

Kontopoulos (2002). While some of the political variables are highly correlated, they each provide a more

nuanced definition of government fragmentation and legislative competition. The correlation results are

available upon request as is the data variation of the political variables by country.

Fragmentation of the executive power represents the number of decision makers and is measured

in two ways. First, the number of cabinet ministers (Spending Ministers) is employed as a direct measure

of decision makers. Policy is ultimately decided by ministers within the cabinet (Perotti and Kontopoulos

2002) and these ministers represent constituencies that benefit directly from budget expenditures. These

ministers act as individual units with their own influence and demands on the budget process. Spending

Ministers is calculated as the number of full ministers in government at the end of each year, excluding

---

[7] As a robustness check, Percentage Tied Aid is used as the dependent variable so Total Aid is dropped as an
independent variable. Percentage Tied Aid is total bilateral ODA commitments tied divided by total bilateral ODA
commitments.
[8] Commitments rather than disbursements are used for three reasons. First, disbursements and commitments are
highly correlated and estimation results are unlikely to be affected (Neumayer 2003). Second, donors have complete
control of commitments (Berthelemy and Tichit 2004). Lastly, the data availability of commitments is greater than
disbursements.

the ministers of finance/budget or prime ministers because in theory they represent the "average" taxpayer instead of individual groups (Alesina and Perotti 1999).

The number of decision makers could also correspond to the number of political parties represented in the governing coalition since political parties are cohesive units representing the interests of specific groups. Two variables are used to measure this more indirect measurement of decision makers. The first is a count of the number of political parties with representation in the governing coalition (Coalition Parties). However, since Coalition Parties does not consider the size of the political parties, the effective number of political parties in the governing coalition, or Effective Coalition Parties, is employed. This variable is defined as:

$$\text{Effective Coalition Parties} = 1 / \sum_{i=1}^{n} p_i^2 \tag{2}$$

where p_i denotes the share of ministers from party i as a proportion of the total number of ministers and n is the number of coalition parties. This variable is the inverse of a Herfindahl-index, which has been used in political economy studies (Taagepera and Shugart 1989).

Three variables are considered to measure the degree of competition in the legislative branch. The first is the excess number of seats (Excess Seats) held by the governing coalition and is defined as the number of seats above those needed for a simple majority, scaled to the number of seats needed for a simple majority:[9]

$$\text{Excess Seats} = (\text{\# of seats above simple majority}) / (\text{simple majority}) \tag{3}$$

The second is the number of political parties with representation in government (Represented Parties). A political party has representation in government if it has a voting member in the legislative branch. The more political parties with representation in government, the more difficult it is for opposing parties to form a united front against the governing coalition (Volkerink and De Haan 2001). Like Coalition Parties, Represented Parties does not consider the size of the various parties in the governing coalition so the

---

[9] ES is not collected for the United States because the bicameral system makes it difficult to determine the excess number of seats if the legislative chambers are controlled by different parties.

effective number of parties in the legislative branch (Effective Represented Parties) is used. The variable is defined as:

$$\text{Effective Represented Parties} = 1 / \sum_{i=1}^{n} p_i^2 \qquad (4)$$

where p_i denotes the share of ministers from party i as a proportion of the total number of ministers and n is the number of parties in the legislative branch.

IV. Results for the basic model

This paper follows previous literature where the effects of fragmentation of the executive power and the degree of competition in the legislative branch of government are estimated separately. The first model analyzes fragmentation of the executive power with Coalition Parties and Effective Coalition Parties included in columns 1 and 2 respectively (Table 1).

[Insert Table 1]

The coefficient for Spending Ministers is statistically significant at the 1 percent level in both specifications while neither the coefficient for Coalition Parties or Effective Coalition Parties is statistically significant at standard levels of significance, though they exhibit the expected positive sign. One additional spending minister increases tied aid between $116.62 and $119.89 million, a 12.5 and 12.8 percent increase from the mean value of tied aid. The positive coefficient for Spending Ministers provides evidence that as the number of policymakers with direct decision making abilities increases, the more aid is tied. Since spending ministers act as an individual unit bringing their own demands or indirectly the demands of their constituencies to the overall spending demands of the executive branch, tied aid may be used as a way to satisfy or reward strategic constituencies with strong political interests. As noted above, aid contracts are a lucrative business. In contrast, the statistical insignificance of the political party variables suggests that more direct decision making abilities may be more important than indirect influence through the political party apparatus. These results are broadly in line with Round and Odedokun (2004) who find the more fragmented a government is the more aid is used to buy political

support. The results also support the findings of Volkerink and De Haan (2001) and Perotti and Kontopoulos (2002) who find that greater government fragmentation affects fiscal policy outcomes, of which aid is a part.

The second model analyzes the impact the degree of competition in the legislative branch of government has on the composition of aid allocation, with Represented Parties and Effective Represented Parties included in columns 1 and 2 respectively (Table 2).

<center>**[Insert Table 2]**</center>

The coefficient for Excess Seats is statistically significant at the 5 percent level when Represented Parties is included and at the 10 percent level when Effective Represented Parties is included. A one percent increase in the proportion of excess seats above the simple majority decreases tied aid between $5.36 and $6.82 million, a 0.57 to 0.73 percent decrease from the mean value of tied aid. The negative coefficient suggests that as the excess number of seats above the simple majority increases, a governing coalition can afford to "lose" some votes and still maintain its political power, reducing the incentive to "buy" votes with tied aid. Again, this result is broadly in line with Round and Odedokun (2004) who suggest the smaller a threat the opposition is to the governing coalition "the easier it seems for the government to ignore the interest of the opposition" in aid allocation. The statistical insignificance of the political party variables (Represented Parties and Effective Represented Parties) again suggests that influencing specific decision makers, in this case the competition over specific legislative seats, may be more important than working through political parties since many political parties must balance broader agendas than specific legislative decision makers.

On average, a one percent increase in the proportion of excess seats above the simple majority translates to about 1.5 additional seats for the government in power.[10] While losing one seat may not be a large swing for a ruling government (the average number of seats above the simple majority in the dataset is 17), from a practical perspective, it doesn't take much in the way of changing seats to make a large

---

[10] For the dataset, the average number of seats that constitute a simple majority is 148. Therefore, an increase of 1.48 seats will increase the proportion of excess seats by 1 percent.

impact on the amount of aid tied. For a lobbyist, changing just 2 seats can mean the difference in obtaining or losing an additional $5 to $7 million aid contract.

Following Perotti and Kontopoulos (2002) who suggest that governments with different political or institutional characteristics react differently to changes in economic variables, the basic empirical specification is re-tested with the political variables of interest interacted with GDP per capita since the amount of aid is influenced by the wealth of the donor country (see above). Columns 3 and 4 in Table 1 show the results for fragmentation of the executive power, with Coalition Parties included in column 3 and Effective Coalition Parties included in column 4. Columns 3 and 4 in Table 2 show the results for the degree of competition in the legislative branch of government, with Represented Parties included in column 3 and Effective Represented Parties included in column 4.

Including the interaction terms confirms the basic results. The coefficient for Spending Ministers is statistically significant at the 5 percent level when Coalition Parties is included and at the 1 percent level when Effective Coalition Parties is included. The coefficients remain the expected positive sign and one additional spending minister increases tied aid between $99.59 and $104.32 million, a 10.6 and 11.1 percent increase from the mean value of tied aid.[11] The coefficient for Excess Seats is statistically significant at the 5 percent level when Represented Parties is included and at the 10 percent level when Effective Represented Parties is included. The coefficients remain the expected negative sign and a one percent increase in the proportion of excess seats above the simple majority decreases tied aid between $5.45 and $5.80 million, a 0.58 to 0.62 percent decrease from the mean value of tied aid. Coalition Parties, Effective Coalition Parties, Represented Parties and Effective Represented Parties are again not statistically significant at conventional levels.

---

[11] Following Wooldridge (2006), the political variables are evaluated at the mean value of GDP per capita, a more meaningful value of GDP per capita than zero. Therefore, the coefficients in the text require an adjustment from the coefficients in the tables. For example, to calculate the $99.59 million value of Spending Ministers in the text, the coefficient of Spending Ministers*GDP per capita is multiplied by the mean value of GDP per capita and added to the coefficient of Spending Ministers. Before the coefficients are rounded in the tables, $(-0.0047037 \times 27343) + (228.21) = 99.59$.

V. Sensitivity Analyses

This section includes three sensitivity tests. The first sensitivity test uses Percentage Tied Aid as a dependent variable instead of Tied Aid since the increase in tied aid may only be a result of an increase in overall aid. The second sensitivity test evaluates the standard model and the model with Percentage Tied Aid with all of the basic political variables included. The last sensitivity test collapses the yearly panel into five-year averages to analyze longer term trends and smooth out business cycles and international shocks, which may affect aid allocation. The general results confirm that as fragmentation in the executive branch increases, tied aid increases and as the degree of competition in the legislative branch decreases, tied aid decreases.

The first sensitivity test uses Percentage Aid as the dependent variable instead of Tied Aid. The first model analyzes fragmentation of the executive power, with columns 1 and 3 including Coalition Parties and columns 2 and 4 including Effective Coalition Parties (Table 3).

[Insert Table 3]

 The results confirm the positive and statistically significant coefficients for Spending Ministers (statistically significant at the 1 percent level in all specifications) while the coefficients for Coalition Parties or Effective Coalitions Parties are never statistically significant at standard levels of significance. Before the political variables are interacted with GDP per capita (columns 1 and 2), one additional spending minister increases the percentage of tied aid between 1.70 and 1.72 percent, a 5.27 to 5.31 increase from the mean value of percentage tied aid. When the interaction variables are included (columns 3 and 4), one additional spending minister increases the percentage of tied aid between 1.52 and 1.60 percent, a 4.72 to 4.94 increase from the mean value of percentage tied aid.

The second model analyzes the degree of competition in the legislative branch of government, with columns 1 and 3 including Represented Parties and columns 2 and 4 including Effective Represented Parties (Table 4).

[Insert Table 4]

The coefficient for Excess Seats is negative and statistically significant in all specifications while the coefficients for the political party variables are never statistically significant. Before the political variables are interacted with GDP per capita (columns 1 and 2), a one percent increase in the proportion of excess seats above the simple majority decreases tied aid between 16.89 and 19.79 percent. When the interaction variables are included (columns 3 and 4), a one percent increase in the proportion of excess seats above the simple majority decreases tied aid between 16.67 and 20.47 percent.

The second sensitivity test analyzes whether the basic results are changed when all of the basic political variables are included, with Tied Aid as the dependent variable in column 1 and Percentage Tied Aid as the dependent variable in column 2 (Table 5).

<center>**[Insert Table 5]**</center>

The inclusion of the basic political variables does not change the positive and statistically significant coefficient of Spending Ministers or the negative and statistically significant coefficient of Excess Seats in either specification. The magnitude of these coefficients also aligns with the previous results. However, with the inclusion of all the political variables, the coefficient for Coalition Parties is positive and statistically significant at the 5 percent level and the coefficient for Represented Parties is negative and statistically significant at the 10 percent level when Tied Aid is the dependent variable. The positive coefficient for Coalition Parties suggests that a government with more constituencies to satisfy may tie more aid than a government with less constituency pressure, perhaps as a way to protect its own political power since losing a coalition partner may mean a loss of political power. The negative coefficient for Represented Parties supports Round and Odedokun's (2004) findings that the more fragmented the opposition is, the easier it is for the ruling government to ignore the opposition in aid allocation. However, the results for the political party variables should be viewed with caution since their coefficients are statistically insignificant when Percentage Tied Aid is the dependent variable.

The last sensitivity test analyzes long term trends in changes to tied aid, with the fragmentation of the executive power analyzed in columns 1 and 2, the degree of competition in the legislative branch

evaluated in columns 3 and 4, and the results when all the basic political variables are included revealed in column 5 (Table 6).[12]

[Insert Table 6]

The results of the longer term trends are not much different than the standard results for the fragmentation of the executive power. The coefficients for Spending Ministers are positive and statistically significant at the 1 percent level for each specification. The results for the degree of competition in the legislative branch are somewhat different. While the coefficients for Excess Seats are the expected negative sign, Excess Seats is only statistically significant when all political variables are included. The statistical insignificance of Excess Seats in the other specifications may suggest that individual legislative seats are not as important in the long run for aid allocation decisions. Perhaps over a longer time period, influencing cabinet ministers may be more important to lobbyists if they view the direct decision makers within government coalitions as more stable than individual legislative seats, helping to explain the results for Spending Ministers and Excess Seats. It is also possible that since aid contracts are likely to be multi-year contracts, once an aid contract is secured, individual legislators become less important than direct decision makers in the executive branch.

VI. Conclusion

Tying bilateral aid is common, despite its questionable value to donor and recipient. This paper examines the link between donor-political institutional features and tied aid and extends the foreign aid literature by documenting the role domestic political factors have in influencing the composition of a country's aid budget. The institutional factors considered are the fragmentation of the executive power and the degree of competition in the legislative branch.

The empirical results of the model measuring the fragmentation of the executive power show that as the number of direct decision makers within the government coalition increases, as measured by the

---

[12] The year 1979 was dropped because it contained the fewest observations. Keeping 1979 and dropping 2009 did not alter the results.

number of spending ministers, the more aid is tied, both in levels and as a percentage of total aid. The model measuring the degree of competition in the legislative branch shows a more comfortable margin of power, as measured by the excess number of seats held by the governing coalition above the simple majority, decreases the amount of aid tied, both in levels and as a percentage of total aid. The results are robust when the basic models are extended to account for how policymakers react to changes in economic variables and when longer time trends are considered. These results suggest that aid is used for political self-interest and that reducing tied aid, when compared to political security, is of second order importance to government decision makers.

The empirical results are not surprising since aid is allocated through a political process filled with self-interested decision makers, political pressure and rent seeking are realities in aid allocation decisions, and donors have a long history of giving tied aid. While these realities make it difficult for practical aid reform, such as the elimination of tied aid, two political reforms are possible that could reduce tied aid. The first reform is a limitation on the number of spending ministers, since the empirical results show tied aid increases as the number of spending ministers increases. As noted by Perotti and Kontopoulos (2002), the number of spending ministers is usually not fixed in a country's constitution so reducing the number of spending ministers is easier than changing other political characteristics.

A second and perhaps more easily implemented reform is the setting of clear and public benchmarks that must be met before aid is tied. These benchmarks must be binding and credible because such a reform will encounter resistance. These benchmarks would place the burden of proof to tie aid on interest groups and sympathetic legislators, to justify the practice publicly rather than privately, increasing public accountability. Such a reform may change the incentives of aid donors at the margin from satisfying their own political considerations to addressing the true needs of aid recipients. If donors are truly serious about using aid to promote economic growth and social development in recipient countries, such reforms should be welcomed.

References

ActionAid International. (2005). *Real Aid: Making Technical Assistance Work*. Johannesburg.

Alesina, A., & Perotti, R. (1999). Budget Deficits and Budget Institutions. In J. Poterba and J.von Hagen (9th ed.). *Fiscal Institutions and Fiscal Performance*. Chicago: University of Chicago Press.

Alesina, A., & Dollar, D. (2000). Who Gives Foreign Aid to Whom and Why? *Journal of Economic Growth*, 5, 33-63.

Aryeetey, E., Osei, B., & Quartey, P. (2003). *Does Tying Aid Make it More Costly? A Ghanaian Case Study*. Institute of Statistical, Social, and Economic Research. University of Ghana.

Baffour, O. (2004). *The Cost of Aid Tying to Ghana.* AERC Research Paper 144. African Economic Research Consortium.

Barrett, C., & Maxwell, D. (2005). *Food Aid after Fifty Years*. Routledge, London.

Berthelemy, J.C., & Tichit, A. (2004). Bilateral Donors' Aid Allocation Decisions: A Three-Dimensional Panel Analysis. *International Review of Economics and Finance*, 13(3), 963-977.

Bertoli, S., Cornia, G., & Manaresi, F. (2008). *Aid Effort and Its Determinants: A Comparison of the Italian Performance with Other OECD Donors*. University of Firenze. Working Paper.

Boone, P. (1996). Politics and the Effectiveness of Foreign Aid. *European Economic Review*, 40, 289-330.

Burnside, C., & Dollar, D. (2000). Aid, Policies, and Growth. *American Economic Review*, 90, 847-868.

Clay, E., Geddes, M., Luisa, N., & te Velde, D. (2008). *The Developmental Effectiveness of Untied Aid: Evaluation of the Implementation of the Paris Declaration and of the 2001 DAC Recommendation on Untying ODA to the LDCs, Phase I Report*. Copenhagen.

Dugger, C. (2006). U.S. Jobs Shape Condoms' Role in Foreign Aid, *New York Times,* October 29.

Easterly, W. (2002). The Cartel of Good Intentions: The Problem of Bureaucracy in Foreign Aid. *The Journal of Policy Reform*, 5(4), 223-250.

Faini, R. (2006). Foreign Aid and Fiscal Policy. *Discussion Paper Series*, no. 5721, The Centre for Economic Policy Research.

Feeny, S., & McGillivray, M. (2004). Modelling Inter-temporal Aid Allocation: A New Application with an Emphasis on Papua New Guinea. *Oxford Development Studies*, 32(1):101-118.

Fleck, R.K., & Kilby, C. (2006). How Do Political Changes Influence US Bilateral Aid Allocations? Evidence from Panel Data. *Review of Development Economics*, 10(2), 210-223.

Gates, S., & Hoefller, A. (2004). *Global Aid Allocation: Are Nordic Donors Different? Working Paper*. The Centre for the Study of African Economies Working Paper Series.

Gounder, R. (1999). Modelling of Aid Motivation Using Time Series Data: The Case of Papua New Guinea. *Oxford Development Studies*, 27(2): 233-250.

Harrigan, J., Wang, C., & El-Said, H. (2006). The Economic and Political Determinants of IMF and World Bank Lending in the Middle East and North Africa. *World Development*, 34(2), 247-270.

Hendra, J. (1987). Only Fit to be Tied: A Comparison of the Canadian Tied Aid Policy with the Tied Aid Policies of Sweden, Norway, and Denmark. *Canadian Journal of Development Studies*, 8(2), 261 – 281.

Hermes, N., & Lensink, R. (2001). Changing the Conditions for Development Aid: A New Paradigm? *The Journal of Development Studies*, 37(6), 1-16.

Hopkins, R. F. (2000). Political Economy of Foreign Aid. In Finn Tarp (ed.) *Foreign Aid and Development: Lessons Learnt and Directions for the Future.* New York: Routledge.

Huber, E., Ragin, C., & Stephens, J. (1993). Social Democracy, Christian Democracy, Constitutional Structure, and the Welfare State. *American Journal of Sociology*, 99, 711–749.

Jepma, C. J. (1991). *The Tying of Aid.* Development Centre of the Organization for Economic Co-Operation and Development. Washington, D.C.

Kanbur, R. (2006). The Economics of International Aid (Vol. 2). Handbook of the Economics of Giving, Altruism, and Reciprocity, 1559-1588.

Lahiri, S., & Raimondos-Moller, P. (2000). Lobbying by Ethnic Groups and Aid Allocation. *The Economic Journal*, 110(462) Conference Papers: C62-C79.

McGillivray, M., & Oczkowski, E. (1992). A Two-Part Sample Selection Model of British Bilateral Foreign Aid Allocation. *Applied Economics*, 24(12): 1311-1319.

Melito, T. (2009). *International Food Assistance: Local and Regional Procurement Can Enhance the Efficiency of US Food Aid, But Challenges May Constrain Its Implementation.* Government Accountability Office. Washington, D.C.

Milner, H., & Tingley, D. (2009). The Political Economy of U.S. Foreign Aid: American Legislators and the Domestic Politics of Foreign Aid. *Economics and Politics*, 22(2), 200-232.

Morgan, D. (1995). Where Foreign Aid Gets Down to Business, *Washington Post*, June 12.

Murshed, M., & Sen, S. (1995). Aid Conditionality and Military Expenditure Reduction in Developing Countries: Models of Asymmetric Information. *Economic Journal*, 105(429), 498 – 509.

Neumayer, E. (Ed.). (2003). The Pattern of Giving Aid: The Impact of Good Governance on Development Assistance (Vol. 34). New York: Rutledge Studies in Development Economics.

Noel, A., & Therien, J. (1995). From Domestic to International Justice: The Welfare State and Foreign Aid. *International Organization*, 49(3), 523-553.

Nowak-Lehman, D., Martinez-Zarzoso, I., & Klasen, S. (2008). *Aid and Trade – A Donor's Perspective.* Discussion Paper 171. Ibero-America Institute of Economic Research. Gottingen.

Osei, B. (2003). *How Tied Aid Affects the Cost of Aid-Funded Projects in Ghana*. African Economic Research Consortium. AERC Research Paper 137. Nairobi.

Osei, R., Morrissey, O., & Lloyd, T. (2004). The Nature of Aid and Trade Relationships. *European Journal of Development Research*, 16(2), 354 – 374.

Quartey, P. (2005). *Innovative Ways of Making Aid Effective in Ghana*. Research Paper No. 2005/5., World Institute for Development Economics Research.

Perotti, R.,& Kontopoulos, Y. (2002). Fragmented Fiscal Policy, *Journal of Public Economics*, 86(2): 191-222.

Radelet, S. (2006). *A Primer on Foreign Aid*. Center for Global Development. Working Paper Number 92.

Roubini, N., & Sachs, J. (1989). Political and Economic Determinants of Budget Deficits in the Industrial Democracies. *European Economic Review*, 33, 903-938.

Round, J., & Odedokun, M. (2004). Aid Efforts and its Determinants. *International Review of Economics and Finance*, 13(3), 293 – 309.

Ruttan, V.W. (1996). *United States Development Assistance Policy: The Domestic Politics of Foreign Economic Aid.* Baltimore: John Hopkins University Press.

Schraeder, P.J., Hook, S.W., & Taylor, B. (1998). Clarifying the Foreign Aid Puzzle: A Comparison of American, Japanese, French, and Swedish Aid Flows. *World Politics*, 50(2), 284-323.

Senanayake, H. (2010). Is Untying Aid the only Solution to the Problem of Tied Aid? *Asian Journal of Public Affairs*, 4(1), 57-73.

Shepsle, K., & Weingast, B. (1981). Political Preferences for the Pork Barrel: A Generalization. *American Journal of Political Science*, 25(1), 96-111.

Sowa, N., & White, H. (1997). *An Evaluation of Netherlands Co-financing of World Bank Activities in Ghana.* The Hague: Policy and Operations Department. Ministry of Foreign Affairs.

Svensson, J. (2000). Foreign Aid and Rent Seeking. *Journal of International Economics*, 51(2), 437-461.

Svensson, J. (2006). The Institutional Economics of Foreign Aid. *Swedish Economic Policy Review*, 13: 115-137.

Taagepera, R., & Shugart, M. (1989). *Seats and Votes*. New Haven: Yale University Press.

Tajoli, L. (1999). The Impact of Tied Aid on Trade Flows between Donor and Recipient Countries. *The Journal of International Trade and Economic Development*, 8(4), 373-388.

Therien, J. (2002). Debating Foreign Aid: Right Versus Left. *Third World Quarterly*, 23(3), 449-466.

Villanger, E. (2004). Company Influence on Foreign Aid Disbursement: Is Conditionality Credible When Donors Have Mixed Motives? *Southern Economic Journal*, 71(2),334-351.

Volkerink, B., & De Haan, J. (2001). Fragmented Government Effects on Fiscal Policy: New Evidence. *Public Choice*, 109, 221-242.

Wagner, D. (2003). Aid and Trade – An Empirical Study. *Journal of the Japanese and International Economics*, 17(2), 153-173.

Weingast, B., Shepsle, K., & Johnsen, C. (1981). The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics. *The Journal of Political Economy*, 89(4), 642-664.

Williams, G., Jones, S., & Amber, V. (2003). *A Vision for the Future of Technical Assistance in the International System*. Oxford: Oxford Policy Management.

Wooldridge, J. (2006). *Introductory Econometrics: A Modern Approach*. Mason: Thomson South-Western.

World Bank. (1998). *Assessing Aid: What Works, What Doesn't, and Why*. Washington, D.C. The World Bank.

Zimmerman, R.F. (1993). *Dollars, Diplomacy, and Dependency: Dilemmas of U.S. Economic Aid.* Boulder: Rienner Publishers.

Table 1: Fragmentation of the Executive Power

Variable	1	2	3	4
Total Aid	0.17 (0.07)**	0.17 (0.07)**	0.17 (0.07)**	0.18 (0.07)**
Spending Ministers	116.62 (40.28)***	119.89 (41.87)***	228.21 (71.05)***	237.01 (71.24)***
Coalition Parties	102.11 (65.03)		143.93 (222.21)	
Effective Coalition Parties		62.65 (96.79)		-72.79 (250.04)
GDP Per Capita	0.005 (0.03)	0.007 (0.03)	0.09 (0.04)*	0.08 (0.04)*
Trade	10.93 (8.41)	10.24 (8.78)	7.79 (7.88)	7.01 (7.97)
Population	-30.00 (16.8)*	-31.60 (17.20)*	-32.60 (16.5)*	-32.10 (17.30)*
Spending Ministers*Growth			-0.005 (0.002)**	-0.005 (0.002)**
Coalition Parties*Growth			-0.002 (0.007)	
Effective Coalition Parties*Growth				0.005 (0.008)
Number of countries	22	22	22	22
Number of observations	531	531	531	531
R-squared (within)	0.47	0.47	0.48	0.48

Notes: The dependent variable is Tied Aid. The regressions cover years 1979 - 2009 and include country fixed effects and year dummies. The set of regressors also includes a constant term. Robust standard errors clustered at the country level are in parentheses. *** = 1%, ** = 5%, and * = 10% significance level

Table 2: Competition in the Legislative Branch

Variable	1	2	3	4
Total Aid	0.25 (0.09)**	0.25 (0.09)**	0.27 (0.09)***	0.25 (0.09)**
Excess Seats	-6.82 (3.07)**	-5.36 (3.11)*	-5.52 (8.87)	-3.92 (7.28)
Represented Parties	-33.97 (47.27)		179.67 (97.91)*	
Effective Represented Parties		125.23 (86.43)		338.32 (226.21)
GDP Per Capita	-0.01 (0.02)	-0.01 (0.02)	0.05 (0.03)	0.02 (0.04)
Trade	3.80 (6.22)	4.37 (6.27)	1.93 (5.67)	4.38 (6.53)
Population	-26.97 (7.14)***	-26.33 (7.55)***	-28.55 (6.79)***	-28.71 (8.34)***
Excess Seats*Growth			-0.001 (0.03)	-0.006 (0.02)
Represented Parties*Growth			-0.009 (0.004)	
Effective Represented Parties*Growth				-0.008 (0.008)
Number of countries	510	510	510	510
Number of observations	21	21	21	21
R-squared (within)	0.60	0.61	0.62	0.61

Notes: The dependent variable is Tied Aid. The regressions cover years 1979 - 2009 and include country fixed effects and year dummies. The set of regressors also includes a constant term. Robust standard errors clustered at the country level are in parentheses. *** = 1%, ** = 5%, and * = 10% significance level

Table 3: Fragmentation of the Executive Power with Percentage Aid

Variable	1	2	3	4
Spending Ministers	1.70 (0.47)***	1.72 (0.45)***	3.21 (1.95)	3.16 (2.01)
Coalition Parties	-0.39 (1.07)		-4.12 (4.76)	
Effective Coalition Parties		-1.21 (2.16)		-2.29 (7.91)
GDP Per Capita	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Trade	0.09 (0.19)	0.09 (0.19)	0.05 (0.18)	0.05 (0.17)
Population	0.009 (0.014)	0.009 (0.014)	0.10 (0.15)	0.08 (0.17)
Spending Ministers*Growth			-0.0001 (0.0001)	-0.0001 (0.0001)
Coalition Parties*Growth			0.0001 (0.0002)	
Effective Coalition Parties*Growth				0.0005 (0.0009)
Number of countries	22	22	22	22
Number of observations	531	531	531	531
R-squared (within)	0.49	0.49	0.49	0.49

Notes: The dependent variable is Percentage Tied Aid. The regressions cover years 1979 - 2009 and include country fixed effects and year dummies. The set of regressors also includes a constant term. Robust standard errors clustered at the country level are in parentheses. *** - 1%, ** = 5%, and * = 10% significance level

Table 4: Competition in the Legislative Branch with Percentage Aid

Variable	1	2	3	4
Excess Seats	-16.89 (8.62)*	-19.79 (9.08)**	-52.67 (22.53)**	-48.62 (25.39)*
Represented Parties	0.47 (0.93)		3.47 (3.39)	
Effective Represented Parties		-2.66 (2.62)		-0.24 (8.15)
GDP Per Capita	0.001 (0.001)	0.001 (0.001)	0.002 (0.001)	0.001 (0.001)
Trade	0.06 (0.21)	0.05 (0.21)	0.009 (0.20)	0.03 (0.21)
Population	-1.46 (1.18)	-1.63 (1.12)	-1.84 (1.13)	-1.96 (1.33)
Excess Seats*Growth			0.001 (0.001)	0.001 (0.001)
Represented Parties*Growth			-0.001 (0.001)	
Effective Represented Parties*Growth				-0.0001 (0.0003)
Number of countries	21	21	21	21
Number of observations	510	510	510	510
R-squared (within)	0.50	0.51	0.51	0.51

Notes: The dependent variable is Percentage Tied Aid. The regressions cover years 1979 - 2009 and include counry fixed effects and year dummies. The set of regressors also includes a constant term. Robust standard errors clustered at the country level are in parentheses. *** = 1%, ** = 5%, and * = 10% significance level

Table 5: All Political Variables

Variable	1	2
Total Aid	0.22 (0.08)***	
Spending Ministers	119.68 (25.49)***	1.73 (0.55)***
Coalition Parties	87.17 (37.27)**	-0.43 (1.09)
Excess Seats	-8.81 (3.26)**	-18.61 (8.61)**
Represented Parties	-69.61 (33.78)*	0.18 (1.02)
GDP Per Capita	-0.02 (0.02)	0.001 -0.001
Trade	5.01 (4.85)	0.06 (0.20)
Population	-260.10 (52.20)***	-1.57 (1.36)
Number of countries	21	21
Number of observations	510	510
R-squared (within)	0.67	0.52

Notes: The dependent variable in Column 1 is Tied Aid and Percentage Aid in Column 2. Columns 1 and 2 use the yearly panel and cover the years 1979 - 2009. All regressions include country fixed effects and year dummies. The set of regressors also includes a constant term. Robust standard errors clustered at the country level are included in parentheses. *** = 1%, ** = 5%, and * = 10% significance level

Table 6: Five Year Averages

Variable	1	2	3	4	5
Total Aid	0.14 (0.09)	0.15 (0.09)	0.29 (0.12)**	0.29 (0.13)**	0.23 (0.09)**
Spending Ministers	193.01 (63.79)***	208.66 (70.88)***			196.48 (45.24)***
Coalition Parties	224.71 (107.09)**				128.18 (91.87)
Effective Coalition Parties		134.68 (187.08)			
Excess Seats			-8.77 (5.56)	-6.31 (6.19)	-8.77 (4.55)*
Represented Parties			-71.44 (79.52)		-118.91 (54.66)**
Effective Represented Parties				143.83 (140.51)	
GDP Per Capita	-0.01 (0.03)	-0.01 (0.03)	-0.03 (0.02)	-0.03 (0.02)	-0.05 (0.02)
Trade	6.49 (7.45)	4.93 (8.07)	6.51 (4.92)	7.58 (5.09)	2.41 (3.63)
Population	-15.00 (16.90)	-18.90 (16.90)	-26.50 (7.01)***	-26.28 (7.83)***	-25.83 (5.42)***
Number of countries	22	22	21	21	21
Number of observations	116	116	111	111	111
R-squared (within)	0.53	0.5	0.63	0.63	0.72

Notes: The dependent variable is Tied Aid. The yearly panel is collapsed into 5 year averages. The regressions cover years 1980 - 2009 and include country fixed effects and year dummies. The set of regressors also includes a constant term. Robust standard errors clustered at the country level are in parentheses. *** = 1%, ** = 5%, and * = 10% significance level

Appendix 1

Table 7: Variable Description and Sources

Variable	Description	Source
Tied Aid*	Total bilateral Official Development Assistance commitments tied (constant 2008 USD millions, i.e. 14 = $14 million).	OECD's online database (DAC Table 7b Tying Status of Bilateral ODA) and Irish Aid of the Department of Foreign Affairs and Trade
Total Aid	Total bilateral Official Development Assistance commitments (constant 2008 USD millions, i.e. 14 = $14 million).	OECD's online database (DAC Table 7b Tying Status of Bilateral ODA)
Percentage Tied Aid	Total bilateral Official Development Assistance commitments tied divided by total bilateral Official Development Assistance commitments (measured as a percentage).	OEDD's online database (DAC Table 7b Tying Status of Bilateral ODA) and author calculation
Spending Ministers	Number of full ministers in the governing coalition (i.e. the cabinet) at the end of each year, excluding the ministers of finance/budget (measured in levels, i.e. 1 minister = 1).	*Europa World Year Book (various editions)*
Coalition Parties	Number of political parties represented in the governing coalition (measured in levels, i.e. 1 party = 1).	*Europa World Year Book (various editions)*
Effective Coalition Parties	The effective number of political parties in the governing coalition, measured as the inverse of the share of spending ministers from party i as a proportion of the total number of spending ministers in the cabinet. For example, if a cabinet has 10 members, 5 from party A and 5 from party B, Effective Coalition Parties $= 1 / [(.5)^2 + (.5)^2] = 2$.	*Europa World Year Book (various editions)* and author calculation
Excess Seats	The number of seats above the simple majority divided by the the simple majority (measured as a percentage). For example, if a parliament has 100 seats, the simple majority is 51. If party X has 53 seats, Excess Seats = 3.92%.	*Europa World Year Book (various editions)* and author calculation
Represented Parties	Number of political parties with representation in government (i.e. holds a voting seat in the legislative branch), measured in levels (i.e. 1 party = 1).	*Europa World Year Book (various editions)*
Effective Represented Parties	The effective number of political parties with representation in government, measured as the inverse of the share of legislators from party i as a proportion of the total number of legislators in the legislative branch. For example, if a parliment has 100 members, 45 from party A and 55 from party B, Effective Represented Parties $= 1 / [(.45)^2 + (.55)^2] = 1.98$.	*Europa World Year Book (various editions)* and author calculation
GDP Per Capita	Gross Domestic Product divided by population (costant 2008 USD).	World Development Indicators: World Bank
Population	The total population of a country is based on the de facto definition of population, counting all residents regardless of legal status of citizenship, except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin, measured in millions (i.e. 14 = 14 million).	World Development Indicators: World Bank
Trade	The sum of exports and imports of goods and services divided by Gross Domestic Products (measured as a percentage).	World Development Indicators: World Bank

* The OECD does not include administrative costs and technical cooperation in the aggregate tied aid figures.

Table 8: Summary Statistics

Variable	Mean	Std. Dev.	Minimum	Maximum	Observations
Tied Aid	936.84	1682.77	0	9597.18	534
Total Aid	3084.7	4644.02	29.93	32734.13	556
Percentage Total Aid	32.39	27.52	0	100	534
Spending Ministers	15.62	4.39	5	31	682
Coalition Parties	2.32	1.45	1	8	682
Effective Coalition Parties	1.92	1.08	1	6.31	682
Excess Seats	11.59	21.55	-49.39	71.29	651
Represented Parties	7.33	3.12	2	19	682
Effective Represented Parties	3.52	1.42	1.69	9.05	682
GDP Per Capita	27343.63	10914.58	7859.21	70798.34	680
Population	37.4	58.5	0.03	307	682
Trade	73.84	46.74	16.01	326.76	681

Note: Percentage Total Aid, Excess seats, Growth, and Trade are in percentages (i.e. 71.29 = 71.29%)