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Aid Effort and its Determinants

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Abstract

The paper empirically explores the factors that could have accounted for the generally declining aid effort (defined as the generosity ratio, or the share of GDP given as aid) of bilateral donors over the last three decades. Annual panel data over 1970-2000 period for the 22 DAC members are used in a series of regressions. The findings suggest the existence of progressivity of aid in relation to donor income. There is also evidence of the economies of scale, in the sense that the share of aid in income decreases with growth in the size of donor country population. Domestic pro-poor tendency also appears to enhance donor generosity, and a positive 'peer pressure' effect is also observed. In addition, the extent of military adventurism of the donor is observed to have enhanced aid effort, just as also the size of government. But no discernible effect is detected for fiscal balance. On the political front, a greater number of checks and balances in the political system as well as the existence of polarization and fractionalization within the government are found to have enhanced aid effort while fractionalization within the opposition has the opposite effect. On the other hand, no discernible and consistent effect of ideological orientation of government is detected. Finally, the movement in the aid effort over time is found to differ between the G7 and non-G7 donors.

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1   Introduction

Most existing studies on the behaviour of donors have concentrated on the aid-allocation issue, namely, how and why donors share a more or less pre-determined volume of bilateral aid among recipients (e.g., Alesina and Dollar 2000; Tarp *et al.* 1998; McGillivray and Oczkowski 1992; Trumbull and Wall 1994, etc.). Yet, virtually no study exists on the equally (if not more) important issue of what factors determine the total volume of aid that a donor makes available directly (or bilaterally) and indirectly (through multilateral channels) to recipients. The few studies on aid effort (e.g., Rao 1997 and Ryrie 1995) are not really concerned with factors affecting aid effort as such, but are primarily focussed on issues such as its measurement and definition.

The quality and total quantity of aid made available to recipients are determined by the aid efforts of donors, and not by the allocative criteria being adopted. Therefore, an explanation of why aid effort varies among donors at a point in time—and, for a particular donor, between different periods—would provide an understanding of the reasons why the nature and volume of aid have been what they are. Furthermore, such an explanation might also help to remedy, by both donors and recipients, whatever is considered unsatisfactory in the existing nature and volume of assistance.

This is the motivation behind the present study, which aims to identify the political and economic factors that have shaped aid efforts of the 22 member countries of the Development Assistance Committee (DAC) of the OECD between 1970 and 2000. Focus is on the major element of the aid effort, i.e., donor generosity in relation to GDP.

The remaining discussion is organized into four sections. In section 2, stylized facts on donors' generosity are presented. Section 3 outlines the methodology while the empirical results are presented and discussed in section 4. Section 5 summarizes and concludes.

2   Stylized facts on donor generosity

2.1   Aggregate performance

In order for the per capita volume of aid received (or overseas development assistance, ODA) to be sustained, amounts made available by donors must keep pace with population growth of the recipient countries.[1] Similarly, for aid volume to maintain pace with the GDP of the recipient countries (and, hence, maintain a constant supplementarity to recipients' own output), the volume of aid has to match the generally increasing GDP of the recipients. This, in turn, requires that the income of

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[1] ODA refers to the official assistance to developing countries (i.e., those included in the Part I of DAC's List of Aid Recipients) and to multilateral institutions with regard to flows to these developing countries only. The transfer, which must be from an official source, is supposed to be for promoting economic development and welfare of the recipients and it must have a grant element of no less than 10 per cent (using 10 per cent discount rate). By this, similar aid to those deemed to be countries in transition (Part II of the DAC List of Aid Recipients) and to multilateral institutions for flows to such countries in transition, which is referred to simply as official aid (OA), is excluded.

the donors or the fraction of their income given as aid (or both) should be rising fast enough so as to make the volume of aid keep pace with the recipient countries' rising population.

In the last three decades as donor incomes have been rising, the increase has only succeeded to cover the extra needs caused by the expanding populations. It has not been able to match the pace of the output increase in recipient countries. Thus, the onus is on increasing donor aid efforts so as, at least, to raise the per capital level of aid to sufficiently maintain aid supplementarity to recipients' own output (i.e., aid received relative to recipients' GDP). But, as can be seen from Table 1 and Figure 1, this has not been the case in recent years.[2] It has, in fact, been falling—particularly during the last decade. While the income (or GDP) of donors rose faster than the recipient countries' populations in the last three decades, donor generosity ratio fell (although it did show a rather modest growth during 1970-80). This has tempered the overall effect on the per capita growth of aid, which records practically no increase over the last 30 years. Also, while donor income over the same period grew almost at the same pace as the recipients' income, the overall effect on aid in relation to recipient GDP (i.e., the supplementarity of aid to recipients' income) was negative.

The three-decade average annual growth rates of these indicators conceal a much more abysmal growth performance for the last 10 years. These were characterized by a 'free fall' in the generosity ratio, aid received (in real terms) per capita, aid received in relation to recipient GDP, and, indeed, the overall aid volume in real terms (see Table 1 and Figures 1 and 2). Available statistics in the first two years of the present decade (and or, indeed, of the century) also suggest that the declining trend has worsened. This is an ominous sign for the future of official assistance.[3]

2.2   Performance of individual donors

In Table 2, the generosity ratio for the 22 individual DAC countries is shown.[4] As can be from the cross-country average, gross and net aid disbursements in relation to GDP were 0.39 and 0.37 per cent, respectively, over the three decades, with the lowest figures (or performance) recorded during the 1970-80 period.

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[2]   In Figure 1, the lines showing the cross-country average of aid disbursement-GDP percentage represent the average of the percentages for all 22 individual donor countries while the lines showing the cross-country total disbursements as percentage of cross-country GDP represent the consolidated disbursements by all 22 donors expressed as a percentage of the consolidated GDP of the group.

[3]   For instance, total ODA from the 22 DAC member countries decreased in nominal terms from the 1999 level of US$ 56,428 million by 4.77 per cent in 2000 and this decreased further by 4.43 per cent in 2001. This suggests that, in real terms, in relation to donor and recipient GDP as well as on the basis of recipients' per capita, the rates of decrease are likely even be higher still.

[4]   The 22 DAC member countries covered by the study are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, UK and USA.

Table 1
Growth rates of donors' aid effort (generosity ratio) and its related indicators (%), 1970-99

	1970-80	1980-90	1990-90	1970-99
Economic (real GDP) growth of the donors [a]	3.37	3.31	2.24	2.85
Economic (real GDP) growth of the recipients [a]	5.48	3.51	3.48	3.78
Growth of donors' aid effort (generosity ratio)	0.63	-0.33	-4.63	-0.58
Growth of recipients' population	2.12	1.94	1.57	1.90
Growth of volume of aid, in real terms	4.02	2.96	-2.49	2.26
Growth of aid received per capita, in real terms [a]	1.86	1.00	-4.00	0.36
Growth of aid received in relation to recipients' GDP	-1.38	-0.53	-5.77	-1.47

Notes:
(i) In the present context, donors refer to the rich OECD member countries while recipients simply refer to developing countries in general;

(ii) The implied growth rates of aid per capita and aid in relation to recipients' GDP are based on the aid volume in real terms, as calculated from the supply side (and hence, using aid claimed to have been given by, as well as the deflator series, for the donors). The results would differ somewhat if calculated from the demand or recipient side, using deflators for, and aid actually received by the recipients;

(iii) Average growth rates are calculated through the least squares approach.

Source: OECD/DAC (online) and World Bank (2001).

Table 2
Individual donor generosity ratios (%), 1970-99

	Gross disbursements-GDP percentage				Net disbursements-GDP percentage			
	1970-80	1981-90	1991-99	1970-99	1970-80	1981-90	1991-99	1970-99
Australia	0.45	0.39	0.29	0.38	0.44	0.39	0.29	0.38
Austria	0.16	0.28	0.32	0.25	0.15	0.26	0.28	0.23
Belgium	0.53	0.52	0.37	0.47	0.53	0.51	0.36	0.47
Canada	0.46	0.45	0.39	0.43	0.45	0.44	0.37	0.42
Denmark	0.53	0.80	0.98	0.77	0.51	0.76	0.95	0.74
Finland	0.16	0.39	0.44	0.33	0.14	0.39	0.42	0.32
France	0.75	0.61	0.59	0.65	0.43	0.55	0.53	0.50
Germany	na	na	0.38	0.38	na	na	0.32	0.32
Greece	na	na	0.15	0.15	na	na	0.15	0.15
Ireland	0.11	0.17	0.20	0.17	0.11	0.17	0.20	0.17
Italy	0.14	0.29	0.25	0.22	0.11	0.28	0.23	0.21
Japan	0.26	0.34	0.34	0.31	0.23	0.30	0.28	0.27
Luxembourg	na	0.16	0.42	0.29	na	0.16	0.42	0.29
Netherlands	0.69	0.96	0.85	0.83	0.65	0.92	0.79	0.79
New Zealand	0.31	0.26	0.23	0.26	0.31	0.26	0.23	0.26
Norway	0.54	0.92	0.92	0.79	0.54	0.92	0.92	0.79
Portugal	na	0.07	0.26	0.17	na	0.07	0.25	0.16
Spain	na	0.09	0.24	0.17	na	0.09	0.23	0.16
Sweden	0.67	0.81	0.80	0.76	0.64	0.81	0.80	0.75
Switzerland	0.18	0.29	0.37	0.28	0.17	0.29	0.37	0.28
United Kingdom	0.47	0.36	0.29	0.38	0.42	0.34	0.28	0.35
United States	0.28	0.23	0.17	0.23	0.25	0.21	0.14	0.20
Grand average	0.39	0.42	0.42	0.39	0.36	0.41	0.40	0.37

Source: OECD/DAC (online) and World Bank (2001).

Fig. 1: Generosity ratio - Aid disbursement-GDP ratio over 1970-99 decades (in %)
(Source: See text)
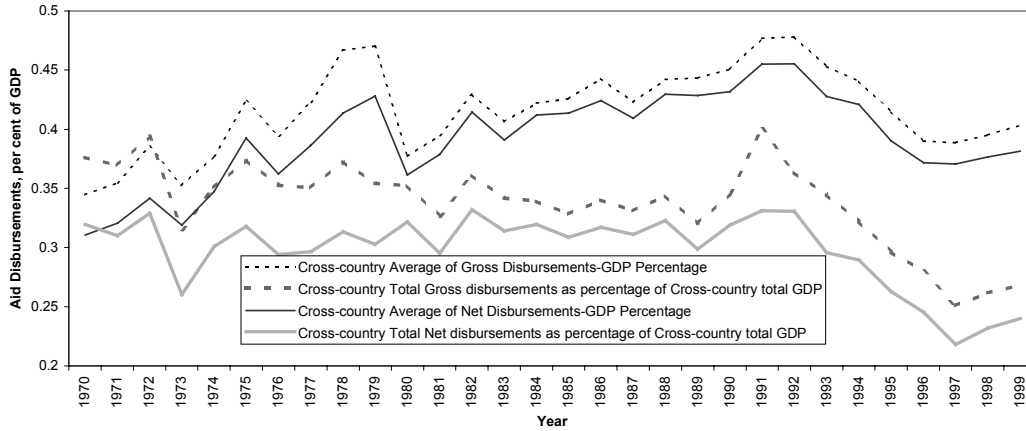
Fig. 2: Aid received per capita (1995 US$) and relative to recipients' GDP (per decile of GDP), 1970-99
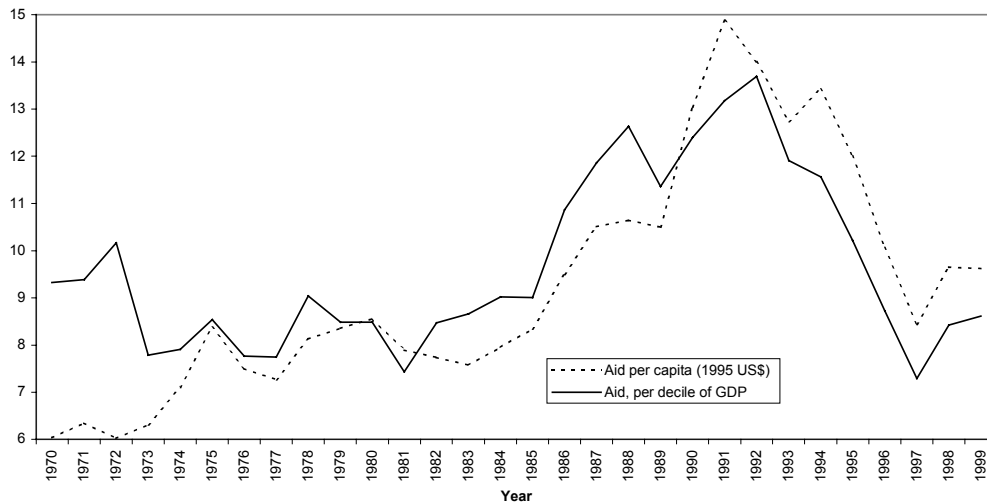
Note: The aid per decile of GDP refers to adi-GDP percentae multiplied by 10.
Source: OECD/DAC (online) and World Bank (2001).

But the trend in aggregate aid effort masks the wide differences existing among individual donors and also over time. Only four donors (Denmark, Netherlands, Norway, and Sweden) consistently met the United Nations (UN) recommended target 'of at least 0.7 per cent of GDP as aid' in the last two decades.[5] In contrast, some donors were very parsimonious, the US being the extreme with just 0.14 per cent of GDP given

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5   They, however, fell shy of the target during the 1970-80 decade, before the target was recommended
     by the UN.

as aid during the last decade.[6] Furthermore, while a number of donors recorded a rising trend in their generosity ratios (Austria, Finland, Switzerland and most of the four UN target-meeting donors), others show no discernible trend over time (e.g., Japan); most donors mainly record an ever-increasing parsimony during the period under review.

No doubt, these wide temporal variations in aid effort (or generosity) by each donor country and across donor countries deserve more investigation. This is the central objective of the study and our methodology is explained in the next section.

3 Methodology

3.1 Concepts of aid effort

The 'aid effort' concept has often been used rather loosely in aid literature. Nevertheless, in trying to answer the question, 'How donor countries are to be assessed and compared with respect to their aid effort?', Rao (1997) has attempted to formalize the meaning of the concept. Quite simply this formalization seems to boil down to what is synonymous with the totality of donor aid performance. According to Rao (1997: 947):

> The full range of donor motives, however, is not necessarily relevant to establishing normative criteria for comparing aid effort. From a normative standpoint, generosity and fairness in aid-giving are arguably the most important criteria. … Yet other criteria may be added to the basic ones of scale and equity …, criteria such as the extent of aid tying, the uses to which aid is put, the nature of recipient government regimes supported, aid effectiveness, absorption constraints, etc.

While we do not disagree with Rao's broad characterization of aid effort, we believe that the most objectively measurable indicator of donor performance (or effort) is, by far, the *scale* of aid given, as normalized by donor income level, commonly referred to as the donor generosity ratio. The 'equity' objective in aid allocation is more subjective, making it more difficult to measure objectively, while other criteria mentioned above are even more nebulous. Thus, the concept of 'aid effort' is often used in aid literature synonymously with generosity ratio, and this concept of aid effort is accordingly adopted here.

Nevertheless, the limitations of proxying donor generosity by the scale or quantity of aid given in relation to income have to be borne in mind. Aid motive is obviously important. For example, a dollar of aid given by the US to Israel for strategic motives, or by Japan to Pakistan for commercial motives, should not carry the same weight as dollar of aid given by Sweden to Tanzania for altruistic reasons. Other qualitative criteria also matter.

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6   The observed low generosity ratio in the last decade is partly due to the fact that from 1997 aid to Israel (the largest sole beneficiary of US aid, receiving about 33 per cent, or US$ 2,253 million out of US$ 6,917 million of US ODA in 1996) became ineligible as 'aid to developing countries' and, hence, as ODA.

3.2 Possible determining factors of donors' aid efforts

While reference to aid effort pervades the literature on aid, there have been scarcely any studies, neither theoretical nor empirical, on its determinants from a donor perspective. So, we have little—if any—previous theoretical framework or empirical findings to rely on for identifying and testing possible aid effort determinants. We are guided, instead, by economic logic and casual references in the literature (e.g., to factors such as donor countries' budgetary situations). Based on this approach, we select and test for the effects of the range of factors discussed below. For convenience, these are classified into domestic political and non-political factors.

3.2.1 Non-political factors

These are mainly economic (including fiscal) variables. Although some are, to some extent, also political in nature, they do not relate exclusively to internal politics in donor countries.

i) *Level of per capita income*: What is being posited here is a positive marginal propensity to give aid in relation to income, so that the ratio of aid to income rises with the level of per capita income.

ii) *Phase of Economic cycle*: Similar to (i), it is expected that a rising phase of economic cycle would permit more aid to be given than during economic recession.

iii) *Size of the government*: Since the allocation of aid is from the state budget, it follows that aid export should rise and be positively associated with the size of the government itself, as measured by total government spending in relation to GDP.

iv) *Fiscal balance*: Tight budgets and the need to reduce fiscal deficits have sometimes been offered as explanation for the falling aid efforts (e.g., Hopkins 2000: 431). To the extent that this explanation is valid, a high fiscal surplus is expected to permit greater aid efforts.

v) *Peer pressure*: What is assumed here is that the aid effort of a donor is a positive function of the aid effort of other donors (i.e., peers of the donor under consideration). There are a number of reasons for this. First, contributions to multilateral institutions (including the UN's development agencies and multilateral development banks) are often decided jointly, through some form of consensus among DAC member countries. Ordinarily, each DAC member strives to honour such collective decisions. Second, DAC itself sometimes establishes certain aid targets and as members honour these targets, aid efforts of each donor tend to move in unison with those of its peers. Third, ordinarily each donor is inclined to raise its aid effort to match the perceived efforts of other DAC members, regardless of DAC targets or other forms of formal collective decisions. The converse applies when aid efforts of other donors are declining.

vi) *Domestic pro-poor spending and policy stance*: It can be argued that donors, who show no concern for the least well-off segment of the domestic poor, are

unlikely to have a particularly altruistic stance internationally. Thus, donor governments' general concern for the domestic poor is not likely to be associated positively with altruism to poor countries and, hence, to the generosity ratio. For instance, according to Hopkins (2000: 434 while summarizing an earlier view in Noel and Therien (1995)), 'In donor countries, a decline in national welfare (programme) has been matched by a decline in foreign aid'. However, such a view presupposes that aid is mainly altruism-motivated. Because of inapplicability of altruism in aid-giving in many instances, there may be no association as such between the level of domestic pro-poor stance and the aid effort. To attempt to resolve this issue empirically, we test for the effect of the share of government expenditure on subsidies and transfers in relation to total government spending. Alternatively, we also proxy the totality of pro-poor stance of the donor government by the extent of income distribution egalitarianism that prevails in the donor country. In this sense, a high degree of income equality would suggest a greater pro-poor concern than a high degree of income inequality. For our purpose, we measure income equality by the share of income accruing to poorest 20 per cent of the population. Alternatively, we also measure income inequality by the Gini coefficient of income distribution.

vii) *Country size*: One might postulate the existence of economies of scale in aid-giving, whereby the generosity ratio may be lower for larger-sized donor countries. For instance, there may be scale economies in the administrative costs for aid (which are included in the official definition of aid). Second, there might be a minimum monetary threshold in giving aid and this may be relatively high for small donors, e.g., should Luxembourg decide to give aid to, say, India, it may not be considered proper to give less than several thousands (or, even, millions) of Euro, whereas such a threshold would easily be surmounted by the US. For these reasons, we test for the effect of country size, as proxied by total population, and expect a negative effect on aid effort.

viii) *International strategic and military interests*: In principle, military assistance does not qualify as ODA. But in practice, politics and lobbying sometimes lead to its inclusion. In addition, much aid that is not military assistance as such could sometimes be given to promote donor military adventurism—say, to persuade the recipient government to allow the donor to have a strategic military base in that country. To proxy for similar motives on aid effort, we test for the effect of two alternative, though similar, factors, namely the share of military expenditure in the donor income and the share of military personnel in the donor labour force. A positive effect of these on aid effort is expected.

ix) *Temporal factors*: There are several miscellaneous and mainly qualitative time-related factors affecting aid effort. For example, as discussed earlier, aid efforts started to plummet from the early 1990s. This may be due to the end of the cold war which, in turn, led to the emergence of Eastern European countries competing with the conventional developing countries for aid and the greater freedom of donors to reduce aid on the basis of concerns about governance issues, facts to which they had to turn a blind eye during the cold war era (see Hjertholm and White 2000). To capture such time-related miscellaneous factors, we include a dummy variable for the post-1990 period

and this is expected to exhibit a negative effect on aid effort. Similarly, we also include a time trend variable which, after controlling for the effect of post-1990 cold war and similar developments, would show whether aid effort has exhibited a rising or declining trend during the past three decades.

3.2.2 Political factors in donor countries

There have been a number of theoretical studies on how the volume and allocation of aid might be determined by the economic and political interests of powerful groups in the donor countries. According to Hopkins (2000: 424), citing the studies of Nelson and Eglinton (1993) and van de Walle (1998):

> Political leaders, interacting within executive and legislative branches, set policy on levels and allocation of aid. Bureaucracies and personalities seek to improve their situation by strategic uses of aid; patronage and short-term solutions often dominate choices.

Some theoretical studies have tried to model such complex aid politics within the framework of principal-agency relationships. For instance, Murshed and Sen (1995) model the interaction of many principals (various competing interest groups) with one agent (aid agency); Lahiri and Raimondos-Moller (2000) model ethnic minority lobbying in donor countries; and Svensson (2000) depicts the situation of rent-seeking by consultancy groups in donor countries within the principal-agency context. At a descriptive or less theoretical level, attempts have also been made to describe the political processes and interactions (if not intrigues) involved between various actors, including aid agency (whose employees' careers may depend on aid expansion), executive and legislative branches, firms with investments in recipient countries, exporters expecting to supply procurement-tied aid; gender-based and environmentalist NGOs, etc. (see, for example, Hopkins 2000 and Lancaster 2000).

However, there has been hardly any empirical work on the effects of these domestic political factors on the volume of aid and, hence, on aid effort. The position we take here is that the effects of such processes and intrigues on aid efforts would be conditioned not only by the orientation of the (executive and legislative branches of) government in power, but also of their relative bargaining power, cohesiveness, and overall political clout. These factors—particularly the checks and balances between branches of government—are found in the political economy literature seeking to explain budget deficits in the OECD countries (Roubini and Sachs 1989); economic policy outcomes (Cox and McCubbins, forthcoming); financial sector distress (Keefer 1999); etc. But the present study is likely to be the first to extend their application to the aid allocation decision. Specifically, we test for the effects of the following domestic political factors:

i)   *Ideological orientation of government*: Right-wing governments are generally perceived to be less pro-poor in their domestic budgetary management and policies, e.g., to spend less on subsidies and government transfers. Our dataset

seems to support this hypothesis.[7] To the extent that there is a link between the concern for the welfare of the needy domestic population and the needy abroad, it might be posited that right-wing regimes in donor countries exhibit lower aid efforts. This, however, is again conditional on aid being motivated by altruism; otherwise, one can envisage the possibility that right-wing governments use aid more as an instrument of foreign commercial and political diplomacy than left-wing regimes. Hence the direction of the overall effect of ideological orientation is ambiguous, *a priori*.

ii) *Constitutional checks and balances on the government*: If the executive arm of the government (and, hence, the aid agency) is under constitutional or political constraints that subjects it to checks and balances or veto power from, say, the legislature, then it has to satisfy, in its aid allocation, not only its own interest but also the interest of the veto-wielders. Except in the unusual case when the interests of the two coincide, the tendency of the need to 'satisfice' would be for the volume of aid and, hence, aid effort to rise with the extent of checks and balances existing in the polity. The volume of aid needed to meet multiple, competing interests should be greater than what would be needed to cater for just a single interest. Thus we posit a positive effect on aid effort arising from either of the two alternative measures of checks and balances in the political system.

iii) *Polarization within the government itself*: The greater the lack of cohesion within the government (e.g., because it is a coalition of parties with more or less incongruent ideologies and policies), the greater the need to make more budgetary allocations for aid. Similarly, if opposition is strong, there would be a greater tendency for the ruling party or coalition to consider the opposition's own orientation and policies in allocating aid than what would be the case if opposition is weak and highly fractionalized. Accordingly, we again test for the effects of alternative proxies of this factor. First, we include two alternative measures of polarization (or differences in orientation) within the government and posit the effect of each on aid effort to be positive. Second, we test for the effect of fractionalization within the government and the opposition, positing the former to have a positive effect on aid effort and the latter a negative effect (as it signifies a weak and divided, easily penetrated opposition).

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[7] Annual panel data-based regression (over the period and for all the 22 donors) of the fraction of government expenditure on subsidies and transfers as a fraction of total expenditure on the trend (T), log of real per capita income (logPCI), and the index of ideological orientation of the executive being right-wing (RIGHT) and that of both executive and legislature being right-wing (RIGHTT) produces the results below (with t-values in parentheses). The results are in line with the expectation of the tendency for a right-wing government to allocate lower shares of the budget to subsidies and transfers.

| -0.002T | + 0.071logPCI | - 0.004RIGHT | N = 432 |
| (-3.0) | (2.3) | (-1.6) | Adj. R^2 = 0.854 |

| -0.002 T | + 0.081logPCI | - 0.003RIGHTT | N = 433 |
| (-3.2) | (2.5) | (-2.1) | Adj. R^2 = 0.857 |

3.3 Model specification

We specify a regression equation of the form:

$$y_{it} = x_{it}\beta + u_{it} \qquad (i = 1,2,\dots,22; \ t = 1,2,\dots,T) \qquad (1)$$

where:

$y =$ the dependent variable, which is aid effort, or aid as a fraction of donor's GDP;

$x =$ the vector of the explanatory variables discussed above;

$\beta =$ the vector of the explanatory variables' parameters, the estimates of which are to be derived;

$u =$ the vector of stochastic term that is assumed to satisfy most of the usual conditions; and

i, t are subscripts for country and time (respectively) in the panel data.

The above specification implies that time-series data are pooled across the countries to form a panel dataset used in estimating the equations. Specifically, annual data over 1970 to 1999 period are pooled across the 22 donor countries. But the resulting panel data are unbalanced in the sense that values are missing in a non-uniform manner with respect to both countries and variables. Also, because of this unbalanced nature of the data, we include only a few explanatory variables (trend, population, per capita income and peer pressure factor) that are available for all countries for (almost) all the years in all the estimated equations while other explanatory variables are included one or two at a time. By doing this, not only is the incidence of multicollinearity minimized, but also the number of observations available to estimate the equation with fewer variables is maximized, as the inclusion of all or most explanatory variables in a particular equation would drastically reduce the usable data points. We employ a fixed-effect method that permits the intercept to vary across countries in the derivation of the panel data estimates.[8] Evidence on the existence (or lack) of stability of the parameter estimates is obtained indirectly in two ways. First, separate estimates are reported for the G7 donors (discussed next) to indicate the extent of cross-country stability. Second, the various equation estimates cover different periods, as dictated by data availability, with only certain regressors (such as per capita income and population) featuring in all the equations. With this, the stability of parameter estimates of these common regressors over time can be inferred while the stability of most others is unlikely to be crucial, especially in view of the fact that they are not estimated over long periods.

Given the nature of the explanatory variables, we have little or no reason to anticipate their endogeneity. Thus, we employ OLS technique and adjust for any presence of heteroscedasticity within this framework with covariance matrix correction method suggested by White (1980).

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[8] The random-effect alternative also gives practically the same results. But to save space, we are not reporting these results, except in one isolated case where the fixed-effect is not applicable due to the inclusion of a dummy variable for G7 countries.

3.4 Separate estimates for G7 member countries

The G7 donors (Canada, France, Germany, Italy, Japan, UK and USA) account for about two-thirds of total aid volume. But the recently observed decreasing aid effort is often said to be due to declining aid volumes from these traditionally largest donors. As noted in OECD (2001: 98) 'The overall flow of aid is largely determined by the efforts of the largest donors ... But, in general, the largest Members have made the largest cuts in the 1990s'. Thus, it would be enlightening to analyse the aid effort of these seven countries separately. In addition, separate estimates for the G7 donors would provide some sort of cross-country stability test of the estimates for all 22 countries, as this would enable us to see whether the generalized results are still valid for the data subset (or smaller dataset) of the seven countries.

Therefore, a separate analysis of the aid effort of the seven countries is carried out in two ways. First, we include an intercept dummy variable for the countries in the panel data estimates for all the 22 countries to determine whether being a G7 member has any autonomous effect on aid effort. Second, we report parallel estimates for the G7 members to see whether being a member country affects the responses to each of the explanatory variables.

3.5 Data sources and how the variables are measured

The dependent variable, aid effort (or generosity ratio), is the combined gross disbursements of ODA loans and grants as a share of donor GDP.[9] The 'peer pressure' factor, defined as the combined aid effort of all other donors except for the one being examined, consists of the ODA loans and grants of all other donors expressed as a fraction of their total GDP. Per capita income is the GDP per capita at the 1995 US dollar value, population size is given in millions, and the phase of economic cycle is computed as the residuals generated from regressing logarithm of real GDP index on a trend variable, so that a positive value of the residuals represents a rising phase of the cycle. Also, government size is the ratio of central government expenditure to GDP; fiscal surplus is inclusive of grants, and subsidies and transfers are government expenditure on subsidies and other current transfers of the central government. The data on these variables are all from the World Bank's *World Development Indicators 2001* (online), except the data on the ODA loans and grants which are from the OECD's *International Development Statistics, IDS* (online). Also from the same World Bank source are the data on military expenditure in relation to national income, and military personnel as a share of the total labour force. Statistics on the income share of the poorest 20 per cent of the population and the Gini coefficient of income distribution are from various issues of the World Bank's *World Development Report*. As income distribution statistics are not available for every year, whatever data are recorded for a particular year, the same are also used for certain previous and subsequent years so as to have observations for all years. Fortunately, income distribution pattern does not change rapidly enough to invalidate the aforementioned alternative we have adopted. All the non-monetary figures are pure fractions, not percentages.

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9 Replacement of gross with net disbursements yields substantially similar results. As shown in Table 2, both are approximately equal. But, conceptually, gross disbursement is preferred as this better indicates aid effort since net disbursement partly depends on timing of loan repayment, a decision that lies with either the recipient or borrower.

The source for the variables on domestic polity is Beck *et al.* (online).[10] The indicator of the right-wing executive branch of government takes a value of 1 if it is classified in the data source as being right-wing; zero for the ideologically central; and –1 for being left-wing. A similar calibration is used for the legislative arm (depending on which ideology has the majority). This is added to the coding of the executive arm to arrive at an index for both the executive and legislative branches being right-wing (whose values therefore range between 2 and –2). The indicator or index of political polarization (whose value ranges between 0 and 2), on the other hand, is of two types.[11] Following the data source, the first is the maximum difference in orientation between two veto powers, defined as the president and largest government party in presidential systems (or the biggest three coalition members in parliamentary systems). The second type differs from the first only if the president's party (or, under the parliamentary systems, the prime minister's party) has an absolute majority in legislature, in which case no polarization (i.e., zero value) is deemed to exist. The checks and balances indicator, on the other hand, records the number of veto players in a polity and indicates the extent of formal constitutional control on political decisionmakers. Again, there are two types, which display some intricate technical differences.[12] Finally, the indicator of government (or opposition) fractionalization is defined as the probability that two deputies or members of parliament picked at random from among different political parties forming the government (or the opposition as applicable) will be from different parties. If only one party (as opposed to a coalition of parties) forms the government, the chance for the government fractionalization indicator would be zero and, if there is only one party outside the government, it would also be zero for the opposition fractionalization indicator.[13]

4 Empirical results

4.1 Presentation of the results

The empirical results based on all the 22 countries are presented in Table 3 (for those equations incorporating explanatory variables that are largely economic in nature) and in Table 4 (for those equations where indicators of domestic political systems and practices feature as the explanatory variables). Corresponding to these, the parallel results for the G7 donor group are given in Tables 3A and 4A.

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[10] This is posted on, and made available through, the World Bank economic growth research website.

[11] The simple correlation between the two is 0.384.

[12] The simple correlation between the two is 0.767. The description of technicalities involved in computing each and of the differences between both covers several pages in the data source. Suffice here to state that they both take cognizance of the executive arm of government as well as the existence and number of legislative arms of government, adjusted for the degree of competitiveness involved in electing them.

[13] Although different, there is a similarity to an extent between the polarization indicators and government fractionalization indicator. The simple correlation coefficients between the latter and each of the two types of the former are 0.414 and 0.569.

Table 3
Estimates for all the 22 donors incorporating the economic explanatory variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Trend line	0.00003 (1.3)	0.00001 (2.7)	0.00004 (2.1)	-0.0001 (-1.1)	-0.0001 (-1.3)	0.0001 (1.9)	0.0001 (2.0)	-0.0001 (-2.8)	-0.0001 (-2.7)
Post-1990 dummy	-0.0004 (-2.3)	-0.003 (-1.9)	-0.003 (-2.2)	-0.0001 (-0.4)	-0.0001 (-0.2)	-0.0005 (-3.3)	-0.0004 (-3.0)	– –	– –
Per capita income (log)	0.004 (4.9)	0.002 (3.1)	0.003 (4.5)	0.004 (5.4)	0.005 (5.4)	0.003 (4.2)	0.003 (4.2)	0.005 (4.8)	0.005 (5.3)
Population size (log)	-0.006 (-5.1)	-0.008 (-6.5)	-0.009 (-6.7)	-0.007 (-4.3)	-0.007 (-4.1)	-0.008 (-5.9)	-0.008 (-6.0)	0.011 (2.7)	0.007 (1.8)
Aid efforts of 'peers' other DAC member donors	0.514 (3.8)	0.692 (4.5)	0.487 (3.0)	0.318 (1.9)	0.332 (1.9)	0.680 (4.5)	0.682 (4.4)	0.466 (2.7)	0.545 (3.2)
Being a G7 member country	0.015 (2.8)	– –	– –	– –	– –	– –	– –	– –	– –
Rising phase of economic cycle	– –	0.004 (3.4)	– –	– –	– –	– –	– –	– –	– –
Government size (expenditure/GDP ratio)	– –	– –	– –	0.011 (5.8)	0.010 (6.7)	– –	– –	– –	– –
Fiscal surplus-GDP ratio	– –	– –	-0.008 (-5.1)	– –	– –	– –	– –	– –	– –
Fiscal surplus-government expenditure ratio	– –	– –	– –	0.0001 (0.2)	– –	– –	– –	– –	– –
Share of subsidies & transfers in government expenditures	– –	– –	– –	– –	0.0008 (0.7)	– –	– –	– –	– –
Domestic income equality: income share of poorest 20%	– –	– –	– –	– –	– –	0.011 (2.4)	– –	– –	– –
Domestic lack of income equality, Gini coefficient	– –	– –	– –	– –	– –	– –	-0.002 (-1.3)	– –	– –
Military expenditure-national income ratio	– –	– –	– –	– –	– –	– –	– –	0.062 (3.3)	– –
military personnel-total labour force ratio	– –	– –	– –	– –	– –	– –	– –	– –	0.064 (3.2)
No. of observations	622	622	551	530	520	612	612	235	235
Adjusted R^2	0.814	0.811	0.842	0.852	0.852	0.814	0.812	0.937	0.935

Notes: (i) The numbers in parentheses below the parameter estimates are the t-values. A parameter estimate is statistically significant at 1%, 5%, and 10% levels if its t-value is, in absolute sense, not less than 2.6, 2.0, and 1.6, respectively;

(ii) Unlike other equations that were estimated through fixed-effect method, the first equation was estimated through random-effect method due to the existence of dummy variable for G7 donors, as discussed in the text. But its intercept is not reported to save space.

Table 4
Estimates for all the 22 donors incorporating the domestic polity indicators

Trend line	-0.0001	-0.00004	0.00002	-0.00002	-0.00001	-0.00001	-0.00001	-0.00001
	(-1.4)	(-1.5)	(0.7)	(-0.9)	(-0.2)	(-0.1)	(-0.5)	(-0.3)
Per capita income (log)	0.005	0.005	0.004	0.005	0.004	0.004	0.004	0.004
	(6.5)	(6.6)	(4.4)	(6.0)	(5.2)	(4.9)	(5.1)	(5.5)
Population size (log)	-0.006	-0.006	-0.009	-0.007	-0.007	-0.006	-0.005	-0.005
	(-3.5)	(-3.2)	(-5.2)	(-3.9)	(-4.1)	(-3.7)	(-3.0)	(-2.7)
Aid efforts of 'peers', other DAC member donors	0.515	0.518	0.333	0.625	0.554	0.592	0.591	0.599
	(3.1)	(3.2)	(1.6)	(3.8)	(3.4)	(3.6)	(3.7)	(3.6)
Index of right-wing government ideology	0.0002	–	–	–	–	–	–	–
	(2.6)	–	–	–	–	–	–	–
Being right-wing government & right-wing legislature	–	0.0001	–	–	–	–	–	–
	–	(2.6)	–	–	–	–	–	–
Polarization index (1st type)	–	–	0.0002	–	–	–	–	–
	–	–	(3.1)	–	–	–	–	–
Polarization index (2nd type)	–	–	–	0.0001	–	–	–	–
	–	–	–	(2.3)	–	–	–	–
Checks & balances index (1st type)	–	–	–	–	0.00004	–	–	–
	–	–	–	–	(1.0)	–	–	–
Checks & balances index (2nd type)	–	–	–	–	–	0.00008	–	–
	–	–	–	–	–	(2.0)	–	–
Government fractionalization index	–	–	–	–	–	–	0.0008	–
	–	–	–	–	–	–	(3.0)	–
Opposition fractionalization index	–	–	–	–	–	–	–	-0.0015
	–	–	–	–	–	–	–	(-4.6)
No. of observations	442	440	426	432	466	458	458	458
Adjusted R^2	0.893	0.894	0.897	0.895	0.890	0.891	0.893	0.896

Notes: The numbers in parentheses below the parameter estimates are the t-values. A parameter estimate is statistically significant at 1%, 5%, and 10% levels if its t-value is, in absolute sense, not less than 2.6, 2.0, and 1.6, respectively.

Table 3A
Estimates for G7 donors incorporating the economic explanatory variables

Trend line	-0.0002	-0.0002	-0.0003	-0.0003	-0.0001	-0.0001	-0.0001	0.00001
	(-6.6)	(-6.8)	(-8.7)	(-8.7)	(-5.0)	(-5.6)	(-0.8)	(0.2)
Post-1990 dummy	-0.0001	0.0002	0.0003	0.0007	-0.0001	0.00002	–	–
	(-0.6)	(1.2)	(2.1)	(3.7)	(-0.4)	(0.1)	–	–
Per capita income (log)	0.010	0.008	0.008	0.009	0.006	0.006	-0.004	-0.003
	(8.1)	(8.2)	(7.2)	(7.5)	(6.2)	(6.4)	(-1.7)	(-1.3)
Population size (log)	-0.002	-0.003	0.003	0.004	-0.004	-0.003	-0.006	-0.0003
	(-1.1)	(-2.2)	(2.7)	(2.7)	(-2.9)	(-2.4)	(-1.1)	(-0.1)
Aid efforts of 'peers' (other DAC member donors)	0.389	0.107	-0.185	-0.171	0.483	0.443	0.249	0.323
	(2.8)	(0.7)	(-1.2)	(-1.1)	(3.5)	(3.3)	(1.1)	(1.7)
Rising phase of economic cycle	-0.006	–	–	–	–	–	–	–
	(-3.1)	–	–	–	–	–	–	–
Government size (expenditure/GDP ratio)	–	–	0.013	0.012	–	–	–	–
	–	–	(6.8)	(6.0)	–	–	–	–
Fiscal surplus-GDP ratio	–	-0.010	–	–	–	–	–	–
	–	(-4.2)	–	–	–	–	–	–
Fiscal surplus-government expenditure ratio	–	–	-0.0001	–	–	–	–	–
	–	–	(-0.2)	–	–	–	–	–
Share of subsidies & transfers in government expenditure	–	–	–	-0.0059	–	–	–	–
	–	–	–	(-3.4)	–	–	–	–
Domestic income equality, income share of the poorest 20%	–	–	–	–	0.023	–	–	–
	–	–	–	–	(4.0)	–	–	–
Domestic lack of income equality, Gini coefficient	–	–	–	–	–	-0.008	–	–
	–	–	–	–	–	(-4.7)	–	–
Military expenditure-national income ratio	–	–	–	–	–	–	-0.023	–
	–	–	–	–	–	–	(-1.0)	–
Military personnel-total labour force ratio	–	–	–	–	–	–	–	0.159
	–	–	–	–	–	–	–	(2.2)
No. of observations	217	191	168	159	191	191	77	77
Adjusted R^2	0.812	0.842	0.881	0.892	0.812	0.817	0.882	0.891

Notes: The numbers in parentheses below the parameter estimates are the t-values. A parameter estimate is statistically significant at 1%, 5%, and 10% levels if its t-value is, in absolute sense, not less than 2.6, 2.0, and 1.6, respectively.

Table 4A
Estimates for G7 donors incorporating the domestic polity indicators

Trend line	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	(-2.2)	(-2.3)	(-1.1)	(-2.2)	(-2.8)	(-2.5)	(-2.2)	(-2.4)
Per capita income (log)	0.004	0.005	0.003	0.004	0.005	0.004	0.003	0.004
	(3.8)	(3.9)	(2.3)	(3.0)	(3.8)	(3.1)	(2.4)	(2.9)
Population size (log)	-0.004	-0.004	-0.005	-0.003	-0.003	-0.002	-0.001	-0.002
	(-2.0)	(-2.0)	(-2.0)	(-1.2)	(-1.5)	(-0.9)	(-0.8)	(-0.9)
Aid efforts of 'peers' (other DAC member donors)	0.349	0.336	-0.108	0.339	0.291	0.364	0.412	0.366
	(2.3)	(2.2)	(-0.5)	(2.3)	(2.0)	(2.5)	(2.9)	(2.5)
Index of right-wing Government ideology	-0.0001	–	–	–	–	–	–	–
	(-1.1)	–	–	–	–	–	–	–
Being right-wing government & right-wing legislature	–	-0.00002	–	–	–	–	–	–
	–	(-0.7)	–	–	–	–	–	–
Polarization index (1st type)	–	–	0.0003	–	–	–	–	–
	–	–	(3.1)	–	–	–	–	–
Polarization index (2nd type)	–	–	–	0.0001	–	–	–	–
	–	–	–	(1.2)	–	–	–	–
Checks-and-balances index (1st type)	–	–	–	–	0.0001	–	–	–
	–	–	–	–	(1.6)	–	–	–
Checks-and-balances index (2nd type)	–	–	–	–	–	0.00001	–	–
	–	–	–	–	–	(0.4)	–	–
Government fractionalization index	–	–	–	–	–	–	0.0013	–
	–	–	–	–	–	–	(3.4)	–
Opposition fractionalization index	–	–	–	–	–	–	–	0.0002
	–	–	–	–	–	–	–	(0.3)
No. of observations	158	158	147	150	159	153	153	153
Adjusted R^2	0.816	0.815	0.835	0.819	0.830	0.829	0.844	0.829

Notes: The numbers in parentheses below the parameter estimates are the t-values. A parameter estimate is statistically significant at 1%, 5%, and 10% levels if its t-value is, in absolute sense, not less than 2.6, 2.0, and 1.6, respectively.

4.2   Evaluation of the results

In all cases, judging by the high values of the adjusted R^2, the regression equations exhibit a good fit or explanatory power. Also, in most cases, the parameter estimates are stable both over time and across country, as is apparent from the performance assessment of the specific parameter estimates. We present below an assessment of the performance of the specific explanatory variables.

For all the 22 countries, aid effort does not exhibit a consistent trend over the three decades, when various factors included as regressors in the equations are controlled for, including a post-1990 time variable capturing the marked aid effort decline since the early 1990s. This is because the coefficient of the trend variable is inconsistently signed, alternating between negative and positive signs. On the other hand, the coefficient of the post-1990 dummy variable is negative in every equation where it is included and is statistically significant in most cases. However, the results for the G7 donors are, in some sense, the exact opposite. Aid efforts of the G7 exhibit a consistent downward trend over the last three decades, albeit without the downward trend accelerating in tempo during the 1990s. This interpretation is based on the consistent negative and generally significant coefficient of the trend line in Tables 3A and 4A while coefficients of the post-1990 dummy variable, on balance, are positive, despite the existence of some negative, but statistically insignificant coefficients (see Table 3A). Thus, the decline in aid effort for these largest donors since the early 1990s is just a mere continuation, in even a moderated form, of the severe decline that started some two decades earlier.

For all the 22 donor countries, including the G7 members, there is progressivity in aid effort in the sense that the higher the real income of the donor, the greater the fraction of real income given as aid, suggesting that aid is a 'luxury good' in the state budget. This interpretation is based on the coefficient of real GDP per capita (in logarithms) which is positive and statistically significant in all cases.

There appears to be evidence of 'scale economies' in giving aid. This is because the fraction of income given as aid is found to be inversely related to the size (population) of the donors. In the equations for all 22 donors, the coefficient of population (in logarithms) is negative and statistically significant in almost all cases, except in two equations where positive coefficients are recorded. Exactly the same is also true of the equations for the G7 countries. The rather isolated existence of positively signed coefficients does not substantially diminish the observed general existence of an inverse relationship between aid effort and size and, hence, it is likely that economies of scale exist, as hypothesized earlier.

There is a strong evidence to support our postulated 'peer pressure' effect whereby a particular donor's aid effort is positively influenced by the aid efforts of other donors. The coefficient of this factor is positive and statistically significant in practically all equations, except in 3 out of 16 equations for the G7 group where negative and statistically insignificant coefficients exist. Lagging the factor by a period to cater for any possible circularity (results not reported) does not even seem to appreciably diminish the strength of the results.

Conflicting results emerge in the case of the effect of the phase of economic cycle. While the coefficient of this factor is positive and statistically significant for all 22

donors, it is negative and statistically significant for the G7 group, and the estimates are characterized by instability across different donor country groups.

As hypothesized earlier, it appears that the decision to give more aid is an integral part of a donor government's decision on expenditures, so that higher overall government spending should also lead to higher aid allocations. This is because in the equations for both the 22-donor group and the G7 members, the coefficient of the size of government is positive and highly statistically significant. Thus, the practice of pruning down the size of government that started in many donor countries in the 1980s must have taken its toll in (and contributed to) the observed stagnating (if not declining) aid effort.

The fiscal balance position does not appear to influence aid policy. The coefficient of fiscal surplus relative to the size of government budget (or expenditure) is statistically insignificant. And in the equation where fiscal surplus relative to GDP features as a regressor, its coefficient is negative and statistically significant, against expectation. But this somewhat implausible result is doubtful because its statistical significance disappears if the effect of the share of government expenditure in GDP is included, suggesting that fiscal surplus (defined as revenue minus expenditure) is simply proxying om a donor perspective. So, we hᵃve little—if any—previous theoretical framework or empirical findings to rely on for identifying and testing possible aid effort determinants. We are guided, instead, by economic logic and casual references iin the literature as well as the donor-invented excuse of budgetary constraints for refusing some aid requests—is hardly surprising. Aid, because of its immense importance as a veritable foreign policy tool of donor governments, is not an especially discretionary expenditure item in the budget. The fact that it accounts for only 1.2 per cent of donor governments' total expenditure over the three decades also means that cutting it would not achieve much in terms of balancing the budget. As rightly pointed out by Browne (1999: 36):

> One of the major reasons for declining aid budgets by many of the donors has been related to a general move towards fiscal restraint. … But the budget straitjacket is obviously not the full explanation. Aid is a rather small component of national budgets, which could be protected even when spending is being constrained.

The linkage between domestic 'altruism' or pro-poor government policy and aid effort may or may not be said to be supported by the data, depending on what we employ as a proxy or yardstick for this. If we employ the share of subsidies and transfers in government total expenditure, the conclusion would be that the linkage does not exist, but not if we choose the domestic income distribution pattern. This is because the coefficient of the share of subsidies and other transfers in government expenditure, though positive as expected, is statistically insignificant in the results in Table 3 for all the 22 donors while, contrary to expectation, the coefficient is negative and significant in the results for the G7 group (Table 3A). By contrast, if we take the effect of income distribution pattern, the coefficient of egalitarianism (share of income accruing to the poorest 20 per cent of the population) is positive and statistically significant. Also, the coefficient of the inequality factor (Gini coefficient of income distribution) is negative

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14 The equation where both the fiscal surplus/GDP ratio and government spending/GDP ratio are included simultaneously is not reported here for reason of brevity.

as expected, although it does not pass significance test in the equation for all the 22 countries. Thus, there is evidence linking domestic egalitarianism in income distribution to donor generosity. To the extent that the observed income distribution pattern is an outcome of domestic policies taken by the government, then, one can also establish a positive link between donor governments' concern for the poor locally and generosity in aid-giving.

The posited motive and strategy of military adventurism in giving aid appears to be supported by the results. As expected, the coefficients of the two alternative proxies for this (namely, the share of military expenditure in donor income and the share of military personnel in donor labour force) are positive and statistically significant, except in one equation for the G7 group where the coefficient of military expenditure-income ratio is negative and insignificance.

The typical pro-poor domestic spending phenomenon supposedly characterizing left-wing governments does not appear to translate into higher generosity ratios. The coefficients of the indicator for the extent of donor being right wing (executive or combined executive and legislative arms) are statistically insignificant in the results for the G7 donors and are positive (against expectations) and statistically significant for the 22 donor countries. Thus, not only is it that stable estimates across countries seem to be lacking but the evidence clearly does not support the proposition that right-wing governments are more parsimonious than left-wing ones. Again, as explained earlier, this could be due to the fact that concern for the poor and needy—supposedly an attribute of left-wing governments—is being overshadowed by other objectives in giving aid.

The greater is the number of checks and balances in the political system, the greater is the volume of aid needed to satisfy the resultant, more diverse interests of the implied veto-power holders and, hence, the greater the aid effort. This inference is based on the coefficients of the two alternative indicators of checks and balances that are all positive, with just one missing the statistical significance test in each of the results based on the G7 group and the enlarged 22 donor datasets.

In line with expectation, the existence of polarization and fractionalization within the government is found to have enhanced aid effort while fractionalization within the opposition has the opposite effect. First, the coefficients of the two alternative indicators of polarization are positive and statistically significant, except in the result for G7 donors where one coefficient is insignificant. This means that the higher the difference in orientation among the veto players (executive and parliament) the higher the aid effort, apparently because of the need for more aid to satisfy the different and veto-wielding interests. Similarly, the coefficient of fractionalization within the ruling coalition is both positive and highly statistically significant, suggesting that the higher is the number of parties forming a coalition, the greater the aid effort—again, apparently to satisfy the various interests of the clout-holding members of the coalition. Conversely, the higher the number of parties forming the opposition, i.e., the more fractionalized it is, the easier it seems for the government to ignore the interest of opposition in its aid allocation decision. This inference is based on the coefficient of opposition fractionalization that is negative and statistically significant in the equation for all 22 countries (although insignificance in the equation for G7 group), suggesting that, on balance, it has a negative effect on aid effort.

19

5   Summary and conclusions

This paper is an attempt to assess the evidence on aid effort and its determinants. Aid effort is measured by the generosity ratio, that is, the ratio of aid given relative to donor country GDP. Theoretical literature provides little by way of working hypotheses, and there are only a few existing studies that look at the evidence from the donor point of view. So, in this sense, the paper starts from a *carte blanche* position. Nevertheless, the empirical results that emerge from the analysis are both indicative and interesting.

Notwithstanding some problems in measuring aid, it is evident from our panel data-based study (using statistics for 22 donor countries and over the last three decades) that a broad range of economic and political factors appear to explain the variation in aid effort. There is evidence of progressivity in aid effort in respect of donor income and some evidence of a decline in aid effort relative to donor population size. In addition, a strong and positive 'peer pressure' effect is detected, whereby aid effort by a donor is positively influenced by those of other donors. Also, the relative size of government and military adventurism is positively associated with aid-giving. With respect to the variables capturing features of donor polity, the most significant effects appear to be government polarization and fractionalization, although there is a suggestion that opposition fractionalization has impact as well. At least as interesting are the hypotheses that do not seem to be supported by the panel regression-based evidence, either because the relevant coefficients are insignificant, or significant but with the 'wrong' sign. For instance, there is no evidence of an association between the generosity ratio and domestic pro-poor government spending, or that right-wing governments are more parsimonious than left-wing ones.

Clearly, all these empirical results are heavily conditioned by the data and the way in which we have attempted to define and measure the variables, including the measure of aid itself. The evidence that the controlling time trend variable is often significant suggests that there may be other (probably non-quantifiable) factors that may play an important role in determining aid effort. But the evidence that the movement over time appears to differ between G7 and other donors is also a significant finding.

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