Aid performance and its determinants. A comparison of Italy with the OECD norm *

SIMONE BERTOLI, GIOVANNI ANDREA CORNIA and FRANCESCO MANARESI

1. Introduction: the role of aid in promoting development in Third World countries

The last twenty-five years have witnessed unprecedented economic changes that have markedly affected both the 'demand' and the 'supply' of international aid.[1] To start with, the 'demand for aid' (and for commercial loans provided by the International Financial Institutions) was curtailed by the rapid growth recorded in the countries of East, South East and part of South Asia, i.e. countries that in the 1960s, 1970s and 1980s were major recipients of international aid. Such countries have now emerged as global growth engines, major partners in international trade, a destination of choice for foreign direct investments (FDI), a main source of unskilled and skilled migrants and, in

□Università degli Studi di Firenze, Dipartimento di Scienze Economiche, Firenze (Italy); e-mails: simone.bertoli@unifi.it; giovanniandrea.cornia@unifi.it and manaresi@gmail.com.

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[1] In what follows, the terms 'aid', 'official aid', 'international aid' and foreign aid are used interchangeably with that of Official Development Assistance, that is defined as the public aid outflows with a grant element of at least 25%, aimed primarily at promoting the economic development and human welfare of recipient countries.

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the case of China, an increasingly important provider of foreign aid to Africa and other low income countries. While still sizeable, poverty declined and continues declining rapidly in these countries while their aid dependence has fallen sharply, with the exception of a few least developed countries such as Bangladesh, Kampuchea and Nepal. In most of South America, the election of progressive governments has led to the re-examination of these countries' dependence on multilateral/bilateral loans and grants characterized by strong policy conditionality, with the results that the financing of their imports and debt servicing is now covered by FDI, migrant remittances, exports and – when necessary – the recourse to an ever expanding international capital market. The situation is somewhat different in the smaller and poorer countries of Central America, but in this region too the financing of imports is increasingly being ensured by a steady flow of migrant remittances. In these countries, as well as in the European economies in transition and the middle income economies of Middle East and North Africa, foreign aid is increasingly being sought more for the 'technical assistance' it brings with it and for its role in 'leveraging domestic resources' rather than as a way to fill a 'resource gap'. The situation is obviously different in Sub-Saharan Africa where aid demand remains very high, including for 'general budgetary support' and 'balance of payments assistance': for instance, in Niger foreign aid represented in 2005 no less than 8% of GDP and about 40% of government revenue. While some growth was recorded since 2000 also in this region, and while the regional balance of payments improved thanks to the recent rise of commodity prices and slowly mounting migrant remittances, the imbalance between domestic needs and resources remains and will remain substantial, making the recourse to international aid unavoidable.

The 'supply of aid' has also been affected by recent economic and technological changes. On the one side, the Western civil society is now better informed than before about the survival needs of the poorest people and nations thanks to the intensification of migration, tourist flows and global media reporting. Such improved awareness raises the pressure on Western governments to increase the 'supply of aid' for altruistic reasons. At the same time, on the other side, with continued growth in trade, outsourcing, FDI and migration, many developed countries now attach to foreign aid a supportive – or at least a complementary – role in the pursuit of their commercial, invest-

ment and strategic objectives. Moreover, the Western governments now argue that aid levels have to be set taking into account also the 'concessions' made in the field of trade openness, foreign investments, migrant quotas and so on. In this regard, the trends in key international financial transactions confirm the declining importance of official aid to developing countries and the steady rise of FDI and workers' remittances. Official remittances, which fail to count relevant informal remittances, were estimated $ 200 billion in 2006 and have therefore become the main source of development finance for many Third World countries. Finally, globalization may have decreased the 'supply of aid' to former colonies, while low (real or perceived) 'aid effectiveness' may have reduced popular support for additional aid and increased the sense of aid fatigue.

These arguments, however, conceal more than they reveal. In fact, the distribution of international financial flows is skewed in favour of the emerging economies, and at the expense of the poorest ones. For instance, in 2006 only $ 7 billion of official remittances were received by Sub-Saharan Africa, by far the poorest region on earth, while $ 45 billion went to East Asia, 36 to South Asia, 53 to Latin America, 25 to Middle East and North Africa and 32 to the European economies in transition (World Bank 2006a). An even more lopsided pattern is observed for the regional distribution of FDI, most of which benefit China, the OECD and a few other East Asian countries.

While the surge in migration and commodity prices and the expansion of financial markets tend to depress both the demand and supply of foreign aid as a 'gap filler', a new rationale for providing aid to poor countries is gradually emerging. This has to do with the financing through a few new Global Funds of activities which prevent or offset the effects of global negative externalities such as environmental contamination, SARS, AIDS, international criminal networks and other infectious diseases that – while potentially more harmful in the poorest countries – affect the developed countries as well.

Thus, while aid supply and aid demand have changed substantially over the last twenty years, and while the promotion of development in parts of the developing world should now be pursued mainly through non traditional instruments, for the 1.5 billion people located in Sub-Saharan Africa, parts of South and South-East Asia and Central America international aid will remain for the next two gener-

ations a key tool for generating badly needed resources, alleviating poverty, reducing hunger and promoting growth. Consequently, while its rationale has partly changed, the demand for and the developmental role of aid remain high, as reiterated by the UN-sponsored Monterrey Conference on Development Financing, the UN Millennium Development Assembly of 2000 and the 2002 EU Barcelona Council that set for its members a minimum aid target of 0.33% of Gross National Income (GNI), with the perspective of reaching a minimum of 0.39% in 2006.

However, such new target-setting has been accompanied by a limited fulfillment of old and new aid obligations. The long-standing UN target of 0.7% of GDP continues to be unmet by most members of the Development Assistance Committee[2] (DAC henceforth), while even less ambitious targets – such as the Barcelona's one – remain unachieved by several donor countries (Table 1).

Not all is negative, however, and some countries have improved both the quantity and quality of their foreign aid during the last six years. For instance, the United Kingdom has raised the volume of its aid flows and radically overhauled its aid agency. Similar reforms were carried out recently in Spain. Aid policy is also becoming more consistent with the stated objective of fighting poverty and deprivation. And the DAC objective of aid untying is increasingly being fulfilled in many countries (see later). All this, however, has not happened in Italy, where the quantity and quality of international aid remains unsatisfactory. This issue is explored in the next sections.

2. Aid concepts

Most studies on international aid focus either on its impact, its allocation among poor countries and sectors, or the domestic policies needed to enhance its effectiveness (Burnside and Dollar 2000). As for aid allocation, the dominant opinion is that selectivity is the most effective way to improve the developmental impact of aid, and that

[2] The Development Assistance Committee is the principal body of the OECD that deals with the issue of co-operation with developing countries. At present, the DAC includes 22 countries plus the European Union.

TABLE 1

TOTAL AID ON A NET DISBURSEMENT BASIS AS A PERCENTAGE OF GDP

Countries	1970-79	1980-89	1990-99	2000-04
Australia	0.43	0.38	0.29	0.24
Austria	0.17	0.24	0.31	0.34
Belgium	0.53	0.49	0.40	0.49
Canada	0.46	0.44	0.39	0.26
Denmark	0.55	0.78	1.02	1.02
Finland	0.16	0.43	0.48	0.39
France	0.41	0.54	0.56	0.48
Germany	0.33	0.39	0.41	0.31
Greece	n.a.	n.a.	0.07	0.22
Ireland	0.09	0.17	0.22	0.32
Italy	0.10	0.31	0.25	0.19
Japan	0.23	0.30	0.27	0.23
Luxembourg	n.a.	0.17	0.46	0.74
Netherlands	0.71	0.93	0.83	0.84
New Zealand	0.31	0.25	0.22	0.21
Norway	0.61	0.92	0.94	0.88
Portugal	n.a.	0.09	0.27	0.37
Spain	n.a.	0.09	0.24	0.24
Sweden	0.71	0.82	0.82	0.83
Switzerland	0.18	0.29	0.39	0.41
United Kingdom	0.43	0.33	0.31	0.37
United States	0.24	0.21	0.16	0.15
Average	0.37	0.41	0.42	0.43

Source: authors' elaboration on OECD DAC data.

assistance should be granted only to countries that have already in place sound policies. The alternative would be to make the granting of aid conditional to the implementation of adequate policies. Aid selectivity has been supported by Easterly (2001) and Collier and Dollar (2002). A second stream of the literature assesses the extent to which aid is determined by 'altruistic' or 'strategic' considerations. Alesina and Dollar (2002) show that aid allocations are driven by strategic considerations (such as political orientation, colonial past and voting pattern in the UN General Assembly). Marchesi and Missale (2004)

find that the Highly Indebted Poor Countries (HIPCs) receive aid precisely because of their high indebtedness, as donors rely on foreign aid as a defensive instrument to reduce the risk of default of recipient countries; finally, prior to the fall of the Berlin Wall, aid effort and – to a lesser extent – allocation choices by DAC countries were influenced by the military expenditure of the Warsaw Pact countries (Boschini and Olofsgård 2007).

A third family of analyses focuses on the determinants of the 'supply of aid' (or 'aid effort') in donor countries. To the best of our knowledge, only two studies have dealt with this topic. Round and Odedokun (2004) examined the determinants of 'aid supply' over 1970-2000, and find that this is favorably affected by the per capita GDP of the donor countries, peer pressure (i.e. the aid commitments of other donors) and government and military expenditures. Faini (2006) tests a model with fewer variables over 1980-2000, and he finds a negative impact of the budget deficit and the public debt on the aid to GDP ratio, suggesting that over the long term expansionary fiscal policies hamper rather than increase aid flows.

Our study belongs to the latter research stream. Hereafter, the main concepts of 'aid supply' are reviewed together with its main determinants. In its simplest form, 'aid supply' can be defined as the aid to GDP ratio. A first dilemma arises immediately: should aid be considered on a commitment or net disbursement basis? Much depends, of course, on the extent of the 'arrears' and the delays with which aid commitments are disbursed. In this regard, table 2 shows that – even in the most recent period – arrears, defined as the difference between commitments and actual disbursements, can account for well over 10% of commitments. Interestingly, countries with a high level of aid over GDP (the Scandinavian and the Netherlands) as well as those that increased aid effort since the early 2000s (such as the UK and Luxembourg) reported low or negative arrears, while countries with low-medium aid to GDP ratios, such as Italy, Germany and Japan, exhibit considerable arrears. As there can be considerable differences between commitments and disbursements, it is safer to adopt *aid on a net disbursement basis* as the relevant concept of 'aid effort'. In this regard, during the entire period (1970-2004) Italian disbursements have never been in line with commitments. This is a negative record shared with Germany, Japan, the United States and, to a lesser extent, Canada.

TABLE 2

ARREARS AS A PERCENTAGE OF AID COMMITMENTS

Countries	1970-79	1980-89	1990-99	2000-04
Australia	5.3	3.8	2.9	1.4
Austria	14.8	22.9	23.5	-0.5
Belgium	20.8	0.1	-5.0	2.8
Canada	21.6	16.2	2.1	12.1
Denmark	18.5	6.5	-5.2	0.2
Finland	26.2	19.3	-1.1	12.5
France	45.0	15.5	0.7	15.5
Germany	31.4	24.4	6.4	19.1
Greece	n.a.	n.a.	-0.3	0.2
Ireland	0.0	0.0	-5.6	-0.1
Italy	35.7	37.6	6.5	15.9
Japan	33.2	24.2	32.0	33.9
Luxembourg	n.a.	n.a.	-4.0	-1.8
Netherlands	23.8	8.2	-1.2	-5.3
New Zealand	6.2	-4.5	-1.9	7.6
Norway	12.9	-4.5	-12.3	-1.1
Portugal	n.a.	41.8	-34.6	5.9
Spain	n.a.	n.a.	-0.3	9.7
Sweden	17.1	-6.8	-1.0	-10.7
Switzerland	19.8	8.3	-0.8	2.7
United Kingdom	20.6	10.8	0.6	2.7
United States	22.3	9.1	17.3	20.7
Average	20.8	12.3	0.8	6.5

Source: authors' elaboration on OECD DAC data.

An even more precise measure of aid effort is given by *aid disbursement net of debt cancellations over GDP*, which measures the true outflow of development finance to developing countries, as most or all of the debt cancelled had not been serviced for years and basically had no real value. As shown in table 3, in most donors countries this more accurate measure of aid is much lower than that reported in table 1, particularly for the last 15 years. The reduction in the aid to GDP due to the subtraction of debt relief is particularly prominent for European countries such as Austria, Belgium, France,

and Italy. During 2000-04, the Italian aid effort net of debt forgiveness was a puny 0.16% of GDP, and only the USA recorded a worse performance.

TABLE 3

TOTAL AID NET OF DEBT CANCELLATION AS A PERCENTAGE OF GDP

Countries	1970-79	1980-89	1990-99	2000-04
Australia	0.43	0.38	0.29	0.24
Austria	0.17	0.24	0.30	0.29
Belgium	0.53	0.49	0.38	0.40
Canada	0.46	0.44	0.37	0.25
Denmark	0.52	0.75	1.00	1.02
Finland	0.14	0.42	0.46	0.39
France	0.40	0.53	0.48	0.41
Germany	0.32	0.37	0.39	0.28
Greece	n.a.	n.a.	0.07	0.22
Ireland	0.09	0.17	0.22	0.32
Italy	0.10	0.30	0.24	0.16
Japan	0.23	0.30	0.26	0.22
Luxembourg	n.a.	0.17	0.46	0.74
Netherlands	0.66	0.91	0.79	0.79
New Zealand	0.31	0.25	0.22	0.21
Norway	0.61	0.92	0.92	0.88
Portugal	n.a.	0.09	0.24	0.34
Spain	n.a.	0.09	0.23	0.22
Sweden	0.67	0.81	0.82	0.82
Switzerland	0.16	0.29	0.37	0.41
United Kingdom	0.42	0.32	0.30	0.35
United States	0.24	0.21	0.15	0.15
Average	0.36	0.40	0.41	0.41

Source: authors' elaboration on OECD DAC data.

The intrinsic value of aid and its global development impact depend also on the *share allocated to low income developing countries* (i.e. countries where resources are scarce and poverty widespread) in relation to the share allocated to middle income developing countries. In the first case, developmental and humanitarian objectives are likely to dominate, entailing that the impact of aid could *a priori* be

the greatest, while in the latter case strategic and commercial considerations may prevail, as suggested, for instance, by the allocation of a large part of the US aid to Egypt, Israel and Jordan. In addition, as the current debate on policy coherence suggests, in middle-income countries the goals of combating poverty, reducing inequality, guaranteeing access to global commons, protecting the environment, and so on, can be achieved through FDI and trade concessions. In contrast, aid remains fundamental in low-income countries where there is little scope for commercial opportunities. In this regard, it is interesting to note that in many DAC countries aid to low-income countries represents at the moment only little more than half the total aid allocations (Table 4). On average, over the last 15 years, aid to low-income developing countries has been 0.23% of GDP, as against 0.40% for the total. The decline of the share of total aid directed to the low income developing countries since 1990 is partly explained by the fall of the communist regimes and the transition crisis, which entailed a redirection of aid flows to the Eastern European and former Soviet countries.

As a result, aid to medium income developing countries rose from below 20% of the total during the pre-1990 period to 30% in the 1990-99 period, to decrease to 27.3% after 2000. At the same time, there was an increase in aid that was allocated to the so-called more-advanced countries and territories, i.e. countries with a GNI per capita higher than $ 9,360, or that was assigned to the new global programmes mentioned above.

Another factor contributing to aid effectiveness is the degree to which bilateral aid is *tied*, *untied*, or *partially tied*. Indeed, several studies have shown that aid tying can strongly reduce its development impact (see Jepma 1991 for a review of the literature on this topic).

In this regard, during the last five years there was a general reduction in aid tying following the 2001 commitment of DAC countries in this respect. But also in this area, Italy recorded the worst performance (Table 5). Indeed, over 2000-04 about 50% of its bilateral aid was still tied or partially tied, with a reduction of only 7% with respect to its 1990-99 level, while Belgium, Norway and the UK managed to reduce the share of tied and partially tied aid by more than 90%.

Another important aspect of 'aid supply' concerns its *predictability*, as national authorities and non-governmental organiza-

TABLE 4

AID TO LOW-INCOME COUNTRIES, PERCENTAGE OF TOTAL AID

Countries	1970-79	1980-89	1990-99	2000-04
Australia	84.2	73.5	64.3	62.9
Austria	56.1	40.9	33.2	34.8
Belgium	81.0	72.3	49.1	52.7
Canada	75.9	64.8	49.1	46.4
Denmark	83.0	83.8	66.1	61.2
Finland	88.8	79.4	57.5	47.7
France	9.1	52.3	44.5	38.8
Germany	58.7	56.7	37.7	44.2
Greece	n.a.	n.a.	30.0	22.4
Ireland	79.2	73.9	60.6	66.7
Italy	78.7	72.1	49.2	50.0
Japan	51.3	53.8	46.6	54.5
Luxembourg	n.a.	62.7	53.4	55.8
Netherlands	58.6	63.4	50.4	51.0
New Zealand	37.7	35.3	45.2	56.0
Norway	87.9	80.8	64.7	59.1
Portugal	n.a.	56.2	73.6	73.1
Spain	n.a.	40.7	30.6	38.9
Sweden	83.6	75.4	56.6	48.8
Switzerland	77.2	66.6	55.1	49.5
United Kingdom	73.7	70.3	52.4	53.2
United States	52.2	41.1	34.8	37.3

Source: authors' elaboration on OECD DAC data.

tions (NGOs) in charge of programme delivery in developing countries can safely plan service expansion, certain they can count for several years on a steady flow of resources. Volatile aid flows, in contrast, may damage the recipient economies due to boom-bust aid and programme delivery cycles and aid-induced Dutch Disease problems (Prati and Tressel 2006). We define aid volatility in year t as the coefficient of variation, CV_t, of aid over GDP over a three-year window.[3]

[3] Formally, for each year t, we calculated $CV_t = \frac{1}{\bar{x}_t}\left\{\left[\sum_{i=t-2}^{t}\frac{(x_i-\bar{x}_t)^2}{3}\right]\right\}^{\frac{1}{2}}$, where $\bar{x}_t = \sum_{i=t-2}^{t}\frac{x_i}{3}$.

TABLE 5

TIED AND PARTIALLY TIED AID
AS A PERCENTAGE OF TOTAL BILATERAL COMMITMENTS

Countries	1980-89	1990-99	2000-04	Percent change 1990s-2000s
Australia	45.8	39.3	12.3	-68.7
Austria	94.5	42.4	26.1	-38.6
Belgium	63.9	50.9	4.2	-91.7
Canada	63.9	46.4	35.7	-23.1
Denmark	34.8	26.4	13.2	-50.0
Finland	42.6	35.1	7.8	-77.8
France	54.9	39.4	9.9	-74.7
Germany	37.1	34.2	4.9	-85.7
Greece	n.a.	66.4	46.9	-29.3
Ireland	29.8	n.a.	n.a.	n.a.
Italy	68.8	54.5	50.6	-7.1
Japan	42.2	10.7	8.9	-17.2
Luxembourg	n.a.	10.0	1.9	-80.8
Netherlands	45.3	21.1	7.1	-66.3
New Zealand	46.6	n.a.	11.6	n.a.
Norway	28.8	15.1	0.7	-95.4
Portugal	n.a.	18.5	7.1	-61.6
Spain	n.a.	51.4	31.1	-39.4
Sweden	23.7	15.1	6.6	-56.3
Switzerland	32.9	13.8	3.6	-74.0
United Kingdom	73.0	35.8	3.0	-91.6
United States	60.9	41.5	n.a.	n.a.
Average	49.4	33.4	14.7	-56.1

Source: authors' elaboration on OECD DAC data.

This indicator is superior to the standard deviation of aid and to the coefficient of variation of aid around the sample mean. According to the measure proposed, a steady increase in the aid to GDP ratio does not raise unpredictability in the receiving countries (which would count on a steady increase in aid flows), though this would be the case if the other two measures were used. According to this indicator,

the countries with the most predictable aid are Denmark, France, the Netherlands and Canada, while those with the least predictable aid are Portugal, Austria, Spain and Italy (Table 6).

TABLE 6

AID VOLATILITY: AVERAGE COEFFICIENT OF VARIATION AROUND A THREE-YEAR MOBILE AVERAGE

Country	1970-79	1980-89	1990-99	2000-04	1970-2004 avg.
Australia	0.13	0.11	0.05	0.03	0.08
Austria	0.21	0.20	0.13	0.11	0.17
Belgium	0.07	0.06	0.08	0.12	0.08
Canada	0.06	0.04	0.06	0.07	0.06
Denmark	0.07	0.03	0.03	0.06	0.05
Finland	0.10	0.10	0.10	0.03	0.09
France	0.04	0.05	0.05	0.05	0.05
Germany	0.07	0.04	0.09	0.02	0.06
Greece	n.a.	n.a.	0.04	0.11	0.06
Ireland	0.21	0.13	0.10	0.07	0.14
Italy	0.20	0.16	0.15	0.06	0.15
Japan	0.07	0.07	0.07	0.07	0.07
Luxembourg	n.a.	0.12	0.11	0.05	0.10
Netherlands	0.08	0.05	0.03	0.05	0.05
New Zealand	0.13	0.05	0.06	0.03	0.07
Norway	0.11	0.05	0.04	0.06	0.07
Portugal	n.a.	0.32	0.12	0.12	0.20
Spain	n.a.	0.24	0.11	0.09	0.16
Sweden	0.10	0.06	0.07	0.05	0.07
Switzerland	0.13	0.05	0.07	0.05	0.08
United Kingdom	0.06	0.08	0.04	0.07	0.06
United States	0.10	0.09	0.11	0.06	0.10

Source: authors' elaboration on OECD DAC data.

3. Determinants of aid effort: a review of competing theories

What factors explain aid effort from a theoretical perspective? The following five families of variables can be retained.

3.1. *Structural characteristics of donor countries*

The ratio of aid over GDP can be expected to increase with per capita GDP-PPP (aid would therefore be a 'superior good', the demand of which rises in parallel with income per capita) and with the share of GDP assigned to domestic tax-funded social transfers, a proxy of domestic solidarity that may influence the attitude towards international redistribution. In contrast, the aid to GDP ratio is expected to decline when income inequality rises, as less egalitarian societies may have a low preference for equity, and be therefore unwilling to redistribute nationally and internationally a sizeable share of their GDP (Mosley 1985). Schweinberger and Lahiri (2006) offer an alternative theoretical explanation of the inverse relationship between income inequality and the public provision of foreign aid. In their model, the levels of private and official aid represent the outcome of a simultaneous game played between the government and the donor households, in which a more unequal income distribution determines a reduction in public aid effort that is only in part compensated by an increase in private aid.

In addition, as suggested in Round and Odedokun (2004), the aid to GDP ratio may fall when the size of the population of the donor country rises as there might be 'economies of scale' in aid giving. A first argument in support of such hypothesis is that the effectiveness of $ 2 billion of aid provided by a single donor is greater than that of two $ 1 billion grants provided by two different donors, as administrative, transaction and coordination costs may be lower in the first case. A second argument is that an increase in population size is likely to be associated with greater population heterogeneity, loss of social cohesion and – *ceteris paribus* – declining willingness to redistribute. This hypothesis finds some support in the fact that, within the DAC, the small countries – such as the Nordics – are more homogeneous and cohesive and have for long maintained an altruistic and progressive attitude towards foreign aid. In all these respects (GDP per capita, social transfers, income inequality and population size), Italy has fared and fares quite well and this would make one predict, *ceteris paribus*, a stronger aid to GDP performance than the actual one. It is worth noting, however, that other theoretical models predict the opposite effect. For instance, if aid is considered a 'global public

good'[4] characterized by non-rivalry and non-exclusion in consumption, the small countries may have an incentive to free-ride (by providing less aid) as they would be less affected at the margin by an overall under provision of global aid.[5]

3.2. *Historical factors*

Colonial powers such as France, UK, Portugal and Spain have traditionally been important providers of aid to their former low income colonies (Round and Odedokun 2004). The influence of this factor on the aid to GDP ratio could be captured for instance by the population size of former colonies with a current GDP per capita lower than $ 2,000 in purchasing power parity terms at 1995 prices. The type of colonization may also be an important factor, as former colonial powers such as the UK placed less importance on preserving a 'special relation' with their former subjects than, for instance, France which actively promotes the 'francophonie' through foreign aid. Yet, as argued in the introduction, globalization may have loosened such historical ties. In addition, it is important to separate the effect of former colonial ties on the 'aid level' from that on 'aid allocation', as historical factors may be expected to play a role in aid allocation (Alesina and Dollar 2002 and Gates and Hoeffler 2004) but not in the overall budgetary efforts. Indeed, top aid givers such as the Nordics lack a significant colonial history and – at least in this case – the impact on the aid to GDP ratio of proxies of past colonial linkages would be expected to be negative.[6]

Other major historical factors, such as the collapse of the Communist Bloc, socialist aid and competition in the Third World are likely to have reduced the incentives to provide foreign aid for strategic and/or security reasons, while 9/11 might have, instead, shifted

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[4] See the pioneering work of Olson and Zeckhauser (1966) extended later on by Dudley (1977).

[5] The model developed by Schweinberger and Lahiri (2006) has been used to analyze the possible effect of different population sizes on the level of aid. The resulting level of aid per capita is found to be negatively correlated with the donor's population.

[6] One could argue that aid giving is indeed a substitute for colonial history, as it allows donor countries to strengthen those ties with developing countries that other donors have inherited from their colonial past.

donor resources towards 'security' and away from 'development and Millennium Development Goals'.

3.3. *Macroeconomic conditions*

Countries with large budget deficits relative to their GDP (particularly if they are subject to the Growth and Stability Pact), high past and current levels of the public debt, a negative or weak trade balance (especially in the 1960s and 1970s when the 'forex gap' and a low level of foreign currency reserves/GDP acted as a constraint to the disbursement of aid in hard currency) and low government spending may be expected – *ceteris paribus* – to face greater difficulties in setting aside an adequate amount of foreign aid because of strong pressures to reduce deficits and public debt and preserve scarce foreign currency (the theoretical models on the relationship between budget deficit, public debt and aid giving are discussed in Mosley 1985 and Faini 2006). This may be the case of Italy and other highly indebted countries, or of countries with a chronic deficit in their balance of payments.

Similar considerations can be made for countries that – regardless of the level of public spending – face competing claims on public resources because of high expenditures on debt servicing, public investments and the military sector. Yet, a large military expenditure may be seen as complementary to aid allocations inspired by geopolitical and strategic factors. For instance, Boschini and Olofsgård (2007) find a positive relationship between military expenditures and the aid volume of DAC countries, arguing that aid was used as a strategic instrument during the Cold War period. Thus, here too there is a problem of identification of the true relation (as the intentions of donors are obviously not made explicit) and the empirical results could be ambiguous. Also, it could be argued that – given the small volume of aid relative to GDP – it is the overall level of public expenditure, rather than its allocation among different expenditure chapters, that influences the volume of aid. Finally, a large output gap (the difference between the actual and the maximum achievable level of output) may also have a depressing effect on aid allocations.

3.4. *Institutional features of aid giving and donor governments' political orientation*

Countries where aid is provided by an 'independent aid agency' may be less exposed to the whims of political-electoral cycles and thus exhibit higher and more stable aid to GDP ratios than countries where aid decisions are taken by the foreign affairs ministry or the prime minister's office, i.e. institutions exposed to conflicting demands for funds. The aid agencies could in fact be modeled as cohesive lobbies with a clear mission and aid targets, a strong self-interest in sustaining aid allocations, and greater capacity to implement effectively aid programmes and act independently from the donors' and recipients' lobbies, generating in this way greater development and political returns on each aid dollar. In addition, as argued by Isernia (1997), independent aid agencies tend to show greater leadership in deciding which developing countries need aid, and in elaborating meaningful development projects to propose to the recipient countries.

The strength and size of the 'independent national NGOs' with capacity to collect funds from the civil society and limited funding dependence on the government[7] can affect favourably overall aid to GDP levels. By playing the role of collective conscience and watchdog of national aid commitments, large NGOs and a progressive media with an interest in poverty and development issues (both of which are absent in Italy) may help focusing public attention on the development challenge, and the need to raise public aid allocations and to monitor the effectiveness of the programmes implemented. In particular, it is plausible to assume that large, self-funded NGOs play an important role in monitoring the correct and timely disbursement of aid allocations and the quality of the programmes and projects selected (both of which are main problems in the case of Italian aid). In addition, the large NGOs operate in many countries and their role could be subsumed as one of aid multinationals with important spillover effects on the mobilization of aid.[8]

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[7] Most Italian NGOs depend for an important part of their financing on the Development Cooperation Directorate of Foreign Affairs Ministry.

[8] The classical study of Mosley (1985) considered the discrepancies between the donor population's desired level of aid and the perception of the actual level provided by the government, arguing that while the population lobbies in favour of its de-

The political orientation of governments (social-democrat vs. libertarian-conservative) may also play a role in determining aid levels (Round and Odedokun 2004 and Faini 2006), though this does not seem at first glance to have been the case in Italy. In fact, the relation between political orientation and aid flows is rather ambiguous, as conservative governments may allocate more aid to promote national commercial interests, while progressive governments may provide a similar amount of aid for altruistic reasons. It is therefore impossible to disentangle econometrically these two effects on the basis of aggregate aid data. In addition, an independent aid agency may be able to preserve an appropriate aid level and allocation regardless of the political orientation and aid preferences of the newly elected government.

Other political factors such as a prominent international role – e.g. membership in the UN Security Council or Board of key multilateral agencies – may also play a role, though the evidence in this regard seems rather limited. In turn, as suggested also by Round and Odedokun (2004), 'peer-effects' – such as a formal pledge to increase aid by neighbouring, reference or competing countries – might have a visible influence in determining aid allocations for reasons of prestige, competition and emulation. This hypothesis may be weakened, however, by the fact that several important donors (the US, Japan and until recently Germany) have not played a leadership role within the international aid community. In the Italian case, it can be surmised that the aid policies and performance of France, Germany and the UK may be of particular relevance in determining – *ceteris paribus* – the level of aid over GDP. In this respect, the recent pledge of these three countries to reach the UN aid target in a few years may affect the level of the future Italian aid allocations.

3.5. *Alternative versus complementary sources of foreign finance*

As noted in the introduction, the perceived and actual role of aid as a source of development finance has changed considerably over the

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sired aid level, the government can try to persuade the electorate, even by providing false information, that the quantity and quality of aid it provides is *sufficient*. Whenever this principal-agent problem is dominant in donor's societies, an independent aid agency would facilitate the provision of factual information to the population, since it may be in its interest to make the government provide *more* aid.

last few decades. In this regard, it could be argued that the level of official aid might be influenced by the flow of other resources to the developing countries as a whole or to groups thereof (e.g. Sub-Saharan Africa). Indeed, bilateral or multilateral aid is just one of several different ways through which developing countries can secure hard currency to finance their development. In fact, aid policies and aid provision can be – and often are – influenced by the amount of other financial flows received by developing countries in the form of private aid, multilateral or bank loans, portfolio flows, FDI, export proceeds (which depend on trade openness in commercial partners) and migrants' remittances. Overall aid flows may have thus become less relevant for those developing countries (including some that still have a low level of income per capita) that were able to secure an adequate amount of foreign currency from other sources.

A first alternative source of hard currency in developing countries is *private aid*. Thus, one could surmise that countries with high private aid to GDP ratios allocate fewer resources to Official Development Assistance, and that public aid plays a subsidiary role to private aid in achieving an overall national aid target, leading in this way to a 'substitution effect' between private and public aid. Yet, the opposite could also be true, as the same factors that generate high levels of private aid might raise public aid allocations. Both such hypotheses are, however, difficult to test because recorded private aid flows are generally quite small and grossly under-recorded.[9] OECD (2000, p. 30) defines NGO grants as

> "expenditures by national NGOs on development assistance and relief, together with any additional contributions in kind, made to developing countries, multilateral organizations, or international NGOs"

net of the support received from governmental institutions, but such a definition suffers from severe conceptual and recording prob-

[9] The theoretical reference here is Schweinberger and Lahiri (2006) who developed a model in which altruistic households in the donor country want to "consume" foreign aid, being it public or private. In this sense, as public aid is compulsorily collected through taxation, they adjust their private aid consumption in order to maximize their utility. However, their model assumes perfect information. To the extent that donor's population is not well informed of the level and quality of official development assistance provided by its government, private aid will be obviously less correlated with public one. On this, see also Hayashi (2002) and Chong and Gradstein (2006).

lems.[10] As shown in table 7, private aid flows are usually less than 0.1% of GDP, with the noticeable exception of Ireland over 2000-04. Among the most virtuous private donors one finds Norway, Switzerland, Ireland and the United States. During the recent period, grants

TABLE 7

PRIVATE AID FLOWS AS A PERCENTAGE OF GDP

Countries	1970-79	1980-89	1990-99	2000-04
Australia	0.033	0.020	0.025	0.061
Austria	0.024	0.022	0.028	0.034
Belgium	0.035	0.020	0.020	0.049
Canada	0.047	0.043	0.041	0.044
Denmark	0.016	0.020	0.025	0.014
Finland	0.013	0.027	0.008	0.008
France	0.004	0.010	0.011	n.a.
Germany	0.042	0.052	0.049	0.045
Greece	n.a.	n.a.	n.a.	0.004
Ireland	n.a.	0.054	0.057	0.122
Italy	0.002	0.002	0.003	0.002
Japan	0.002	0.004	0.005	0.006
Luxembourg	n.a.	0.000	0.031	0.021
Netherlands	0.032	0.072	0.077	0.070
New Zealand	0.039	0.026	0.027	0.027
Norway	0.048	0.065	0.090	0.084
Portugal	n.a.	0.001	0.001	0.002
Spain	n.a.	0.001	0.016	n.a.
Sweden	0.052	0.061	0.035	0.009
Switzerland	0.053	0.050	0.052	0.082
United Kingdom	0.025	0.028	0.037	0.024
United States	0.048	0.039	0.046	0.083
Average	0.030	0.029	0.032	0.040

Source: authors' elaboration on OECD DAC data.

[10] The problems of under-reporting can be of two types: first, flows are difficult to track, and this is particularly true when the NGO sector is highly fragmented and 'informal'. Second, financial flows are a poor measure of the actual flow of resources, since many members of NGOs work on a voluntary basis or are paid considerably less than the market value of their services (communication of Mr Y. Ahmad, DAC Directorate, Paris, 16 May, 2007).

from US NGOs exceeded $ 3 billion a year, making the country the largest private donor in the DAC, and in 2004 they reached $ 10.4 billion or 49% of total public aid.

Italian private aid flows, in contrast, are the lowest among all DAC countries (0.002% of GDP over 2000-04). This is puzzling, as the Italian aid system is characterized by a high-density network of small and medium religious and lay NGOs. However, the DAC data on Italy may not be far from the truth, and their low level may only reflect a highly fragmented NGO system, its high dependency on public funds and the limited fundraising capacity of a highly 'decentralized co-operation system'. However, to nuance this negative picture, it must also be noted that under-reporting problems may be particularly intense in Italy, as the atomization of the NGOs system increases the difficulties faced by the government in assessing private aid flows. In addition, it is likely that a myriad minuscule aid flows channeled by parishes and other Catholic organizations escape entirely official registration.

In spite of all this, the joint examination of tables 1 and 7 suggests it is unlikely that in Italy and the majority of DAC countries private aid can be considered a valid substitute of Official Development Assistance. Even in the USA and Ireland, i.e. donors with a strong private philanthropic tradition, the 2000-04 private aid flows ranged between 0.08 and 0.1% of GDP.[11] Second, with the rare exceptions just mentioned, private aid flows correlate positively with public aid flows, suggesting that public and private morality in this area reinforce each other. Only Sweden, Luxemburg and Finland show a correlation coefficient between private and public aid flows of less than 0.55.

Debt cancellation may also be seen as a substitute of aid flows (net of debt cancellation). Indeed, this argument is often mentioned in some aid organization, though it is generally accepted that the impact of 'fresh aid' is far greater than that of debt cancellation, as the debt was not being serviced or reimbursed (Cohen 1996). *Foreign loans* are often seen as a substitute of aid flows (especially in middle income developing countries) and there is evidence that such substitution has taken place in some of these countries, especially in Latin America. The relation between FDI to developing countries and pub-

[11] The creation of new huge US private foundations may, however, change in the future the nature of aid flows to developing countries.

lic aid is unclear and probably not significant.[12] The literature (e.g. Kimura and Todo 2007, Karakaplan, Neyapti and Sayek 2005) suggests that there might be a complementary relationship between aid and FDI, with the former acting as a vanguard of the latter. However, this effect could play a role in the allocation of aid, favouring those recipient countries where the donor is planning to invest, rather than raising its total volume. One could instead expect a relation of substitutability with the aggregate outflow of FDI to developing countries, as a better access to private capital markets could lower the donors' incentives to allocate aid funds to these countries.

Trade concessions (measured for instance by the volume of competing imports from developing countries – e.g. imports of agricultural, textile and other low tech goods, or the lowering of tariffs on such goods) could also be seen as a substitute of foreign aid. Several authors (e.g. Elbadawi 1999 and Adam and O'Connell 2004) have argued that trade liberalization has a stronger development potential than foreign assistance. If this is so, there is a case for granting free access to the donors' markets while using resources previously directed to development assistance for compensating the domestic producers who have been penalized by trade liberalization (Browne 1999). However, in low income countries with a limited export capacity due to infrastructural and other bottlenecks, trade concessions cannot be seen as a substitute of foreign aid. Just the opposite. In such cases, 'aid-for-trade' may likely be needed to improve the future trade earnings of backward developing countries (Hoekman and Prowse 2005). In this case, the short term relation between aid-and-trade would be one of complementarity, while in the long term it might be one of substitution.

Finally, *openness to migration* originating in developing countries might also be considered an effective substitute of aid allocations. Kapur (2005) argues that the slogan 'migration not aid' could well replace the older 'trade not aid' in negotiations between developed and developing countries, given the increasing relevance of remittances in the balance of payments of many of the latter. Alternatively, Schiff (1994) argues from a political economic perspective that foreign aid may increase migration as, by increasing poor people's income, it may help them finance the high costs of international mi-

[12] Testing of such hypothesis is problematic as the outward FDI data are not disaggregated by country of destination.

gration. This could be particularly true, if the quantity and quality of aid inflow is not enough to increase employment and income-earning opportunities in the countries of origin.

Openness to migration could be proxied by an estimate of remittances over GDP originating from each donor. Yet, in the balance of payments, remittances are not disaggregated by countries of destination, and there is a risk that evidence of increasing remittances to middle-income developing countries may be used to reduce aid flows to low income ones. Alternatively, openness to migration could be more directly proxied by the stock of immigrants over the resident population. Yet, a large presence of migrant workers could lead – or be perceived to lead – to an increase in social expenditures in favour of the migrants, with the effect of depressing budgetary allocations to foreign aid.

4. An econometric model of the determinants of aid performance

The model presented hereafter aims at estimating the impact of many of the factors discussed above on the level of aid supply in DAC countries.

4.1. *Dependent variable*

In this study, the dependent variable ('aid supply' or 'aid effort') is proxied by net aid disbursements over GDP, as this ratio measures most appropriately the true aid effort. Aid comprises bilateral or multilateral concessional flows (i.e. with a grant element of at least 25%) allocated by state agencies for the promotion of economic and human development in developing countries. It includes the official assistance directed to countries in transition from socialism to capitalism. Aid data originate from DAC table 1 (www.oecd.org/stats). It was decided not to use aid commitments as these would reward donors "for over-promising aid or systematically underestimating" the absorptive capacity of aid recipients (Roodman 2007a, p. 4). Furthermore, we excluded debt relief from the definition of aid, as debt cancellation does not give rise to an actual disbursement of funds, and

may even imply a double-counting of aid if the debt that is canceled was granted on a concessional basis.

As suggested in section 2, an alternative and possibly more accurate measure of 'aid effort' is 'aid to low income developing countries (LDC)'. Information on bilateral aid flows by the level of income recipient countries is taken from the DAC table 2a (www.oecd.org/stats). Moreover, all multilateral aid provided by each donor to the United Nations agencies or to the International Development Agency (IDA) of the World Bank was conventionally assigned to the low income countries. Finally, the allocations of aid channeled through the European Commission (EC) requires some caution, as the EC assigns to bilateral aid only part of the resources received from its member countries, while the rest is allocated to multilateral aid agencies. Furthermore, only part of the bilateral aid channeled via the EC is directed to low income countries. Luckily, information provided by the EC itself permits to solve this problem.[13] As a result, each donor's aid to low income developing countries is defined as the sum of 'Bilateral Aid to LDCs', 'Multilateral Aid' and the 'Multilateral Aid allocated by each donor to the European Community', with this latter term multiplied for the share of total aid allocated by the EC to LDCs and to multilateral agencies. However, as this variable correlates closely with the aid to GDP ratio (the average country correlation coefficient is 0.89), it has not been used in the subsequent empirical analysis.

4.2. *Explanatory variables*

Among the possible determinants of 'aid effort', the following ones were retained in our model. They are presented following the subdivision adopted in section 3:

[13] The EC provides information on commitments, and gross and net disbursements, as well as the share of aid directed to low income developing countries. We first analyzed the extent to which total gross flows from DAC countries to EC correlate with EC gross disbursements. Results of the panel regression for all the DAC countries showed that gross disbursements are highly correlated (overall $R^2 > 0.98$) to total DAC countries' disbursements. We, then, assumed that the share of aid directed to developing countries within EC bilateral disbursements and the share of multilateral aid within EC total disbursements is constant across all EC donors and over time. Details of the panel analysis are available from the authors upon request.

i) Structural variables: *real income per capita* is measured by the logarithm of real GDP per capita in PPP terms.[14] *Income Inequality* is proxied by the Gini coefficients of the distribution of gross income taken from the Globalization-Health Nexus Database 2007 (Cornia, Rosignoli and Tiberti 2007) that relies mainly on the World Income Inequality Database 2005 published in June 2005 by the WIDER. The original average five-year observations from Cornia, Rosignoli and Tiberti (2007) were interpolated to obtain yearly Gini estimates; *population size* is the logarithm of the population of DAC countries taken from World Bank (2006b). The extent of *government intervention and redistribution* is proxied by the ratio of government receipts on GDP taken from the OECD *Economic Outlook* (www.oecd.org/stats), as in the DAC countries a high (and generally progressive) taxation has been shown to give rise to redistributive public expenditures that considerably reduce the degree of polarization of the distribution of disposable income in relation to that of market income.

ii) Historical factors: *Colonial history:* information on past colonial history of donor countries comes from several publications and websites. The variable used in the model is the logarithm of the population of former colonies that have a per capita GNI (measured with the Atlas method) of less than $ 2,000.

iii) Macroeconomic determinants: the *fiscal balance* is proxied by the budget deficit over GDP and the level of public debt (net of public financial assets)[15] over GDP taken from various issues of the OECD *Economic Outlook*. The time series on fiscal deficit and public debt were also interacted with a dummy variable that signals a *violation of the Growth and Stability Pact* (i.e. a deficit and a public debt in excess of 3% and 60% of GDP respectively) signed by EU countries. Such dummy is used also for non-signatory countries, to test for a differential impact on aid of large fiscal imbalances. The construction of these two alternative dummies is meant to correct the informational limitations of the budget deficit and public debt variables, as these measure the fiscal position and not the fiscal stance. *Trade balance over GDP* and the *output gap* are derived from the

[14] Heston, Summers and Aten (2006).

[15] Because of data limitations, we employed gross financial liabilities for Greece, Luxembourg and Portugal. To cover missing data, we integrated OECD series with data from the IMF IFS for Finland, Italy, New Zealand, Norway, Spain and Switzerland.

OECD *Economic Outlook*; a negative gap indicates that the GDP falls short of its estimated potential level.

iv) *Institutional features*: information on the existence of *independent aid agencies*, that is agencies operating independently from the Ministry of Foreign Affairs, was obtained by means of an online research of institutional websites of the 22 DAC countries. *Peer effects*: Round and Odedokun (2004) define this variable as the average – *weighted* by the donor countries' GDP – of the aid to GDP ratios. As this measure is clearly driven by the behavior of larger countries, this paper proxies this variable with the *unweighted* average of aid over GDP of other DAC countries, that is lagged by one year in the regression to avoid simultaneity problems. *Political orientation* is defined by a discrete variable taking value of –1 for centre-left governments, 0 for moderate governments and 1 for centre-right governments. The information comes from the Database of Political Institutions available online from www.worldbank.org and that is described in Beck *et al.* (2001).

v) *Alternative sources of foreign finance*: data on the *immigrant stock*, which is defined as the share of immigrant population on the country's total population, comes from World Bank (2006a), and it is meant to be a proxy for the level of remittances originating from the country.

4.3. *Countries and period analyzed*

The analysis covers the 22 DAC countries that – together with the EU – have traditionally been the main aid providers. Aid is also delivered by non-DAC donors. Until 1989, the communist countries of Europe provided large amounts of aid to their satellites but its volume relative to GDP is difficult to measure due to various statistical problems. Since the mid-1970s the OPEC countries have also provided aid to the developing countries though in some cases, as in that of Saudi Arabia, such aid focused more on the promotion of religious values than on fostering development. In recent years, China has emerged as a new important donor. Data about these other donors is however scant. For these reasons, the non-DAC donors were excluded from the analysis. The period considered is 1970-2004, as data on several relevant variables are not yet available for 2005-06.

4.4. *Descriptive statistics*

Table 8 provides the descriptive statistics (number of observations, average, standard deviation and minimum and maximum of the variables used in the regression analysis). The table shows that in most cases the variables exhibit considerable variations, a fact that should improve the estimates of the parameters (see for instance the data on the ratio of deficit and debt[16] over GDP).

TABLE 8

DESCRIPTIVE STATISTICS

Variable	Obs	Mean	Standard deviation	Min	Max
Aid[a]	710	0.406	0.245	0.013	1.171
Aid, excluding debt relief[a]	710	0.395	0.241	0.013	1.171
Real income per capita, PPP constant dollars	770	19,575	6,178	6,987	50,751
Output gap[a]	684	−0.58	2.47	−12.01	6.37
Trade balance[a]	770	0.5	5.0	−16.7	21.6
Fiscal deficit[a]	694	−1.9	6.5	−15.7	88.0
Public debt[a]	692	36.5	30.8	−30.8	132.6
Government revenue[a]	694	42.2	9.3	21.5	69.0
Development Agency	741	0.348	0.477	0	1
Peer effect	770	0.392	0.041	0.290	0.493
FDI to LDC, $ million per year	770	71,588	82,894	2,466	260,236
Violation of G&S pact, signatory countries	770	0.053	0.224	0	1
Violation of G&S Pact, all countries	770	0.471	0.499	0	1
Migrants, in percent of resident population	770	8.89	7.40	0.57	37.83
Population, ln	770	16.41	1.43	12.74	19.50
Gini coefficient	526	33.8	4.9	20.3	45.5
Debt cancellation[a]	770	0.010	0.025	0	0.275
Population living in poor former colonies, million	770	92.1	274.0	0	1,760.1
Political Orientation	737	0.027	0.930	−1	1

[a] The variable is expressed as a ratio to GDP.

Source: authors' elaborations.

[16] The minimum value of the public debt can be negative as the definition adopted is of gross government liabilities, that can be negative – as in the case of Norway – if the government owns sizeable assets.

4.5. *Econometric specification of the model and estimation approach*

The paper aims at estimating, by means of a standard regression analysis, the determinants of the Official Development Assistance to GDP ratio for the 22 OECD DAC countries over the period 1970-2004. This ratio for the country i in year t, y_{it}, is modelled as a linear function of a vector $\boldsymbol{X}_{it}$ of explanatory variables:

$$y_{it} = X_{it}\beta_i + \varepsilon_{it} \text{ where } \varepsilon_{it} = \alpha_i + \eta_{it} \text{ for } i = 1, ..., 22. \quad (1)$$

We impose the restriction that $\boldsymbol{\beta}_i = \boldsymbol{\beta}$, for i = 1, ..., 22, as the limited time dimension of the panel leaves no other option than pooling the data; we formally test the adequacy of this restriction by means of a Chow test. The error term ε_{it} in 1 is composed by a country-specific time-invariant effect α_i – that may correlate with the vector of regressors $\boldsymbol{X}_{it}$ – and by a disturbance term $\eta_{it} \sim$ iid $(0, \sigma_\eta^2)$, that is assumed not to correlate with $\boldsymbol{X}_{it}$ and the normality of which is not required (Baltagi 2002). The opportunity to include country-specific effects is formally tested performing an *F*-test on the null hypothesis that all α_i are jointly equal to zero, and a Breusch-Pagan test. Furthermore, as both pooled OLS estimators and fixed and random effect panel estimators rest on the hypothesis of the stationarity of the variables' time series, this assumption has been tested following Im, Pesaran and Shin (2003) for the explanatory variables, and with a Dickey-Fuller test for the dependent variable, as the analysis of the descriptive statistics on the aid to GDP ratio suggests that the series could have different statistical characteristics across the 22 donor countries.

The Dickey-Fuller test, the results of which are presented in table 9, does not reject the null hypothesis that the dependent variable contains a unit root for 17 out of the 22 donor countries. For this subset of countries, we then chose to include the lagged value of the dependent variable among the regressors, as otherwise the regression would have been imbalanced, and the residuals could have been non stationary. Remarkably, as it will be discussed in section 4.6, the inclusion of the lagged dependent variable does not affect the sign and significance of all but one the other regressors. Note that the choice to include the lagged dependent variable among the regressors is not only driven by statistical considerations, but is also grounded

in a strong economic rationale, since the persistence in budgetary allocations determines a significant path-dependence in the evolution of aid effort (Faini 2006 and Roodman 2007b). Notwithstanding some concerns about the stationarity of some of the regressors,[17] we chose to stick to either OLS or panel estimators, as panel cointegration techniques would be severely hindered by the short time span covered by the data.

TABLE 9

DICKEY-FULLER TEST FOR THE STATIONARITY OF THE SERIES

	Dickey-Fuller test for unit root					
	Official development assistance over GDP			Official development assistance exclud. debt relief over GDP		
Country	Obs	Test	Approx. p-value	Obs	Test	Approx. p-value
Australia	34	-2.513	0.11	34	-2.488	0.12
Austria	34	-2.881	0.05	34	-3.147	0.02
Belgium	34	-2.812	0.06	34	-1.924	0.32
Canada	34	-0.904	0.79	34	-1.420	0.57
Denmark	34	-1.992	0.29	34	-1.794	0.38
Finland	34	-1.729	0.42	34	-1.759	0.40
France	34	-1.262	0.65	34	-1.479	0.54
Germany	34	-1.852	0.36	34	-2.244	0.19
Greece	8	-1.498	0.53	8	-1.498	0.53
Ireland	30	-1.223	0.66	30	-1.223	0.66
Italy	34	-1.704	0.43	34	-1.728	0.42
Japan	34	-2.035	0.27	34	-1.440	0.56
Luxembourg	24	0.195	0.97	24	0.195	0.97
Netherlands	34	-2.280	0.18	34	-2.347	0.16
New Zealand	34	-2.268	0.18	34	-2.287	0.18
Norway	34	-2.625	0.09	34	-2.612	0.09
Portugal	24	-0.159	0.94	24	-0.149	0.94
Spain	24	-1.451	0.56	24	-1.457	0.55
Sweden	34	-3.363	0.01	34	-3.696	0.00
Switzerland	34	-1.238	0.66	34	-1.450	0.56
United Kingdom	34	-2.512	0.11	34	-2.837	0.05
United States	34	-2.939	0.04	34	-2.880	0.05

Source: authors' estimates.

[17] The Im, Pesaran and Shin (2003) tests on the stationarity of the regressors – not reported here, available upon request from the authors – provided mixed evi-

The tests on the poolability of the data are presented in table 10, that reports the Chow tests performed on the preferred model specification (specification 1 in table 11). The Chow tests warn against the poolability of the data, as the null hypothesis is rejected at conventional confidence level for all but one regressors. As the focus of our paper is on Italy, we also performed the Chow test including in the model specification only a set of interactions with the dummy variable for Italy, and the results signal a significantly different slope coefficient only for two regressors, namely the trade bal-

TABLE 10

CHOW TEST FOR POOLABILITY OF THE DATA

	Poolability	Poolability, Italy
Variables	Chow test (p-value)	Chow test (p-value)
Lagged aid, countries with non stationary series	1.83 (0.029)**	0.99 (0.407)
Debt cancellation[a]	1.69 (0.042)**	1.48 (0.225)
Real per capita income, ln	2.65 (0.000)***	2.74 (0.098)*
Trade balance[a]	2.10 (0.004)***	7.99 (0.005)***
Government revenues[a]	3.46 (0.000)***	0.18 (0.675)
Public debt[a]	1.92 (0.001)***	1.97 (0.161)
Primary fiscal deficit[a]	1.87 (0.013)**	0.81 (0.370)
Development agency	1.33 (0.237)	-
Output gap[a]	3.30 (0.000)***	1.37 (0.242)
Output gap* Development Agency	2.44 (0.025)**	-
Peer effect	2.50 (0.000)***	1.03 (0.311)
No. of countries	22	22
No. of observations	558	558

[a] The variable is expressed as a ratio to GDP.
*, ** and *** denote significance at the 10, 5 and 1% confidence level respectively.
Source: authors' estimates.

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dence: most of them, with the exceptions of the public debt, budget deficit and government revenues over GDP, do not contain a unit root. For both the budget deficit and the debt, the null hypothesis is rejected when the number of lags is increased, so as to allow for serial correlation of the residuals, while even after such transformation the government revenue still contains a unit root in all series.

ance and, to a lesser extent, the real per capita income. The limited number of observations precludes the option to lift the restriction that $\boldsymbol{\beta}_i = \boldsymbol{\beta}$, for i = 1, ..., 22, but the evidence provided by the Chow tests strongly suggests the need to carry out robustness tests on the stability of the estimated coefficients, namely restricting the estimation to a subset of either countries or years, as in Round and Odedokun (2004).

Finally, to choose between OLS and panel estimators, we performed a Breusch-Pagan LM and *F*-tests on all the proposed specifications. The tests strongly confirm the presence of country-specific effects in the error term ε_{it} (Table 11). This signals the lack of efficiency of the OLS estimator, as the variance-covariance matrix of ε_{it} is not spherical, suggesting therefore to rely on panel estimators. The choice between random and fixed effects panel estimators was done by means of a Hausman specification test.

4.6. *Estimation results*

Table 11 reports the estimates of 12 alternative specifications of model 1 obtained by changing either the variables included in the vector $\boldsymbol{X}_{it}$ of regressors or the estimation procedure, or by restricting the analysis to a subset of years and countries to test the robustness of the estimates. All the specifications in table 11 contain a core set of 11 regressors, to which we separately add other 7 regressors, in specifications 6 to 12. Rather than discussing the results of each model specifcation one by one, we provide an overview of the estimates of the coefficients of each regressor, assessing whether they are robust and consistent with the expectations about their sign and size presented in section 3. The dependent variable is aid excluding debt cancellation over GDP, while the same set of model specifications with aid over GDP as the dependent variable are included in table A.1 in the Appendix.[18]

[18] In Table A.1, the coefficents of all variables but debt cancellation and the dummy for the violation of the Growth and Stability Pact maintain the same sign and significance level; debt cancellation becomes positive but not significant, signaling that debt relief does not produce a significant upward effect on aid effort. This result is consistent with the estimates of table 11 that are discussed below.

The main regression results are presented describing the estimated coefficients of the explanatory variables, divided into the usual five groups:

i) structural variables. The coefficient of the natural logarithm of the *real income per capita* is positive but generally not significantly different from zero, suggesting that donors' affluence is not a main determinant of aid once we control for the other relevant factors. This variable becomes significant only when the Gini coefficient of the income distribution or the population of the donor countries are included among the regressors (specifications 8 and 12 respectively). *Gini coefficient*: the coefficient of this variable is negative and statistically significant, confirming the inverse relation assumed *ex ante* between domestic income inequality and aid effort. *Population*: such variable is negative and statistically significant, a result consistent with the literature on aid giving. A higher *government revenue* to GDP ratio is systematically associated with a higher aid disbursement, and the estimated effect is both statistically and economically significant. An increase by 5 percentage points in government revenue over GDP is estimated to increase foreign aid by 0.1% of GDP. As argued in section 3, this coefficient is likely to be driven by both a pure *size* effect – larger budget leaves more room for aid granting – and a *redistribution* effect – as greater revenue is associated with a more pronounced income redistribution, both domestic and North-South.

ii) Historical factors. As noted in section 4.2, the variable that proxies *colonial past* measures the population living in former colonies with a current per capita GNI below $ 2,000 at 1995 prices. An increase in such variable may be interpreted as an increase in the 'aid demand' in former colonies to which former colonial rules respond by increasing their 'aid supply'. However, as already noted, several important donors (such as the Scandinavian countries) have no colonial past, and this is expected to affect the expected positive sign of the coefficient of such variable. Indeed, contrary to the expectations, the variable has a negative though just marginally significant effect on the aid to GDP ratio (specification 11).

iii) Macroeconomic determinants. As in Round and Odedokun (2004), the parameter of the *fiscal deficit* is positive in all specifications, suggesting that a rise in the budget deficit would raise the level

TABLE 11

DETERMINANTS OF AID EFFORT

	Dependent variable: aid, *excluding debt cancellation*, over GDP											
Variables Model Specification	1	2	3	4	5	6	7	8	9	10	11	12
Lagged aid, countries with non stationary series	0.597 (11.88)***	0.543 (13.38)***	-	0.682 (15.91)***	0.634 (13.37)***	0.597 (11.85)***	0.591 (11.45)***	0.589 (8.90)***	0.595 (11.66)***	0.592 (11.65)***	0.598 (11.97)***	0.578 (11.24)***
Debt cancellation[a]	−0.683 (−4.29)***	−0.708 (−4.82)***	−0.781 (−4.78)***	−0.555 (−2.91)***	−0.693 (−4.08)***	−0.683 (−4.28)***	−0.671 (−4.14)***	−0.936 (−7.11)***	−0.680 (−4.26)***	−0.701 (−4.33)***	−0.673 (−4.21)***	−0.697 (−4.58)***
Real per capita income, ln	0.024 (1.06)	0.018 (0.77)	0.007 (0.27)	0.012 (0.53)	0.048 (1.74)*	0.024 (1.07)	0.028 (1.19)	0.208 (3.73)***	0.016 (0.54)	0.028 (1.20)	0.032 (1.33)	0.112 (3.23)***
Trade balance[a]	0.006 (4.02)***	0.006 (4.78)***	0.010 (6.82)***	−0.000 (−0.22)	0.003 (2.68)***	0.006 (3.97)***	0.006 (4.01)***	0.004 (2.70)***	0.006 (3.99)***	0.005 (3.93)***	0.005 (3.87)***	0.005 (3.37)***
Government revenues[a]	0.014 (6.40)***	0.015 (8.99)***	0.021 (10.39)***	0.005 (2.85)***	0.012 (6.35)***	0.014 (6.37)***	0.014 (6.36)***	0.009 (3.90)***	0.014 (6.23)***	0.013 (6.40)***	0.014 (6.38)***	0.013 (6.17)***
Public debt[a]	−0.001 (−5.31)***	−0.001 (−6.64)***	−0.002 (−8.15)***	−0.001 (−3.91)***	−0.001 (−3.99)***	−0.001 (−5.29)***	−0.001 (−5.28)***	−0.002 (−5.26)***	−0.001 (−5.33)***	−0.001 (−5.11)***	−0.001 (−5.19)***	−0.001 (−5.31)***
Primary fiscal deficit[a]	0.010 (4.94)***	0.010 (5.86)***	0.014 (8.42)***	0.003 (2.69)***	0.007 (4.13)***	0.010 (4.96)***	0.010 (4.92)***	0.009 (4.22)***	0.010 (4.90)***	0.010 (5.05)***	0.010 (4.91)***	0.010 (4.87)***
Development Agency	0.010 (0.59)	0.022 (1.40)	0.024 (1.29)	0.016 (0.91)	−0.000 (−0.01)	0.010 (0.58)	0.008 (0.47)	0.014 (1.09)	0.011 (0.63)	0.010 (0.60)	0.008 (0.50)	0.007 (0.39)
Output gap[a]	0.009 (3.92)***	0.009 (3.93)***	0.010 (3.88)***	0.004 (2.18)**	0.008 (4.01)***	0.009 (3.97)***	0.009 (3.92)***	0.006 (2.37)**	0.009 (3.89)***	0.009 (4.08)***	0.008 (3.84)***	0.007 (3.15)***
Output gap* Development Agency	−0.009 (−2.76)***	−0.009 (−2.59)***	−0.007 (−2.15)**	−0.010 (−4.19)***	−0.013 (−3.21)***	−0.009 (−2.75)***	−0.009 (−2.81)***	−0.007 (−2.03)**	−0.009 (−2.70)***	−0.009 (−2.80)***	−0.008 (−2.69)***	−0.008 (−2.66)***
Peer effect	−0.025 (−0.28)	−0.042 (−0.46)	0.056 (0.49)	0.070 (0.75)	0.066 (−0.64)	0.025 (−0.28)	−0.041 (−0.45)	−0.113 (−1.04)	−0.020 (−0.22)	−0.032 (−0.36)	−0.010 (−0.11)	−0.003 (−0.04)

TABLE 11 (*cont.*)

DETERMINANTS OF AID EFFORT

	Dependent variable: aid, *excluding debt cancellation*, over GDP											
Variables Model Specification	1	2	3	4	5	6	7	8	9	10	11	12
Violation of the G&S Pact	-	-	-	-	-	0.000 (0.00)	-	-	-	-	-	-
Violation of the G&S Pact, all	-	-	-	-	-	-	−0.017 (−1.29)	-	-	-	-	-
Gini coefficient	-	-	-	-	-	-	-	−0.013 (−5.19)***	-	-	-	-
Migrants	-	-	-	-	-	-	-	-	0.001 (0.49)	-	-	-
Political orientation	-	-	-	-	-	-	-	-	-	0.007 (1.87)*	-	-
Population in poor former colonies, ln	-	-	-	-	-	-	-	-	-	-	−0.016 (−1.67)*	-
Population, ln	-	-	-	-	-	-	-	-	-	-	-	−0.336 (−4.00)***
Countries, observations	22,558	22,558	22,560	22,464	15,370	22,560	22,560	20,386	22,558	22,554	22,558	22,558
Overall R^2	0.599	0.642	0.621	0.395	0.732	0.599	0.605	0.525	0.595	0.598	0.491	0.387
Estimator	FE	RE	FE	FE	FE	FE	FE	FE	FE	FE	RE	RE
F-test with FE, Breusch-Pagan LM test with RE	70.23 (0.00)	3192.44 (0.00)	63.87 (0.00)	102.98 (0.00)	47.61 (0.00)	69.82 (0.00)	67.68 (0.00)	61.63 (0.00)	58.09 (0.00)	65.58 (0.00)	69.91 (0.00)	71.74 (0.00)
Hausman test (p-value)	10.86 (0.45)		-	-	-	-	-	-	-	-	-	-

Notes: t-statistics within parenthesis; *, ** and *** denote significance at the 10, 5 and 1% confidence level respectively; the set of regressors also contains a constant term. FE and RE refer to the 'fixed effects' or 'random effects' procedures alternatively adopted for the estimation of the parameters.
[a] The regressor is expressed as a ratio to GDP.

of foreign aid. This runs contrary to the expectations illustrated in section 3 and the results obtained by Faini (2006).[19] As argued in section 4.2, this puzzling result may be due to the difficulty of measuring the fiscal stance, as a weak budgetary position – or a significant debt overhang – may not have a detrimental impact on foreign aid provided that the government adopts an accommodating attitude towards these fiscal disequilibria. By the same token, the positive coefficient of the fiscal deficit could also possibly be explained looking at the evolution of the primary deficits of the countries with a huge debt overhang, as Belgium and Italy: large primary surpluses were attained in an attempt to reduce the debt burden – as in Italy in the early 1990s – so that they actually signal a very strict fiscal policy, rather than signalling a fiscal bonanza that could have let more space for aid. To test whether different sizes of the fiscal imbalances have a different impact on aid effort, we included a dummy variable meant to capture a situation where the fiscal imbalances reach a critical level. This dummy variable takes the value of 1 when a country has either a fiscal deficit or a public debt in excess of 3 and 60% of GDP respectively, the limits set by the European Growth and Stability Pact. Two different specifications of such variable were introduced, the first referring only to signatory countries after 1997, the year in which the pact was signed, and the second covering all countries and all years. Still, the inclusion of this variable, in the two alternative specifications, does not completely solve the puzzle of the impact of the fiscal deficit: the estimated coefficient of the first specification of the dummy is not significant, while the second specification is, as expected, negative but highly significant only when aid effort is considered gross of debt relief (Table A.1 in the Appendix). *Public debt*: as expected, a high debt overhang turns out to have a significant and negative effect on aid disbursement. *Trade balance*: the coefficient of this variable is always positive and significant, confirming the *a priori* supposition that foreign aid rises in the presence of a strong balance of payments in donor countries. Interestingly, the point estimate

[19] Round and Odedokun (2004, p. 306) report that "fiscal balance does not appear to influence aid policy [...] in the equation where fiscal surplus relative to GDP is a regressor, its coefficient is *negative* and statistically significant, contrary to expectations" (emphasis added). They argue that "aid, because of its immense importance as a veritable foreign policy tool of donor governments, is not a particularly discretionary item in the budget". This argumentation, however, runs contrary to our expectation of a pro-cyclical pattern of foreign aid.

of such coefficient is roughly constant across all specifications but 4 where it is strongly reduced, as the estimation was restricted to the 1980-2004 period. This seems to reasonably suggest that the foreign exchange constraint is less stringent in periods of free currency convertibility. *Output gap*: its coefficient is always positive, consistent with the expectation of a procyclical pattern of foreign aid, and is statistically significant in all specifications.

iv) Institutional features. The estimated coefficient for the *development agency* is positive, though always insignificant, suggesting that an independent development agency does not produce a relevant *level effect* on aid effort. Still, this does not entail that institutional features have no role in shaping aid effort, as the *interaction between development agency and output gap* has a negative estimated coefficient, significant in all specifications and close in size to the estimated coefficient of the *output gap*. This confirms the view that development agencies constitute a domestic lobby able to defend the aid budget in times of economic slowdown. Thus, the existence of an independent development agency ensures greater aid stability over the economic cycle but not greater aid allocations.[20] Budgetary allocations are also estimated to have a relevant degree of inertia, as the estimated coefficient of the *lagged aid effort* is positive and highly significant in all specifications, confirming the findings of Faini (2006). *Peer effect*: the estimated effect is generally non significant; this suggests that the marginal effect of the peer-pressure is ultimately not so strong, contrary to what was found in previous analyses (Round and Odedokun 2004). *Political orientation*: surprisingly enough, the estimated effect is positive and significant, suggesting that a conservative government raises aid effort. A similar result was obtained by Round and Odedokun (2004), who argue (*ibid.*, p. 307) that

> "this could be due to the fact that concern for the poor and needy – attributed to left-wing governments – is being overshadowed by other objectives in giving aid".[21]

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[20] The relevance of this result needs not to be understated, as avoiding boom and burst cycles in foreign aid is likely to significantly reduce its possible Dutch Disease effects as well disruptions in service delivery in recipient countries.

[21] However, caution should be used when judging these results, since the dataset we used – the World Bank's Database of Political Institutions – classifies some government in a debatable way, e.g. the Italian government led by Prodi between 1996

In contrast, Faini (2006) finds that left-wing governments are associated with an increase in aid effort. Yet, his results are obtained making use of an index of political orientation ranging between 1 and 10; this suggests that the variable used in this paper may be a poor measure of governments' political orientation.

v) Alternative sources of foreign finance. Because of a strong collinearity with real GDP per capita (r = 0.73), the *stock of migrants* on the resident population is included only in specification 9 that yields a positive but insignificant coefficient for this variable. Better and more detailed data are required to provide a sounder assessment of the relationship between migration and aid effort.

Last but not least, as aid effort is defined as disbursements net of debt relief, we included this latter variable in the set of regressors, to test the relevance of the argument that claims that debt cancellations have a detrimental impact on the actual transfer of resources towards recipient countries, so that they would not represent an additional effort by donor countries. The estimated coefficient of *debt relief*, defined as a share of donor countries' GDP, is negative and highly statistically and economically significant. The estimations suggest that once a donor country writes off a $ 1,000 debt, it reduces its disbursements by approximately $ 700, casting doubts on the actual development impact of debt relief programmes.

The checks on the robustness of the estimated parameters confirm that they are broadly stable even when restricting the estimation of the aid effort relation to the 1980-2004 period (specification 4) and to the current members of the EU (specification 5). This helped reducing the concerns about the poolability of the data arising from the results of the Chow test (Table 10).[22]

Among the 12 specifications presented in table 11, the first two were selected as the preferred ones. Although the Hausman specification test does not reject the null hypothesis that the random effect estimator is consistent and efficient, it was decided to rely on specification 1 rather than 2 to assess the extent and evolution over time of

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and 1998 is identified as 'centrist' while, in fact, it was a center-left government, probably no more 'moderate' than a US democratic government.

[22] As a further robustness check, we estimated specification 1 in first differences, i.e. including the change in aid effort with respect to the previous year as the dependent variable, and excluding the lagged value of aid from the set of regressors. Once again, the results – that are available from the authors upon request – signal that the estimated parameters are remarkably robust.

the Italian aid gap, excluding the country-fixed effect α_i from the theoretical level of aid that is used to estimate the gap (see section 5), as the Hausman test suggests that the α_i are not correlated with the regressors. In any case, as it can be inferred by the strong similarity of the parameters of specifications 1 and 2, the size and time-profile of the Italian aid gap is insensitive to this choice.

5. Assessment of the Italian aid performance and of the 'Italian aid gap'

Though always weak, Italy's aid effort has fluctuated perceptibly over the last forty years. In the 1960s and 1970s Italy was part of a group of comparatively less affluent OECD nations (including the other Southern European countries, Ireland, Finland as well as Austria and Switzerland) that allocated a negligible 0.10-0.15% of their GDP to aid. During this period, the main political parties did not show interest for the aid issue, and the Italian development assistance was mainly entrusted to a small group of NGOs providing technical assistance and training to a few low income countries (Isernia 1997). Confirmation of such neglect is given by the fact that the first Italian law on development cooperation was approved only in 1979.

Aid volumes grew during the 1980s following an active campaign spearheaded since 1980 by the Radical Party on occasion of the International Year of the Child. The aid issue was later taken up by the Socialist Party that saw in it an opportunity to strengthen its position within the Italian political system. As result, the aid to GDP ratio rose from around 0.2% of GDP in 1983 to over 0.4% in 1988. Yet, such increase was not accompanied by a clear identification of the priority countries and sectors of intervention, or of the strategic mission to be assigned to aid policy. Meanwhile the aid apparatus remained weak and at the whims of the political class, and no investment was made to create the technical expertise needed for an effective allocation and timely disbursement of an increasing amount of aid funds (Isernia 1997 and ActionAid 2007). The rising aid trend was reversed from 1990 onward and by the early 2000s the aid to GDP ratio had returned to its historical low level of 0.15-0.20%, without changing significantly since then.

The poor Italian aid performance of the last 15 years coincided with the adoption of a restrictive fiscal stance (needed to satisfy the Maastricht criteria), the disintegration of the Soviet Bloc, the end of the Cold War and the related need to prop up friendly regimes in developing countries, a rapid increase in trade, migration and financial links with the developing countries, 9/11 and a major slowdown of the Italian economy in the first half of the 2000s. During this period aid performance deteriorated also in several other industrialized countries such as the US, Canada, Germany and France, though it improved in several others.

In view of all this, it has been argued that Italy's poor performance has to be seen in the context of such trends, of the country's limited colonial experience, of its chronic high-deficit, high-debt situation and of other adverse factors. To further justify the low level of Italian aid, it has been claimed that the country promotes the development of poorer nations in other ways, e.g. via a capillary network of Italian religious and lay NGOs operating in the developing countries, by opening its borders to a large number of migrants (though such opening has been proportionately more pronounced in other 'laggard countries' such as Spain, Greece and Portugal), by providing the fourth largest contingent of UN peacekeepers, by intensifying trade relations with the developing countries and by generous debt cancellations.

How correct are these claims? Are there Italian 'special conditions' that justify the low level and quality of Italian aid? Or are these claims being made in an instrumental way? To what extent can these 'special conditions' explain the low level of Italian aid? Would the Italian aid performance approach the DAC 'aid giving norm' if these and other factors were taken into account when measuring what the Italian aid should be once considering the country's contextual situation? This section aims at answering these queries. In particular it aims at answering the following three questions: once Italy's contextual conditions are taken into account, does the Italian aid performance fall within the DAC 'norm'? In case it is below it, how large is the Italian 'aid gap'? And has this gap widened or narrowed over time?

To answer these questions and offer an estimate of the Italian 'aid gap', we compare the level of the Italian public aid with different aid targets and aid behaviours. The first 'normative' benchmarks

against which to assess the Italian aid performance are the long-standing UN aid target of 0.7% of the donors' GDP and the 2002 EU target that established that by 2006 at least 0.33% of the GDP of its members was to be assigned to development aid. It is well known that Italian aid has remained well below such targets and that the Italian aid gap in relation to them remains substantial (Table 12). Indeed, while most donors failed to reach the UN target, most of the EU-15 countries reached the 2002 EU target, with the exception of Italy, Greece, Portugal and Spain (OECD 2007a). As a third normative benchmark to assess the Italian aid gap we choose the average level of aid over GDP granted by the European countries. Also in this case, the Italian aid gap is substantial, except for the years 1985-89. In 2000-04, it was equal to 0.294% of GDP (Table 12). Yet, these three normative gaps do not take into account Italy's specific conditions, such as the disadvantage caused by a large public debt or the absence of an independent aid agency.

TABLE 12

ALTERNATIVE NORMATIVE MEASURES OF THE ITALIAN AID GAP

	Percent of GDP						
Aid gap with respect to:	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
United Nations goal[a]	-	-	-	-	-	0.521	0.515
European Council of Barcelona[a]	-	-	-	-	-	-	0.145
European average[b]	0.196	0.297	0.205	0.073	0.170	0.250	0.294
	Percent of actual net disbursements						
Aid gap with respect to:	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
United Nations goal[a]	-	-	-	-	-	291.4	279.1
European Council of Barcelona[a]	-	-	-	-	-	-	78.7
European average[b]	164.7	311.3	103.2	20.4	52.6	139.8	159.3

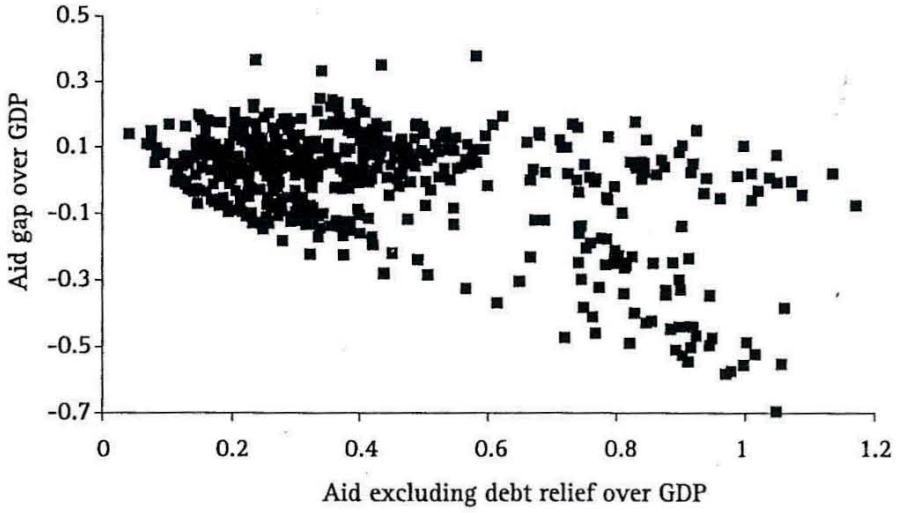
[a] Aid including debt relief.
[b] Aid excluding debt relief.
Source: authors' calculations.

Thus, to take the relevant structural, institutional and macroeconomic conditions into account we estimated a 'positive' (or behavioural) aid gap that assumes that a country's aid giving behaviour is described by the parameters of the multivariate econometric analy-

sis, which represent, it must be reminded, the average aid giving behaviour of the 22 DAC countries over the 1970-2004 period. Before proceeding to the measurement of the estimated Italian aid gap, it is worthwhile to underscore that our multivariate analysis does not suggest a well-defined relationship between the aid to GDP ratio and the 'aid gap', that is to say that countries with a high (low) level of aid giving need not to be characterized by a negative (positive) aid gap. To stress this point, figure 1 plots together the level of aid and the aid gap estimated from specification 1 in table 11, including the country-fixed effect α_i in the definition of the aid gap. Figure 1 shows that although the relationship between the aid effort and aid gap is negative, there is a significant amount of variability around the mean, implying that also some countries with a fairly high aid effort exhibit a positive aid gap.

FIGURE 1

AID AND AID GAP, ALL SAMPLE COUNTRIES



Yet, as some of the special difficulties faced by Italy depend on past policy mistakes (as in the case of an excessive accumulation of public debt, or inability to create an independent aid agency), the aid gap estimated from the multivariate analysis is likely to provide an unfair justification for Italy's poor aid performance. For instance, if a country has a large public debt, specification 1 generates a fairly low value for the warranted aid and thus for the aid gap. This objection suggests that we should calculate a second warranted level of foreign aid that does not account for the impact of negative circumstances that are – at least in part – the result of 'bad policies' followed in the past.

A country's past or present policy mistakes – in other words – cannot be used as a convincing argument to reduce current aid allocations. Following this line of reasoning, we calculated two alternative levels of warranted aid: the first excludes the depressing effect on aid giving due to large fiscal imbalances, by assuming a zero primary fiscal balance (when this is actually negative), and a 60% debt to GDP ratio (when its actual value is above this threshold). The second level of warranted aid adds to this scenario an institutional change, by assuming the existence of an Italian autonomous aid agency.

The estimated parameters of specification 1 are thus used as a basis to compute the values of the warranted Italian aid effort, i.e. the values that aid effort should take when inserting on the right-hand side of aid equation 1 the values that the explanatory variables take in the case of Italy – eventually adjusted as indicated above, so as to avoid to calculate a low value of warranted aid due to past mistakes. If the warranted aid effort arrived at in this manner is higher than that actually provided, Italy would be underperforming in relation to what would be expected on the basis of the average DAC behaviour. The difference between these two values represents a further and more robust yearly measure of the Italian 'aid gap'. The gap is likely to have fallen during the 1980s when Italian aid surged and to have risen between then and the present time. A comparison between the aid that Italy should have provided if it behaved as the average DAC countries and that it actually provided allows to conclude – after taking into accounts all factors discussed above which influence the aid to GDP ratio in donors countries – whether Italy performs according to the DAC norm, below it or above it.

The positive measure of the Italian 'aid gap' computed on the basis of the multivariate analysis is lower than the prior 'normative' measures of the aid gap, signaling therefore that the Italian aid performance with respect to the DAC average can be explained to some extent by the structural problems faced by the Italian economy such as a massive debt overhang and other factors. Yet, the estimated aid gap remains nevertheless far from being negligible even when all the Italian problems are accounted for; more specifically, the estimated yearly aid gap has been amounting to approximately 0.1% of the Italian GDP since 1995. Figure 2 plots the evolution of the Italian aid gap from 1971 to 2004, together with its corresponding 95% confidence interval: the aid gap has always been significantly positive

since the early 1990s,[23] while it had been either negative or non significant since 1984 to 1990.[24]

The extent of the current Italian aid gap emerges even more clearly from the lower panel of table 13, where the positive aid gap is measured as a share of current net disbursements. According to the estimates obtained in this way, the Italian aid gap exceeded 50% of net disbursements over the 1995-2004 period. That is to say that, even when controlling for its underlying economic problems, Italy has underperformed markedly with respect to the DAC average, and Italy's disbursements should be increased by roughly half of their actual level to be in line with the aid level predicted by its economic, structural and institutional conditions.

TABLE 13

ALTERNATIVE POSITIVE MEASURES OF THE ITALIAN AID GAP

	Percent of GDP						
Definition of aid gap	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
Estimated on specification 1	0.059	0.083	0.040	-0.002	0.048	0.097	0.096
Estimated on specification 1, assuming fiscal balance[a]	0.058	0.078	0.043	0.035	0.123	0.214	0.183
Estimated on specification 1, assuming fiscal balance and institutional changes[b]	0.062	0.094	0.064	0.055	0.143	0.234	0.185
	Percent of actual net disbursements						
Definition of aid gap	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
Estimated on specification 1	49.6	86.7	20.2	-0.6	15.2	57.3	59.4
Estimated on specification 1, assuming fiscal balance[a]	48.3	81.5	21.7	9.7	39.0	126.6	113.5
Estimated on specification 1, assuming fiscal balance and institutional changes[b]	52.4	98.4	32.0	15.4	45.4	138.0	114.9

[a] Aid gap computed under the assumption that the primary fiscal balance is equal to zero when it is actually negative and that the public debt to GDP ratio is equal to 60% when the actual ratio is above this threshold.

[b] Aid gap computed under the assumptions described in the previous note, and further assuming the existence of an independent aid agency.

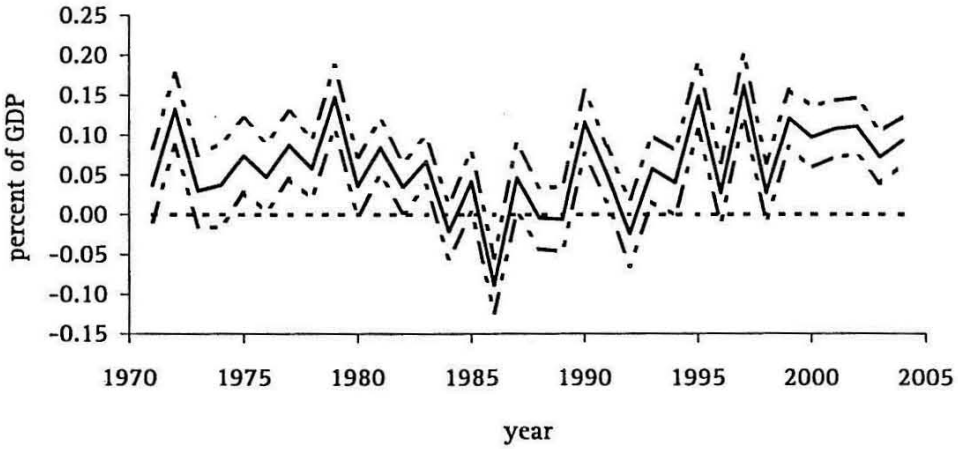
Source: authors' calculations.

[23] In only 3 years the aid gap is significant at the 10 rather than the 5% confidence level.

[24] This happened notwithstanding the substantial and rising divergence between commitments and disbursement that Italy recorded during the 1980s (see table 2).

FIGURE 2

ITALIAN AID GAP WITH 95% CONFIDENCE INTERVAL

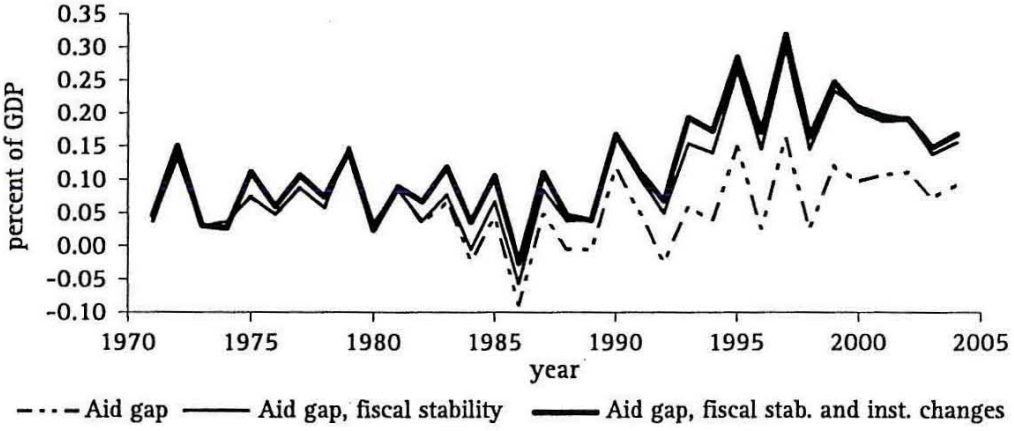


As expected, the other two positive aid gaps (assuming a balanced primary deficit, a public debt over GDP ratio equal to 60% and – in the second case – also the existence of an independent state aid agency) are larger in size, suggesting that Italy's large fiscal imbalances have a large negative effect on the Italian aid effort, while the absence of an independent aid agency would not widen the aid gap in all years, except during years of recession, as – for instance – in the early mid-1990s and mid-2000s. Figure 3 describes the evolution of the three alternative values of aid gap derived from the multivariate analysis.

Table 14 quantifies the monetary value of the Italian aid gap in 2006-07, assuming that the average gap over 2000-04 remained constant as a percentage of GDP over 2006 and 2007. To meet the UN

FIGURE 3

ALTERNATIVE 'POSITIVE' MEASURES OF THE ITALIAN AID GAP



0.7% target, in 2006 the government should have assigned to aid an additional € 7.6 billion. Even the more modest aid target set in 2002 in Barcelona would require an additional allocation of over € 2 billion while, to reach average current European aid effort, Italy would need to raise its development aid by € 4.3 billion. Finally, the volume of the aid gap measured by means of the positive multivariate regression specification 1 taking into account the country's circumstances is over € 1.4 billion while, if we assume also fiscal stability and the existence of an independent aid agency, the gap becomes much higher, i.e. over € 2.7 and € 2.8 billion respectively.[25]

TABLE 14

ESTIMATES OF THE VOLUME OF THE AID GAPS, € MILLIONS

Aid gap in relation to:	2006	2007
United Nations goal	7,603.4	7,906.3
European Council of Barcelona	2,144.4	2,229.8
European average	4,339.6	4,512.7
Specification 1	1,413.7	1,470.0
Specification 1, assuming fiscal balance	2,699.9	2,807.6
Specification 1, assuming fiscal balance and institutional changes	2,729.5	2,838.3

Source: authors' calculations, based on GDP estimates for 2007 from Eurostat.

Finally, it is interesting to compare the Italian aid gap with that of other DAC members with a poor record of aid giving. The OECD (2007b) indicates that, besides Italy, other three Southern European countries – Greece, Portugal and Spain[26] – did not meet in 2006 the minimum country target set by the EU during its Barcelona Council. These countries represent a natural reference group to provide a further assessment of the Italian aid effort between 1995 and 2004, a period characterized by a significantly positive Italian aid gap (Figure 2).

In this regard, Figures 4a-4c show that the aid gap of these three countries followed different paths over the period. Greece recorded a *negative* – albeit non significant – aid gap for most of the years, Spain shows a positive but downward-trending aid gap, while the picture for Portugal resembles the Italian one, as the gap is positive for 7 out of 10 years, although figure 4b evidences that

[25] The computation of the two normative aid gap would be more properly carried out in a full-blown simulation model.

[26] OECD (2007b) signals that Spain missed the Barcelona target only because of a change in GNI accounting.

the Portuguese aid gap turned negative in 2004, as the country markedly improved its aid effort. Spain and – to an even greater extent – Greece fare relatively well in comparison with the average DAC behaviour, while Italy does not; the limited aid effort of these three countries appears in fact to be mostly due to their adverse structural and macroeconomic conditions, which appear to be relevant factors in explaining why their aid performances did not live up to European commitments. Thus, the comparison with the other Southern European DAC member countries reinforces the evidence about the extreme weakness of the Italian aid performance since the early 1990s.

FIGURE 4A

GREEK AID GAP WITH 95% CONFIDENCE INTERVAL

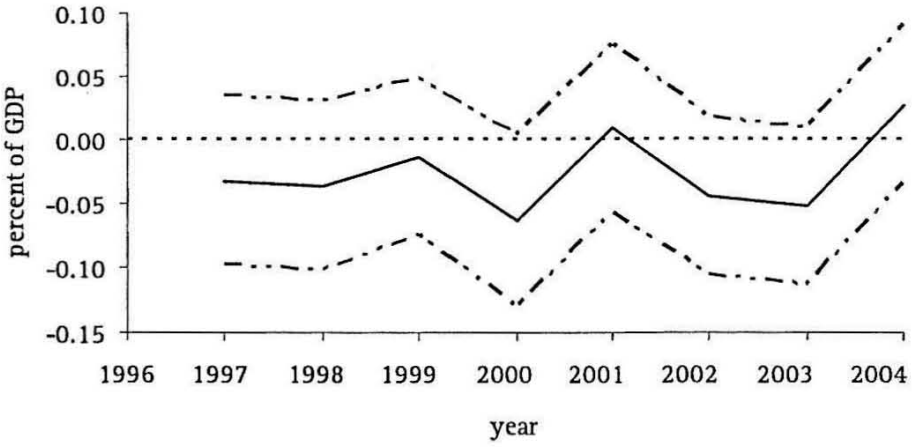


FIGURE 4B

PORTUGUESE AID GAP WITH 95% CONFIDENCE INTERVAL

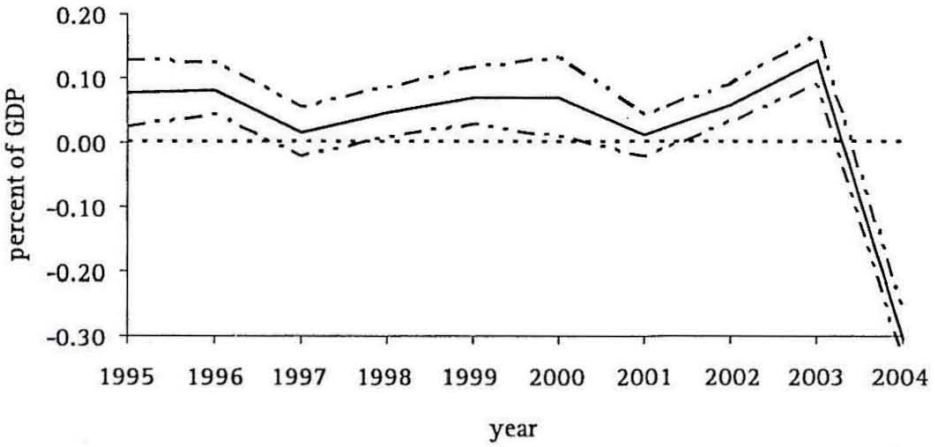
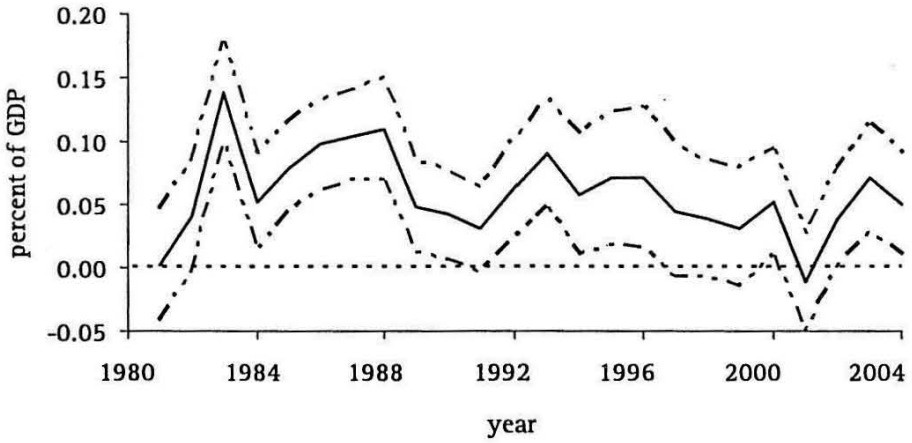


FIGURE 4C

SPANISH AID GAP WITH 95% CONFIDENCE INTERVAL



6. Conclusions

This paper has argued that Italy's aid performance is problematic in more than one respect. To start with, the country's aid volume is low in relation to whatever normative or positive benchmark is utilized, and a minimum of € 1.4-2.8 billion is required to reach the aid level warranted by its specific macroeconomic, structural and institutional conditions. Its performance is weak not only in relation to the average DAC behaviour, but also to that of other less prosperous Southern European countries. In addition, the level of arrears (signaling a weak aid administration), though falling in relation to the past, remains high. This paper also shows that the Italian aid gap – relative to an unimpressive DAC average behaviour – persists even when accounting for the country's unfavourable conditions (and, in some cases, one wonders whether these are justifiable), regardless of the political orientation of the various governments that succeeded themselves at the helm of the country. The achievement of international targets is becoming more and more distant over time – and reaching these objectives, to which now the main European partners of Italy are firmly committed, will require a large budgetary effort. It is time the country respects the international obligations it has underwritten and starts playing also in the field of foreign aid a role consistent with its economic weight, history, geography and collective ethic.

TABLE A.1

DETERMINANTS OF AID EFFORT, AID INCLUDING DEBT RELIEF

	Dependent variable: aid over GDP											
Variables / Model Specification	1	2	3	4	5	6	7	8	9	10	11	12
Lagged aid, countries with non stationary series	0.622 (11.92)***	0.543 (13.38)***	-	0.717 (14.23)***	0.659 (12.74)***	0.622 (11.87)***	0.613 (11.70)***	0.622 (9.42)***	0.619 (11.78)***	0.615 (11.70)***	0.623 (12.03)***	0.602 (11.21)***
Debt cancellation[a]	0.152 (0.97)	0.140 (0.84)	0.219 (1.33)	0.211 (0.95)	0.113 (0.67)	0.152 (0.97)	0.181 (1.11)	−0.030 (−0.25)	0.161 (1.01)	0.136 (0.85)	0.162 (1.03)	0.142 (0.95)
Real per capita income, ln	0.031 (1.29)	0.021 (0.87)	0.008 (0.30)	0.007 (0.29)	0.055 (1.93)*	0.031 (1.31)	0.039 (1.62)	0.246 (4.43)***	0.005 (0.15)	0.036 (1.51)	0.038 (1.57)	0.113 (3.27)***
Trade balance[a]	0.005 (3.56)***	0.006 (4.65)***	0.010 (6.84)***	−0.000 (−0.34)	0.002 (1.74)*	0.005 (3.54)***	0.005 (3.52)***	0.003 (2.00)**	0.005 (3.57)***	0.005 (3.42)***	0.005 (3.38)***	0.004 (2.97)***
Government revenues[a]	0.014 (6.42)***	0.015 (9.35)***	0.021 (10.30)***	0.004 (2.81)***	0.012 (6.34)***	0.014 (6.39)***	0.014 (6.49)***	0.009 (4.17)***	0.014 (6.41)***	0.013 (6.43)***	0.014 (6.41)***	0.013 (6.23)***
Public debt[a]	−0.002 (−6.54)***	−0.002 (−7.40)***	−0.002 (−8.22)***	−0.001 (−4.29)***	−0.001 (−5.74)***	−0.002 (−6.51)***	−0.002 (−6.40)***	−0.002 (−6.34)***	−0.002 (−6.60)***	−0.002 (−6.29)***	−0.002 (−6.41)***	−0.002 (−6.53)***
Primary fiscal deficit[a]	0.010 (5.27)***	0.011 (6.42)***	0.014 (8.41)***	0.004 (3.37)***	0.008 (4.49)***	0.010 (5.32)***	0.010 (5.11)***	0.009 (4.40)***	0.011 (5.28)***	0.010 (5.35)***	0.010 (5.23)***	0.010 (5.19)***
Development Agency	0.010 (0.57)	0.022 (1.36)	0.025 (1.31)	0.016 (0.84)	0.002 (0.09)	0.010 (0.57)	0.006 (0.34)	0.012 (0.76)	0.013 (0.71)	0.010 (0.57)	0.009 (0.49)	0.007 (0.40)
Output gap[a]	0.008 (3.85)***	0.009 (4.04)***	0.010 (3.91)***	0.004 (2.37)**	0.008 (3.96)***	0.008 (3.81)***	0.008 (3.86)***	0.005 (1.96)*	0.009 (3.88)***	0.009 (3.91)***	0.008 (3.76)***	0.007 (3.16)***
Output gap* Development Agency	−0.008 (−2.68)***	−0.008 (−2.52)**	−0.007 (−2.15)**	−0.009 (−3.76)***	−0.013 (−3.18)***	−0.008 (−2.67)***	−0.009 (−2.78)***	−0.006 (−1.97)**	−0.008 (−2.52)**	−0.008 (−2.67)***	−0.008 (−2.60)**	−0.008 (−2.58)**
Peer effect[c]	−0.039 (−0.45)	−0.067 (−0.75)	0.056 (0.49)	0.003 (0.03)	0.039 (−0.39)	−0.039 (−0.45)	−0.072 (−0.82)	−0.192 (−1.84)*	−0.029 (−0.33)	−0.041 (−0.48)	−0.025 (−0.29)	−0.010 (−0.12)

Notes: t-statistics within parenthesis; *, ** and *** denote significance at the 10, 5 and 1% confidence level respectively; the set of regressors also contains a constant term.

[a] The regressor is expressed as a ratio to GDP.

TABLE A.1 (*cont.*)

DETERMINANTS OF AID EFFORT, AID INCLUDING DEBT RELIEF

	Dependent variable: aid over GDP											
Variables Model Specification	1	2	3	4	5	6	7	8	9	10	11	12
Violation of the G&S Pact	-	-	-	-	-	0.001 (0.06)	-	-	-	-	-	-
Violation of the G&S Pact, all	-	-	-	-	-	-	−0.036 (−2.61)***	-	-	-	-	-
Gini coefficient	-	-	-	-	-	-	-	−0.010 (−4.09)***	-	-	-	-
Migrants	-	-	-	-	-	-	-	-	0.004 (1.47)	-	-	-
Political orientation	-	-	-	-	-	-	-	-	-	0.007 (1.95)*	-	-
Population in poor former colonies, ln	-	-	-	-	-	-	-	-	-	-	−0.017 (−1.76)*	-
Population, ln	-	-	-	-	-	-	-	-	-	-	-	−0.321 (−3.90)***
Countries, observations	22,558	22,558	22,560	22,464	15,370	22,558	22,558	20,386	22,558	22,558	22,558	22,558
Overall R^2	0.555	0.611	0.632	0.343	0.663	0.555	0.565	0.504	0.543	0.563	0.461	0.408
Estimator	FE	RE	FE	FE	FE	FE	FE	FE	FE	FE	RE	RE
F-test with FE, Breusch-Pagan LM test with RE	75.51 (0.00)	2936.27 (0.00)	63.11 (0.00)	104.26 (0.00)	57.83 (0.00)	75.28 (0.00)	73.38 (0.00)	65.68 (0.00)	68.02 (0.00)	67.94 (0.00)	75.54 (0.00)	78.77 (0.00)
Hausman test (p-value)	−6.34 (−)		-	-	-	-	-	-	-	-	-	-

Notes: t-statistics within parenthesis; *, ** and *** denote significance at the 10, 5 and 1% confidence level respectively; the set of regressors also contains a constant term.

[a] The regressor is expressed as a ratio to GDP.

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