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Is NGO Aid Not So Different After All? Comparing the Allocation of Swiss Aid by Private and Official Donors

by Peter Nunnenkamp, Janina Weingarth and Johannes Weisser

Kiel Institute for the World Economy, Düsternbrooker Weg 120, 24105 Kiel, Germany

Is NGO Aid Not So Different After All? Comparing the Allocation of Swiss Aid by Private and Official Donors

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Abstract:
Being closer to the poor, NGOs are widely believed to provide better targeted aid than state agencies. But empirical evidence is largely lacking. We contribute to closing this gap by drawing on an exceptionally detailed Swiss database that covers different forms of NGO aid and several official aid benchmarks. The differentiated Tobit estimations account for both altruistic and selfish aid motivations. It turns out that it depends on the source of NGO funding as well as the choice of the official benchmark whether or not NGOs provide better targeted aid. In contrast to widespread belief, however, the allocation of self-financed NGO aid reveals striking similarities to the allocation of official Swiss development aid.

Keywords: NGO aid; Official aid; Aid allocation; Tobit models

JEL classification: F35

Peter Nunnenkamp
Kiel Institute for the World Economy
24100 Kiel, Germany
Telephone: +49 431 8814 209
E-mail: peter.nunnenkamp@ifw-kiel.de

Janina Weingarth
Johannes Weisser
Advanced Studies Program
Kiel Institute for the World Economy
24100 Kiel, Germany
E-Mail: J.Weingarth@gmx.de
E-mail: johannes.weisser@gmail.com

1.   Introduction

It is widely agreed that aid granted by governments (official development assistance, ODA) is subject to flaws that tend to compromise its effectiveness in promoting economic and social development in the recipient countries. While the targeting of ODA to the needy and deserving is often found to be rather weak,[1] economic and political self-interest of donors appears to have had an important impact on the allocation of ODA across recipient countries (e.g. Alesina and Dollar 2000; Berthélemy 2006).

At the same time, it has traditionally been an article of faith (Tendler 1982) that non-governmental organizations (NGOs) are closer to the poor than official aid agencies, and that the allocation of NGO aid is less distorted by commercial and political mandates of state agencies, notably the promotion of exports and the formation of political alliances. Even donor governments appear to share the view that NGOs have an important role to play for aid to reach the poor and render it more effective. The share of bilateral ODA channeled to or through NGOs exceeded 15 percent in 2005-2006 for various OECD countries.[2] Overall grants by NGOs based in the member countries of the OECD's Development Assistance Committee (DAC) amounted to $14.7 billion in 2005,[3] thus exceeding bilateral ODA from every individual DAC country except for the United States.

The quantitative significance of NGO aid notwithstanding, little is known about where NGO aid is spent and how well targeted it actually is. If at all, NGO aid is typically analyzed in country-specific studies, with Bangladesh having received particular attention (e.g. Fruttero and Gauri 2005). The literature is largely confined to ODA when it comes to aid allocation across countries, which is mainly because of data constraints. The most widely used OECD/DAC data on aid (OECD 2007) are seriously deficient with respect to NGO aid at the level of individual recipient countries.

We contribute to closing this empirical gap by making use of the exceptionally detailed dataset available for Swiss NGOs and official aid agencies. This dataset not only allows for comparing the aid allocation of NGOs and the state, but also for assessing whether the allocation behavior of NGOs depends on whether they are using their own financial resources or funds provided by state agencies as official "backdonors". Our empirical approach covers various possible aid motivations. Above all, we evaluate whether poverty-

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[1] For a recent and more optimistic view, see Dollar and Levin (2006).
[2] See Table 18 under: http://www.oecd.org/dataoecd/52/11/1893159.xls (accessed: January 2008). Note that this share relates to NGOs in the donor country as well as to national NGOs in the recipient country, in contrast to Swiss ODA under the heading "contributions to NGOs" as defined in Section 3 below.
[3] This OECD figure does not include donor government grants and subsidies to national NGOs.

related indicators of need have a stronger impact on the allocation of NGO aid than on the allocation of ODA. We also take into account that NGOs may have the comparative advantage of operating in "difficult" environments (World Bank 1998; UNDP 2005). Furthermore, NGO aid may be superior to ODA in that it is less affected by commercial and political interests of the donor country. But NGOs may be tempted to replicate the allocation behavior of their backdonor in order to minimize the risk of losing future refinancing.

Considering the censored nature of the aid variable, we employ Tobit models to assess whether the allocation of aid differs between NGOs and state agencies, and between different forms of NGO aid. It turns out that it depends on the source of NGO funding, the choice of the official benchmark, and the definition of neediness whether or not NGOs provide better targeted aid. In contrast to what one might expect, however, the allocation of self-financed NGO aid reveals striking similarities to the allocation of ODA.

The paper is organized as follows. Section 2 gives an overview over the relevant literature. Section 3 describes the data set on development aid and discusses the model specifications. In Section 4 we present the empirical results. The last section concludes.

2.   Previous Literature

The literature on the determinants and effects of foreign aid is largely confined to ODA granted by OECD governments. Several studies argue that the targeting of ODA to needy recipient countries with reasonably good local conditions (in terms of basic institutions and economic policies) is far from perfect (Burnside and Dollar 2000; Collier and Dollar 2002). According to McGillivray (2003) as well as Dollar and Levin (2006), the poverty and policy orientation of several official donors has improved recently, but targeting by some major bilateral donors (e.g., France and the United States) still leaves much to be desired. Alesina and Weder (2002) rejected the rhetoric of donors that ODA rewarded efficient and honest governments.

The needs-based allocation of ODA may also be distorted by selfish donor motives. Alesina and Dollar (2000) found that bilateral ODA was dictated as much by political and strategic motives of donors as by need and local conditions in recipient countries. More recently, Berthélemy (2006) still labels various donors "egoistic", rather than altruistic. Some official donors tend to use aid to promote exports to recipient countries (see also Berthélemy and Tichit 2004; Canavire et al. 2006); other donors "buy" political support by granting ODA (e.g., Kuziemko and Werker 2006; Dreher et al. 2008).

In several respects, NGOs may provide better targeted aid than official donors. Most

obviously perhaps, the allocation of NGO aid should be less distorted by commercial and political interests of donor governments (Nancy and Yontcheva 2006: 3). The poverty focus of NGO aid may also be stronger than that of ODA: NGOs may be better in reaching the poor by circumventing governments in the recipient country and dealing directly with local target groups (Riddell et al. 1995). Moreover, after the World Bank posited in the late 1990s that government-to-government transfers do not work when governance is particularly bad in the recipient country, it was sometimes argued that NGOs have comparative advantage of working in difficult environments (Fowler and Biekart 1996; Edwards and Hulme 1996; Koch 2007).[4]

However, empirical verification of such "articles of faith" (Tendler 1982) is still largely lacking. According to Edwards and Hulme (1996: 961), the case for emphasizing the role of NGOs largely rests "on ideological grounds." Critics suspect that NGOs often are "the implementer of the policy agendas" of governments (Edwards and Hulme 1996: 970).[5] In particular, the view that NGOs have a clear focus on the poor has come under attack.[6]

Arguably, it depends on the degree of financial autonomy whether or not aid allocation by NGOs differs from that of state agencies. Fisher (1997) argues that "while the moniker 'nongovernment organization' suggests autonomy from government organizations, NGOs are often intimately connected with their home governments."[7] The dependence of many NGOs on government funding is expected to shape their aid allocation. To the extent that they follow their official backdonors, their aid allocation would no longer be superior in terms of targeting the needy and deserving. More specifically, with future funding from official backdonors at risk, financially dependent NGOs can be expected to allocate aid strategically, e.g., by targeting less poor countries where success is easier to achieve (Koch et al. 2007). In other words, NGOs may be tempted to improve the chances of continued official refinancing by demonstrating visible results that tend to be easier to achieve with projects addressing less entrenched forms of poverty.

According to the principal-agent model presented by Fruttero and Gauri (2005), official backdonors (the principals) have incomplete information on the projects of NGOs (the agents), while future funding of NGOs depends on perceived success or failure of current

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[4] The well-known World Bank (1998) study "Assessing Aid" calls for engaging the civil society in order to render aid more effective in highly distorted environments.

[5] For similar concerns, see Smillie (2000: 127) and Robinson (1997: 67).

[6] See the references given in Riddell and Robinson (1995: 35-42) as well as Edwards and Hulme (1996); more recent examples include Amin et al. (2003) as well as Rahman and Razzaque (2000). Bebbington (2005: 937) notes that earlier "celebrations meant that inevitably disillusion would follow, and indeed it did."

[7] According to Edwards and Hulme (1996), the relations of NGOs with state agencies are "too close for comfort."

projects. To demonstrate success, NGOs are inclined to minimize risk which weakens their incentive to operate in difficult environments where failure may jeopardize future funding. Moreover, there might be an incentive for NGOs to locate where other donors are engaged as well. Conformity of location choices is supposed to render it more difficult for principals to assess the performance of individual agents, and may thus help preventing financial sanctions. Fruttero and Gauri (2005) address these propositions at the sub-national level within one particular recipient country, Bangladesh. They find empirical support for several propositions derived from the principal-agent model of officially funded NGO aid. Most importantly, strategic funding considerations appear to have de-linked location choices from indicators of need in local communities.

Few empirical studies exist on the cross-country allocation of NGO aid, with opposing results. Koch et al. (2007) find NGO and official aid to be correlated for Germany and Norway, and argue that this is consistent with the view that NGOs depending on official funding tend to follow the country-wise distribution of official donors. Likewise, Koch (2007) reports a fairly strong and positive correlation between Dutch NGO aid and Dutch official aid across recipient countries. By contrast, the panel regression results of Nancy and Yontcheva (2006) suggest that aid allocation by European NGOs in the 1990s was independent of official EU aid, indicating that co-financed NGOs are not merely implementing EU aid policies. As concerns the poverty orientation of NGOs, Nancy and Yontcheva (2006) find that poverty in recipient countries was the major determinant of aid allocation by European NGOs. All these studies have in common, however, that they do not systematically compare the aid allocation of NGOs with that of ODA.

Dreher et al. (2007) come closest to our analysis below. These authors employ Probit and Tobit models on aid allocation by Swedish NGOs and the official Swedish aid agency. The Swedish case tends to support the skeptical view according to which NGOs are unlikely to outperform official donors by providing better targeted aid. Most strikingly, Swedish NGOs do not seem to have taken account of indicators of need in the recipient countries in the second stage of the aid allocation process, i.e., when deciding on the amount of aid to countries having passed the eligibility test. However, Swedish NGOs may be exceptional in that they depend to more than 80 percent on official funding. Another reason why it might have been fairly difficult for Swedish NGOs to excel is that Swedish ODA is widely acclaimed to be well targeted and altruistic (e.g., Dollar and Levin 2006, Canavire et al. 2006).

In the next section, we turn to the case of Switzerland which, in several respects, offers

deeper insights into the targeting of NGO aid across recipient countries, compared to the targeting of official aid. This is not to ignore that addressing this issue in a country study of Switzerland has its own limitations. Even compared to Sweden, Switzerland represents a relatively small donor country, with about US$ 1.65 billion of total ODA in 2006.[8] To the best of our knowledge, however, a similarly detailed database does not exist for major donor countries.

3.   Data and Estimation Approach

NGO Aid and ODA Benchmarks

The data for Swiss aid, provided by the Swiss Agency for Development and Cooperation (SDC), is exceptionally detailed with regard to the specific categories and sources of aid. Special about this dataset with respect to NGO aid is that the funding sources of the NGOs are given; self-financed NGO aid ("NGO Aid Proper" in the following) and official funds channeled through Swiss NGOs (so-called contributions to NGOs; "Contributions") are presented separately for each country in which the NGOs are active. Accordingly, the dataset not only allows for comparing the aid allocation of NGOs and the state, but also for assessing whether the allocation behavior of NGOs depends on whether they are using their own financial resources or funds provided by state agencies as official backdonors. The reasoning in Section 2 suggests that it is mainly NGO Aid Proper that may be allocated differently than ODA, while NGOs may tend to follow the location choices of backdonors when allocating official funds channeled through them. The latter aid item may be considered a specific mode of ODA delivery, rather than NGO aid narrowly defined. We perform separate estimations for these two types of aid allocated by Swiss NGOs.

    The widely perceived superiority of NGO aid may not only depend on the source of NGO financing but also on which type of official aid provides the benchmark. For various donor countries, there is little choice as reported ODA cannot be differentiated between specific types and state agencies involved. The data available for Swiss aid is particularly informative in this respect, too. Apart from the aforementioned contributions to NGOs, total public aid ("Public Aid") is differentiated into (i) development aid proper and (ii) humanitarian aid. Moreover, category (i) is available for different state agencies whose motivations to grant aid are likely to differ. In addition to development aid from SDC ("ODA Proper"), the State Secretariat for Economic Affairs (SECO) represents another important

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[8] See Table 1 under: http://www.oecd.org/dataoecd/52/9/1893143.xls (accessed:January 2008).

official source of development aid ("SECO Aid").[9] The mere fact that two major official sources exist suggests that they apply different allocation criteria. The allocation of SECO Aid seems to be guided by more narrowly defined economic criteria, given that sustainable economic growth and integration into the world economy figure prominently in its mission statement. The SDC appears to follow a broader approach towards poverty alleviation, not only focusing on economic criteria but also on, for example, education, human rights, equal opportunities and conflict resolution.[10] We perform separate estimations for ODA Proper, Humanitarian Aid and SECO Aid, in order to compare NGO Aid Proper as well as Contributions with different official benchmarks.

We converted all dependent aid variables from Swiss Francs into US Dollars, using annual average exchange rates. In our cross-country estimations, we employ (the logarithm of) five-year averages of all aid variables based on annual data for 2001-2005 available from SDC.

Figure 1 somewhere here

As Figure 1 shows, Swiss public aid clearly exceeds NGO aid. Nevertheless, NGO Aid Proper plays a significant role in Switzerland, accounting for 28 percent of total aid in 2001-2005. ODA Proper accounts for the bulk of Public Aid, while Humanitarian Aid and SECO Aid contribute about 18 and 21 percent respectively to Public Aid. Official aid funds channeled through Swiss NGOs (Contributions) are by far the smallest aid category.

The simple correlations between all aid categories, reported in Table 1, reveal a fairly interesting pattern. The correlations cast first doubts on whether Swiss NGOs behave as suggested by the literature review in Section 2. Most strikingly, the correlation between NGO Aid Proper and Public Aid turns out to be particularly high. This seems to be in conflict with the view that NGOs use their own funds to distinguish themselves from official aid agencies, e.g., by a stronger focus on the poorest recipient countries. The correlations are relatively weak between Contributions and Public Aid, as well as between Contributions and NGO Aid Proper. The latter result appears to be in line with the hypothesis that the source of funding matters for the allocation of aid by NGOs. However, the former correlation puts into question whether NGOs tend to imitate official aid agencies when allocating funds provided by official

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[9] For a detailed description of all variables see Appendix 1. Note that there are various minor official aid sources not considered separately in the following, including federal agencies with special mandates, e.g., related to education, as well as the cantons and municipalities.

[10] http://www.seco-cooperation.admin.ch/index.html?lang=en and
http://www.deza.ch/en/Home/About_SDC/Brief_portrait, accessed: December 2007.

backdonors. Similar to Contributions, SECO Aid is only weakly correlated with most of the other aid categories, suggesting that the allocation of SECO Aid follows specific criteria.

Table 1 somewhere here

Method

Our data has one distinguishing feature: it is censored. Various NGOs, and even official agencies in smaller donor countries such as Switzerland, typically grant aid to a limited number of recipient countries. Consequently, the dependent aid variables have many 'zero' observations; because of the censored nature of the aid variable OLS estimations would be biased. Three different approaches to deal with this issue have been suggested in the literature (Neumayer 2003; Berthélemy and Tichit 2004).

The first approach is a two-part model, where the first step involves a Probit estimation that determines the probability of receiving aid (selection equation), and the second step an OLS estimation that determines the amounts of aid for the sub-sample of positive aid observations (allocation equation). Formally, aid to recipient *i* is defined as:

$$\Pr(aid_i > 0) = F(aY_i + u_i)$$
$$aid_i = bZ_i + v_i,$$

where F(.) denotes the cumulative distribution function, *Y* and *Z* are explanatory variables for the selection and allocation equation, *a* and *b* the respective vectors of coefficients, and *u* and *v* independent and normally distributed error terms. The crucial assumption underlying this approach is that the choice of the recipient and the amount of aid allocated are independent of each other (*u* and *v* are not correlated). If this assumption does not hold, which appears to be highly likely, the regression in the second step suffers from a selection bias.

The second approach is the sample selection or Heckman model, which resembles the two-part model, except that *u* and *v* are not assumed to be independent. Again, a Probit estimation is performed in the first step. In the second step, the so-called inverse Mill's ratio from the first step is added to the set of explanatory variables in order to correct for the selection bias. We then obtain:

$$\Pr(aid_i > 0 = F(aY_i + u_i)$$
$$aid_i = bZ_i + \rho \sigma f(aY_i + u_i) / F(aY_i + u_i) + v_i,$$

where ρ stands for cov(u,v), σ for var(v), and f(.)/F(.) for the inverse Mill's ratio.

The third approach is the Tobit model, which estimates aid allocations in one step, taking the censored nature of the aid variable directly into account. Aid to a specific recipient is specified as the maximum of zero and a linear combination of the explanatory variables so as to guarantee that predicted aid flows cannot become negative:

$$aid_i = \max\,(0,\ bZ_i + u_i)$$

The main limitation compared to the Heckman model is that the variables are restricted to have an identical impact on aid eligibility and the amount of aid given.[11] However, the Heckman procedure suffers from its own problems: Estimations may be unreliable due to serious multicollinearity problems if the same set of explanatory variables is employed in both equations. Moreover, it is very difficult to find appropriate exclusion variables for the first step of the Heckman procedure. Therefore, we follow large parts of the relevant literature and prefer the Tobit model for our regression analysis.[12]

Explanatory Variables

In line with the previous literature on aid allocation, we include a standard set of possible determinants of aid: Most importantly, the logged per-capita GDP (purchasing power parity adjusted constant 2000 international $) of recipient countries provides an encompassing indicator of need, which has repeatedly been shown to shape the distribution of aid (Berthélemy and Tichit 2004; Berthélemy 2006; Nunnenkamp and Thiele 2006; Dollar and Levin 2006; Canavire et al. 2006). We expect the marginal effects of per-capita GDP on aid to be significant and negative. This should apply to all types of aid. As argued above, however, NGO aid is widely expected to be more poverty oriented than public aid.

The institutional development of recipient countries is included for two reasons. On the one hand, official donors may behave as suggested by the influential World Bank study "Assessing Aid" (World Bank 1998). Accordingly, recipient countries would receive less aid than indicators of need may suggest if they lack basic institutional preconditions required for aid to be effective (Nunnenkamp and Thiele 2006; Dollar and Levin 2006). Institutional

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[11] Note that the Tobit model can be derived as a special case of the Heckman procedure with coefficients, variables and residuals that are the same in the selection and allocation equation.
[12] For empirical applications of Tobit models in the context of aid allocation, see, for example, Berthélemy and Tichit (2004), Canavire et al. (2006), and Thiele et al. (2007).

development should then be positively related to official aid. On the other hand, NGO aid may be negatively related to institutional development if NGOs choose to work in difficult environments (see Section 2 above). We use "control of corruption" ("Corruption" for short) as presented by Kaufmann, Kraay and Mastruzzi (2007) to measure institutional development, with higher index values indicating less corruption.

Furthermore, we account for the possible self-interest of donors when granting aid. Trade-related interests are captured by Swiss bilateral exports to aid recipient countries, relative to Swiss GDP ("Exports").[13] Political motivations of aid are proxied by considering the voting behavior of recipient countries in the UN General Assembly ("UN Voting"). More precisely, UN Voting reflects the percentage with which aid recipient countries voted in line with Switzerland from 2002 to 2005. Exports and UN Voting should carry positive signs for aid from donors with commercial or political motives. In the case of altruistic official donors, NGOs may in contrast find it more difficult to excel their public counterpart, as shown for the case of Sweden by Dreher et al. (2007).

We also account for natural disasters in recipient countries which often motivate emergency aid from both official donors and NGOs. However, disasters cannot be expected to have the same impact on all our aid categories. On the one hand, the marginal effects of disasters should be particularly strong for Humanitarian Aid, which is especially meant to provide a quick response to emergencies. On the other hand, the effects of disasters might even be negative for SECO Aid, which appears to be driven mainly by market and investment-related factors. The severity of natural disasters is measured by the log number of people affected ("Disasters").

A dummy for so-called fragile states ("Fragile") is included as recent research suggests that aid could be used effectively as a means of post-conflict resolution (Collier and Hoeffler 2004). Finally, we control for (logged) population of recipient countries. This is required as the dependent aid variable is not in per-capita terms. While more populous countries should get more aid, donors typically exhibit a small-country bias (e.g., Doucouliagos and Paldam 2007), which means that an increase in population does not lead to a proportional increase in aid.

Arguably, some of the explanatory variables may not be exogenous. For instance, effective aid may raise the per-capita income of recipient countries. Aid may also help

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[13] The definition of this variable follows Berthélemy (2006). Canavire et al. (2006) relate bilateral exports to the donor's total exports. By contrast, Nancy and Yontcheva (2006) consider the ratio of the recipient's imports from the donor country to the recipient's total imports. This measure appears to be less suitable to reflect the importance of bilateral trade relations for the donor.

institutional development. For several reasons, however, reverse causation is unlikely to distort our empirical results. Various aid items are unlikely to have short-term effects on economic outcomes (Clemens et al. 2004). As concerns the impact on institutions, short-term effects are still more unlikely. According to Burnside and Dollar (2004: 4), "researchers coming from the left, the right, and the center have all concluded that aid as traditionally practiced has not had systematic, beneficial effects on institutions and policies." Finally, Swiss NGOs and even the Swiss government are probably too small as donors to shape economic and political outcomes in a significant way by their aid allocation. Nevertheless, we lag all explanatory variables in order to minimize the risk of any reverse causation. We provide detailed information on the definition and sources of variables in Appendix 1.[14]

In the base specification of our model, we regress the different categories of Swiss public and NGO aid on the aforementioned independent variables. We perform Tobit models as follows:

$$\ln \text{Cat Aid} = \alpha + \beta 1 \, (\ln \text{per-capita GDP}) + \beta 2 \, (\ln \text{Population}) + \beta 3 \, (\ln \text{Disaster})$$
$$+ \beta 4 \, (\text{Corruption}) + \beta 5 \, (\text{Fragile}) + \beta 6 \, (\text{UN Voting}) + \beta 7 \, (\text{Exports}) + \varepsilon$$

where Cat Aid refers to the five different aid categories.

All estimations reported in the subsequent sections are based on a sample of 131 low and middle-income countries, according to the World Bank's income classification (World Development Indicators). High income countries (with a per-capita income of more than $11.116 in 2006) are excluded as is standard in the aid allocation literature. Summary statistics for all aid categories as well as for all explanatory variables are presented in Appendix 3.

4.   Estimation Results

As noted before, the nonlinear Tobit approach takes the maximum of zero and a linear combination of the explanatory variables. Consequently, the estimated coefficients cannot be interpreted in the same way as standard ordinary least squares (OLS) coefficients. The coefficients can be judged with respect to their significance levels and signs, but not with respect to their magnitudes. Marginal effects have to be computed to be able to say something about the magnitudes of the coefficients. Three different marginal effects can be evaluated:

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[14] Note that none of the correlations between our explanatory variables raises concerns with respect to multicollinearity; see Appendix 2.

- The first one reveals the impact that a certain explanatory variable has on the probability of a country receiving aid at all. Formally, this is given as $P(Y > 0|X)$ where Y is our dependent variable and X our explanatory variable.

- The second marginal effect reveals the impact that a certain explanatory variable has on the amount of aid that a country receives, given that it receives any aid at all. Formally, this is given as $E(Y|X, Y > 0)$.

- Third, the overall marginal effect (OME) is a combination of the first two effects and is formally given as $P(Y > 0|X) \cdot E_x(Y|X, Y > 0) + P_x(Y > 0|X) \cdot E(Y|X, Y > 0) = E(Y|X)$, where the subscript x indicates the derivative with respect to X. This provides the marginal effect that a certain explanatory variable has on the amount of aid that a country receives, taking into consideration the probability that this country receives aid at all.

The subsequent presentation of our estimation results focuses on the OME. For the base specifications, the other two marginal effects as well as the coefficients can be found in Appendix 4 and 5.

Our dependent variables show strong exponential trends so that we logged them. In contrast to OLS regressions, however, having explanatory and dependent variables in logs does not automatically yield elasticities. Likewise, the coefficients and marginal effects of explanatory variables in levels cannot be interpreted as semi elasticities. Instead, all marginal effects can only be judged with respect to their direction, significance and relative magnitudes across regressions using different aid categories.

Table 2 somewhere here

Keeping these peculiarities in mind, we present the results of our base specification in Table 2. The significance levels and the magnitudes of the OMEs point to striking similarities between Swiss NGO Aid Proper and total Public Aid, thus corroborating the above noted strong correlation between these two types of aid. The OMEs of the recipient countries' per-capita GDP are negative and highly significant for both types of aid. In other words, poorer recipient countries get more aid from NGOs as expected, but the poverty orientation of NGO aid does not appear to be stronger than that of public aid. If at all, the OME is slightly more negative for public aid. The magnitude of the positive OME of the recipient countries' size in terms of population is almost identical for NGO aid and public aid.

NGO Aid Proper also resembles Public Aid in that its allocation remains unaffected by

institutional quality as measured by the degree of corruption prevailing in the recipient countries. This is interesting for two reasons: On the one hand, official Swiss donors did not follow the World Bank's advice to favor well governed recipient countries, providing better institutional conditions for public aid to be effective. On the other hand, Swiss NGOs did not attempt to distinguish themselves from official donors by making use of comparative advantages they might have with respect to working in difficult local environments. The OMEs of Disaster and Fragile are also insignificant for both NGO and total Public Aid. This is hardly surprising, considering that aid motivations such as disaster relief and post-conflict resolution may be too specific to shape the allocation of aggregate aid categories such as total Public Aid and NGO Aid Proper.

The allocation of NGO aid differs only slightly from the allocation of public aid with respect to the two variables supposed to capture the commercial and political self-interest of official donors. UN Voting is highly significant and positive for Public Aid, which supports the view that official donors reward political allies. However, UN Voting is also significant for NGO aid, though only at the ten percent level. The political neutrality of Switzerland may explain this similarity at least partly. Official donors as well as Swiss NGOs may feel obliged to spread the idea of political neutrality. This can be achieved by supporting recipient countries which may suffer from discrimination by major donors such as the United States as the former do not belong to any of the established political camps. It seems to fit into this line of reasoning that the UN voting coincidence between Switzerland and the United States was very low with about 37 percent, compared to a coincidence of around 70 percent between Switzerland and its European neighbors.

Commercial self-interest does not appear to have shaped the allocation of public aid, which is in line with previous findings for Swiss aid by Berthélemy and Tichit (2004) as well as Berthélemy (2006).[15] As a consequence, there was little room for Swiss NGOs to outperform official donors by delinking aid from export-related interests. Yet it should be noted that the OME of exports for Swiss NGO Aid Proper is significantly negative at the five percent level. Koch et al. (2008) find a similar pattern also for NGOs from other source countries, possibly because NGOs consider recipient countries with stronger trade links to be less needy of aid.

All in all, the results reported so far cast into serious doubt the widely held view that

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[15] Note that total Swiss exports account for about 31 percent of Swiss GDP. However, this share declines to 4.3 percent when high-income countries are removed from the sample – as is the case in our present analysis. Belarus represented the sample country accounting for the highest value (0.37 percent) of the export variable. The minor importance of most sample countries as Swiss export markets may have weakened the incentive to use aid as a means of export promotion.

NGOs use their own financial resources to clearly distinguish themselves from official donors. Nevertheless, the disaggregation of public aid may offer additional insights on whether the targeting of NGO aid depends on the source of funding as well as the official benchmark chosen. As concerns the official benchmark, it was to be expected that the results for Public Aid also largely apply to its quantitatively most important sub-category, ODA Proper.[16] Humanitarian aid stands out in two respects. First, the OME of per-capita GDP suggests that the poverty orientation of humanitarian aid is relatively strong, compared to other types of public aid and NGO aid. Second, the OME of Disaster is significant at the one percent level, indicating that it is mainly this aid category that responds to emergencies in the aftermath of natural disasters. But even for humanitarian aid, the OME of UN Voting reveals a strong bias towards politically like-minded countries.

The allocation of SECO Aid clearly differs from the allocation of humanitarian aid. This is even though per-capita GDP enters significantly negative at the ten percent level, and – somewhat surprisingly – Exports remain insignificant in the estimation for SECO aid. However, the particularly large OME of population indicates a strong bias of SECO Aid towards large countries, which could be due to the future market potential these countries offer. Moreover, we find a peculiar pattern for Disaster and Fragile, which both enter negatively at the five percent level. It seems that SECO avoids working in fragile states and countries struck by natural disasters, probably because a relatively stable political and economic environment is deemed necessary to render the project and investment-related aid from this agency to be effective.

Contributions are of particular interest even though they represent the smallest aid category under consideration (see Figure 1). The allocation of Contributions, the part of public aid that is administered by NGOs or delivered through them, in fact differs from the allocation of both total public aid and NGO Aid Proper.[17] Most notably, Contributions clearly stand out in that per-capita GDP does not enter significantly negative. While the allocation of Contributions is not poverty oriented, Contributions resemble Humanitarian Aid in terms of responding to natural disasters, suggesting that the Swiss government referred to NGOs as another (possibly less bureaucratic) means of aid delivery in emergencies.

However, the government also appears to have (mis-)used the NGO channel for political reasons. UN Voting enters highly significant, with a negative OME of a comparatively large magnitude. This suggests that the government preferred dealing with

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[16] The only exception is that Exports turn significantly negative at the ten percent level.
[17] However, the allocation of both Contributions and NGO Aid Proper is significantly biased against more important export markets of Switzerland among the sample countries.

politically "unfriendly" countries indirectly through the NGO channel. A similar reasoning may apply to NGO-administered aid granted to well governed recipient countries, considering that the mission statements of official agencies such as SDC argue in favor of engaging in *less* benign environments in order to actively fight problems of corruption and a lack of democratic structures. However, the positive OME of Corruption in the estimation for Contributions is also consistent with the proposition that NGOs prefer working under easier institutional conditions, in order to be able to present success stories to official backdonors and, thereby, improve the chances for future funding.

5.   Robustness Tests

We apply several robustness tests to our base specification to check whether the results reported in the previous section are sensitive to changes in variables and specifications.[18] Most importantly, we consider alternative indicators of need to evaluate the poverty orientation of different types of public and NGO aid. Although most commonly used, per-capita GDP is not a perfect indicator of recipient need. South Africa, for example, counts as an upper middle-income country in terms of per-capita GDP, but income inequality is very high in the country with around 34 percent of the population still living on less than $2 a day. We thus perform robustness tests for two more indicators of recipient need: the Human Development Index (HDI) and the poverty headcount.

The HDI, compiled by the United Nations Development Programme, comprises economic and social measures of health, education and standard of living. It thus provides a broader measure of need than per-capita GDP, while being available for a sample of almost 180 countries. Overall, the results remain quite robust for most explanatory and dependent variables (columns (2) in Table 3). However, it appears that the poverty orientation of NGO aid is understated when measured by per-capita GDP. In contrast to the base specification with per-capita GDP, the effect of HDI is larger for NGO Aid Proper than for Public Aid. Furthermore, the HDI enters significantly negative at the five percent level for Contributions. This is in contrast with the previous finding, according to which recipient need played no role for the allocation of NGO administered public funds.[19]

Alternatively, we employ the poverty headcount, which is defined as the percentage of the population living on less than $2 a day. NGOs often claim that the poverty orientation of

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[18] Note that we only report the OMEs for the robustness tests, but the other marginal effects are available on request.

[19] Finally, Exports turn significantly negative for Public Aid, thus resembling NGO aid in that the proposition of aid being used as a means of export promotion is clearly rejected.

their aid would be biased downwards when measured by average incomes, rather than the prevalence of absolute poverty. Substituting the poverty headcount for per-capita GDP results in a drastically reduced sample. Nevertheless, major results are hardly affected. Concerning the estimations with Contributions, Humanitarian Aid and SECO Aid respectively as dependent variables, the effects of the explanatory variables are mostly of the same order of magnitude and significance no matter of whether recipient need is measured by per-capita GDP or the poverty headcount.[20] Likewise, most of the explanatory variables remain largely as before in the estimations with total Public Aid and NGO Aid Proper as dependent variables. The only notable exception is that Corruption turns out to be significant for Public Aid.

Table 3 somewhere here

However, there is one striking difference between NGO Aid Proper and Public Aid when comparing the base specification in Table 2 and the estimations reported in Table 3. While both per-capita GDP and the poverty headcount enter significantly with the expected sign for NGO Aid Proper, the poverty headcount does not affect the allocation of Public Aid. We checked whether this difference is due to the substantially reduced sample or the measurement of recipient need, by re-estimating the base specification for the reduced sample. The results reported in columns (1 red.) of Table 3 indicate that both types of aid closely resemble each other also for the reduced sample with per-capita GDP as the indicator of need. Poverty orientation in the sense of allocating more aid to countries with a larger share of the population living on less than US$ 2 a day appears to be restricted to NGO aid, however.

Next, we substitute Voice and Accountability for Corruption as an indicator of governance and institutional development. Voice and Accountability is another indicator provided by Kaufmann, Kraay and Mastruzzi (2007), measuring the extent to which a country's citizens can participate in selecting their government, as well as freedom of expression, association and media. This indicator of democratic rights and structures is available for almost 200 countries. The change in the specification has little effect with respect to all other independent variables (columns 4, Table 3).

The impact of governance and institutions on aid allocation depends on measurement to some extent. NGO-administered public aid (Contributions) still provides a striking contrast

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[20] Estimates for (some) sub-categories of Public Aid are not shown but available on request.

to the other aid categories as concerns the link between institutional development and aid allocation. Voice and Accountability enters positively, as did Corruption before, in line with the World Bank's suggestion to grant more aid to better governed countries. For NGO Aid Proper as well as total Public Aid, however, the effect of Voice and Accountability is now significantly negative, meaning that less democratic countries receive more aid. This is no longer surprising once the mission statements of Swiss aid agencies are taken into account. For instance, SDC stresses its aim to strengthen democratic structures in the recipient countries, especially "at the base" in accordance with Swiss experience and culture. NGOs seem to have followed the same approach when allocating their own funds. Our finding that Contributions have been allocated according to completely different rules is possibly because the Swiss government used the NGO channel of aid delivery when supporting recipient countries which fit less well into official mission statements.

Finally, we exclude some outliers. We define an observation to be an outlier if it is more than three standard deviations smaller or larger than the mean. This reduces the sample by nine observations. Almost all results remain very similar to those of the base specification.[21] The major exception concerns the effect of per-capita GDP on NGO Aid Proper, which turns insignificant. By contrast, the effects of the HDI and the poverty headcount remain unaffected when excluding the outliers.

6.   Summary and Conclusions

It has traditionally been an article of faith that NGOs are closer to the poor than official donors, and that the allocation of NGO aid is less distorted by interventions of state agencies with commercial and political mandates such as export promotion or the formation of political alliances. But empirical evidence is extremely scarce on where NGO aid is spent and how well targeted it actually is. We contribute to closing this gap by drawing on an exceptionally detailed Swiss database that covers different forms of NGO aid as well as several official donors serving as benchmarks. We perform separate Tobit estimations for these aid categories, accounting for both altruistic and selfish aid motivations.

In contrast to what one might expect, the allocation of self-financed NGO aid reveals striking similarities to the allocation of Swiss ODA. First of all, NGO aid is not generally more poverty oriented. It rather depends on the measurement of recipient need whether NGOs outperformed the government in this respect. Our findings support the view that the poverty

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[21] Results are not reported but are available on request.

orientation of NGO aid would be understated when only measured by average per-capita incomes.

Neither the government nor NGOs followed the World Bank's advice to favor recipient countries offering better institutional conditions for aid to be effective. Rather, essentially all Swiss donors seem to work on the (heavily disputed) assumption that aid may help improve governance. Finally, neither official nor NGO donors used aid as a means to promote Swiss exports, but both granted more aid to politically like-minded recipient countries.

Yet it depends on the source of funding as well as the choice of the official aid benchmark whether Swiss NGOs granted better targeted aid. It appears to be easier for NGOs to excel, e.g., in terms of poverty orientation, compared to state agencies with mandates going beyond international development cooperation (such as Switzerland's State Secretariat for Economic Affairs). At the same time, the allocation of NGO-administered ODA differs substantially from the allocation of self-financed NGO aid and ODA Proper. Public funds channeled through Swiss NGOs appear to be subject to a special regime. The government referred to NGOs as (another) way of aid delivery in response to natural disasters, but possibly also to provide aid to politically "unfriendly" recipient countries with whom state agencies preferred not to deal directly.

Taken together, our findings caution against the view that aid would be better targeted to the needy and deserving if only NGOs had more resources at their disposal and a bigger say on the allocation of aid. The Swiss example rather suggests that the incentives of NGOs to swim against the tide are weaker than widely believed, even when deciding on the allocation of their own resources. Rather than trying to excel by distinguishing themselves from other donors, NGOs may prefer following official aid strategies and allocation rules to get easier access to public funds. Official backdonors in turn are likely to push their own agenda when using NGOs as a form of ODA delivery, and may even consider NGOs to be "subcontractors who can be hired at will" (Monteiro 2007).

More research is required to shed further light on these issues. Most obviously, it is clearly warranted to perform similar case studies for other donor countries, especially quantitatively more important donors such as the United States, France or Germany. Regrettably, the data situation renders this extremely difficult, not least because NGOs often are fairly reluctant to open their books on aid allocation beyond presenting regional aggregates in annual activity reports. Second, it would be desirable to augment the specification of the aid allocation equation in several ways. Most interestingly, the funding

structure of (individual) NGOs could be entered as an independent variable, if available for a sufficiently large number of NGOs. Interacting this variable with standard determinants of aid allocation could then reveal whether financially autonomous NGOs provide better targeted aid than their counterparts relying on state financing.

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Figure 1: Amount of aid for different aid categories in thousand US$.
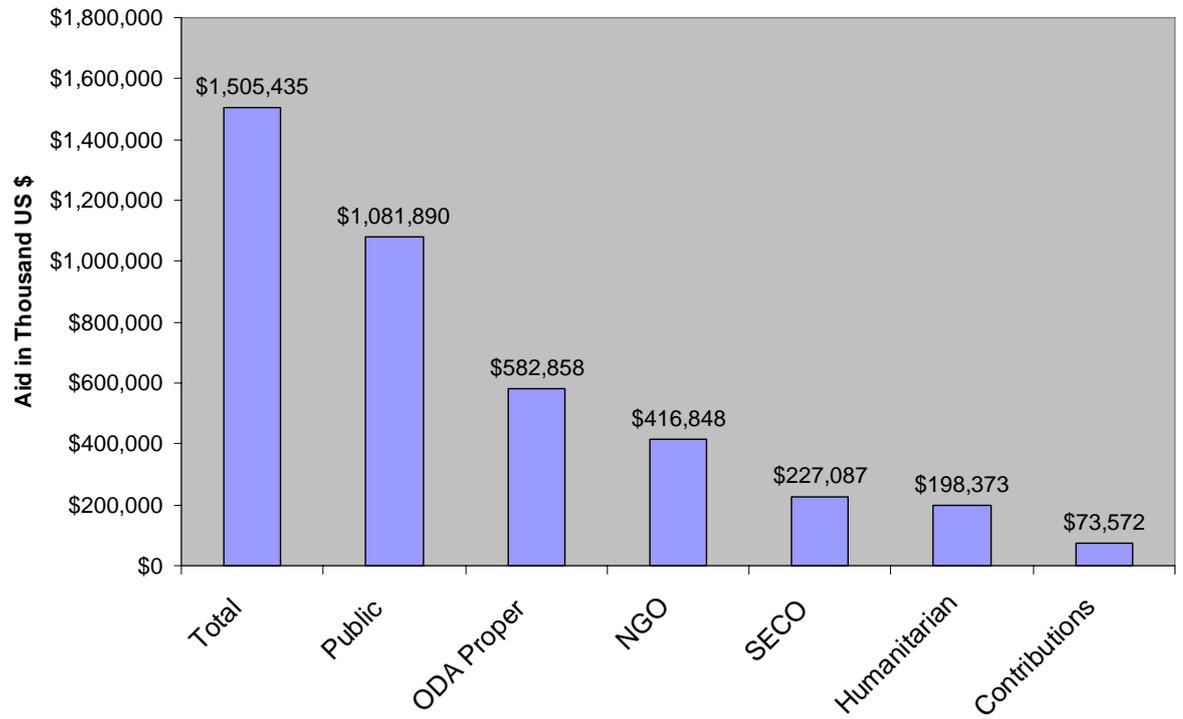
Source: DCC (various issues).

Table 1: Correlation of Aid Categories

	Public Aid	NGO Aid Proper	ODA Proper	Humanitarian Aid	Contributions	SECO Aid
Public Aid	1.00					
NGO Aid Proper	0.86	1.00				
ODA Proper	0.94	0.82	1.00			
Humanitarian Aid	0.82	0.69	0.76	1.00		
Contributions	0.60	0.64	0.58	0.45	1.00	
SECO Aid	0.58	0.44	0.56	0.36	0.20	1.00

Table 2: Tobit Regressions: Marginal Effects, Base Specification

	NGO Aid Proper	ODA Proper	Public Aid	Humanitarian Aid	Contributions	SECO Aid
Expl. Variables			Overall Marginal Effects			
GDP (LN)	-0.12**	-0.18**	-0.17***	-0.31***	-0.15	-0.42*
Population (LN)	0.18***	0.22***	0.17***	0.21***	0.38***	0.70***
Disaster (LN)	0.00	0.00	0.00	0.05***	0.07**	-0.09**
Corruption	-0.03	0.00	-0.06	-0.18	0.59***	-0.50
Fragile	-0.03	-0.14	-0.07	0.17	0.31	-1.31**
UN Voting	1.08*	2.34***	1.89***	3.84***	-9.83***	12.59***
Exports	-1.17**	-2.47*	-0.87	-0.36	-4.90**	-3.37
Obs.total	126	118	126	126	126	126
Obs. Censored	14	15	13	35	53	70

Table 3 – Tobit Regressions: Marginal Effects, Robustness Tests

	NGO Aid Proper				ODA Proper				Public Aid total				Contributions			
	(1 red.)	(2)	(3)	(4)	(1 red.)	(2)	(3)	(4)	(1 red.)	(2)	(3)	(4)	(1 red.)	(2)	(3)	(4)
Expl. Variables	Overall Marginal Effects															
GDP (LN)	-0.10**	-	-	-0.11**	-0.11*	-	-	-0.19***	-0.13***	-	-	-0.16***	0.04	-	-	-0.09
HDI	-	-0.96***	-	-	-	-0.76**	-	-	-	-0.73***	-	-	-	-1.58**	-	-
Pov. Headcount ($2)	-	-	0.004***	-	-	-	0.00	-	-	-	0.00	-	-	-	0.01	-
Population (LN)	0.07**	0.18***	0.06**	0.16***	0.11***	0.21***	0.10***	0.18***	0.11***	0.18***	0.10***	0.15***	0.20**	0.36***	0.19*	0.42***
Disaster (LN)	0.01	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.08**	0.07**	0.07*	0.05
Corruption	-0.03	-0.03	-0.06	-	-0.09	-0.07	-0.16*	-	-0.07	-0.10	-0.15**	-	0.30	0.55***	0.40*	-
Voice & Account.	-	-	-	-0.10*	-	-	-	-0.09	-	-	-	-0.12**	-	-	-	0.35**
Fragile	-0.09	-0.06	-0.16	-0.06	-0.16	-0.14	-0.16	-0.18	-0.01	-0.07	-0.03	-0.11	0.02	0.17	-0.13	0.38
UN Voting	0.70	1.95***	0.89	1.39**	1.74**	2.85***	1.46*	2.66***	1.71***	2.36***	1.50**	2.25***	-11.96***	-8.52***	-10.71***	-10.53***
Exports	-0.39	-1.10*	-0.22	-1.13**	-0.73	-1.53**	-0.90	-1.01	-0.56	-1.22**	-0.68	-0.85	-3.88**	-4.28**	-2.99*	-4.47**
Obs. total	82	127	82	126	82	127	82	126	82	127	82	126	82	127	82	126
Obs. Censored	3	15	3	14	3	15	3	15	2	13	2	13	28	52	28	53

Note: The table shows the overall marginal effect $E(Y \mid X)$ for all explanatory variables and different categories of aid. Significance levels are indicated by *** for the 1%, ** for the 5% and * for the 10% level.

Appendix 1 – Variable Description

Variable	Description	Source
Public Aid	All public aid funds, comprising *inter alia* ODA Proper, Humanitarian Aid, Contributions and SECO Aid. Natural logarithm of 1 + the original values.	Swiss Agency for Development and Cooperation, SDC online statistics, http://www.deza.ch/en/Home/documentation (accessed: October 2007)
NGO Aid Proper	All privately funded aid of non-governmental organisations. Natural logarithm of 1 + the original values.	SDC online statistics
ODA Proper	Total public aid minus Humanitarian Aid, Contributions and SECO Aid. Natural logarithm of 1 + the original values.	SDC online statistics
Humanitarian Aid	Official humanitarian aid from the Swiss Agency for Development and Cooperation (SDC). Natural logarithm of 1 + the original values.	SDC online statistics
Contributions	Public aid channeled through NGOs. Natural logarithm of 1 + the original values.	SDC online statistics
SECO Aid	Aid funds from the State Secretariat for Economic Affairs (SECO). Natural logarithm of 1 + the original values.	SDC online statistics
GDP (LN)	Per-capita GDP at constant 2000 US$, PPP adjusted. Average over the years 1997-2001. Natural logarithm.	World Bank, World Development Indicators 2006
Pov. Headcount (2$)	Percentage of people living on less than 2$ a day. Average over the years 1997-2001.	World Bank, World Development Indicators 2006
HDI	Human Development Index for 2005	United Nations Development Programme (UNDP), http://hdr.undp.org/en/statistics/data/
Population (LN)	Population in natural logs. Average over the years 1997-2001.	World Bank, World Development Indicators 2006
Disaster (LN)	Number of people affected through disasters. Natural logarithm. 1997-2001	International Disaster Database, http://www.em-dat.net/ (accessed: November 2007)
Corruption	Control of corruption. Index ranging from -2.5 to 2.5 with 2.5 indicating the least possible corruption. Average over the years 1996-2000.	Kaufmann, Kraay and Mastruzzi (2007)
Voice & Accountability	Index of democratic structures and rights, ranging from -2.5 to 2.5 with 2.5 indicating the optimal performance. Average over the years 1996-2000.	Kaufmann, Kraay and Mastruzzi (2007)
Fragile	Dummy that is one for countries with CPIA of 3.0 or below in 2005.	World Bank's Country and Institutional Assessment (CPIA)
UN Voting	Measure of voting coincidence between Switzerland and aid recipient countries in the UN General Assembly. Average over the years 2002-2005.	Kindly made available by Axel Dreher
Exports	Bilateral exports relative to Swiss GDP. Current US$. Average over the years 1997-2001.	International Monetary Fund, Direction of Trade Statistics

Appendix 2 – Correlations of all dependent and explanatory variables

	Public Aid	NGO Aid Proper	ODA Proper	Humanit. Aid	Contribs.	SECO Aid	GDP (LN)	HDI	Poverty Headc. $2	Pop. (LN)	Disaster (LN)	Corruption	Voice & Accoun.	Fragile	UN-Voting	Exports
Public Aid	1.00															
NGO Aid Proper	0.86	1.00														
ODA Proper	0.94	0.82	1.00													
Humanitarian Aid	0.82	0.69	0.76	1.00												
Contributions	0.60	0.64	0.58	0.45	1.00											
SECO Aid	0.58	0.44	0.56	0.36	0.20	1.00										
GDP (LN)	-0.43	-0.40	-0.38	-0.44	-0.34	-0.16	1.00									
HDI	-0.25	-0.30	-0.19	-0.27	-0.39	0.08	0.87	1.00								
Pov. Headcount 2$	0.26	0.41	0.16	0.32	0.48	-0.07	-0.82	-0.86	1.00							
Population (LN)	0.70	0.70	0.67	0.60	0.50	0.45	-0.25	-0.12	0.14	1.00						
Disaster (LN)	0.48	0.49	0.48	0.54	0.46	0.17	-0.29	-0.18	0.35	0.57	1.00					
Corruption	-0.32	-0.29	-0.25	-0.36	-0.07	-0.15	0.52	0.40	-0.38	-0.16	-0.11	1.00				
Voice & Accoun.	-0.41	-0.39	-0.33	-0.44	-0.16	-0.11	0.44	0.39	-0.33	-0.40	-0.07	0.56	1.00			
Fragile	0.06	0.07	0.00	0.17	0.09	-0.18	-0.35	-0.44	0.23	-0.04	-0.01	-0.32	-0.36	1.00		
UN-Voting	0.17	0.11	0.19	0.08	-0.31	0.28	0.28	0.43	-0.51	0.07	-0.02	0.17	0.22	-0.15	1.00	
Exports	0.16	0.15	0.16	0.15	0.04	0.16	0.31	0.33	-0.32	0.45	0.24	0.20	0.04	-0.17	0.17	1.00

Appendix 3 – Summary statistics of dependent and explanatory variables

	Mean	Std. Dev.	Min	Max	Median	Observations
Aid Categories						
Public Aid	5810.78	8873.61	0.27	47428.40	1592.25	127
NGO Proper	1194.46	2286.48	2.63	18623.17	459.63	103
ODA Proper	4662.86	7630.21	-2349.53	40780.63	940.16	125
Humanitarian	693.14	918.05	2.15	3639.72	251.23	81
Contributions	2531.33	4706.47	0.54	32257.20	737.95	125
SECO Aid	2725.48	3920.54	-3682.21	15673.79	765.45	58
Expl. Variables						
GDP	4291.92	3545.69	491.63	22465.37	3543.72	131
Pov. Headcount (2$)	40.52	29.98	2.00	94.13	37.19	85
HDI	0.67	0.15	0.34	0.87	0.71	134
Population	34981157.35	135751263.94	42705.40	1250000000.00	6911801.50	142
Disaster (LN)	8.77	4.49	0.00	18.19	9.94	142
Corruption	-0.42	0.54	-1.68	1.34	-0.47	141
Voice & Account.	-0.30	0.85	-1.94	1.31	-0.29	141
Fragile	0.16	0.37	0.00	1.00	0.00	147
Exports	0.03	0.06	0.00	0.37	0.00	148
UN-Voting	0.59	0.05	0.48	0.73	0.57	141

Note: Values for the dependent variables only refer to countries that received aid at all.
The numbers for all aid categories and GDP are stated in 1000 $US.

Appendix 4 – Tobit Regressions: Coefficients, Base Specification

Expl. Variables	Public Aid		NGO Aid Proper		ODA Proper		Humanitarian Aid		Contributions		SECO Aid	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
GDP (LN)	-1.20***	0.00	-0.75**	0.02	-1.20***	0.00	-1.37***	0.00	-0.56	0.32	-1.75*	0.08
Population (LN)	1.20***	0.00	1.14***	0.00	1.16***	0.00	0.94***	0.00	1.40***	0.00	2.90***	0.00
Disaster (LN)	-0.02	0.68	-0.02	0.69	-0.01	0.90	0.22***	0.01	0.24**	0.02	-0.36**	0.04
Corruption	-0.41	0.38	-0.19	0.67	-0.05	0.92	-0.80	0.23	2.18***	0.01	-2.08	0.17
Fragile	-0.47	0.46	-0.17	0.78	-0.85	0.23	0.78	0.37	1.15	0.28	-5.42**	0.02
UN-Voting	12.99***	0.00	6.70*	0.06	13.87***	0.00	17.18***	0.00	-36.00***	0.00	52.06***	0.00
Exports	-6.01	0.12	-7.22**	0.04	-6.06	0.15	-1.63	0.75	-17.96**	0.01	-13.93	0.28
Constant	-9.63**	0.02	-9.25**	0.02	-10.57**	0.02	-12.41**	0.04	4.94	0.53	-59.26***	0.00
sigma	2.21***	0.000	2.05***	0.000	2.41***	0.00	2.93***	0.000	3.48***	0.000	5.55***	0.000
Observations total	126		126		124		126		126		123	
Obs. censored	13		14		15		35		53		70	
pseudo R^2	0.18		0.17		0.15		0.16		0.16		0.14	
chi^2 p-value	0.000		0.000		0.000		0.000		0.000		0.000	

Significance levels: *** 1%, ** 5%, * 10%.

Appendix 5 –Marginal effects for all aid categories

Dep Var: **Public Aid**	E(Y|X)		E(Y|X,Y>0)		P(Y>1)	
Expl. Variables	mar. eff.	p-value	mar. eff.	p-value	mar. eff.	p-value
GDP (LN)	-1.49***	0.000	-1.47***	0.000	0.00	0.110
Population (LN)	0.78***	0.000	0.76***	0.000	0.00	0.097
Disaster (LN)	0.07	0.270	0.06	0.270	0.00	0.350
Corruption	-0.56	0.270	-0.55	0.270	0.00	0.350
Fragile	-0.35	0.620	-0.34	0.620	0.00	0.680
UN Voting	14.94***	0.001	14.68***	0.001	0.04	0.120
exports	-1.16	0.770	-1.14	0.770	0.00	0.770
Obs. total	126					
Obs. censored	13					
Dep Var: **NGO Aid Proper**	E(Y|X)		E(Y|X,Y>0)		P(Y>1)	
Expl. Variables	mar. eff.	p-value	mar. eff.	p-value	mar. eff.	p-value
GDP (LN)	-1.06***	0.002	-1.03***	0.002	-0.00	0.100
Population (LN)	0.69***	0.000	0.67***	0.000	0.00*	0.071
Disaster (LN)	0.07	0.200	0.07	0.200	0.00	0.290
Corruption	-0.37	0.440	-0.36	0.440	-0.00	0.480
Fragile	-0.10	0.880	-0.10	0.880	-0.00	0.880
UN Voting	8.71**	0.030	8.50**	0.030	0.04	0.150
Exports	-1.92	0.610	-1.87	0.610	-0.01	0.630
Obs. total	126					
Obs. censored	14					
Dep Var: **ODA Proper**	E(Y|X)		E(Y|X,Y>0)		P(Y>1)	
Expl. Variables	mar. eff.	p-value	mar. eff.	p-value	mar. eff.	p-value
GDP (LN)	-0.18**	0.01	-0.20***	0.00	-0.01*	0.06
Population (LN)	0.22***	0.00	0.19***	0.00	0.01**	0.03
Disaster (LN)	0.00	0.97	-0.00	0.90	-0.00	0.90
Corruption	0.00	0.98	-0.01	0.92	-0.00	0.92
Fragile	-0.14	0.27	-0.14	0.23	-0.01	0.29
UN Voting	2.34***	0.00	2.25***	0.00	0.13*	0.06
Exports	-2.47*	0.09	-0.98	0.15	-0.06	0.22
Obs. total	124					
Obs. censored	35					
Dep Var: **Humanitarian Aid**	E(Y|X)		E(Y|X,Y>0)		P(Y>1)	
Expl. Variables	mar. eff.	p-value	mar. eff.	p-value	mar. eff.	p-value
GDP (LN)	-1.46***	0.001	-1.16***	0.001	-0.09***	0.003
Population (LN)	0.46***	0.002	0.37***	0.002	0.03***	0.007
Disaster (LN)	0.29***	0.000	0.23***	0.000	0.02***	0.002
Corruption	-0.9	0.150	-0.71	0.150	-0.06	0.170
Fragile	0.75	0.380	0.61	0.390	0.04	0.310
UN Voting	16.90***	0.002	13.41***	0.001	1.06***	0.007
Exports	2.9	0.530	2.3	0.530	0.18	0.530
Obs. total	126					
Obs. censored	35					

Appendix 5 continued:

Dep Var: **Contributions**	E(Y|X)		E(Y|X,Y>0)		P(Y>1)	
Expl. Variables	mar. eff.	p-value	mar. eff.	p-value	mar. eff.	p-value
GDP (LN)	-0.71*	0.085	-0.50*	0.086	-0.09*	0.088
Population (LN)	0.51***	0.001	0.36***	0.001	0.07***	0.001
Disaster (LN)	0.28***	0.000	0.19***	0.000	0.04***	0.000
Corruption	1.41**	0.020	0.99**	0.020	0.18**	0.022
Fragile	0.87	0.330	0.62	0.340	0.1	0.270
UN Voting	-24.86***	0.000	-17.53***	0.000	-3.24***	0.000
Exports	-6.64	0.180	-4.68	0.180	-0.86	0.180
Obs. total	126					
Obs. censored	53					
Dep Var: **SECO Aid**	E(Y|X)		E(Y|X,Y>0)		P(Y>1)	
Expl. Variables	mar. eff.	p-value	mar. eff.	p-value	mar. eff.	p-value
GDP (LN)	-0.79*	0.063	-0.60*	0.061	-0.13*	0.063
Population (LN)	1.20***	0.000	0.92***	0.000	0.20***	0.000
Disaster (LN)	-0.14**	0.050	-0.11**	0.050	-0.02*	0.053
Corruption	-0.84	0.180	-0.64	0.180	-0.14	0.180
Fragile	-1.56***	0.002	-1.37***	0.006	-0.32***	0.004
UN Voting	22.11***	0.000	16.89***	0.000	3.76***	0.000
Exports	-5.92	0.260	-4.53	0.260	-1.01	0.260
Obs. total	126					
Obs. censored	70					

Note: Three marginal effects (as introduced in the text) as well as the respective p-values for all aid categories and each explanatory variable of the base specification (Table 1); ***, ** and * signal significance at the 1%, 5% and 10% level.