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No. 1890 | January 2014

Web: www.ifw-kiel.de

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Natural Disasters and Private Donations to NGOs: The Effects of Being Present after the Tsunami in the Indian Ocean*

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Abstract:

NGOs are widely perceived to raise their flag in humanitarian hot-spots with strong media presence in order to attract higher private donations. We assess this hypothesis by comparing the changes in donations between US-based NGOs with and without activities in the four countries most affected by the tsunami in the Indian Ocean in 2004. Performing a difference-in-difference-in-differences (DDD) approach, we find only weak indications that private donors systematically and strongly preferred active over inactive NGOs.

Keywords: natural disaster, non-governmental organizations, private donations, Indian Ocean.

JEL classification: L31; Q54; F35

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* We thank Michaela Rank for excellent research assistance.

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1. Introduction

International non-governmental organizations (NGOs) have played an increasingly important role in emergency relief and reconstruction, not least in the aftermath of the earthquake and subsequent tsunamis in the Indian Ocean in December 2004.¹ This disaster shocked the public around the world. It caused an estimated 270,000 casualties and affected millions more (Rempel 2010). The human toll was highest in Indonesia, followed by Sri Lanka, India, and Thailand.

The response to the disaster in terms of official emergency aid and private giving was unprecedented, too. Amartya Sen celebrated “the outburst of human sympathy” (Sen 2005). According to Flint and Goyder (2006), private donations contributed about 40 percent to the estimated US\$ 14 billion of funds for emergency relief and reconstruction from international sources.

Private donations represent the predominant source of funding of many NGOs. For instance, private donations (cash and in-kind contributions) accounted for 57 percent of total revenues of all US-based NGOs which registered with the US Agency for International Development (USAID) and engaged in international relief and development.² Hence, it is hardly surprising that NGOs compete for private donations through fundraising. Notions such as the “alms bazaar” (Smillie 1995), the “NGO scramble” (Cooley and Ron 2002), and the “goodwill bazaar” (Aldashev and Verdier 2010) are used in the literature to characterize this competition.

¹ As noted by Smillie (1995: 101), various well-known international NGOs “were formed first and only to deal with emergencies.”

² Funding from official sources accounted for about one quarter of total revenues. So-called private revenues (comprising sales, user fees and investment income) contributed the rest. For details, see: <http://www.usaid.gov/sites/default/files/documents/1880/volag2012.pdf> (accessed: December 2013).

NGOs are widely perceived to “raise funds for future work by raising their flag in media-saturated humanitarian ‘hot spots’” (Cooley and Ron 2002: 12) such as the tsunami affected countries in the Indian Ocean. According to De Waal (1997), NGOs engaged in disaster relief go where the TV cameras are to get the highest media attention and, thereby, mobilize the maximum of private donations. However, empirical evidence on the quantitative effects of “flying the flag” in humanitarian hot-spots on private donations in the aftermath of major emergencies is largely lacking.

We contribute to closing this gap by combining two datasets for a sample of 31 large US-based NGOs, which allow us to compare the changes in revenues between NGOs with and without activities in the four Asian countries most affected by the 2004 tsunami: (i) self-collected data on the recipient country portfolio of NGOs for each year since the late 1990s and (ii) annual accounting data available for these NGOs from the so-called VolAg reports of USAID.³ Specifically, we assess whether US-based NGOs with activities in these countries reported a higher increase in private donations than NGOs without such activities. We perform a difference-in-difference-in-differences (DDD) analysis to test for significant differences when comparing the changes in private donations before and after the tsunami between NGO groups with and without activities in the affected countries.

The structure of the paper is as follows. Section 2 discusses the related literature and introduces our hypotheses. We describe the data and the approach of testing for differences between NGOs with and without activities in tsunami affected countries in Section 3. The results in Sections 4 and 5 show weak indications that private donors systematically and strongly preferred active over inactive NGOs. Section 6 concludes.

³ The collection of VolAg data for the 1990-2008 period is available from: <http://ghdx.healthmetricsandevaluation.org/record/ihme-formatted-usaid-volag-database-1990-2008> (accessed: December 2013). The most recent VolAg report is available from: <http://www.usaid.gov/sites/default/files/documents/1880/volag2012.pdf> (accessed: December 2013).

2. Related literature and hypotheses

One strand of the existing literature on donor reactions to natural disasters discusses the effectiveness of emergency aid, including NGO aid.⁴ For instance, the so-called Tsunami Evaluation Coalition conducted several thematic assessments to evaluate donor responses after the Asian tsunami.⁵ Flint and Goyder (2006), Telford and Cosgrave (2007), and Rempel (2010) provide informative overviews on assessment criteria, the performance of official donors and NGOs, and the lessons to be learnt for future emergencies.⁶

Another strand of the literature focusses on the determinants of international emergency aid. Following conventional aid allocation studies, several empirical studies address the question of whether the allocation of emergency aid is primarily needs-based, or rather driven by selfish donor motives; recent examples include: Drury et al. (2005), Strömberg (2007), Fink and Redaelli (2009), Becerra et al. (2012), and Raschky and Schwindt (2012).⁷ Some studies on the determinants of emergency aid explicitly account for the role of the media. Olson et al. (2003: 124) conclude from several case studies that “only occasionally do the media play a decisive role in influencing donors to allocate large amounts of aid to specific emergencies.” Eisensee and Strömberg (2007) analyze the influence of the media on the US government’s response to about 5,000 natural disasters since the late 1960s. They find that US emergency aid depends on whether the disaster occurs at the same time as other newsworthy events such

⁴ Major issues include the scale and timeliness of donor responses, impartiality between recipient countries and compared to other emergencies, needs orientation, accountability and local ownership, and agency proliferation and coordination. Moore et al. (2003) focus on NGO networks and coordination in their case study of the relief and recovery operations during the Mozambican floods of 2000. They show that NGOs with higher centrality scores served a greater number of beneficiaries of relief and recovery projects.

⁵ The Tsunami Evaluation Coalition included aid agencies of some donor countries such as Danida and Sida from Denmark and Sweden, respectively, several UN agencies, and large NGOs such as CARE and World Vision.

⁶ Pandya (2006) provides a critical assessment of disaster relief by NGOs in Aceh, the region in Indonesia that was most affected by the tsunami. The author argues, *inter alia*, that “the over-saturation of the post-disaster relief scene led NGOs to ‘scramble for beneficiaries’ in certain areas, while in others, there was no NGO presence whatsoever” (page 305). Jayasuriya and McCawley (2008) discuss the effectiveness of reconstruction programs in the aftermath of the tsunami.

⁷ Francken et al. (2012) assess the allocation of emergency aid within one particular country, Madagascar. Some other studies take a broader perspective by analyzing the response of different types of financial flows, including aid, to natural disasters (e.g., Yang 2008; David 2011).

as the Olympic Games. It seems that decisions on emergency aid are “driven by news coverage of disasters and that this news coverage is crowded out by other newsworthy material” (Eisensee and Strömberg 2007: 722).

Findings that natural disasters catching media attention typically attract more emergency aid appear to be highly relevant for international NGOs engaged in relief and reconstruction operations. It is widely agreed that “pragmatic and organizational concerns” (Fruttero and Gauri 2005: 759) have an important say on the location choices of NGOs competing for official funding and private donations.⁸ Specifically, visibility and demonstrable activity on the ground may help improve the NGOs’ funding prospects and, thus, ensure their survival and growth in the aid business. Bernard Kouchner, co-founder of Médecins sans Frontières (Doctors without Borders) and French Minister of Foreign Affairs in 2007-2010, explicitly endorsed the so-called Law of Hype (“la loi du tapage”) – i.e., NGOs vying for media attention and appealing to public emotions in order to bring attention to humanitarian crises and raise private donations (Kouchner 1971; see also DeChaine 2012).

Critics stress the drawbacks of “the (sometimes ruthless) efforts of NGOs to attract private donations” (Aldashev and Verdier 2010 drawing on De Waal 1997), e.g., in terms of “excessive fundraising” (Rose-Ackerman 1982), lack of coordination, and proliferation of actors (Smillie 1995; Telford and Cosgrave 2007; Rempel 2010). NGOs advertising their brand name in emergencies such as after the 2004 tsunami have been harshly criticized. In November 2005, the Indian magazine Outlook summarized a critical investigation into NGO activities in tsunami affected districts in Tamil Nadu and Pondicherry under the heading “Everybody loves a good tsunami – and none more than the cash-flush NGOs.” The critics of NGOs seem to agree with the proponents that “flying the flag” in humanitarian hot-spots is

⁸ See also Smillie (1995) as well as Cooley and Ron (2002).

essential for NGOs to benefit from higher private donations in the aftermath of major emergencies. Accordingly, we hypothesize:

NGOs which were (more) active in the four most affected Asian countries at the time of the tsunami benefited from a higher increase in private donations than NGOs which were not (less) active in these countries.

Nevertheless, the existing literature on the determinants of private donations points to several qualifications of this hypothesis. The NGOs' own fundraising effort figures prominently among these determinants. As argued by Aldashev and Verdier (2010), the fundraising effort of an NGO helps attract donations to this particular NGO by persuading donors that the NGO's activities are particularly close to the donor's preferred dimension of relief and development. All the same, the fundraising effort of an NGO does not necessarily reduce donations to other NGOs. Other NGOs may even benefit from the fundraising effort of peers to the extent that their effort activates new donors and enlarges the overall pool of donations.⁹ In the present context, NGOs which were not engaged in relief operations in the tsunami affected countries may have received additional donations by freeriding on the fundraising efforts of NGO peers being active in these countries.

According to Smillie (1995: 117), "disaster appeals are well known within NGOs as building blocks for longer-term donor relationships." Nevertheless, it cannot be taken for granted that disaster-related giving has lasting effects on the revenues of NGOs raising their flag where an emergency struck, relative to other NGOs staying away. Drawing on a 2005 report of the Institute of Fundraising in the United Kingdom, Flint and Goyder (2006: 35) conclude that "the impact of the tsunami appeal on other charities seems to have been short-lived." Kerlin (2013) provides indirect evidence for US-based NGOs which suggests minor business stealing

⁹ As Aldashev and Verdier (2010) put it, fundraising has a double function: On the one hand, it influences the choice of which NGO to give to (business stealing effect). On the other hand, it awakens donors who did not give to any NGO before (market size effect).

effects even in the immediate aftermath of the Asian tsunami: Private donations increased in 2005 not only for NGOs specialized in international relief operations, but also for NGOs specialized in other fields such as health and democracy/ civil society.

Furthermore, while “flying the flag” may be essential for NGOs to benefit from higher private donations, the incentive to engage in fundraising is weaker when alternative sources of official funding are easily accessible after major disasters such as the Asian tsunami (Andreoni and Payne 2003). As noted by Kerlin (2013), the increase in government grants to US-based NGOs in 2005 may be attributed at least partly to the US government’s response to the tsunami and its reliance on NGOs as a channel of emergency aid delivery. According to Andreoni and Payne (2011), it is mainly through the disincentive effects on fundraising that official NGO funding crowds out private donations. In the present context, this could imply that NGOs not serving as a channel of official emergency aid to tsunami affected countries are more likely to sustain their fundraising effort. If so, this would reduce or even prevent a decline in private donations to inactive NGOs, relative to those to active NGOs.

Finally, the distribution of private donations in favor of active NGOs may be less pronounced than expected as the choices of many donors do not appear to be well informed. For instance, Smillie (1995: 210) argues that “there is so much fundraising competition, and so few ways to learn about which NGO is effective, that individuals considering a donation simply go with the household names.” Nunnenkamp and Öhler (2012) show that private donations to US-based NGOs hardly depend on publicly available information on NGO characteristics revealing an efficient and targeted use of funds.¹⁰ In the present context, relatively uninformed donors may simply give to the usual household names, irrespective of whether or not these NGOs are active in the tsunami affected countries. It is then open to debate whether,

¹⁰ Recent experimental evidence suggests that only a minority of donors spent money or time to find out relevant information leading to better informed choices on whom to give to (e.g., Fong and Oberholzer-Gee 2011; Null 2011).

say, Food for the Poor – a particularly large and well-known Christian NGO in the United States – attracted less donations after the Asian tsunami than the smaller and perhaps less known Food for the Hungry, even though only the latter was active in two of the most affected countries (India and Indonesia).

Taken together these qualifications invite a more specific hypothesis: *The extent to which (more) active NGOs benefited from higher private donations in the aftermath of the tsunami, compared to NGO which were not (less) active, is likely to be small and short-lived.*

To the best of our knowledge, the subsequent analysis is the first to compare the effects of major natural disasters such as the Asian tsunami in 2004 on private donations to NGOs being active in the affected countries and NGOs being inactive there. Three recent studies on private giving in the United States and the funding of US-based NGOs are related to our analysis, but none of them addresses the hypotheses introduced above. Brown and Rooney (2010) present an historical analysis of private giving in the United States, showing that national crises (including war, terrorism, political and economic crises, and natural disasters in the US) during the 1959-1999 period were seldom a significant driver of donations once personal income and wealth is controlled for. More closely related to our study, Kerlin (2013) assesses the impact of three major events, including the Asian tsunami in 2004, on the revenues of US-based international NGOs.¹¹ In line with expectations, private donations to NGOs increased considerably in 2005, which Kerlin (2013) attributes largely to the Asian tsunami. However, Kerlin (2013) does not compare the change in revenues for NGOs with and without activities in the countries most affected by the disaster. Finally, Kim and Nunnenkamp (2013) use a similar approach as we do in the following in order to assess whether the presence of US-based NGOs in Afghanistan and Iraq improved their chances of external funding.

¹¹ The two other major events are the terrorist attacks of September 11, 2001, and the economic downturn in 2001.

3. The NGO sample

We make use of a new time-series cross-sectional dataset on the activities of US-based NGOs in developing countries, including the four countries that were most affected by the tsunami in 2004. Our data collection effort focused on large NGOs which the National Center for Charitable Statistics (NCCS) classifies in categories Q30 and Q33, i.e., international development and international relief, respectively.¹² Drawing on websites and annual reports and personal contact through e-mail and phone, we obtained sufficient information on annualized recipient country portfolios, covering the 1997-2008 period, for 40 NGOs. This group accounts for 51 percent of total assets of all NGOs classified by NCCS in categories Q30 or Q33.

The self-collected data on the country portfolio of NGOs allow us to identify which NGO was active in one or more of the countries affected by the tsunami, and which NGO was inactive. The distinction between active and inactive NGOs refers to the year 2005. This information is combined with detailed data on NGO revenues and expenditures from USAID's annual VolAg reports. VolAg data are missing or incomplete for nine NGOs, so the subsequent analysis is based on a sample of 31 NGOs.¹³ The VolAg reports offer annual data on overseas program expenditures; total revenues are differentiated between private and official sources. We focus on private cash donations and funding from US government agencies.¹⁴

¹² For details, see: <http://nccs.urban.org>.

¹³ Appendix 1 lists the 31 NGOs in our sample. We kept Citihope International in the sample even though VolAg data are missing in 2008 for this NGO. This has no impact on the DDD analyses below which do not include 2008. Moreover, the descriptive statistics are hardly affected by this choice, since Citihope was among the smallest NGOs in our sample (in terms of both overall revenues and private donations).

¹⁴ Some NGOs also report considerable private support through so-called in-kind contributions such as volunteer services and donated goods. In-kind contributions accounted for about one third of overall private support to all NGOs covered in the 2012 VolAg report (<http://www.usaid.gov/sites/default/files/documents/1880/volag2012.pdf>). However, there appear to be various missing entries for in-kind contributions and the appropriate accounting for these contributions may be open to debate. Hence, we focus on private cash donations in the following. US government funding contributed about 70 percent to overall official funding of all NGOs covered in the 2012 VolAg report; other governments and international organizations contributed the rest.

Graph 1 shows the longer-run trends in total revenues, private donations, US government funding, and overseas program expenditures for our sample of 31 US-based NGOs. The annual deviations from these trends are typically fairly modest. The peak in private donations in 2005 immediately after the tsunami in the Indian Ocean represents a notable exception (lower panel of Graph 1). Private donations increased by US\$ 570 million in 2005 and exceeded the amount in the previous year by almost 50 percent. However, the boom proved short-lived, and donations returned to the longer-term trend in the subsequent year.¹⁵

In contrast to what one might have expected, the tsunami was not associated with an increase in government funding of our NGO sample. Quite the contrary, government funding fell below the trend in 2005. This may be for two reasons. On the one hand, the US government could have anticipated the boom in private donations and took the opportunity to curtail official NGO support. The US government would have moderated the positive deviation of total revenues from the trend in 2005 (upper panel of Graph 1). On the other hand, some NGOs reportedly declined official funds during the boom of private donations (Flint and Goyder 2006; Telford and Cosgrave 2007). It is also striking that overseas program expenditures did not exceed the longer-term trend in 2005. Little more than half of the increase in total revenues carried over into an increase in overseas program expenditures, suggesting that NGOs used the temporary peak in private donations largely to fill the pool of financial reserves.¹⁶

From our sample of US-based NGOs it appears that substantially higher private donations in 2005 did not result in an equally strong expansion of overseas program expenditures. However, Graph 1 may obscure different developments between NGOs with activities in the countries affected by the tsunami and NGOs without such activities.

¹⁵ The development of private donations was very similar when separating the sample into NGOs classified by NCCS in categories Q30 (international development) and Q33 (international relief); not shown for the sake of brevity.

¹⁶ This especially applies to NGOs in category Q33, but developments were again qualitatively the same for NGOs in category Q30.

4. Regional NGO presence and private donations

In this section, we distinguish between three sub-groups of the 31 US-based NGOs: seven NGOs which were not active in any of the four affected countries, 12 NGOs which were active in just one country, and 12 NGOs which were active in at least two countries.¹⁷ We proceed in two steps. For a start, we compare the donations given to the three sub-groups of NGOs and the corresponding changes in overall revenues and overseas program expenditures. Subsequently, we perform a DDD analysis with two alternative classifications of NGOs into the treatment group and control group, respectively.

Descriptive statistics

Graph 2 reveals the longer-term trends of private donations and the annual deviations from the trend. The average level of donations was lowest in the sub-group without activities in the region, and highest in the sub-group with activities in at least two countries.¹⁸ However, the longer-term trend in donations was fairly similar for all three sub-groups. Private donations increased about threefold for all sub-groups when comparing the two initial years (1997/98) with the two final years (2007/08) in Graph 2.

Turning to short-term changes after the tsunami, the increase in private donations in 2005 was relatively small – in absolute as well as relative terms – for the sub-group of NGOs without activities in the affected region (see also Table 1). At the same time, private donations considerably exceeded the trend immediately after the tsunami for the two sub-groups with

¹⁷ For convenience we often use the term “region” when referring to the group of the four most affected countries.

¹⁸ While private cash donations played a minor role for NGOs without activities in the region, total revenues of NGOs in this sub-group were fairly similar to those of NGOs with activities in one country. One NGO in the former sub-group (Food for the Poor, a Christian charity engaged in Latin America and the Caribbean) reported exceptionally high in-kind contributions in recent years.

activities in the region. This tends to support the hypothesis that private donors allocated higher donations primarily to NGOs being engaged in at least one of the most affected countries. A comparison between the two sub-groups with activities in the region provides further evidence to this effect. The increase in private donations immediately after the tsunami was particularly pronounced – again in absolute as well as relative terms – for NGOs engaged in at least two of the four most affected countries.¹⁹

All the same, it appears from Table 1 that higher donations to NGOs with (stronger) presence in the region had at best limited effects on total revenues and overseas program expenditures of different sub-groups of NGOs.²⁰ The percentage increase in total revenues after the tsunami was only slightly higher for active NGOs than for inactive NGOs. Furthermore, NGOs with activities in at least two affected countries reported a relatively small increase in overseas program expenditures (see last row of Table 1). This seems to be partly because of reduced government funding. At the same time, it was mainly the NGOs with a stronger presence in the region which largely used the peak of private donations to fill the pool of financial reserves. For both reasons, private donors cannot be sure that higher donations to more active NGOs immediately translate into expanded overseas operations.

DDD analysis

The descriptive statistics offered first indications on the effects of the tsunami in the Indian Ocean on private donations received by sub-groups of US-based NGOs. However, comparing the level of donations before and after the tsunami relies on the assumption that nothing else

¹⁹ Private donations increased by US\$ 189 million or 41 percent in 2005 for NGOs with activities in one affected country, while they increased by US\$ 363 million or 54 percent for NGOs with activities in at least two affected countries (Graph 2 and Table 1).

²⁰ It should be recalled from Section 3 that the data situation does not allow us to distinguish between overseas program expenditures in the affected countries and outside the region.

has changed the level of donations over time, which is unlikely to hold.²¹ The alternative approach of comparing the changes in donations between NGOs which were (more) active in the tsunami affected region with less active or inactive NGOs also relies on a strong assumption, namely that sub-groups of NGOs did not differ systematically even before the tsunami.

The following difference-in-difference-in-differences (DDD) analysis combines the before-after comparison and the active-inactive comparison. This approach mitigates the problem of overly strong assumptions and allows drawing correct inferences regarding the effect of the tsunami on private donations. We calculate the changes in private donations (PrD) before and after the tsunami (e.g., during the 2002-2004 and 2004-2006 periods); the before-after differential for the treatment group (T) of NGOs which are (more) active in the region is then compared with the before-after differential for the control group (C) of NGOs with less (or no) activity in the region. Formally, this amounts to:

$$DDD = ((PrD^{T,2006} - PrD^{T,2004}) - (PrD^{T,2004} - PrD^{T,2002})) \\ - ((PrD^{C,2006} - PrD^{C,2004}) - (PrD^{C,2004} - PrD^{C,2002}))$$

As discussed in more detail below, we adjust the sub-periods before and after the tsunami depending on whether assessing medium- or short-term effects. Moreover, we define the treatment and control groups in two alternative ways: (1) treatment group of 24 NGOs active in at least one of the four affected countries compared to control group of seven NGOs not active in any of the four affected countries; (2) treatment group of 12 NGOs active in at least two of the four affected countries compared to control group of 12 NGOs active in just one of the four affected countries.

²¹ See Becerra et al. (2012) for a before-after approach of assessing foreign aid surges following large natural disasters.

In addition to calculating DDD statistics as indicated above, we follow Kim and Nunnenkamp (2013) and Öhler et al. (2012) by performing regressions to test for significant differences between the patterns for the treatment and control groups of NGOs. More precisely, we derive standard errors and *t*-statistics from a regression where the change in private donations in the different sub-periods represents the dependent variable. Dummies for the treatment group and the sub-period after the tsunami as well as an interaction term between these two dummies are included as independent variables. The coefficient on the interaction term corresponds to the DDD estimate. Formally, the regression is as follows:

$$\text{Change in PrD} = \alpha + \beta \text{Treat} + \gamma \text{2nd Period} + \delta (\text{Treat} * \text{2nd Period}) + \epsilon$$

Table 2 reports the different steps of the DDD analysis. The upper two panels compare 24 active NGOs with seven inactive NGOs, while the lower two panels compare 12 NGOs engaged in at least two countries with 12 NGOs engaged in just one country. For both definitions of the treatment and control groups, we either take a medium-term or short-term perspective. The medium-term perspective considers changes over two years before and after the tsunami (as in the DDD equation above); the short-term perspective considers annual changes in the years before and after the tsunami.

Columns (1)-(4) in Table 2 show the first step of calculating the differences (Ds) in private donations before and after the tsunami – for active (more active) NGOs in columns (1) and (2) and for inactive (less active) NGOs in columns (3) and (4). The increase in private donations was, on average, relatively small before the tsunami; the *t*-tests often suggest that the average level of donations was not significantly higher in 2004, compared to the initial year of the ‘before’ period. The increase in donations to the treatment groups was much larger after the tsunami, though not for the control group of NGOs without any presence in the tsunami affected region (column (4), upper two panels).

The second step of calculating the DDs in columns (5) and (6) reveals the ‘before-after’ comparison for the treatment and control groups of NGOs, respectively. The evidence is ambiguous for the control groups. Specifically, the DDs for NGOs without any presence in the region or in just one country are insignificant at conventional levels when taking a short-term perspective (column (6), second and fourth panel). The results for the treatment groups underscore that the tsunami was associated with a boom in private donations to NGOs which were (more) active in the region; the DDs are significant at the five percent level or better for both treatment groups. Nevertheless, the third and final step of our DDD analysis provides no indications that private donors significantly preferred (more) active NGOs over inactive or less active NGOs. The DDDs in column (7) of Table 2 are all positive, but the coefficients on all interaction terms fail to pass conventional significance levels in the regressions combining the ‘before-after’ comparison with the ‘active-inactive’ comparison.

5. Country-specific evidence: active versus inactive NGOs

Section 4 offered no conclusive evidence that private donors preferred donating to NGOs with stronger presence in the tsunami affected region. In the following, we assess the donors’ preferences with regard to specific countries. We again proceed in two steps. For a start, we separate donations to the sub-group of NGOs being active in one particular country among the four most affected countries from donations to the sub-group of NGOs which are inactive in that particular country. In the DDD analysis reported further below, active and inactive NGOs in a particular country represent the treatment group and control group, respectively.

Descriptive statistics

NGO presence differed considerably between the four affected countries. It was strongest in India, even though the human toll caused by the tsunami was much lower than in Indonesia and Sri Lanka; 19 NGOs of our sample of 31 NGOs were active in India which represents the largest country with the lowest average per-capita income (US\$ 1,990 in PPP terms in 2004) among the four most affected countries. Indonesia as the second largest country with an average per-capita income of US\$ 2,800 suffered the largest number of deaths; 14 NGOs of our sample were active there immediately after the tsunami. The number of active NGOs was considerably smaller in much richer Thailand (six NGOs) – and also in less populated Sri Lanka (eight NGOs) where the human toll was particularly high in relative terms.

Against this backdrop, it is not surprising that the trend line for donations to NGOs with activities in India is far above the trend line for inactive NGOs in the first panel of Graph 3. In contrast, the trend line for donations to NGOs with activities in Thailand is slightly below that for inactive NGOs in the last panel of Graph 3. However, the changes in private donations after the tsunami reveal a striking similarity for all four countries. Throughout the region, private donations jumped from below to above the trend line in 2005 – independently of whether NGOs were active or inactive in the particular country. The increase in donations to active NGOs in India (about US\$ 400 million) was relatively pronounced compared to inactive NGOs (about US\$ 150 million). The difference in the increase in donations between active and inactive NGOs was less pronounced (about US\$ 140 million) in Indonesia and Sri Lanka, and even negative in Thailand where the increase in donations to active NGOs was US\$ 75 million lower than that to inactive NGOs.²² Taken together, it appears that private donors typically preferred active NGOs when deciding on their donations, but only to a

²² This can be attributed to the small number of active NGOs in Thailand (see above).

modest degree. The subsequent DDD analysis subjects this tentative conclusion to further scrutiny.

DDD analysis

The following DDD analysis compares the before-after differential for the treatment group (T) of NGOs with activities in a particular country with the before-after differential for the control group (C) of NGOs without activities in the country. As in Section 4, we modify the sub-periods before and after the tsunami depending on whether assessing medium- or short-term effects. Table 3 reports the three steps of the DDD analysis for private donations to NGOs with regard to each of the four most affected countries.²³

The upper panel of Table 3 takes a medium-term perspective of changes over two years before and after the tsunami; the lower panel takes a short-term perspective of annual changes in the years before and after the tsunami.²⁴ Columns (1) and (2) show the first step of calculating the differences (D s) in private donations before and after the tsunami for those NGOs being active in the particular country, while columns (3) and (4) show the same D s for inactive NGOs. The second step of calculating the DD s in columns (5) and (6) reveals the ‘before-after’ comparison for active and inactive NGOs, respectively. The third step of combining the ‘before-after’ comparison with the ‘active-inactive’ comparison is based on the

²³ We also performed the DDD analysis for US government funding, total revenues and overseas program expenditures. The DDDs for total revenues and overseas program expenditures proved to be insignificant at conventional levels, corroborating the previous impression that the temporary boom in private donations did not translate one-to-one into higher total revenues and expenditures. The DDDs for US government funding turned out to be insignificant (India and Indonesia) or significantly negative (Sri Lanka and Thailand). As noted in Section 3, the negative DDDs for the latter two countries may be attributed to the US government’s anticipation of booming private donations and/ or the NGOs’ lower demand for official funding when private donations were easily available. Results are not shown for the sake of brevity; they are available from the authors on request.

²⁴ We also performed the DDD analysis by taking a longer-term perspective on the ‘before-after’ dimension (2000-2004 versus 2004-2008). Results are not shown as they do not offer additional insights compared to the medium-term perspective. In particular, the DDDs are insignificant at conventional levels as in the upper panel of Table 3.

regression introduced in Section 4, where NGOs being active in the particular country represent the treatment group and inactive NGOs represent the control group.

As can be seen in columns (1) and (3), the increase in private donations was, on average, relatively small before the tsunami. Moreover, the *t*-test often reveals that the average level of donations was not significantly higher in 2004, compared to the initial year of the ‘before’ period. This especially applies to the sub-group of active NGOs, independently of whether we take a medium or short-term perspective. The increase in donations was typically much larger after the tsunami, and almost all Ds in columns (2) and (4) are statistically significant at the ten percent level or better.²⁵

The ‘before-after’ comparison in columns (5) and (6) underscores the earlier impression that the tsunami was associated with a boom in private donations. The DDs are typically highly significant for NGOs being active in the particular country.²⁶ This holds for both the medium-term perspective in the upper panel of Table 3 and the short-term perspective in the lower panel. The finding of larger DDs for active NGOs in the short run, compared to the medium run, corroborates that donations quickly returned to the normal pattern after the temporary boost immediately after the tsunami. The time perspective matters more for inactive NGOs in column (6). Taking a medium-term perspective, the increase in donations proved to be significantly higher after the tsunami than before for the group of inactive NGOs, too. Taking a short-term perspective, however, the DDs for NGOs without activities in India, Indonesia and Sri Lanka are statistically insignificant at conventional levels.

Most importantly, the final step of our DDD analysis provides few indications that private donors systematically and strongly preferred active NGOs over inactive NGOs. This is even though the DDs appear to be larger for active NGOs in column (5) than for inactive NGOs in

²⁵ The exceptions relate to (the few) active NGOs in Thailand and inactive NGOs in India (2005-2004).

²⁶ Thailand is again an exception.

column (6). In the short run, the evidence is ambiguous when combining the ‘before-after’ comparison and the ‘active-inactive’ comparison in column (7) of Table 3 (lower panel). On the one hand, the DDD results are statistically insignificant for India and Indonesia. On the other hand, private donors clearly preferred the eight NGOs being active in Sri Lanka over the 23 NGOs not being present where the human toll of the tsunami was most pronounced in relative terms. In the medium term, however, the DDD results are statistically insignificant for all four countries affected by the tsunami (upper panel).

6. Summary and conclusion

International NGOs play an important role in emergency relief and reconstruction after major natural disasters such as the tsunami in the Indian Ocean in 2004. They are widely perceived to raise their flag in humanitarian hot-spots with strong media presence in order to attract higher private donations. However, empirical evidence on whether NGO presence is essential to benefit from private donations in the aftermath of disasters hardly exists, as NGO-specific data on location choices and revenues from private donations is scarce.

We collected information on the recipient country portfolio of a sample of large US-based NGOs since the late 1990s, and combined this information with data on revenues and expenditures from USAID’s VolAg reports. This allowed us to compare the changes in private revenues (and other accounting items) between NGOs with and without activities in the four Asian countries most affected by the 2004 tsunami – India, Indonesia, Sri Lanka, and Thailand.

Simple before-after comparisons tend to support the hypothesis that “flying the flag” helps attract higher private donations. The increase in donations in 2005 was relatively small for the sub-group of NGOs without any activity in the affected region, and highest for the sub-group

of NGOs with activities in at least two of the most affected countries. Likewise, it appeared that private donors typically preferred active NGOs, though only to a modest degree, when comparing the increase in donations for NGOs being present in a particular country among the four most affected countries with the increase for NGOs without activity in that particular country.

However, we found surprisingly few indications that private donors systematically and strongly preferred (more) active NGOs when performing DDD analyses which combine the before-after comparison with the comparison between (more) active and less active or inactive NGOs. At the regional level of all four countries taken together, we did not find that private donors preferred (more) active NGOs in a statistically significant way. At the level of individual countries, a statistically significant preference for active NGOs was observed only for Sri Lanka, which suffered the greatest human toll in relative terms.

Furthermore, the temporary boom in private donations immediately after the tsunami had only limited effects on total revenues and overseas program expenditures of US-based NGOs. Future research may help clarify whether this finding is mainly because NGOs responded to booming private donations by reducing their dependence on official funding – perhaps to avoid government interference and reduce bureaucratic costs. At the same time, government authorities may have anticipated the boom in private donations after the tsunami in the Indian Ocean and curtailed official NGO support accordingly. In any case, our findings suggest that private donors cannot be sure that higher donations to NGOs being present where a disaster strikes translate one-to-one into an expansion of overall overseas programs. It rather appears that higher program expenditures where NGOs raise their flag result at least partly from a diversion of activities elsewhere.

Further research is also required to evaluate whether our findings from the case study of the tsunami in the Indian Ocean hold more generally. The adjustments of NGOs and governments

to other major disasters and sudden increases in private donations could provide important insights in this regard. In particular, further evidence on crowding out of official NGO funding by easily available private donations under emergency conditions would be an important complement to the earlier finding of Andreoni and Payne (2003; 2011), according to which official funding crowds out private donations under ‘normal’ conditions requiring greater effort of NGOs in fundraising.

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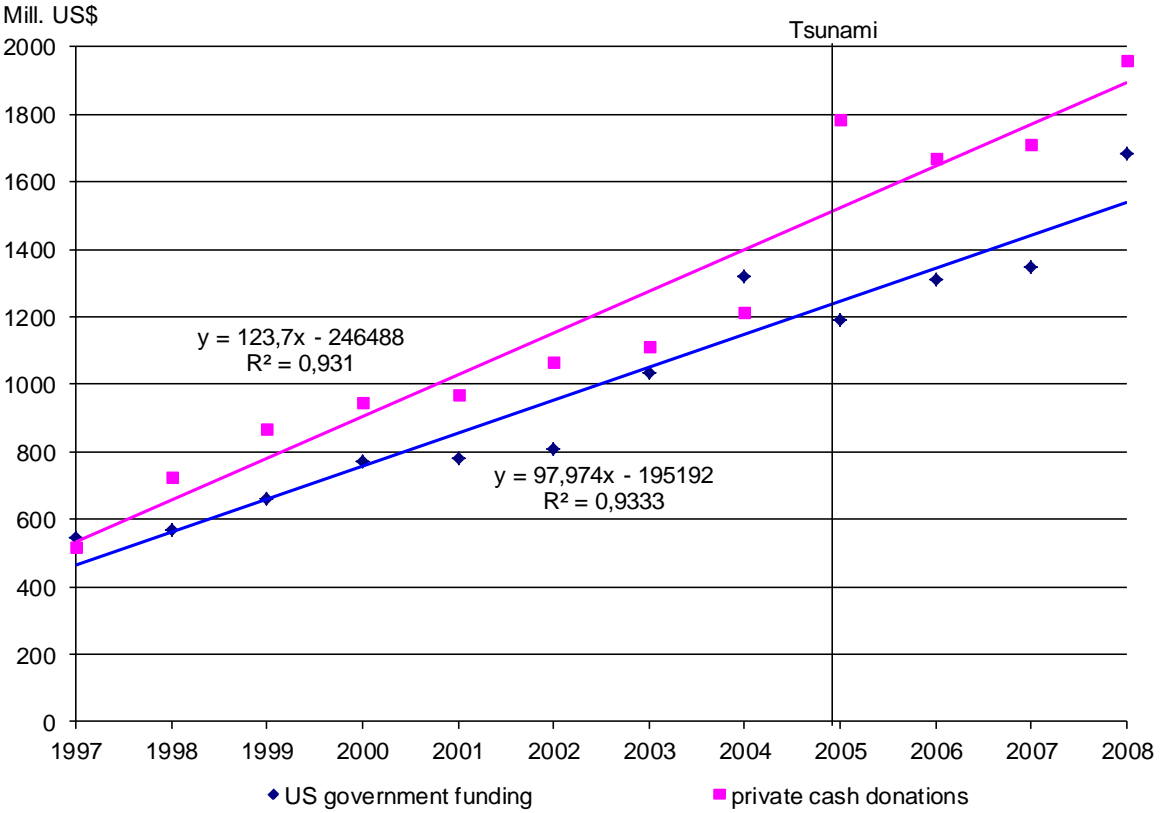
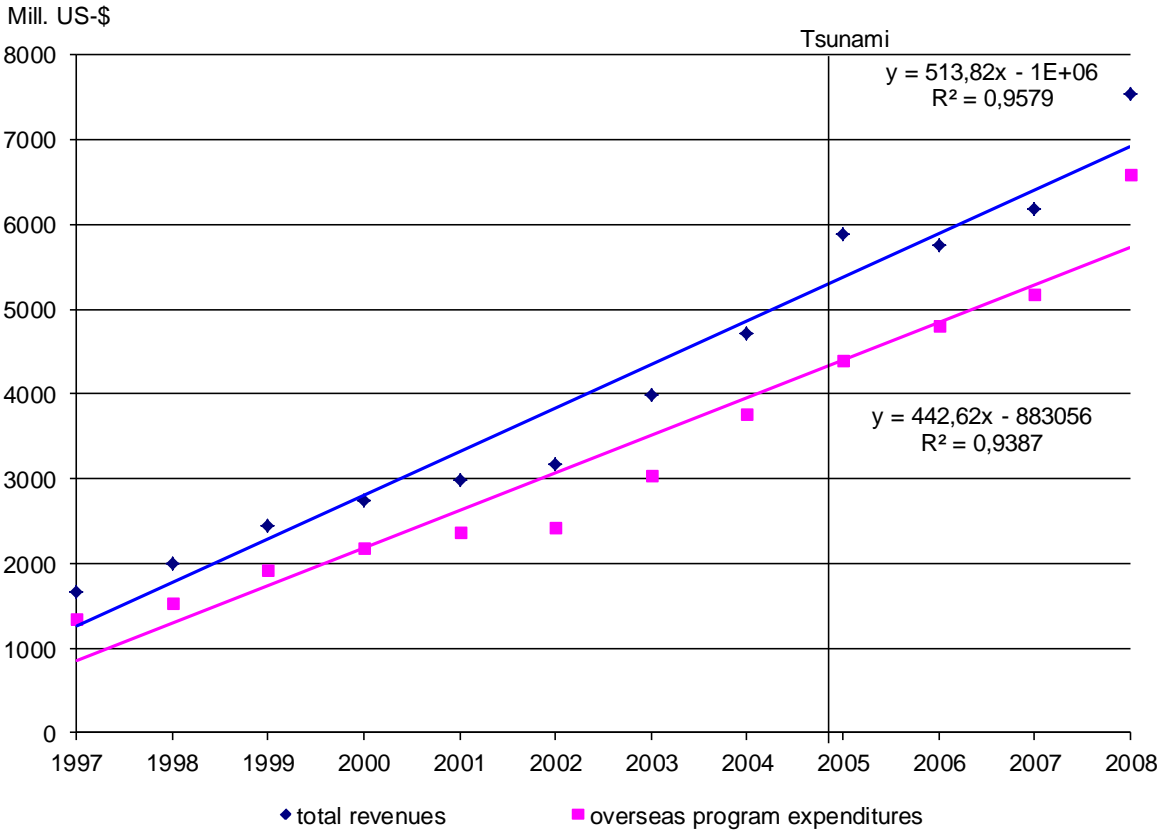
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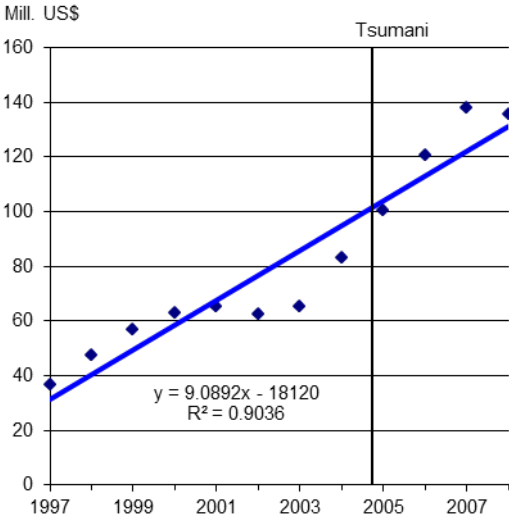
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Graph 1 – Total revenues, overseas program expenditures, private donations and government funding: all 31 NGOs, 1997-2008

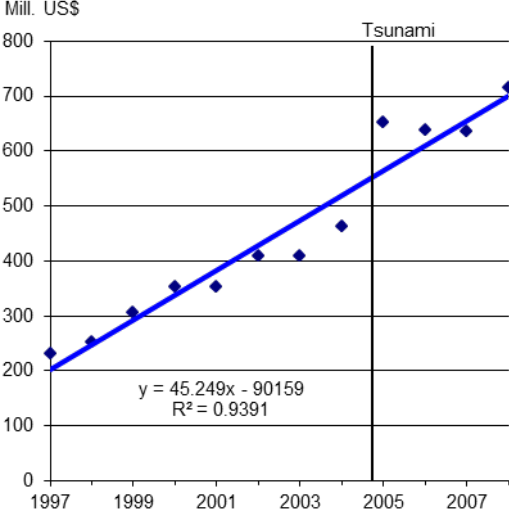


Graph 2 – Private donations to NGOs being active in none, one or at least two of the four countries affected by the tsunami

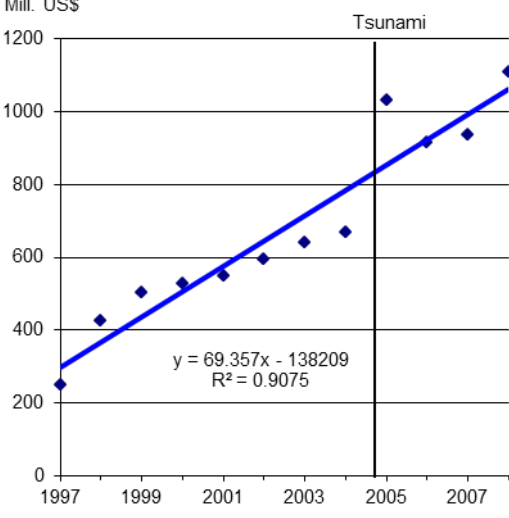
NGOs active in none of the four countries



NGOs active in one of the four countries

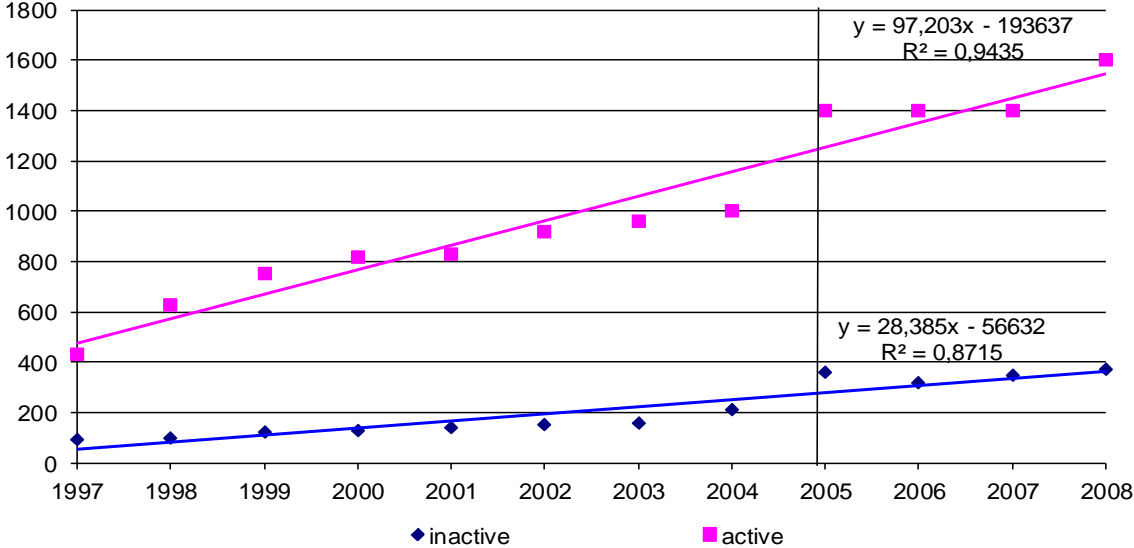


NGOs active in at least two of the four countries

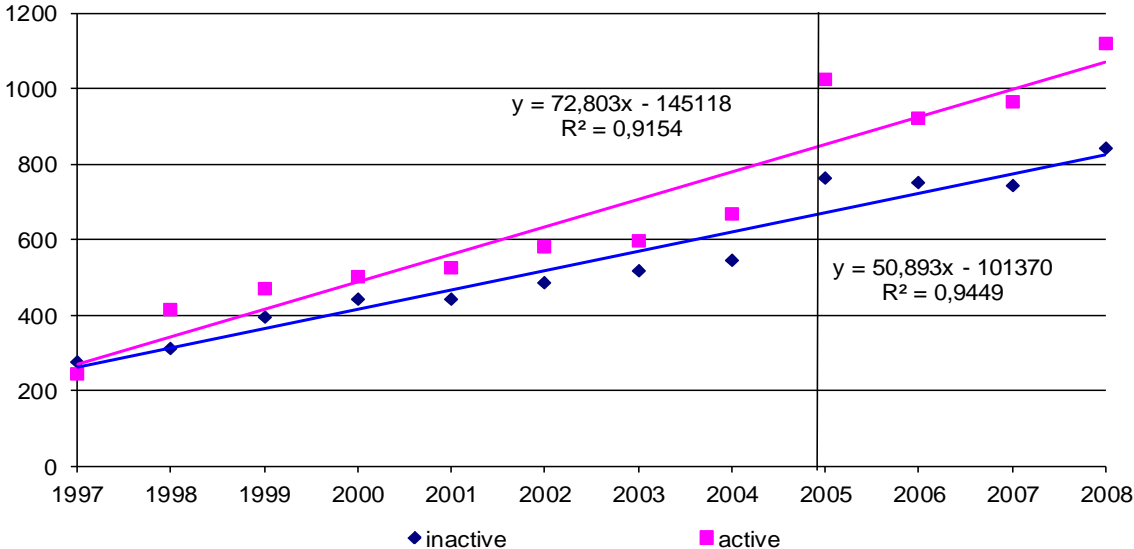


Graph 3 – Private donations: active versus inactive NGOs in India, Indonesia, Sri Lanka and Thailand

India

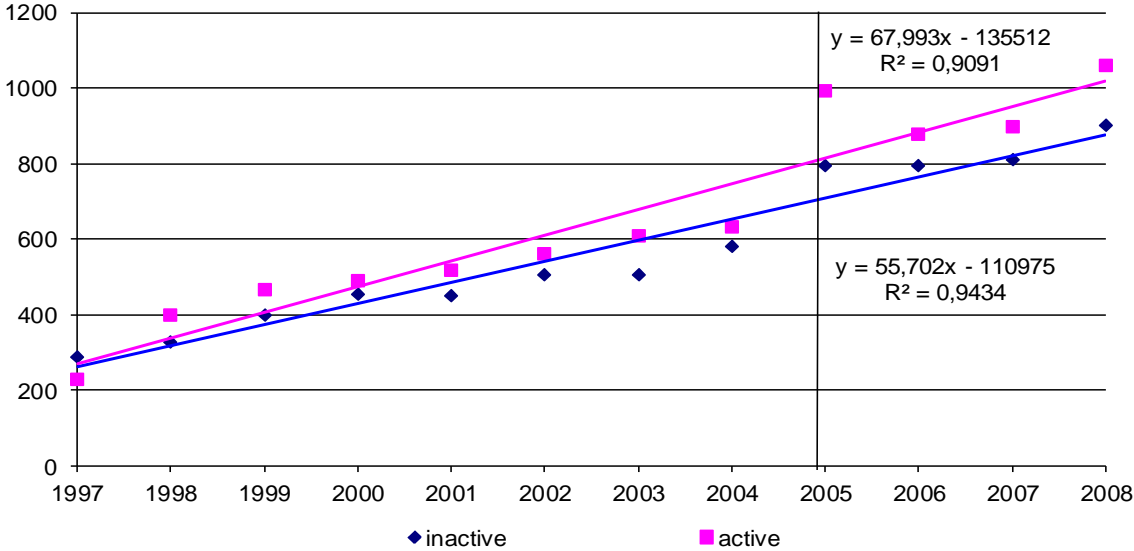


Indonesia



Graph 3 continued:

Sri Lanka



Thailand

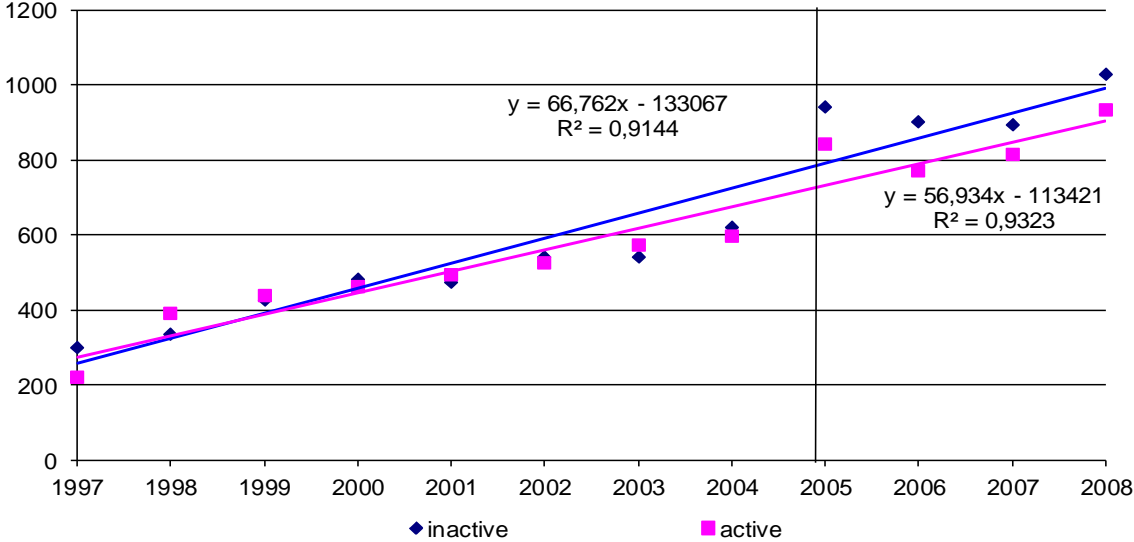


Table 1 – Annual change in private donations, US government funding and overseas program expenditures, 2004-2005 (percent): NGOs being active in none, one or at least two of the four countries affected by the tsunami

	NGOs active in none of the four countries	NGOs active in one of the four countries	NGOs active in at least two of the four countries
Private donations	20.7	40.8	54.3
US government funding	-21.7	19.2	-20.1
Total revenues	21.0	27.6	24.9
Overseas program expenditures	23.8	23.2	12.0

Table 2 – DDD analysis: private donations (US\$ million), by regional presence (number of countries)

(1) Ds NGOs present in at least one country 2004-02	(2) 2006-04	(3) Ds NGOs present in none 2004-02	(4) 2006-04	(5) DDs NGOS present in at least one country	(6) DDs NGOs present in none	(7) DDDs
5.4**	17.5***	2.9	5.4	12.1***	2.4*	9.6
Ds NGOs present in at least one country 2004-03	2005-04	Ds NGOs present in none 2004-03	2005-04	DDs NGOS present in at least one country	DDs NGOs present in none	DDDs
3.5*	23.0***	2.5	2.5	19.6***	-0.1	19.6
Ds NGOs present in at least two countries 2004-02	2006-04	Ds NGOs present in one country 2004-02	2006-04	DDs NGOS present in at least two countries	DDs NGOs present in one country	DDDs
6.2	20.5**	4.6	14.4**	14.3**	9.8**	4.4
Ds NGOs present in at least two countries 2004-03	2005-04	Ds NGOs present in one country 2004-03	2005-04	DDs NGOS present in at least two countries	DDs NGOs present in one country	DDDs
2.4	30.3**	4.5*	15.8	27.9**	11.2	16.7

Notes: *t*-tests with significance levels * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. See Section 4 for details of the calculation of DDDs. Due to rounding, the DDDs may not exactly match the difference between the DDs reported in columns (5) and (6). The same applies to the previous step of calculating the DDs.

Table 3 – DDD analysis: private donations (US\$ million), by country affected

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Ds active NGOs		Ds inactive NGOs		DDs active NGOs	DDs inactive NGOs	DDDs
	2004-02	2006-04	2004-02	2006-04			
India	5.0*	18.2**	4.3	9.7*	13.2***	5.4*	7.8
Indonesia	6.4	18.1**	3.6*	12.0***	11.7**	8.4***	3.3
Sri Lanka	9.3	30.6**	3.3*	9.2***	21.3***	5.9***	15.3
Thailand	12.2	29.1	3.1**	11.3***	16.9	8.2***	8.7

	Ds active NGOs		Ds inactive NGOs		DDs active NGOs	DDs inactive NGOs	DDDs
	2004-03	2005-04	2004-03	2005-04			
India	2.7	22.0**	3.8	12.7	19.4**	9.2	10.2
Indonesia	5.2*	25.3**	1.7	12.7**	20.1**	11.0	9.0
Sri Lanka	3.1	44.7**	3.3**	9.2*	41.6**	5.9	35.7***
Thailand	4.2	41.2	3.0**	12.9**	37.0	9.9**	27.1*

Notes: *t*-tests with significance levels * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. See Section 4 for details of the calculation of DDDs. Due to rounding, the DDDs may not exactly match the difference between the DDs reported in columns (5) and (6). The same applies to the previous step of calculating the DDs.

Appendix 1– List of NGOs included in the analysis

- Action Against Hunger-USA
- Africare
- Aga Khan Foundation U.S.A.
- The American Jewish Joint Distribution Committee, Inc.
- AmeriCares Foundation, Inc.
- The Asia Foundation
- Children International
- Christian Children's Fund
- CitiHope International, Inc.
- Food for the Hungry, Inc.
- Food for the Poor, Inc.
- HOPE Worldwide, Ltd.
- International Medical Corps
- International Orthodox Christian Charities, Inc.
- International Relief and Development
- International Relief Teams
- Ipas, Inc.
- Lutheran World Relief, Inc.
- Management Sciences for Health, Inc.
- Mercy Corps
- Pathfinder International
- PLAN International USA, Inc.
- Planet Aid
- Private Agencies Collaborating Together, Inc.
- Project Concern International
- Project ORBIS International, Inc.
- Save the Children Federation, Inc.
- Women for Women
- World Relief Corporation
- World Vision, Inc.