The Effect of Aid Synergies on Growth

The conditionality between governmental and non-governmental aid

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Abstract

This thesis investigates the impact of synergy effects between non-governmental (NGO) and governmental aid on growth. The hypothesis is that the effectiveness of governmental aid is conditional on whether it is clustered with NGO aid in a recipient country. In theory, NGOs have a comparative advantage for assisting the poor in material and human asset building, whereas governmental aid can foster the implementation of growth promoting policies and institutions at the macro-level. By working together in the same countries NGOs can ensure that the growth opportunities created by governmental aid also benefit the poor. Subsequently, pro-poor growth theory (growth which lowers poverty) suggests that when inequality is reduced higher growth rates can be achieved. This virtuous circle makes the combination of NGO and governmental aid in theory effective at reducing poverty. A new dataset has been constructed for this study, which includes aid expenditures data from 2000 until 2007 from 27 of the largest international NGOs. A random effects panel model is used to empirically determine the possible synergy effects between governmental and NGO aid. The regression results display a significantly positive coefficient for the interaction effect term. This supports the theory that the combination of NGO and governmental aid is more effective at reducing poverty than when these types of aid are given in isolation.

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1. Introduction

Since the start of the new Millennium there has been a tendency from several foreign aid donor countries to give more weight to the effectiveness of aid in their allocation pattern. An example of this is the Millennium Challenge Account aid program under the Bush Administration. The absence of a conclusive answer on aid effectiveness makes this a challenging task for the donor administrations. Rajan and Subramanian (2005) state that there is no cross-country evidence that suggests a robust relationship between aid and growth. Their conclusions hold when aid is conditioned for different types of aid, whether it is given to countries with sound economic policies or when it is conditional on the geographical region of a recipient country. Therefore, are there situations in which aid can foster economic growth, or is it always money down the drain?

The world of foreign aid consists of three types of aid: (1) official development aid (ODA) that is provided by governments or multilateral organizations, (2) development aid given by humanitarian and non-governmental organizations (NGOs), and (3) humanitarian or emergency aid, provided by official donors, UN agencies and NGOs (Riddell, 2007). The literature on aid and aid effectiveness, however, has mainly been centered on one of these types: official development aid.[1] This literature reports mixed results with respect to aid's ability to increase Gross Domestic Product (GDP) growth, as suggested above.[2] Meanwhile the amount of development aid disbursing into the developing countries has never been higher as today (Riddell, 2007). This can be attributed to the sharp increase in the size and resources of the NGO sector. To illustrate this, the Union of International Associations notes that the number of registered NGOs has increased from 31.246 in 1990 to 59.003 in 2003 (Guide to Civil Society Network, 2004). Overall grants of NGOs located in the member countries of the Development Assistance Committee (DAC) of the Organization of Economic Co-operation and Development (OECD) amounted to $18.5 billion dollar in 2007. This amount exceeds bilateral aid from every single DAC member country, except for the

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[1] ODA consists for 2/3 out of bilateral assistance, also called governmental aid and 1/3 out of multilateral assistance, which is aid given by multilateral organizations (OECD, 2007).
[2] There is a vast amount of aid effectiveness literature see for example: Boone, (1994), Burnside and Dollar (2000), Collier and Dollar (2002), Dalgaard, Hansen and Tarp (2004), Roodman (2004) and Clemens et al. (2004) give a clear summary of this literature.

United States.[3] More than 20 of the largest NGOs in the world such as Oxfam, Caritas and Care have annual budgets of more than $100 million dollar a year. This means that one single NGO contributes an amount of aid, which is equal to 50% of the total official bilateral assistance of a small DAC country like Portugal, New Zealand or Greece (OECD, 2007).[4]

Despite the scope of this sector, there is only one study by Yontcheva and Masud (2005) which empirically analyzes the effectiveness of NGO aid on a country level.[5] Koch et al. (2008) determined the allocation pattern of 60 international operating NGOs and conclude that NGOs target the same countries as official bilateral donors. This latter result raises the question if clustering of aid is positive. It would be positive if the combination of NGO aid and governmental aid is effective at reducing poverty. Thus, the increasing importance of the NGO industry, the gap in the aid literature with respect to NGO aid effectiveness and the newly discovered concentration of governmental and NGO aid, has led to the following research question:

Are there positive synergy effects between governmental aid and non-governmental aid, meaning that in areas where these types of aid are clustered governmental aid is more effective at reducing poverty?

This synergy effect is driven by the assumed complementarity between NGO and governmental aid. The World Bank (1998: 104) states on this topic:

> " … in highly distorted environments the government is failing to provide supportive policies and effective services. That is why government-to-government financial transfers produce poor results. Effective aid in such an environment often involves supporting civil society to pressure the government to change or to take service provision directly into its own hands (or to do both)."

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[3] This OECD figure does not include donor government grants and subsidies to national NGOs.
[4] www.oecd.org/dataoecd/52/9/41808765.xls
[5] Yontcheva and Masud (2005) limit their study to European NGOs. Their dataset consists of data from the European Commission representing projects proposed by European NGOs and cofinanced by the European Union (EU). This data is not publically available.

There are no reliable datasets available on NGO expenditures and therefore a new database has been constructed for this thesis. The data was extracted from the annual reports or (in most cases) acquired through contacting the financial departments of the respective NGOs. The dataset includes development aid expenditures from 27 of the largest international NGOs for every year between 2000 and 2007. The results of the panel regression show that governmental aid by itself does not lead to more growth, but when it is conditioned on NGO aid, it has a significantly positive effect on growth. Panel regressions including only low-income countries show the same significant positive relationship between the interaction of NGO and governmental aid on growth.

This is the outline of the thesis. In section 2 the definition of the different forms of aid will be given. n section 3, the comparative advantages of governmental and NGO aid will be analyzed, which will give an indication of the possible complementary between both forms of assistance. Section 4, will combine this information into an overall development framework and will point out possible complementarity and synergy opportunities. Section 5, theoretically explains how complementary between governmental and NGO aid can lead to more poverty reduction. Section 6 presents the empirical part of the thesis by first examining the self-compiled NGO data, reporting stylized facts and explaining the empirical model. Section 7 presents the results of the regression analysis. Section 8 concludes.

2. Defining Aid

This section will define governmental and non-governmental aid, and it will highlight the current aid giving trends within these sectors.

2.1 Official Bilateral Development Assistance

The most commonly used definition of official aid in the development aid literature is called official development assistance (ODA). See box 2.1.1 for the core definition of ODA, as set by the Development Assistance Committee (DAC).[6]

| **Box 2.1.1 Definition of Official Development Assistance** |
|---|
| Official Development Assistance (ODA) is defined as those flows to developing countries and multilateral institutions provided by official agencies, including state and local governments, or by their executive agencies, each transaction of which meets the following tests: i) it is administered with the promotion of the economic development and welfare of developing countries as its main objective; and ii) it is concessional in character and conveys a grant element of at least 25 per cent. |
| *Source:* OECD (2007) |

ODA consists out of two types of aid: bilateral and multilateral. Bilateral aid is given directly by governments, through their official aid agencies or ministry, to the recipient government or in some cases to NGOs in the aid recipient country. This type of aid is also called government-to-government aid. Multilateral aid on the other hand is provided by an international organization active in development, such as the World Bank, International Monetary Fund (IMF) or one of the Development Banks. On average three-quarters of ODA consists of bilateral aid (Figure 2.1.1). The synergy effects between NGO aid and the bilateral aid part of ODA will be the focus of this study and named 'governmental aid'.

As can be seen in figure 2.1.1, aid disbursements started to increase rapidly after the 9/11 World Trade Centre attack, which has lead to the longest period of expansion of total ODA ever recorded. Despite the current contraction the absolute amount of governmental aid and total ODA are still higher than ever. Two other notable trends about the way governmental aid are:

- More and more bilateral aid is given in the form of programme aid: to sector-wide approaches (SWAPs) or to General Budget Support (GBS);
- An increasing part of the official bilateral aid budget (and also the budgets of multilateral institutions such as the World Bank) are channeled through NGOs.

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[6] The DAC is part of the OECD and has been formed in 1960 by the leading donor governments to coordinate and promote aid from the donor governments.

Figure 2.1.1 Net ODA by DAC member countries 1980-2007
(Net disbursements in constant 2006 USD billion)
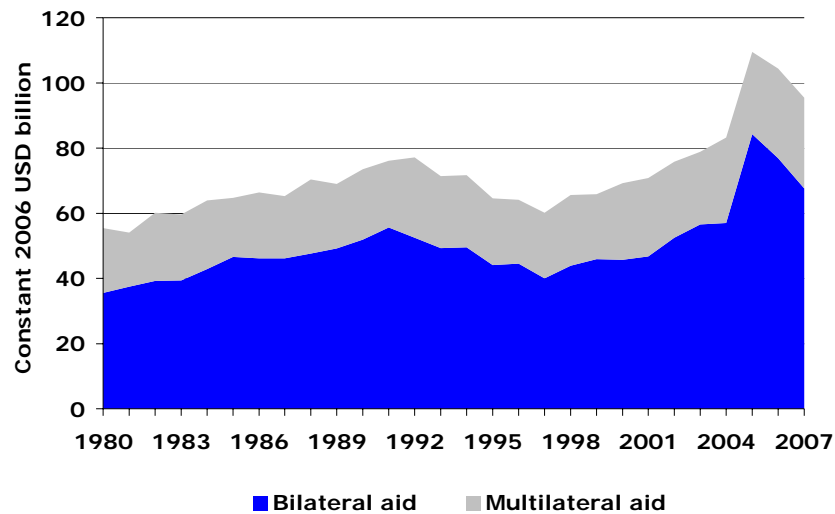
Source: OECD (2007)

Bilateral aid currently consists of 4% of programme aid (OECD, 2007). This amount is likely to increase in the future, because by signing the Paris Declaration in 2005, all DAC countries have set a target of providing 66% of their total aid budget by the year 2010 in the form of programme aid (OECD, Paris Declaration on Aid Effectiveness, 2005). This could have an impact on the assumed complementarities between NGO and governmental aid, because programme aid is part of the overall development plans of the recipient country and is not earmarked for specific projects. In general, governmental aid expenditures will then be directed to macro-economic projects and in that case the work of NGOs could become more important to ensure that the benefits of these broad based programs are shared with the rural poor.

There is also an increasing trend of bilateral donors channeling part of their aid budget through NGOs. The share of bilateral aid channeled to or through NGOs exceeded 15 percent in 2006-2007 for various OECD countries, notably the Netherlands (21.4 percent), Spain (20.2 percent) and Switzerland (18.8 percent).[7] On average, the DAC countries have transported 6 percent of their total ODA budgets through NGOs in 2006-2007. This equals $6,2 billion dollar, which is about the total aid budget of Denmark and Sweden together. The fact that official bilateral and multilateral donors increase the direct funding of NGOs could indicate that NGOs play a distinct and possible complementary role in the aid process.

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[7] See Table 18 under: http://www.oecd.org/dataoecd/52/11/1893159.xls (accessed: January 2009). This share relates to NGOs in the donor country as well as to national NGOs in the recipient country.

Figure 2.1.2 gives an overview of total governmental aid per sector. It shows that in the period 2000-2007 the biggest part of total governmental aid has been spent on social infrastructure (34%), debt relief (17%) and economic infrastructure (13%).

Figure 2.1.2: Average governmental aid per sector – 2000-2007
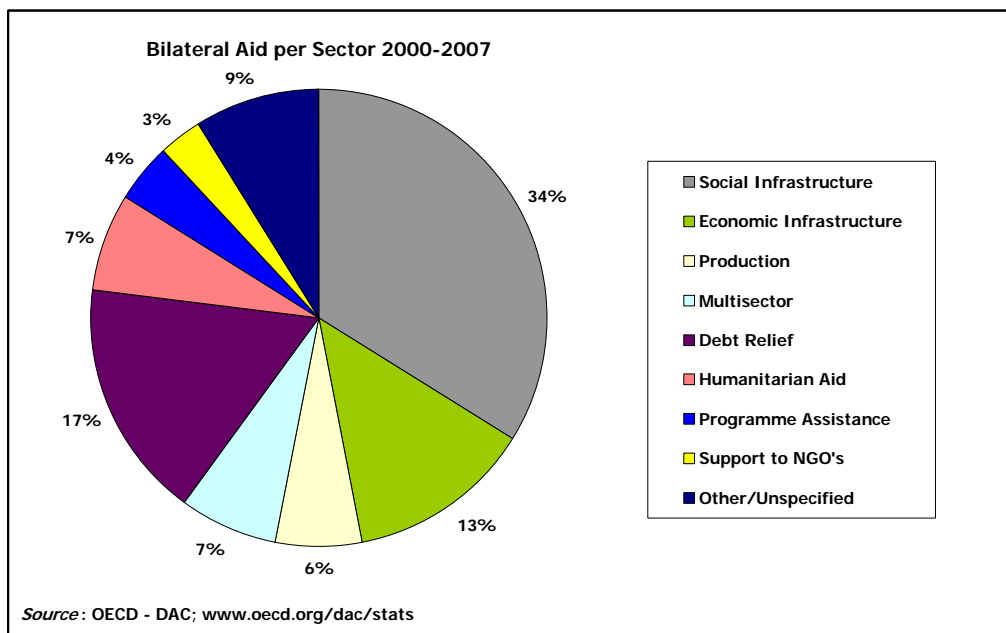
Social infrastructure encompasses the areas of education, health, population, water/sanitation and government & civil society. The economic infrastructure of a country consists in turn of transport, communications, banking/financial services and energy. Within these two broadly defined sectors most governmental aid has been given to education (8%), government & civil society (9%) and transport and storage (5%; OECD, 2007).

2.2 NGO Aid

NGOs are defined as organizations that are (i) not part of the government sector, and (ii) not created to earn any profit. NGO aid is distributed in the form of physical goods, skills and technical know-how, financial grants (gifts), or loans (at concessional rates) transferred from non-governmental organizations directly to the beneficiaries, local grassroot organizations, national/local NGOs or to the government (Riddell, 2007). This broad definition of an NGO could include a whole range of organizations from a neighborhood organization concerned with better

lighting to a globally operating organization as Oxfam. Therefore, two important distinctions will be made throughout this thesis, which are applicable to all theory and data analysis. Firstly, this study focuses on internationally operating NGOs and those organizations that work on development issues, and subsequently are not primarily involved in emergency operations. The tasks of these NGOs are the service deliveries of school provision, health, housing, water, and sanitation to specific groups of poor people and communities. Additionally, these NGOs aim to strengthen civil society by empowering poor people. Riddell (1997: 263) describes this NGO task, which has gained importance over the last decade as 'NGOs help poor people to take greater control of their lives and to alter the policies and key decisions affecting them.'

Table 2.2.1: Number of NGOs per sector

Purpose	1990	2000	2003	Growth (%) 1990-2000	Growth (%) 2000-2003
Culture and Recreation	1169	2733	3666	13.4%	34.1%
Education	1485	1839	3212	23.8%	74.7%
Research	7675	8467	12387	10.3%	46.3%
Health	1357	2036	2925	50.0%	43.7%
Social Services	2361	4215	6434	78.5%	52.6%
Environment	979	1170	1781	19.5%	52.2%
EconomicDev&Infrastructure	9582	9614	15221	0.33%	58.3%
Law, Policy Advocacy	2712	3864	7090	42.5%	83.5%
Religion	1407	1869	3082	32.8%	64.9%
Defense	244	234	425	-4.1%	81.6%
Politics	1275	1240	2780	-2.7%	124.2%
Total	**30,246**	**37,281**	**59,003**	**23.3%**	**58.3%**

Source: Union of International Associations, *Guide to Civil Society Networks* (2004)

Table 2.2.1 shows the number of registered international NGOs, which formally receive and use aid funds. The figures indicate that the number of registered NGOs expanded rapidly between 1990 and 2003. Especially at the beginning of this decade the number grew with 58.3% between 2000 and 2003. The sector which showed the biggest increases (between 2000-2003) are political orientated NGOs. This confirms the earlier mentioned statement that NGOs are increasingly involved in strengthening civil society. Table 2.2.1 also indicates that in absolute numbers most NGOs have been involved in the sectors of economic development & infrastructure (26% in 2003). This would mean that in case of economic development & infrastructure governmental donor agencies and NGOs concentrate their aid efforts on the same sector.

3. Comparative Advantages

Governmental and NGO aid are increasingly working alongside each other in developing countries (Koch et al., 2008). Another important trend is that official aid agencies increasingly turn to NGOs for the implementation of governmental aid programs. This raises the following questions: Why is there a need for different type of aid organizations? Why it is not possible for one agency to be responsible for all foreign aid delivery in a particular sector? The existence of multiple types of aid agencies assumes that each type fulfils a distinct role in the development process in which they most likely have a comparative advantage. This section will provide a short overview of the assumed comparative advantages of both governmental and NGO aid.

3.1 Comparative Advantages of Governmental Aid

The vast amount of resources, technical know-how, research possibilities, and political influence are often named features of bilateral aid organizations (Riddell, 2007). These features could make governmental agencies an appropriate partner to assist developing countries in achieving their national development programme and completing large scale development projects. Riddell (2007) mentions the following assumed comparative advantages of governmental aid :

- Wide scope (focus on broad development themes)
- Focus on General Budget Support and Sector Wide Approaches
- Close linkages with recipient government
- Technical assistance and research capacities
- Capacity building
- Long term perspective
- Promoting regional stability and cooperation

Most governmental aid programs have a focus on broad macro-economic themes such as accelerating economic growth by improving policies, promoting trade, developing infrastructure, building skilled workforces, and addressing the environmental challenges (Riddell, 2007). These activities are taking place at national, regional, and local levels. Recently, many bilateral donors are shifting

towards more programme aid (General Budget Support and SWAPs) to be able to achieve the aforementioned broad development goals. In fact, it has been part of the Paris Declaration to increase the provision of SWAPs or General budget support, where it is assumed by the DAC donor countries that (i) it increases commitment of the recipient, because (ii) aid becomes part of the general development plans of the country as formulated by the recipient country, and (iii) more cost effective because of the use of pooled funds than using a large number of discrete projects.

Another comparative advantage of governmental aid agencies is that they are most effective in assisting countries with which they have a long-standing relationship. As Cassen (1994: 209) notes:

'Bilateral programs, which are much the greater part of aid, have important strengths and functions. They have particular knowledge, historical ties, and close relationships with particular recipient countries. In addition to this bilateral aid, agencies often have the technical know-how and close links to the recipient government to effectively assist the recipient government in the capacity building of their officials.'

Moreover, with the recent focus of institutions and good governance, a donor government has more political power to put demands on recipient governments in terms of bettering institutions, governance, and lowering corruption. This concept is also known as 'conditioned aid' (Edwards, 1991).

Finally, donor government agencies can play an important role on the international level. Governmental aid donors are given a key role in promoting regional stability and cooperation by being part of trade negotiations, for granting debt relief, and by providing a combination of giving aid with military peacekeeping in politically unrest countries (Riddell, 2007). The latter concept is also described as 'peacekeeping for development.'

3.2 Comparative advantages of NGO aid

NGOs are viewed by many official agencies and members of the public as 'more efficient and cost-effective service providers than governments, and giving better value-for-money, especially in reaching poor people' (Edwards and Hulme, 1995: 961).

There are certain features which differentiates NGO from governmental aid, even when they are involved in similar projects. Fowler (1988) describes two main distinctive features of NGOs. First, he notes that the organizational form of NGOs make them more flexible and responsive as compared to the 'uniformity', 'rigidity', and 'command methods' of the more bureaucratic lines of government. This ensures that NGOs can respond quickly to changing external conditions. Furthermore, NGOs are believed to be more innovative in their development projects, which have been described by Vivian (1994: 190) as follows:

"While government plans are typically concerned with the political aspects of the distribution of development projects, NGOs need not be. This gives them greater room for maneuver, and would conceivably make it more possible for them to explore new types of projects and to fail in them without the loss of legitimacy that such experimentation would cost the government."

Secondly, the relationship between NGOs and beneficiaries is based upon principles of voluntarism rather than control, which is typical of government (Fowler, 1988). They are closer to the beneficiaries and therefore have a better understanding of local situations. Subsequently, with this knowledge they can act as intermediaries between the State and other development actors. These specific characteristics of NGOs have resulted in a belief amongst bilateral and multilateral aid agencies that NGOs have a number of comparative advantages over governments in addressing the needs of the poor. Below is a short summation of these assumed comparative advantages:

- Respond quickly to changing external conditions
- Experiment with innovative approaches
- Strong ability to form close linkages with local communities
- Identify emerging issues

- Successful intermediaries between actors in the development arena
- Cost-effective service delivery
- Working with and strengthening local institutions

In conclusion, NGOs are thought to be 'more cost effective in service delivery, to have a great ability to target poor and vulnerable sections of the population, to demonstrate a capacity to develop community-based institutions and to be better able to promote the popular participation needed for sustainability of benefits' (Fowler, 1991: 56). Moreover NGOs are perceived to be a 'means of strengthening civil society and fostering good government' (Bebbington and Riddell, 1995: 880). This last mentioned comparative advantage is particular important, since it is assumed in new economic and political development agenda that good governance is essential for a well functioning economy.

## 4. The Development Framework and Synergy Effects

Having described the main features and assumed comparative advantages of governmental and non-governmental development work, the question still remains whether these type of aid complement each other. If they do, then there could be positive synergy effects between governmental and non-governmental aid, which in turn would lead to a significant effect on development. There is not much literature on this topic, but reading the statements of governmental aid practitioners, such as the country evaluations by the OECD and the World Bank, the commonly expressed view is that NGOs should fill the gap between micro and macro development action. The Director of the Division of Effectiveness of Quality of the Netherland Ministry of Foreign Affairs states for example:

"We, as bilateral donor, are good at the macro level, where civil society organizations are strong at the micro level; by working in the same countries we can effectively bridge the micro-macro gap" (Koch, 2007).

Koch (2007), studying the location choices of 20 of the largest NGOs worldwide (most of these NGOs are also included in the dataset of this study), draws the conclusion that NGOs tend to work in the same countries as their official 'backdonors.' Based on interviews with the NGOs in his dataset he states that the reason for this clustering of aid seems to be that 'NGOs believe they can be more effective if they complement the efforts of their bilateral donor and thus adjust their country allocations accordingly.' This indicates that complementary behavior between NGOs and bilateral donors appear to dominate in aid recipient countries. However, the factors that drive this complementary behavior are not yet identified. Therefore, the following part will try to fill in this gap.

Figure 4.1 shows the major areas of development action within the aid sector. This framework has been developed and described in detail by Alan Fowler (1997). When explaining this framework we move from the right to the left and from top to bottom. Starting at the right hand side of the figure the ultimate goal of development aid as stated by Fowler (1997: 6) reads 'to create socially just and sustainable economies with accountable inclusive systems of governance.'

Figure 4.1: Framework of Development Action
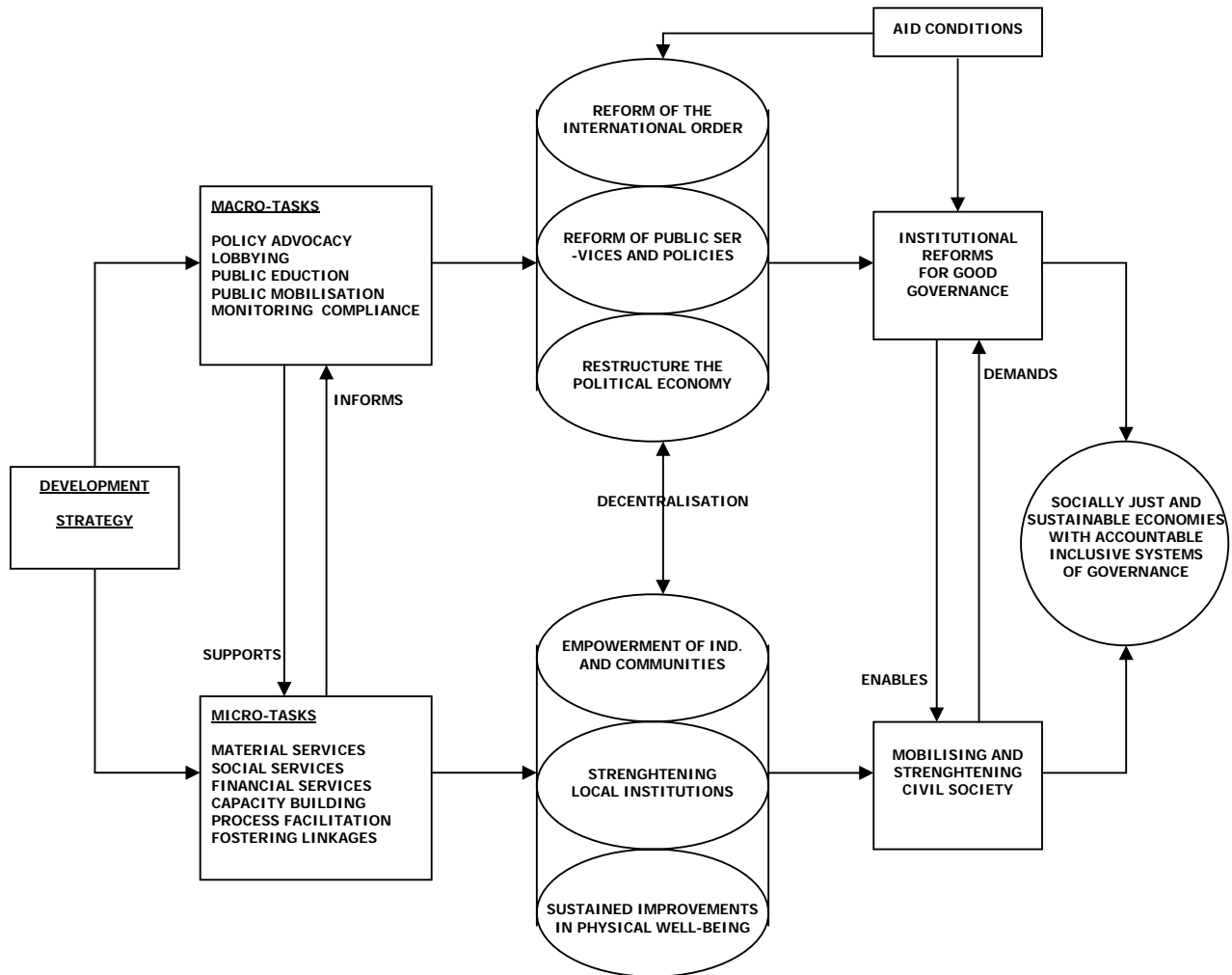
Source: Alan Fowler (1997)

In the pursuit of this ultimate development goal interventions take place at two levels: macro- and micro-level.

Macro-level development action

At the macro-level there are three types of reform which eventually should change the underlying causes of poverty, while at the same time creating better governance. *Reform of the international order* aims to change the balance of international economic and political power more in favor of poorer nations. This could be realized for example by lifting trade barriers that are limiting export possibilities of developing

countries, and by reducing the debt burden of developing countries. *Reform of public services and policies* aims at changing the relationship between the government and the poor and marginalized groups. Specifically, it focuses on giving the poor and marginalized a voice in the making of public policy. *Restructure of the political economy* should result in a separation of political and economic interests improving the macro-situation of the poor. Specific examples are exposing corruption, removing regulations against the informal sector, encouraging voter registration, redistributive taxation, and encouraging cooperation between national organizations, and civic and economic organizations of the poor, such as small-scale producers (Fowler, 1997). These three general reforms are achieved by several specific 'macro-tasks' such as:

- *Policy advocacy;* aimed at influencing the general public as well as the policy making government officials;
- *Lobbying;* taking the message of marginalized groups to the political platform, through for example specific campaigns;
- *Public education;* through school curricula, newspaper, television, etc. Making the public aware of issues of poverty, risks and development actions;
- *Monitoring compliance;* calling for access to information about the implementation and effect of policies which are being undertaken at government level.

Micro-level development action

In general, development work at the micro-level aims to mobilize and strengthen civil society (Figure 4.1). Civil society, which encompasses everything from interest groups, religious movements, and local women's' clubs to large national NGOs, play a key role in development action, because these social movements are able to change the existing political and economic order (Fischer, 1993). Development action at this level focuses on: the formation of these civil organizations and "strengthening their capacity to engage with each other, with the state and with the market." The following three types of reform are taking place at the micro level (Figure 4.1):

- Empowerment of individuals and communities so they are able to make claims on the development processes and profit from it;
- Building up the capacities of people's organizations;
- Improving people's livelihoods and physical well-being in sustainable ways.

These reforms are realized amongst other by the following micro-tasks:

- Providing material services such as hardware for water supplies, construction materials for schools and inputs (fertilizers and tools) for agriculture;
- Provision of social services such as health or legal advice centers, counseling or education for people with disabilities;
- Financial services, such as micro lending to individuals or groups, often following the model set up by the Grameen Bank;
- Human capacity building through increasing literacy ratios and by providing trainings.

The first three mentioned micro-tasks are specifically aimed at building up the 'assets' of the poor. There are two types of assets: tangible and intangible. Tangible assets include material assets such as housing, agricultural land, clothing, tools, and savings. Intangible assets are for example human capital (level of education), social network, and access to financial services (Shapiro and Wolff, 2001). In the World Development Report 2000/2001 'asset building' is presented as one of the key ways to 'attack' poverty. The World Bank suggests attacking poverty in three ways: (i) Promoting opportunity; (ii) Facilitating empowerment; (iii) Enhancing security. *Promoting opportunity* consists of giving poor people material opportunities like jobs, credits, roads, access to markets, schools, water, and health services. *Facilitating empowerment* consists of strengthening the participation of poor people in political processes, and in local decision-making. *Enhancing security* should reduce vulnerability to economic shocks, natural disasters and diseases. When people are less 'asset-poor' they will recover more easily from these kinds of shocks. The last mentioned micro-task, and one of the most important ones, is the capacity building of poor people. This is often realized by development workers in the field, the so-called "change agents", through their interaction with individuals and groups.

The described micro- and macro tasks are carried out by both types of organizations. For example, there are many influential international NGOs nowadays, such as Oxfam, who educate local farmers about agricultural techniques and, simultaneously, have a strong lobby working at the government level pressing for trade liberalization. Likewise, the biggest part of governmental aid still consists of specific projects, which are often carried out by the embassy, and directly involves local beneficiaries.

Nevertheless, as explained in section three, governmental agencies are believed to have a comparative advantage for working at macro-level, whereas NGOs at the micro-level. Micro-tasks, such as "capacity building" and "fostering linkages", are well suited to NGOs (Figure 4.1). Simultaneously, governmental donors are powerful players when it comes to influencing the recipient government and changing governance systems.

Fowler (1997) states that achieving the appropriate synergies between these activities on the macro- and micro-level can have significant influence on effective development. In theory, when civil institutions become stronger, they are more capable in making demands on the government, and to force them to change their governance in terms of services, rights, access to resources, and public policies in favor of the poor. Simultaneously, changing governance systems should make it easier to form and operate civil organizations, so that it is easier to effectively pursue the interests of marginalized groups. When these forces meet 'in the middle', in other words, when the micro-macro gap is being bridged, they reinforce each other. These are the assumed positive synergy effects between governmental and NGO aid, which lead to effective poverty reduction.

5. Aid Effectiveness Theory

In the previous sections the comparative advantages of governmental and NGO aid have been outlined, as well as the possible complementarity between their development actions. However, the question of interest has not been fully answered, namely, whether this complementary behavior results in a significantly positive effect on growth.

In the second half of the 1990's the analysis about the impact of aid (ODA) on growth became centered on macro-economic frameworks. The starting point was a paper by Peter Boone (1996) who stirred up the aid-growth debate by suggesting that aid does not lead to more growth. Many researchers interpret his result as a confirmation of the "micro-macro paradox". This paradox suggests that many aid projects report positive outcomes at the micro-level, whereas no measurable results are found at the macro level. Various papers have been written trying to explain this paradox, of which Burnside and Dollar (2000) has been one of the most influential. They investigate a new hypothesis: "Aid affects growth, but it is conditional on the same policies that affect growth." They find that aid indeed has a positive impact on growth in countries that have a good policy environment. After Burnside and Dollar many more conditioned aid studies have been written, of which this thesis is being one of them. The conditioned aid literature agrees upon the point that governmental aid (ODA) has on average zero effect on growth. Furthermore, the impact of aid depends on specific country characteristics. This thesis hypothesizes that the effect of governmental aid on growth is conditional on NGO aid. Subsequently, it is assumed that when NGOs are active in the recipient country, it will make governmental aid more effective.

The theoretical explanation is that NGO aid can reduce initial inequality within a particular country, by building the assets of the poor and as such can make the effect of governmental aid on growth more 'pro-poor.' This raises the following questions: "What makes growth pro-poor?" and "What role does aid play?"

"Pro-poor" growth is defined by Ravallion and Chen (2003) as growth that reduces poverty. One of the most straightforward reasons why this thesis focuses on pro-poor growth is because poverty reduction is the primary objective of most bilateral donors. The signing of the Millennium Development Goals, through which the donor community committed itself to the target of halving the 1990 $1/per day poverty rate by 2015, is a clear example of this poverty-focused approach. The second reason why to care about pro-poor growth, is because poverty is not just a result of low average income, it can also be an impediment to future growth (Ravallion, 2004). The literature explaining the link between inequality and growth states for example that due to credit market failures some people are unable to exploit growth-promoting opportunities for investments.[8] This credit constraint affects the poor disproportionally, through which it will be harder for them to escape poverty. This is called the 'poverty trap.' Another argument is that high inequality can lead to macro-economic instability and hamper efficiency promoting reforms that require cooperation and trust (Aghion et al., 1999; Bardhan et al., 1999). Additionally, there is extensive cross-country empirical evidence that countries with higher rates of inequality experience lower growth (Alesina and Rodrik, 1994; Easterly, 2002).

The link between growth and poverty is straightforward. The World Bank (2000) states that when countries become richer, on average the incidence of income poverty falls. For these reasons, "economic growth is a powerful force for poverty reduction" (World Bank, 2000; 45). It is also empirically well funded that the rate of economic growth does not change inequality in a particular country (Ravallion and Chen, 1997; Ravallion 2001; Dollar and Kraay 2002). This would mean that when there is positive economic growth, even though the rate of inequality is unaffected, the absolute number of poor people is reduced. However, cross-country studies have indicated that there is a vast difference amongst countries in the rate of poverty reduction. Ravallion and Datt (2002) estimate that initial inequality is one of the main determinants of these differences.

Ravallion and Datt (2002) further specify what aspects of "inequality" matter for pro-poor growth. Firstly, there is tangible asset distribution, where it is assumed that

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[8] See Benabou (1996), Aghion et al., (1999) and Bardhan et al., (1999) amongst others about this topic.

higher initial asset poverty translates into less poverty reducing growth. Second, but not less important, is human capital. Low basic income education attainments are often identified as a source of income inequality (Li et al., 1998). As Ravallion and Datt (2002) put it: "Education will also influence how much the poor are equipped to participate in skill-demanding non-farm growth."

It is stated that there are important synergies between human resource development and growth orientated policy reforms (World Bank, 2000; Bruno et al.,1998) As explained in section three NGOs have a comparative advantage in educating poor people at the micro-level, whereas governmental aid can support large scale growth promoting policies and projects at the macro-level. By working as 'change agents' and being part of the 'civil society' themselves, NGOs can ensure that the poor and the marginalized also benefit from growth opportunities created by governmental aid. This will lower initial inequality, which in itself will foster long term growth opportunities and poverty reduction (Ravallion, 2004). In the following sections it will empirically be determined whether this theory holds.

6. Dataset, Descriptive Statistics, and Methodology

Due to lack of cross-country NGO data most researchers have studied NGO aid effectiveness relying on project evaluations and household surveys. For example, using household survey data from Bangladesh, Gauri and Fruttero (2003) analyze NGO location motivation and conclude that NGOs' location choice is heavily influenced by a concern for donor funding. Another possibility is to utilize NGO data from the European Commission, but this information is only publically available since 2007. Thus, the only way to study the effect of NGO aid on growth, and NGO aid interacted with governmental aid is to construct a new database. Additionally, some descriptive statistics of NGO aid will be given and compared to governmental aid. The final part of this section will discuss the regression model, the included variables, and some methodology issues.

6.1 Data on NGO aid

Data on international NGO aid flows can be found in the annual reports of the respective organizations, but most international NGOs only give an overview of programme expenditures per region. To estimate the effectiveness of NGO aid and to identify possible synergy effects, a new database has been constructed on NGO aid expenditures of 27 of the biggest international NGOs in the world. Following Koch et al. (2008), all NGOs that met the following two criteria have been contacted:

    (i)   the annual budget exceeded €10 million in 2005;

    (ii)   they are not predominantly humanitarian organizations.[9]

The reason for not including organizations which are mainly involved in humanitarian operations is that the budgets of these organizations are mainly driven by exogenous shocks and emergencies. Including these organizations in the analysis would mean that the regression results could get influenced by a few outliers.

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[9] To specify criteria (ii): Organizations with budgets accounting for over 50% of emergency aid were not contacted, such as The Red Cross and Médecins Sans Frontières. Also, the main difference between the study and NGO database of Koch, Dreher et al., (2008) is that they only include NGO expenditures for the year 2005, which they obtained from 60 organizations. With this data they analyze NGO aid allocation motives and compare this to governmental aid allocations. They do not study NGO or governmental aid effectiveness.

In total, 70 organizations have been contacted, of which 27 provided the requested data. This equals a response rate of 39%. The reason for some of the negative responses was that 'due to limited amount of time and resources they could not cooperate in student research projects.' (World Vision Canada and Save the Children USA). All data has been converted into constant 2000 US dollars.

The sample of international NGOs included in this research is a good representation of the current donor community. NGOs from most DAC countries have been included, with Norway, Denmark and Japan being the biggest exceptions. See appendix 1 for a list of the NGOs included in the sample. The exclusion of Danish and Japanese NGOs will probably not induce a 'selection bias' problem for the regression analysis, because the NGO aid share of Japanese and Danish aid is very low (0,01% and 0,03% of GNI respectively) (OECD, 2007).[10] There is no data available on Norwegian NGO aid share.

The total amount of aid granted by the NGOs from this sample ranges from $1.9 billion in the year 2000 up to $2.7 billion in 2007. This amount of $2.7 billion is about 15 percent of the total grants from all NGOs as reported by the OECD in 2007.[11] NGOs from the United States, United Kingdom, Germany and The Netherlands account for almost three quarters (74 percent) of total NGO expenditures in the sample. Notably, the six included NGOs from the United States account for just over 50 percent ($9.9 billion) for all NGO disbursements between 2000 and 2007. Comparing this to the OECD figures of 2007 on NGO grants from these four countries these ratios are comparable (OECD, 2007).

All countries on the DAC list of aid receiving countries are included in the dataset, with the exception of some small island states and countries with less than one million inhabitants. Appendix 2 gives a complete list of the included countries.

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[10] http://www.oecd.org/dataoecd/52/9/41808765.xls
[11] The total net NGO grants amounted to $18,508 million in 2007. This figure does only include the grants from the DAC member's who have reported to the annual DAC questionnaire.

6.2 Descriptive Statistics

Table 6.2.1 depicts the top 10 recipient countries of NGO and governmental aid per capita between 2000-2007. The table shows that five countries (Timor-Leste, Nicaragua, Suriname, Bosnia and Herzegovina, and Palestinian territories) are the top recipients of per capita aid for both types of aid. This is in line with the results of the study by Koch et al. (2008), who also find that NGOs tend to target the same countries as official donors, which would lead to the clustering of aid. Of the top 10 recipients of per capita aid 20% was considered to be a 'least developed country' by the DAC in 2005-2006. Finally, note that the governmental aid per capita figures in table 6.2.1 are much larger than the NGO figures. The reason for this is that the NGO figures represent the 27 NGOs included in this dataset and actual NGO aid will be higher.

Table 6.2.1: Top 10 recipients of per capita NGO and governmental aid
(average per year between 2000-2007)

Average annual per capita *NGO* aid in constant 2000 US dollars		Average annual per capita *governmental* aid in constant 2000 US dollars	
Timor-Leste*	6,15	Iraq	25,49
Nicaragua	5,86	Timor-Leste*	24,09
Suriname	4,79	Cape Verde	21,05
Bosnia and Herzegovina	4,56	Palestinian territories	17,01
Lebanon	4,03	Serbia	14,74
Belize	3,85	Nicaragua	11,94
Zimbabwe	3,66	Bosnia and Herzegovina	11,05
Namibia	3,48	Jordan	10,97
Eritrea*	3,44	Suriname	10,10
Palestinian territories	3,32	Bhutan*	9,59

* Labeled as Least Developed Country by DAC at 1 January 2006
Source: Governmental aid: OECD (2007) – NGO aid: data provided by NGOs

Table 6.2.2 displays the top 10 recipients of total NGO and governmental aid per year between 2000-2007. In this case 30% of the recipients (Indonesia, Democratic Republic of the Congo and Nigeria) are top recipients of NGO aid as well as for governmental aid. Most of the other listed countries are in the top 20 of both sources of aid.[12] This gives some indication of the clustering of aid. Note moreover that the large and populous countries dominate when we look at the absolute numbers. Small countries dominate, focusing on per capita expenditures.

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[12] Afghanistan, Tanzania and Mozambique are in the top 20 recipients of NGO aid. Sudan, South-Africa and Uganda are in the top 20 of bilateral aid.

Table 6.2.2: Top 10 recipients of total NGO and governmental aid per year
(average per year between 2000-2007)

Average annual *NGO* expenditures in US dollars		Average annual *governmental* expenditures in US dollars	
India	120.630.202	Iraq	719.320.469
Kenya	83.997.546	Nigeria	297.982.031
Sudan*	64.460.145	Afghanistan	185.351.875
Indonesia	62.896.513	China	163.457.813
Brazil	60.692.876	Congo, dem rep*	157.502.344
South-Africa	54.452.603	Vietnam	140.814.375
Uganda*	49.674.958	Indonesia	136.255.000
Zimbabwe	47.552.450	Tanzania*	129.745.156
Congo, dem.rep*	42.548.520	Egypt	113.916.563
Nigeria	42.415.367	Mozambique*	112.574.531

* Labeled as Least Developed Country by DAC at 1 January 2006
Source: Governmental aid: OECD (2007) – NGO aid: data provided by NGOs

Figure 6.2.1 shows the regional distribution of NGO aid from our sample. Most aid is allocated to African countries (47%), Asia (22%) and Latin-America (19%). This is very close to the distribution pattern Koch, Dreher et al., (2008) found in their dataset which included expenditures figures from 60 international NGOs.

Figure 6.2.1: Total NGO aid per continent
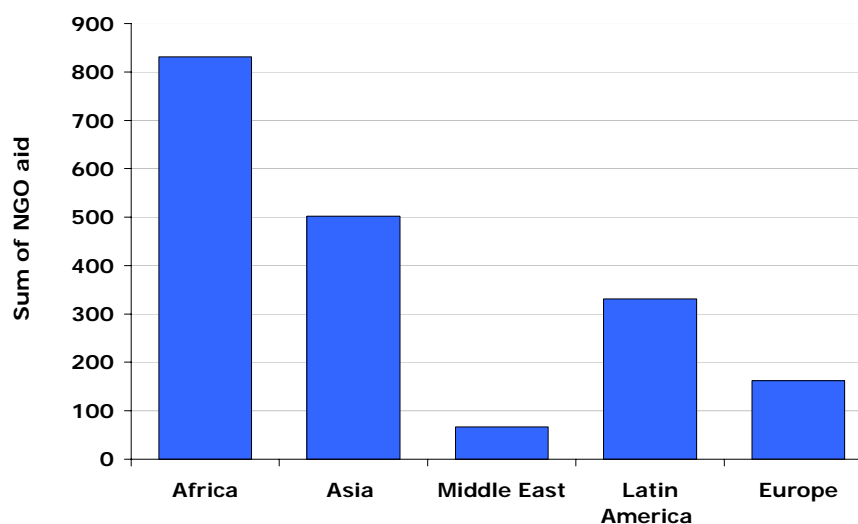(average per year between 2000-2007, in US dollars)

Figure 6.2.2: Average NGO aid per capita per income category

(average per year between 2000-2007, in US dollars)

Least Developed - Other Low Income - Lower Middle Income - Upper Middle Income
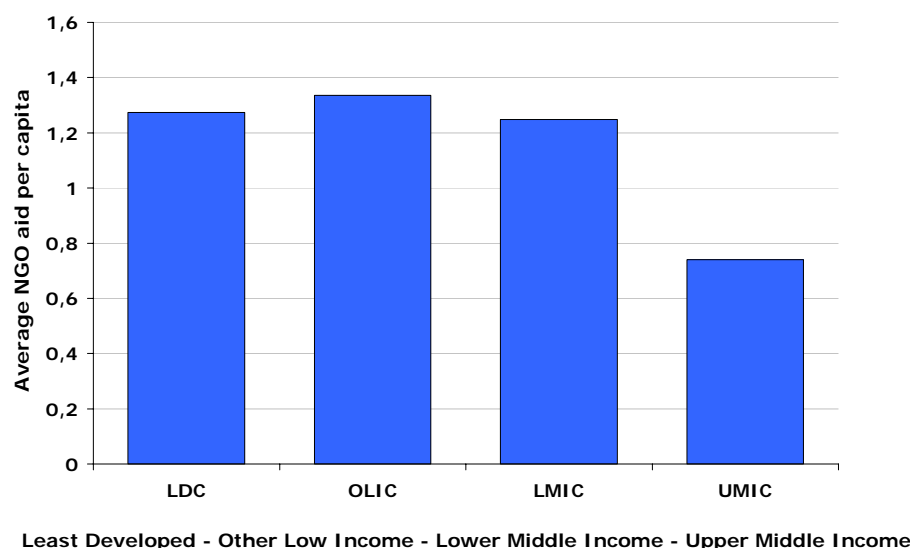
Figure 6.2.2 in turn displays the average NGO aid per capita per income category. The group of least developed countries receive less aid per capita (1.27 US dollar) than the Other low income countries (1.41 US dollar). Only the upper the group of Upper Middle Income countries receive significantly less NGO aid per capita (0.74 US dollar). These stylized facts are also similar to Koch et al. (2008) who used data on 2005 expenditures for 60 NGOs. The dataset constructed for this study will therefore be a good representation of total international NGO expenditures.

6.3 Methodology

Section 7 will empirically examine the conditioned effect between governmental and NGO aid on growth. The standard approach of measuring aid effectiveness has been to construct a model in which the basic objective of development is economic growth. (Boone, 1996; Burnside and Dollar, 2000). Recent debate on the effectiveness of aid has centered around the economic and statistical significance of the aid coefficients and aid interacted with policy (Burnside and Dollar, 2000, 2004; Hansen and Tarp, 2001; Easterly et al., 2003). For this study, growth is also chosen as the dependent variable, because growth data is available for most countries and years. There is also extensive literature on growth studies, which ensures that a well established estimation method can be used for this study. Thirdly, previous research has

indicated that economic growth has been pro-poor in the past (see section 5). Hence, growth is a good proxy for poverty reduction and overall development outcomes.

The time period in this analysis will cover eight years from 2000 up to 2008. Ideally the time period for analyzing the effects of aid on growth would be longer, but as explained in the previous section it is very hard to obtain NGO data for years preceding the year 2000. Including NGO data from the 1990's would have severely decreased the response rate, making it more difficult to obtain robust results on the interaction effect between NGO aid and governmental aid. Moreover, Burnside and Dollar (2004) use data from 1990 up to 1999 and have found robust results on the effect of aid on growth for this time-period.

The econometric technique used in this thesis is similar to the procedure used in the so-called 'conditioned aid-growth literature'. This strand of literature assumes that the average effect of aid across all countries is close to zero, and in some countries it is positive at some moments in time (Clemens et al., 2004). Studies within this literature strand try to find the country characteristics upon which this positive effect of aid depends on. For example, Burnside and Dollar (2000) conditioned the effect of aid on policies, where Collier and Dehn (2001) conditioned on export prices, and Guillaumont and Chauvet (2001) on climate shocks. All of these studies use the same model, or slightly modified, as the model used by Burnside and Dollar (2000). They investigate the hypothesis: "aid does effect growth but it is conditional on the same policies that affect growth." They find that aid indeed can have a positive impact on growth in countries which have a good policy environment. The hypothesis of this thesis is that the effectiveness of governmental aid is conditional on whether it is given in combination with NGO aid. This falls into the realm of the conditioned aid literature and will therefore follow the specifications as used by the aforementioned study by Burnside and Dollar.

The Growth Equation

Based on the above mentioned hypothesis Burnside and Dollar (2000) ran regressions between aid, growth and several policy variables. The following equation shows the relationship between growth (g), initial income (y), aid (a), several policy variables (p'), several other variables (x'), like ethnic fractionalization and most

importantly, the cross term between aid and the policy variables. Equation (1) is the original Burnside and Dollar (2000) regression equation.

$$g_{it} = \beta_{g0} + y_{it}\beta_{gy} + a_{it}\beta_{ga} + p'_{it}\beta_{gp} + a_{it}\tilde{p}_{it}\beta_{gap} + x'_{it}\beta_{gx} + \varepsilon_{it}^{g} \qquad (1)$$

For this thesis the direct effect of NGO aid on growth needs to be included, as well as the cross term between NGO aid and the policy variables. Furthermore, the interaction effect between NGO and governmental aid is included (Equation (2). This term captures the conditionality of governmental aid on NGO aid, which as explained in the theoretical part can have a substantial influence on overall aid effectiveness. Equation (3) shows the final specification of the model for this thesis.

$$Interaction\ term = govA_{it} \times ngoA_{it}\beta_{gbAngoA} \qquad (2)$$

$$g_{it} = \beta_{g0} + x'_{it}\beta_{gx} + govA_{it}\beta_{ga} + p'_{it}\beta_{gp} + govA_{it}\tilde{p}_{it}\beta_{gap} +$$

$$ngoA_{it}\beta_{gngoA} + ngoA_{it}\tilde{p}_{it}\beta_{gap} + govA_{it} \times ngoA_{it}\beta_{ggovAngoA} + \varepsilon_{it}^{g} \qquad (3)$$

g_{it} : the growth rate of real per capita GDP of country i during period t

x'_{it} : a vector of initial conditions and other exogenous variables such as the initial value of real per capita GDP in country i at the beginning of period t and the amount of ethnic fractionalization in country i at time t.

$govA_{it}$:the level of governmental aid as a fraction of GDP received by country i in period t

$ngoA_{it}$:the level of NGO aid as a fraction of GDP received by country i in period t

p'_{it} : a vector of macroeconomic policy variables in country i at time t

Basic specification of the growth regression
The dependent variable, economic growth, is measured by the average per capita annual growth rate which is taken from the World Development Indicators (2007) from the World Bank. Subsequently, the first regressor in the growth equation is initial GDP taken again from the World Bank Development Indicators, which is the

logarithm of GDP per capita in the year 2000. In Burnside and Dollar (2000) they construct their own policy index to measure the quality of institutions and policies. But as they dispute themselves in latter publications, 'it makes more sense to use one of the overall indices used in the recent literature' (Burnside and Dollar 2004).[13] The variable that provides the best country coverage and is commonly used in effectiveness studies, is the Worldwide Governance Indicators (WGI) from the World Bank.[14] The WGI measure standardizes and averages information from different sources on institutions and policies, such as the ICRG rule of law measure and the Freedom House of democracy measure. The index ranges from -2.5 to 2.5 with higher scores indicating better institutions and policies. Better institutions and policies in turn create a good environment for entrepreneurship and growth. The WGI measure is used to represent the institutional quality variable. The separate policy variables to construct the policy index, has also been included for comparability reasons. This policy index is a weighted average of inflation, openness, and government consumption data. Earlier aid-growth studies have indicated that these variables have a large influence on growth.

Several economists have claimed that the impact of aid depends on the geographical location of the respective recipient country (Gallup et al., 1999; Dalgaard et al., 2004). To control for the geographical influence two dummy variables for Sub-Saharan Africa and East Asia have been included. Additionally, the fraction of land in the tropics, which has often been used as a geographical measure in the current aid-growth literature, has been added to the regression (Gallup et al., 1999). The governmental aid measure that is used is the bilateral part of real net ODA taken from the OECD in constant US dollars, divided by real GDP from the World Bank in constant US dollars.

Data on all variables was available for 118 countries. See appendix 2 for a list of included countries. In total 702 observations are included in his regression analysis, because some of the observations on policy or institutional variables are missing.

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[13] Burnside and Dollar had constructed their own policy index by including a measurement of monetary policy (inflation), fiscal policy (budget deficit) and trade policy (openness indicator).
[14] The WGI indicators were previously called the 'KKZ' estimates from Kaufmann, Kraay and Zoido-Lobaton (2005).

Table 6.3.1 below shows summary statistics for the variables that are the main focus of the analysis.

Table 6.3.1 – Aid, Synergy Effect, Policies, and Growth: Summary statistics

	Initial GDP Per capita in 2000 (2000$)	Per capita GDP growth (percent per annum)	Gov. Aid (percent of GDP)	NGO Aid (percent of GDP)	Gov. Aid x NGO Aid
Mean	2205	3.02	3.66	0.16	1.35
Median	1145	2.97	1.68	0.05	0.08
Standard deviation	2899	4.56	4.93	0.25	3.80

Note: These results are based on 118 countries and 702 observations.

On average, aid recipient countries receive about 3.66 percent of their GDP in governmental aid and 0.16 percent of their GDP in the form of NGO aid.[15] The synergy effect has a large range with a maximum observation of 62.5 for Guinea-Bissau in 2003, which is driven by the large amount of received governmental aid (47% of GDP). Burundi, Mozambique, Uganda and Zambia are some other countries with a high estimate of the governmental aid x NGO aid interaction term. Note that all these countries belong to the lowest income countries in the world. Hence, finding a positive significant relationship for this interaction term could have a large impact on increasing the effectiveness of aid and subsequently the reduction of poverty. There are also a few negative observations, such as -0.05 for St. Lucia in 2004. These negative observations could be driven by loan repayments and PPP exchange rate fluctuations.

Endogeneity issues

An important issue that was raised in the aid effectiveness literature (conditioned and unconditioned) is the possible endogeneity of foreign aid. When aid is endogenous, meaning that it depends on the independent variables in the system, then ordinary least-squares (OLS) estimates are inconsistent. To correct for the endogeneity of aid most conditioned aid studies (Burnside and Dollar, 2000; Easterly et al., 2004) use next to OLS also two-stage least squared method. In these studies the OLS and TSLS produce similar outcomes, including for the variable of interest, the interaction term between policy, and aid. Therefore, it is assumed that the OLS panel regression

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[15] Note that this 0.16 percent of NGO aid is calculated from the NGOs included in the dataset. The actual percentage will be higher.

will give robust results. Another way of addressing endogeneity is simply to use initial or lagged values of aid instead of instrumenting for contemporaneous aid. This is also done in Rajan (2006), who finds the same results whether they instrument or use lagged values of aid. Using one year lagged values of governmental and NGO aid the endogeneity of aid will be corrected. Second, the preliminary estimations have indicated that there is potential danger of heteroskedasticity. Therefore, all reported statistics are measured with White's heteroskedasticity consistent errors, which is conform to the approach of Burnside and Dollar (2000) and other aid-growth literature studies. Finally, note that Burnside and Dollar (2000) use time dummies to correct for the potential business cycle effect. The dataset used for this study is has a much shorter time-period than other aid-growth studies[16]. Therefore, it is probably less necessary to correct for the potential business cycle effect. Nevertheless, to establish whether a fixed or random effects model should be preferred the Hausman test has been performed. In conclusion, the specification and method is in line with the conditioned aid literature strand and endogeneity and heteroskedasticity issues will be appropriately handled.

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[16] Burnside and Dollar (2000) used a sample range from 1970 – 1993.

7. Regression Results

This section presents the results of the panel regression and is divided in four subsections. First, the output of the standard growth regression will be given and compared to the results from other aid-growth studies. The second part will account for the interaction effect between governmental and NGO aid. In the third part the interaction effect between different types of aid and policy will be determined. In the final part the results will be discussed.

7.1 Standard Growth Regressions

Table 7.1.1 reports the estimates of the standard ordinary least squares (OLS) growth regression including the standard variables used in the aid-growth literature. Column (1) presents the results of equation 1 as reported in section 6.3, without including the aid variables. Starting with the first regressor, initial GDP is expected to have a significant negative effect on growth in accordance to the conditional convergence theorem. In column (1), it can be seen that there is a very small negative relationship that is significant. It is also expected to find a negative relationship between ethnic fractionalization and growth, because ethnic fragmented countries and regions tend to provide fewer public goods, especially education and are more prone to ethnic violence (Easterly and Levine, 1997). However, the reported estimate in column (1) does not support this finding. The reason for this might be the fact that ethnic fractionalization is time constant and based on data from 1985.

The following regressor, institutional quality representing the quality of institutions, has the expected positive effect on growth and is highly significant.[17] Another institutional variable that has been included is money supply (M2) over GDP, which represents the quality of financial development of the country (King and Levine, 1993). Because of concern over the endogeneity, the variable has been lagged one year. Nevertheless, it is found to be insignificant.

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[17] See Easterly (2000a) on the role of institutions for growth. Note that the ICRG index is usually used as a measurement for institutions. However, this measurement is not publically available therefore I have used the KKZ index of the World Bank.

Table 7.1.1 OLS growth regression

Regression Nr.	(1)	(2)	(3)
Constant	5.808	5.665	5.663
	(1.022)***	(1.116)***	(1.102)***
Initial GDP	-0.0002	-0.0002	-0.0002
	(0.000)***	(0.000)***	(0.000)***
Ethnic Fractionalization	0.053	0.198	0.078
	(0.488)	(0.511)	(0.519)
Institutional quality	0.92	0.947	0.928
	(0.281)***	(0.271)***	(0.252)***
M2/GDP (lagged)	0.004	0.005	0.005
	(0.004)	(0.004)	(0.004)
Sub-Saharan Africa	-1.086	-1.461	-1.387
	(0.250)***	(0.209)***	(0.212)***
Europe and Central Asia	3.884	3.786	3.809
	(0.471)***	(0.412)***	(0.424)***
Tropicar	-0.677	-0.764	-0.737
	(0.376)*	(0.340)**	(0.35)**
Government Consumption	-0.083	-0.102	-0.098
	(0.026)***	(0.02)***	(0.019)***
Inflation	-0.048	-0.047	-0.046
	(0.032)	(0.031)	(0.032)
Openness	0.001	0.002	0.002
	(0.003)	(0.003)	(0.003)
ODA / GDP	….	0.058	….
		(0.036)	
Governmental Aid / GDP	….	….	0.106
			(0.06)*
NGO / GDP	….	….	-0.257
			(0.758)
Observations	616	616	616
R-squared	0.20 (0.19)	0.21 (0.19)	0.21 (0.19)

Note: The dependent variable is real per capita GDP growth. White's heteroskedasticity consistent standard errors are in parentheses. ***Significant at the 1 percent level ** Significant at the 5 per cent level * Significant at the 10 per cent level.

The two dummy variables Sub-Saharan Africa and Europe / Central Asia are highly significant and have the expected sign. The other included geographical variable 'tropicar', representing the percentage of land in the tropics of a particular country, also has the expected negative sign and is significant at the 10 percent level. Finally, the growth regression includes three policy variables, which have been identified in the literature as having a significant impact on growth and are generally included in the aid-growth literature. Government consumption (relative to GDP) measures the size of the government, where it is hypothesized that a smaller government is better for growth (Easterly and Rebelo, 1993). The highly significant negative coefficient displayed in table 7.1.1, column (1) confirms this hypothesis. Previous research has

also indicated that the amount of trade openness (sum of imports and exports) has a positive effect on growth (Frankel and Romer, 1996). This sample does give a positive coefficient for openness on growth, but it is highly insignificant. An explanation for this dissimilar outcome with respect to Burnside and Dollar (2000) and other growth studies, could be that most other studies use the more specific Warner-Sachs (1995) openness index.[18] Unfortunately, this index was not available for the time-period of the present study, therefore, the total amount of export and import as a percentage of GDP is being used. Following Fischer (1993), inflation is included as a measure of monetary policy. The negative estimate is in line with the expectation since a high inflation rate hampers growth and moreover it would make aid lose some of its value. The inflation coefficient just misses the 10 percent significance level. There are two differences compared to other aid-growth studies. First, most studies include the assassination variable to capture civil unrest. Secondly, next to government consumption most studies include budget deficit data as another proxy for fiscal policy. The reason for not including these variables is that the assassination variable was not publically available.

Column (2) includes the aid variable; in this case ODA is used for comparison purposes. The insignificant positive coefficient of ODA is similar to the one reported by Burnside and Dollar (2000), Also the other explanatory variables show similar coefficients as reported in other aid studies, with the exception of the insignificant variables.

Column (3) reports the regression estimates when the separate aid instruments, governmental aid over GDP and NGO aid over GDP, are plugged into the common aid-growth regressions. It shows that governmental aid has a positive and significant effect on growth at the ten percent level. NGO aid has a negative, though not significant coefficient. It is too early to draw any conclusions from this result, because NGO aid has not yet been instrumented for, therefore, this result also could indicate that NGOs allocate their budgets more towards the poorest (slow growing) countries.

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[18] Sachs and Warner (1995) use a dummy variable for trade openness. Closed economies are ones that have average tariffs on machinery and materials above 40 percent, or a black-market premium above 20 percent, or pervasive government control of key variables. The company that measured the black market component of the Sachs and Warner index went out of business in 1998.

Also notice that the coefficients of the policy variables (government consumption, openness and inflation) have hardly changed when the aid variables are introduced. This indicates that the partial correlation between aid and the policy variables is close to zero. The coefficients of the other variables are also similar and keep their significance levels. Finally, the goodness of fit of this model, as recorded by the R-squared, is a bit lower than the usually reported R-squared, which is often close to the 0.38 that is seen in the aforementioned aid growth studies. This can be attributed to the fact that this regression has fewer significant variables.

7.2 Accounting for Synergy Effects between Governmental and NGO Aid

It is now time to introduce the variable of interest of this study: the governmental and NGO aid interaction term (Equation 2). But first the preferred model including this interaction effect needs to be determined. This means that the insignificant variables, M2/GDP (lagged), ethnic fractionalization and openness, will be excluded from the estimation. Additionally, in all subsequent specifications the one year lagged aid variables will be used to correct for endogeneity. The Hausman test was performed to establish whether a fixed or random effect model should be preferred. The test statistic indicated that there is no systematic difference between the estimates from fixed or random effects and therefore a two-way random effect model has been used. A least squares estimation with White heteroskedastic corrected standard errors has been used. The results of these regressions are presented in table 7.2.1, in which columns (4) and (5) present the results including all countries. Columns (6) and (7) only include low income countries.

7.2.1 Regression with all Countries

In column (4) the results of the preferred model are being displayed, including the lagged aid variables. First of all, note that all initial regressors keep their quantitative magnitudes and significance. Although not significant, both governmental and NGO aid have a positive effect on growth. In column (5) the interaction variable of interest is introduced, being the interaction effect of governmental aid X NGO aid. When this term is introduced in specification (5) the governmental aid estimate as well as the NGO estimate turn negative and keep being insignificant. This is in line with many conditioned aid theory studies, which hypothesize that the average effect of aid

(meaning ODA) on growth is close to being zero. However, the coefficient on the interaction effect is quite large and significant at the 5 percent level.

Table 7.2.1- Growth Regression with aid interaction term

Regression Nr.	All countries (92)		Low income countries (40)	
	4)	(5)	(6)	(7)
Constant	7.081	7.632	5.74	6.549
	(1.130)***	(0.948)***	(2.378)**	(2.08)***
Initial GDP	-0.0002	-0.0002	0.001	0.001
	(0.000)***	(0.000)***	(0.002)	(0.527)
Institutional quality	1.117	1.091	1.127	1.353
	(0.523)**	(0.538)**	(1.295)	(0.284)
Sub-Saharan Africa	-1.742	-1.417	-2.002	-1.754
	(0.519)***	(0.490)***	(0.974)***	(0.934)*
Europe and Central Asia	3.635	3.928	1.796	2.442
	(0.626)***	(0.786)***	(2.246)	(2.367)
Tropicar	-0.918	-0.868	-0.957	-0.828
	(0.485)*	(0.519)*	(1.081)	(1.104)
Government Consumption	-0.157	-0.167	-0.118	-0.14
	(0.038)***	(0.037)***	(0.066)*	(0.06)**
Inflation	-0.077	-0.075	-0.085	-0.077
	(0.033)**	(0.033)**	(0.044)*	(0.039)*
Governmental Aid / GDP	0.067	-0.046	0.08	-0.015
	(0.046)	(0.054)	(0.075)	(0.065)
NGO Aid / GDP	2.038	-1.71	3.55	0.797
	(1.345)	(1.193)	(1.754)**	(0.836)
Governmental Aid x NGO Aid	….	0.391	….	0.268
		(0.187)**		(0.16)*
Observations	644	644	280	280
R-squared	0.20	0.22	0.16	0.18

Note: The dependent variable is real per capita GDP growth. White's heteroskedasticity consistent standard errors are in parentheses. ***Significant at the 1 percent level ** Significant at the 5 per cent level. * Significant at the 10 per cent level. Specifications (4), (5), (6), (7) have been modeled as random effect regressions based on results of Hausman test for consistency between fixed and random effect models.

This result confirms the hypothesis that there are positive synergy effects between governmental and NGO aid, which make governmental aid more effective at increasing growth and reducing poverty. To determine that this result is robust the same analysis will be performed with only low-income countries.

7.2.2 Regression with low-income Countries

The next step is to drop all the middle income countries, because it is expected to see a stronger relationship between the variables of interest when we only focus on

low income countries. Moreover, middle income countries have greater access to international capital markets and therefore there is considerable reason to believe that aid has a different impact on a low-income than on middle-income country. As Burnside and Dollar (2000) put it 'clearly good coverage of poor countries is important if results are to be robust.' Therefore column (6) and (7) show the results of the regressions only including the countries classified as 'least developed countries' and 'other low income countries' by the DAC (see appendix 2 for a list of low-income countries).

The results are comparable to the whole dataset with respect to sign and coefficient. As expected, institutional quality and the geographical variables SSA become more important in these growth regressions. The significance level of most other variables has been reduced. It seems that aid, as could be expected, plays a more important role for growth in low-income countries. This is illustrated by the large positive aid coefficient for NGO aid, which is significant at the 5 percent level. In the last column (7) the synergy effect term has been introduced again. Also for the low-income regressions the coefficient for the interaction term is positive and significant at the 10 percent level.

7.3 Aid Instruments, Policies, and Growth

The major novelty of Burnside and Dollar (2000) – and a hot issue in the aid-growth debate- is the inclusion of an interaction term between foreign aid and policy. The economic policies (inflation, openness, government consumption) are grouped in a single index. Burnside and Dollar (2000) argue that the effectiveness of aid depends on the same policies which foster growth. In their regressions they find a positive significant relationship of the aid-policy interaction term, which means that the effectiveness of aid indeed depends on the quality of economic policies.

Following Burnside and Dollar (2000) a policy index will be constructed from the base equation column (1). Ideally, only significant policy variables are used to construct this index, but to maintain the same estimation methods as Burnside and Dollar (2000) all three policy variables (openness, inflation and government consumption) have been included. The coefficients of the variables are used to construct the following index:

*Policy index = 5.808 + 0.001 * openness – 0.048 * inflation – 0.083 * gov.consumption* (4)

For collinearity problems Burnside and Dollar (2000) use a weighted average of the three indicators in line with their impact on growth. There are two differences with the original policy index. Namely, instead of budget balance this study uses government consumption, which was much better available for the time period and number of countries. In contrast to what Burnside and Dollar found, openness does not have a large influence on the policy index. The reason for this different result is probably because Burnside and Dollar (2000) use a more specific measure of openness, as stated before, namely the Warner-Sachs (1995) openness index. The policy index also includes a constant term, so that the policy index can be interpreted as a country's predicted growth rate. One note is that the policy index can also be negative when inflation or government consumption is extremely high.

Table 7.3.1 – Governmental and NGO aid interacted with policy

Regression Nr.	(8)	(9)	(10)
Initial GDP	-0.0002	-0.0002	-0.0002
	(0.000)***	(0.000)***	(0.000)***
Institutional quality	0.996	0.923	1.069
	(0.30)***	(0.271)***	(0.297)***
Sub-Saharan Africa	-1.771	-1.693	-1.632
	(0.234)***	(0.22)***	(0.265)***
Europe and Central Asia	3.546	3.582	3.551
	(0.32)***	(0.347)***	(0.318)***
Tropicar	-0.778	-0.761	-0.78
	(0.219)***	(0.232)***	(0.219)***
Policy Index	0.934	0.92	0.837
	(0.288)**	(0.289)***	(0.265)***
Governmental Aid / GDP	0.218	-0.106	….
	(0.346)	(0.129)	
NGO / GDP	-5.75	….	-3.797
	(5.85)		(2.742)
Governmental Aid X Policy	-0.031	0.052	….
	(0.08)	(0.037)	
	1.593	….	1.31
NGO Aid X Policy	(1.275)		(0.675)*
Observations	644	644	644
R-squared	0.28	0.27	0.28

Note: The dependent variable is real per capita GDP growth. White's heteroskedasticity consistent standard errors are in parentheses. Specification (8), (9) and (10) have been modeled as a fixed (period) regression based on Hausman test for consistency between fixed and random effect models. Governmental aid and NGO Aid are one year lagged variables. ***Significant at the 1 percent level ** Significant at the 5 per cent level * Significant at the 10 per cent level.

In the growth regression presented in table 7.3.1, column (8), the three separate policy variables has the policy index (Equation 4). Column (8) also includes two separate interaction effects of governmental and NGO aid interacted with the policy index. Unlike Burnside and Dollar there is no positive significant interaction effect between either NGO or governmental aid and policies. It is even the case that governmental aid interacted with policies has a negative effect on growth. It is sometimes argued in statistical analysis that the inclusion of more than one interaction term gives biased estimates. Therefore, column (9) and (10) report the results on the separate effects. Both coefficients of the interaction terms are now positive and the NGO aid x policy interaction term is significant at the 10 percent level. Thus, this dataset does not find the same result as Burnside and Dollar (2000), namely that official aid is effective when it is given to countries with sound monetary and fiscal policies.

An explanation for these different results could be that Burnside and Dollar (2000) use a different aid measurement.[19] Nevertheless, most studies which use exactly the same aid measurement, time-period and estimation method as Burnside and Dollar do not find a significant relationship between aid and policies (Easterly et al., 2003; Dalgaard and Hansen, 2001; Rajan and Subramanian 2005).

7.4 Discussion

First, the main results of the variables of interest will be repeated before their respective relationship with growth and other variables will be interpreted.

In four out of six specifications, NGO aid has a large insignificant negative relationship with growth. Only in table 7.2.1, column (6) a positive relationship between growth and NGO aid was found for the low-income countries. This effect is significant at the five percent level. Another interesting finding was that, when NGO aid is given to countries with sound economic policies, it does have an, albeit small, significant effect on growth, this is in line what Burnside and Dollar (2000) found for EDA interacted with policies.

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[19] One of the novelties of the Burnside and Dollar (2000) study is that they use a new database on foreign aid developed by the World Bank (Chang et al, 1998). This database uses the grant component of each concessional loan which has been added to the outright grants and is called Effective Development Assistance (EDA).

In four out of six regressions, governmental aid shows a positive coefficient, which was significant in one case. This gives some indication of the expected effect between governmental aid and growth, although no robust conclusion can be drawn from these results. The fact that there are so many insignificant results would just reconfirm the common notion amongst conditioned aid researchers, being that on average aid has no significant effect on growth. Nevertheless, a theory to explain the negative coefficients for NGO aid and positive coefficient for governmental aid can be found in Clemens et al. (2004) in which they analyze the effect of "short-impact" and "long-impact" aid on growth. They divide aid into three categories: (1) emergency aid; (2) aid that affects growth over a long period of time, which supports democracy, education, health, or the environment; (3) aid that could stimulate growth in four years, which includes budget and balance of payment support, investments in infrastructure and aid for productive sectors as agriculture and industry (Clemens et al., 2004). They find that "short-impact" aid has a strong and significant relationship with growth. Thus, this explains why governmental aid, which is mainly invested in debt relief, budget support, and infrastructural projects has a positive impact on growth within the 7 years of this study. On the other hand, NGO aid mainly focuses on developing civil society and human capacity building, which can be classified as "long-impact" aid. Hence, within the 7 years time-period of this study, it probably has no effect on growth.

Now it is time to analyze the main outcome of this study, which is the significantly positive interaction effect between governmental and NGO aid. This significant positive relationship with growth was found when the full dataset was being used, and also for the low-income countries dataset solely. These results confirm the theory presented in sections four and five, since there are positive synergy effects between governmental and NGO aid. It explains the fact that, separately, they have no effect on growth, but combined there is a significant positive relationship with growth. This synergy effect is driven by the ability of NGOs to close the micro-macro gap through human capital building of the poor. Human capital building makes it more likely that the poor benefit the by governmental aid created growth opportunities. This would mean that, where governmental aid has no effect, or could potentially worsen inequality (when it gets in the hands of corrupted government officials), and therefore has no significant effect on growth, NGO aid can positively

change initial asset distribution. Thus, the results also confirm the theory that reduced inequality improves growth performance, as explained in section five. This confirms the theory that governmental aid conditioned on NGO aid can make government's aid effect on growth 'pro-poor.' This type of growth leads to lower inequality, with lower inequality in turn leading to faster growth. This virtuous circle makes the combination of NGO and governmental aid effective at reducing poverty.

Before going to the conclusion and offering some policy recommendations, some deficiencies of the current data and research method need to be made explicit. The 27 NGOs represented in this dataset are based in 11 different countries, which could lead to biased data. Large aid giving countries, such as Japan or Denmark are not included, neither southern based NGOs such as Action Aid (South-Africa). Although it is not expected that these NGOs are fundamentally different than the NGOs in our current sample, this can only be validated when research includes data from all these NGOs. Another argument could be that the time-period for measuring the effect of aid on growth should be longer than eight years. For example, early research shows that the coefficient on instrumented aid is significantly positive when it is allowed ten or more years to have an effect on growth (Mosley, 1980; Gupta and Islam,1983).

8. Conclusion

NGOs play an important role in the development sector, but their effectiveness on growth has never been investigated. This study tries to complement the current conditional aid-growth literature by disaggregating total aid into governmental aid and non-governmental aid, and measuring their separate effects, as well as their combined effect, on growth. The NGO data has been self-compiled from 27 of the largest international NGOs from various OECD countries. Employing panel regression estimation with random effects, and correcting for potential endogeneity and heteroskedasticity in the parameters, the hypothesis that there are positive synergy effects between governmental and non-governmental aid has been determined.

The main finding of this study suggests that there are positive synergy effects between governmental and non-governmental aid, meaning that, in areas where both types of aid are given, governmental aid is more effective at reducing poverty. To be more specific, neither governmental aid, nor non-governmental aid has a significant effect on growth when measured separately, but when bilateral aid is given conditional on NGO aid, there is a significantly positive effect on 'pro-poor' growth. Apparently, the combination of growth promoting policies induced by governmental aid, in combination with human capital building induced by NGO aid, is one of the solutions to guarantee aid effectiveness.

Based on these results, some initial policy suggestions could be given. First of all, one general recommendation would be that donor governments, as well as multilateral organizations, should continue with financially supporting NGOs. With this support NGOs could expand their activities within official aid supported countries, which should create new positive synergy opportunities. Also donor countries, which channel only a minor part of their official aid budgets through NGOs, such as Japan and Sweden, should look into the possibilities of allocating part of their budget to NGOs that are active in their supported countries. This increases the chance that their official aid has a long-term impact on poverty reduction. Finally, it is also advised that NGOs and governmental aid practitioners identify which countries are in special need for a high clustering of governmental and NGO aid. For example, in

countries with poor institutional quality it might be more difficult for governmental aid to reach the poor, therefore it is even more crucial that NGO aid is given to these countries.

The findings of this paper invite further research in several aspects. First of all, the coefficients on the different aid variables suggest that there still could be an endogeneity problem between the different aid instruments. Therefore, further research is recommended, using different estimation methods, such as two-stage-least-squares and GMM, to establish whether the results remain robust. Furthermore, the aid-growth relationship can be influenced by many other factors that have not been considered in this macro-economic framework. Therefore, it is suggested that the synergy effects between governmental and non-governmental aid are also analyzed based on qualitative data from interviews with NGOs, governmental donor agencies, and aid recipient governments. This should give a better understanding of the exact working of the synergetic relationship between these two types of aid.

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Appendix

Appendix 1: Overview of NGOs in Sample

Koordinierungsstelle	Austria
Broederlijk Delen	Belgium
Development and Peace	Canada
Care France	France
Handicap International	France
Brot für die Welt	Germany
Miseror	Germany
Concern	Ireland
Goal	Ireland
Cordaid	Netherlands
Hivos	Netherlands
Terre des Hommes	Netherlands
Woord en Daad	Netherlands
Church of Sweden	Sweden
Caritas Switzerland	Switzerland
Swiss Aid	Switzerland
Catholic Agency for Overseas Development (CAFOD)	United Kingdom
International Planned Parenthood Federation (IPPF)	United Kingdom
Marie Stopes International	United Kingdom
Oxfam International	United Kingdom
Water Aid	United Kingdom
ADRA	United Nations
Ford Foundation	United Nations
Kellogg Foundation	United Nations
Mercy Corps	United Nations
Population Services International (PSI)	United Nations
Rockefeller Foundation	United Nations

Appendix 2: Countries in Sample

Sub-Saharan Africa	Asia & Pacific	Latin-America	Middle East & Northern Africa	Europe & Central Asia
Benin*	Bangladesh*	Argentina	Algeria	Albania
Botswana	Bhutan*	Belize	Egypt	Armenia
Burkina Faso*	Cambodia*	Brazil	Iran	Azerbaijan
Burundi*	China	Chile	Israel	Croatia
Cameroon*	Fiji	Colombia	Jordan	Georgia
Cape Verde*	India*	Costa Rica	Morocco	Kazachstan
Central African Rep.*	Indonesia	Dominica	Saudi Arabia	Kyrgyz Rep.*
Congo, Rep. of*	Laos*	Dominican Rep.	Tunisia	Macedonia
Cote d'Ivoire*	Malaysia	Ecuador		Moldova*
Ethiopia*	Mongolia*	El Salvador		Serbia &
Gabon	Nepal*	Haiti*		Montenegro
Ghana*	Pakistan*	Honduras		Tajikistan*
Kenya*	Papua New Guinea*	Jamaica		Turkey
Lesotho*	Philippines	Mexico		Ukraine
Madagascar*	Sri Lanka	Panama		
Malawi*	Thailand	Paraguay		
Mali*	Vietnam*	Peru		
Mauritania*		Suriname		
Mauritius		Trinidad and Tobago		
Mozambique*		Uruguay		
Niger*		Venezuela		
Nigera				
Nigeria				
Rwanda*				
Senegal*				
Seychelles				
Sierra Leone*				
South Africa				
Sudan*				
Swaziland				
Tanzania*				
Togo*				
Uganda*				
Zaire				
Zambia*				

Note: *are included in the low-income dataset. Countries included in the low-income dataset are the DAC listed 'least developed countries' and 'other low income countries.'

Appendix 3: Data Description and Sources

Variable	Description	Source
Growth	Annual real GDP per capita growth	World Development Indicators (2007)
Initial GDP	Annual real GDP per capita	World Development Indicators (2007)
Ethnic Fractionalisation	Measurement for the amount of Ethnic Fractionalization	Roeder (2001)
Institutional quality	Average of 6 governance indicators (ranges from -2 to 2, increasing with better institutions)	Worldwide Governance Indicators (2007)
M2 LAG	Average Annual measure of money and quasi money as percentage of lagged GDP, data are averages for first three years	World Develoment Indicators (2007)
ECA	Dummy for Europe & Central Asia	World Development Indicators (2007)
SSA	Dummy for Sub-Saharan Africa	World Development Indicators (2007)
TROPICAR	Fraction of country's area in the tropics	Gallup,Mellinger, Sachs (1999)
Government Consumption	The annual ratio of government consumption to GDP	World Development Indicators (2007)
Inflation	The annual rate of CPI-based inflation	World Development Indicators (2007)
Openness	The annual rate of total trade (import + export) to GDP	World Development Indicators (2007)
ODA / GDP	Avarage Annual real Official Development Assistance as a percentage of real GDP lagged for one year (net disbursements)	OECD (2007)
NGOAID / GDP	Average Annual real NGO aid as a percentage of real GDP lagged for one year	Constructed by author from input by contact International Development NGOs
ODA / GDP	Average Annual real ODA as a percentage of real GDP lagged for one year	OECD (2007)
Governmental Aid / GDP	Average annual real bilateral part of ODA as a percentage of real GDP lagged for one year	OECD (2007)