AID EFFECTIVENESS IN POST-CONFLICT COUNTRIES

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Abstract

Since the end of the Cold War, post-conflict countries have attracted widespread economic assistance and policy advice from donor community to support their recoveries from war, to rebuild institutional capacities, and to restore their human and social capital. Yet, donor responses to post-conflict countries are uneven and some countries have received substantial amounts of assistance in the immediate aftermath of the conflict (e.g., Bosnia and Herzegovina, Kosovo, Afghanistan, and Iraq). In addition, the stark environment of the post-conflict countries poses challenges to both recipient and donor countries.

This dissertation examines the role of aid in countries recovering from conflict by investigating the determinants and the time scale of post-conflict aid and its impact on outcomes of economic recovery. In so doing, this dissertation aims to enhance understanding of the role of foreign aid in post-conflict environments. It is timely in the context of reevaluation of aid effectiveness and increasing concerns about fragile states, whereby post-conflict countries are especially significant as they are less likely to meet MDGs; and yet, post-conflict countries attract aid from the same pool of donor funding, with other non-conflict countries.

The analysis in this dissertation contributes to the ongoing debate on foreign aid effectiveness in three aspects. First, to trace temporal patterns of aid inflows and estimate their potential impact on recovery outcomes, I bring together both strands of aid literature: aid allocation and aid effectiveness. Second, under the same framework, I examine effectiveness issues through different recovery outcomes, such as economic growth, infant mortality, and good policy environment. Lastly, I combine cross-country and case study analysis.

The findings of this analysis support the view that aid offsets negative effects of conflict on recipient societies. Although the effects of post-conflict aid on growth seem more ambiguous, in post-conflict settings, aid is more effective in saving lives, reconstructing physical and institutional infrastructure, and adopting good policies. These findings unravel the heterogeneous impact of post-conflict aid on different recovery outcomes and suggest the importance of generous aid flows during the early years after the conflict; better absorptive capacities of aid in later periods may not be attained if a country fails to build its institutions and reconstruct its social capital. Consequently, the time-sequencing of aid should be governed by multiple goals, if it is to attain an immediate peace dividend.

Contents

1. INTRODUCTION

This dissertation examines the role of foreign aid in the recovery process of post-conflict countries. The analysis aims to enhance understanding of the patterns of post-conflict aid and the effects of foreign aid on growth and recovery in the post-conflict period. It is timely in the context of reevaluation of aid effectiveness and increasing concerns about fragile states, whereby post-conflict countries are especially significant as they are less likely to meet MDGs. Yet, post-conflict countries attract aid from the same pool of donor funding, with other non-conflict countries (Collier and Hoeffler, 2004). In this setting, there is need for a fresh look and a broader understanding of the patterns and the impact of post-conflict aid.

Foreign aid as a tool for development has remained a subject of intense debate for more than five decades. During this time, aid effectiveness has received an uninterrupted attention while there seems to be no consensus to whether aid plays a positive role for growth and development of the recipient economies. The debate on aid effectiveness has involved a wide range of issues, from growth promotion, poverty reduction, meeting of the Millennium Development Goals (MDGs) targets, to creation of sound institutions and policies (Mavrotas, 2010). Changes in aid agendas mirror shifts in the perspectives of donors about aid objectives, influenced notably by the end of Cold War and post-September 11 events and increased focus on human security. The following section provides a background that sets the context in which post-conflict aid has received an increased attention and it highlights the importance of aid effectiveness analysis and the policy implications for countries recovering from conflict.

1.1. Background and Research Problem

Armed conflicts have become increasingly relevant to the development debate. Fearon and Laitin (2003) report that between 1945 and 1999 there were 127 civil conflicts, 25 of which were ongoing in 1999. These civil conflicts caused 6.2 million deaths, which is about five times higher than the death toll caused by interstate conflicts. Only during the 1990s, they led to around 13 million refugees and 38 million displaced persons around the world. By causing economic and humanitarian disasters, civil conflicts have become major impediments to the development of conflict affected countries. They have taken place in developing countries and have disproportionately affected the Sub-Saharan Africa. Peace in these countries has been fragile as the estimated risk of reversing into conflict increases at about 40 percent in the first years of peace (Bigombe et al., 2000).

High risk of conflict in the first years of peace is due to the high proliferation of arms, shattered human and social capital, as well as poor social and political policies. The risks of conflict pertain as well to the sources of the conflict itself, such as natural resource management, horizontal and vertical inequalities, or ethnic and religious disparities (del Castillo, 2008; Davies, 2008). Consequently, post-conflict recovery has been brought to the forefront of development issues and hence the causes and recovery from conflicts have spawned considerable academic research (Collier et al., 2003; Collier and Hoeffler, 2004; Collier and Hoeffler 2004a; UNU-WIDER Conference, 2004; World Bank Post-Conflict Transitions in the WBER, 2008; AERC supplement in *Journal of African Economies*, 2009).

The role of aid in countries affected by conflict is controversial as there seems to be no consensus whether aid has a stabilizing effect on the risks of conflict.[1] Since post-conflict environments are prone to new conflicts, the task of sustaining peace is harder than that of achieving it. This in turn raises questions regarding the impact of aid in post-conflict societies.

[1] See for example, Grossman 1992; Arcand and Chauvet 2001; Collier and Hoeffler 2002; Duponchel, 2008.

The specificities of the post-conflict aid (timing, composition) and the stark post-conflict environment where it is disbursed suggest that post-conflict aid affects recovery outcomes differently, and as such it is different from conventional aid (Demekas et al., 2002). It has also been identified that aid is particularly effective in raising growth in post-conflict situations; and this result does not come as a surprise to Collier (2007: 106), who recalls that 'this is how aid got started'—to rebuild post-WWII Europe.

Since the end of the Cold War, the development debate and the donor community has increased their focus on armed conflicts. In 1997 the World Bank established its Post-Conflict Fund (now fragile and Conflict Affected Countries Program) to be able to respond more quickly and support effectively the immediate needs of post-conflict countries. Accordingly, in 2004, the World Bank assistance to post-conflict countries comprised about 25 percent of its total current lending (Flores and Nooruddin, 2008).

Del Castillo (2008: 40-41) draws attention of the donor community by arguing that economic reconstruction in post-conflict countries should not be treated as 'development as usual' whereby some important segments such as consolidation of peace and restoration of basic services and physical infrastructure are ignored. Drawing on the recent failures in Iraq and Afghanistan, del Castillo (2008) warns that 'pursuing policies that are optimal from an economic viewpoint—particularly in terms of financing—can have tragic consequences for the political, security, and social transitions.' Hence, successful post-conflict recoveries should be seen as a 'development-plus' challenge including extra activities on reconstruction and peace consolidation.

At the time when conflicts have become major impediments to development and the donor community recognizes the need for a special focus in assisting post-conflict recoveries, the debate about the effectiveness of aid seems gloomy. In a study that revisits the past evidence on aid effectiveness, Rajan and Subramanian (2008) find no systematic effect of aid

on growth. This evidence seems to have revived the micro-macro paradox of aid effectiveness, where aid might work at micro levels but its effects are diminished on their way to macro level. Moyo (2009) provides a strong critique against aid as a tool for development. She argues that aid effectiveness is a myth and that aid does not reduce poverty; on the contrary it perpetuates underdevelopment in aid-dependent countries. Since millions of Africans are poorer today because of aid, Moyo (2009) calls for complete termination of development aid to Africa. Conclusions about aid failure might have future policy implications for aid allocation to Africa, which comprises the largest number of conflict affected countries.

According to Fukuda-Parr (2010), the majority of worst-performing countries in terms of meeting their MDGs have been affected by conflict directly or indirectly and these countries are in greatest need of foreign aid. In light of this debate, it is of crucial importance to sharpen the focus on the role of post-conflict aid as a tool for peace recovery and development. Since all the developing countries, including those affected by conflict, attract aid from the same pool of donor funding (Collier and Hoeffler, 2004), investigation of the patterns and the determinants that drive aid to post-conflict countries is warranted.

Against this background, this dissertation examines the role of aid in countries recovering from conflict by investigating the determinants and the time scale of foreign aid allocation to post-conflict countries and the effects of foreign aid on outcomes of economic recovery in the first post-conflict decade. In so doing, this dissertation aims to enhance understanding of the role of foreign aid in post-conflict environments.

1.2. Outline of the dissertation

The effectiveness of foreign aid can be analyzed with respect to such objectives as growth promotion, poverty reduction, and welfare improvements. Foreign aid might be ineffective in promoting growth for several reasons originating from both the supply side (aid given for

other purposes than growth) and demand side (aid fungibility or crowding out the export sector). To date, research on aid effectiveness has not yet adequately addressed the issue of aid allocation. This dissertation examines both the determinants of aid allocation and the environments where aid is disbursed. In so doing, I investigate the two strands of foreign aid research—the allocation and effectiveness of foreign aid—and supplement it with country case study.

The analysis is organized through three interlinked chapters on post-conflict aid (Chapters 2, 3, and 4). Chapters 2 and 3 are cross-country studies and Chapter 4 is a country case study. Estimations in Chapters 2 and 3 are drawn from two different datasets. The first dataset is an extension of Kang and Meernik (2004) and the second one focuses on a sample of 75 developing countries, out of which, 40 are affected by major civil conflicts. The Appendixes A and K provide lists of conflicts/countries and description about the definition, construction, and sources of variables used.

Specifically, Chapter 2 identifies the determinants of post-conflict aid, the nature of allocated aid (timing and amount), and their possible relationship to aid effectiveness. The preferred starting point is Kang and Meernik (2004), which employs an event study methodology through which the calendar time is transformed into 'event time'; that is, the time when conflict ended. In this way, donor responses to conflict affected countries can be analyzed and compared in pre-conflict as well as post-conflict years.

The analysis of Kang and Meernik (2004) is extended in three aspects. First, the dataset is expanded through more years and it contains 227 conflict episodes/countries. Thus, the series are extended from 1968-2001 to 1968-2007 covering conflicts that started in 1973-onward and ended up by 2002. Second, this chapter extends to the examination of aid determinants on the sub-groups of total aid (multilateral and bilateral aid) and on subsections

of armed conflict dataset (interstate and intrastate conflict). Third, it applies robustness tests by adding control variables, removing outliers, and using fixed effects approaches.

Since the focus of my research is on civil conflicts, in the second step, I examine aid allocation on a sample of civil conflicts that have experienced a decade of peace. To do so, I construct a four-year panel dataset for 75 developing countries covering the period 1970-2009 (the second dataset). In this sample, 40 countries experienced civil conflicts of high intensity and were war-free 10 years after the conflict ended. The presence of conflict is marked through dummy variables as per Collier and Hoeffler (2004) and Elbadawi et al. (2008). To trace possible relationships with aid effectiveness, I focus on temporal disbursement of aid inflows and rely on fixed effects techniques to take account of the influence of unit effects on donors' decision-making processes (e.g., historical and colonial ties).

The main econometric results from the extended analysis are that indicator variables on second and third post-conflict years are positive and statistically significant, showing that aid comes in large amounts in the second and third year and drops off in subsequent years. The presence of military interventions by OECD countries is consistently significant suggesting that aid to conflict affected countries flows within a politicized environment and thereby follows a selective approach. The results derived from the second datatset suggest that aid surges around the postconf1 period (from the second to the fifth year) and after that is not statistically significant from other non-conflict countries. The question of proper time scaling of aid flows is taken forward in Chapter 3—in the context of aid effectiveness debate.

Chapter 3 examines the role of aid in the process of post-conflict recovery, also at a cross-country level. In this chapter, I first revisit the existing evidence about aid and growth in post-conflict contexts, emphasizing the timeframe of aid and growth recovery during the first post-conflict decade. The central focus in the existing literature has been on the role of growth in post-conflict recovery and on how the time-scaling of aid should follow post-conflict

growth patterns. This conclusion has been criticized for overemphasizing the growth objective and neglecting other important objectives such as poverty reduction (Addison, 2004).

In these situations, the impact of post-conflict aid on growth is important; yet another important link should be that between aid and social indicators. To this end, the second chapter focuses on infant mortality rates as sensitive variables to conflict. Further, infant mortality rates are considered as a comprehensive indicator of development since for higher chances of infants' lives there is need for more than better health services, such as better nutrition and health of mother as well as increased access to safe water and sanitation. Thereby improvements in infant mortality rates reflect broader changes in socio-economic conditions of the country and progress achieved with poverty reduction. Finally, I test the effect of aid in improving countries' policies and institutions by using the Economic International Country Risk Guide (ICRGE). I also use variables that are specific to conflict-affected countries and control for the presence of International Peacekeeping Missions.

Although disaggregation of total aid inflows into sectoral flows is important, the datasets suffer from several shortcomings, notably the lack of data on aid disbursements before 1990 and the discrepancies between the amount of aid commitments and actual aid flows. Given these data limitations, I use total aid inflows throughout the analysis. The working methodology is based on Rajan and Subramanian (2008) and Arndt et al. (2009). The key idea for instrumentation in Rajan and Subramanian (2008) is to model the supply of aid based on donor-related rather than recipient-specific characteristics. The parameters are estimated with the Instrumental Variable (IV) procedure with GMM and LIML options. The estimations are drawn from the second dataset.

The most robust results from Chapter 3 suggest that aid disbursed after attainment of peace is effective in reducing physical miseries such as infant mortality, which may have favorable long-term effects on growth. The evidence demonstrates a strong positive effect of

aid on infant mortality using total aid inflows. There is some evidence that post-conflict aid supports higher growth attainment in the second post-conflict period but the results are not completely robust. Post-conflict aid also supports the adoption of sound policies and this effect is significantly correlated with countries with peacekeeping missions.

Chapter 4 examines the role played by the donor community in Kosovo during the first post-conflict decade (1999-2008). It specifically evaluates the effectiveness of aid in the recovery process of post-conflict Kosovo, by looking at the time and sectoral composition of aid flows in terms of emergency needs, security issues, and reconstruction efforts. This case study sharpens understanding of the issues related to post-conflict aid and its effectiveness in a particular post-conflict environment. Large amounts of aid inflows and the distinctive nature of post-conflict reconstruction and state building process make Kosovo an insightful case to examine the impact of post-conflict aid.

The methodology is grounded on the theoretical framework provided by Demekas et al. (2002), who propose a distinction between humanitarian and reconstruction aid. Although lack of time series data renders it difficult to conduct a rigorous econometric analysis, the datasets on donor activities in Kosovo allow for disaggregation of the data by sector/year and hence making inferences on aid's role in terms of three sets of objectives: peace, participation, and prosperity. The Kosovo case study provides deeper insights into time sequencing and sectoral composition of aid and thus complements the first two chapters that are based on cross-country analysis.

The findings suggest that Kosovo experienced an aid-driven growth decade, but with limited and ambiguous effects on employment and poverty. At the same time, the case study reinforces some of the conclusions from Chapters 2 and 3: in the first two post-conflict years, foreign aid in Kosovo reached very high levels in per capita terms (with 300 euro per capita), but declined drastically thereafter. Its geographic position (being in Europe) had an impact on

allocation of large scale of financial and technical assistance. Further, aid in Kosovo have been more effective in improving non-income dimensions of poverty such as better housing conditions and access to education and safe drinking water—all of them having positive effects in improving the quality of life. These results are in line with the findings from the third chapter where aid seems to be more effective in improving social outcomes.

The final Chapter draws conclusions and provides policy recommendations developed from the key findings of the previous chapters.

2. AID ALLOCATION IN POST-CONFLICT COUNTRIES

2.1. Introduction

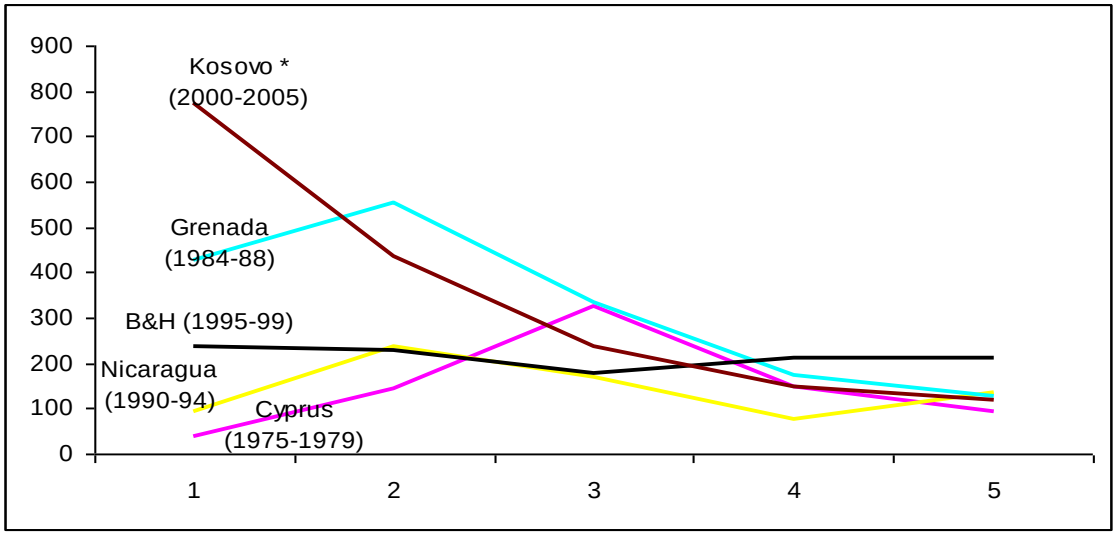
During the early 1990s, the number of post-WWII civil wars peaked with over a third of countries being directly affected by 'serious societal warfare' (Marshall and Gurr, 2005). This increase was attributed to the small increase in ethnic conflicts following the Cold War and above all to conflict accumulation from previous periods. Following their independence, many African countries have been affected directly or indirectly by civil war (Mlambo et al., 2009).

Countries affected by conflict have attracted widespread economic assistance and policy advice from the international donor community to support their recovery from war and rebuild their institutional capacities. Bilateral and multilateral donors have pledged substantial funds for the immediate post-conflict reconstruction of Bosnia and Herzegovina (1994), Kosovo (1999), East Timor (1999), Afghanistan (2002), Iraq (2003), and Georgia (2008), to name a few countries. Both scholars and practitioners have noted that successful reconstruction is key to preventing the re-emergence of conflicts in these regions. In 1997, the World Bank established its Post-Conflict Fund (now the Fragile and Conflict Affected Countries Program) to be able to respond more quickly and support effectively the immediate needs of post-conflict countries. Nevertheless, Collier and Hoeffler (2004) argue that due to the highly politicized nature of post-conflict situations, there has been considerable variation in donor response. Thereby not all countries affected by conflicts have attracted the attention of the donor community.

Against this backdrop, this chapter sets the ground for a thorough analysis of post-conflict aid effectiveness by first investigating determinants of aid allocation to post-conflict

societies. It examines donor decision-making processes by looking at the conflict types, donor types, recipient country characteristics, and donor interests. Then, the time frame of allocated and disbursed amounts of aid in countries affected by civil conflicts is examined. Demekas et al. (2002) argue that post-conflict aid is typically not a constant stream: it can reach high levels both in per capita terms and relative to the size of the recipient economy, but then declines sharply once the emergency phase—first two to three years—is over. In the same vein, Kang and Meernik (2004) suggest that aid levels tend to increase after conflicts but then taper out after several years (see Figure 1).

Figure 1: Post-Conflict Aid (per capita in 2000 constant dollars)



Source: OECD International Development Statistics, 2009; *RIMS database (Ministry of Finance and Economy), 2009.

Another issue related to the distinctiveness of post-conflict aid is its composition, where humanitarian and reconstruction components evolve in different amounts and directions during the post-conflict period. Demekas et al. (2002) suggest that the findings of the conventional aid literature may not apply in post-conflict cases. Thus, there is need for a fresh look and a broader understanding of the patterns and the impact of post-conflict aid.

2.2. Survey of Aid Allocation Literature

Foreign aid allocation is examined by the donor-side analysis drawing on both economics and international relations literature. In general, studies on aid allocation can be categorized in two main strands: those seeking to describe aid allocation to donor countries and 'donor performance' and a more recent strand that seeks to prescribe how should aid be allocated to recipient countries (McGillivray, 2004). There is also the explanatory strand, which follows a positive approach in answering to the question 'why is aid allocated as it is?' (White and McGillivray, 1995: 164). These three areas of research are interlinked. This paper describes and evaluates the allocation of aid against a set of normative criteria, that is, it combines both positive and normative approaches of aid allocation to recipient countries.

2.2.1. Modeling aid allocation

Most of the studies on aid allocation use vectors of variables that comprise recipient need and donor interests which serve as determinants of aid flows to developing countries. Formally, the models can be written as (McGillivray, 2003):

$$A_i = \beta_0 + \beta_1 RN_i + \beta_2 DI_i + \mu_t (1)$$

where A_i is aid to recipient i; RN_i and DI_i are the vectors of recipient needs and donor interest; β_0 is a constant; and β_1, β_2 are vectors of parameters.

Studies that modeled aid allocation to the recipient countries date far back to 1970s and 1980s. McKinlay and Little (1979) model aid allocation among recipients by distinguishing between recipient needs and donor interests. The recipient needs are related to humanitarian motives whereas donor interests reflect foreign policy objectives. This means that they have estimated the two models separately: one for the recipient need and the other for the donor interest. The recipient needs versus donor interests dichotomy is also used by

Maizels and Nissanke (1984) who test these two models to examine motivations of bilateral and multilateral donors. Their sample covers periods 1969-70 and 1978-80 of around 80 developing countries. Maizels and Nissanke (1984) first test the recipient needs model controlling for income per capita, Physical Quality of Life Index, the growth rate of GNP, and current account/GDP. Then, in the second model, they test the donor interest using variables such as, arm transfers, dummies for regional interest, stock of private direct investment from donor countries, and the number of transnational companies that were operating in the recipient country in 1980. Their main findings are that while allocation of bilateral aid is dominated by political, economic, and military strategic interests, the recipient needs seem to be more important for multilateral aid.

However, McGillivray (2003) argues that use of the recipient need/donor interest (RN-DI) model suffers from methodological shortcomings. The problems are related to the specification bias in these equations which in turn might lead to biased results (at least for one of these equations). Due to this problem, the cold war studies on aid allocation might have offered biased results. Hence, McGillivray (2003) suggests that more rigorous econometric techniques might lead to the conclusion that developmental criteria have had a larger influence on cold war period than has been previously shown.

More recent studies show that the direction of foreign aid is dictated by commercial and political motives of donors much more than economic needs of the recipient. To answer the question 'who gives foreign aid to whom and why' Alesina and Dollar (2000) examine a sample of 77 recipients of bilateral aid for the period 1970-1994. The following indexes are used to test for bilateral aid flows: trade openness, democracy, civil liberties, colonial status, share of FDI to GNP, (real PPP) per capita income at the beginning of a period, and population size. Their main conclusion is that foreign aid objectives are framed by political and strategic motives. More specifically, Alesina and Dollar (2000) portray the differences in

behavior among major donors and find considerable differences. While Nordic countries give aid to the poorest countries and appear to reward sound policies of the recipient countries, France and Japan appear to be allocating aid in favor of former colonies and UN friends with no particular response to good policies and the recipients' level of income. The United States seem to behave in a somewhat similar manner with the Nordics; yet being concerned about the UN friends and Middle East allies.

In his panel dataset, Berthélemy (2006) combines three dimensions: 22 DAC donors (*i*), 137 aid recipients (*j*), for the years 1980 to 1999 (*t*). With approximately 36,000 observations, he claims to have used 'the largest and the most exhaustive available dataset' for developing countries during the period under consideration (Berthélemy, 2006:2). He is largely guided by other studies in the aid allocation literature in choosing the explanatory variables. His findings suggest that although most donors attach more importance to their trading partners (and hence their egoistic behavior) they still take account of the neediest recipient countries. Berthélemy (2006) also suggest that, on average, donors seem to give more aid to countries with better governance indicators, such as democracy, and absence of violent conflicts.

Feeny and McGillivray (2008) extend the model developed by Dudley and Montmarquette (1976) which is based on the utility function of decision makers of the donor country. They use time series data for ten top recipients of DAC bilateral aid; period under consideration is 1968 to 1999. Consequently, in their analysis, no time invariant variables like geographic location or colonial past are selected. Feeny and McGillivray (2008) claim that application of this model allows them to correct for the assumption that aid flows to individual countries are determined independently of those to other countries. In other words, this model is considered to account for the joint determination of aid allocation and also for different donor behavior among individual aid recipients. Based on their findings, Feeny and

McGillivray (2008) conclude that the amount of foreign aid to developing countries is determined by both recipient need and donor interest variables and that donors do not behave the same among different recipients.

A normative approach in aid allocation models, seeking to show how aid should be allocated among recipients is pursued in the so called prescriptive studies (McGillivray, 2003; 2004). In these studies, aid allocation according to developmental criteria is derived and then is compared to actual aid allocations. McGillivray and White (1994) derive the prescriptive allocation of aid through the use of a scaled composite indicator for recipient countries' needs, scaled composite indicators of countries' absorptive capacity, and the size of their populations. They claim that their prescriptive allocation is consistent with the so called population scale neutrality. The use of these coefficients avoids prescribing all aid to a single country that has the greatest weighted sum of need and absorptive capacity.

Collier and Dollar (2002) compare the present aid allocation with the one that is considered to have maximum effect on poverty alleviation. Their prescriptive allocation model draws on the earlier work by Burnside and Dollar (2000) and is built to maximize the number of people lifted out of poverty. Hence, in the efficient allocation model, more aid is aimed at countries with severe poverty and sound policies. Collier and Dollar (2002) suggest that the poverty efficient allocation of aid doubles the number of people lifted out from poverty. However, they find that in the actual allocation, poorest countries receive much less aid than their share of the world's poor.

An alternative procedure to Collier and Dollar's proposal is suggested by Cogneau and Naudet (2006). They build a normative aid allocation procedure based on the principle of equality of opportunities, an approach based on Romer's post-welfarist theories of social justice. When compared to current aid allocations, the allocation procedure derived by Cogneau and Naudet (2006) prescribes more aid to the poorest countries. However, their

suggested allocation takes into account structural advantages to growth—unlike Collier and Dollar (2002) that take account of quality of policies.

2.2.2. Aid allocation in post-conflict situations

One of the categories of factors that are used as criteria for aid allocation is related to exogenous shocks and structural vulnerability including post-conflict situations (Guillaumont, 2008). Literature on post-conflict aid is more recent with handful of empirical studies. Within this line of research, it has been argued that aid in post-conflict situations enables faster recovery and reduces the risk of new conflict. However, the pattern of response to post-conflict countries does not seem to reflect systematic analysis. Instead, it might reflect more 'political and bureaucratic expediency' (Collier and Hoeffler, 2004: 1137; Collier 2007). Notably, Collier (2007: 152) discusses how the peace resolution period—'high glamour years'—influences the media and politicians and thus affects donor decisions to provide money in the first couple of years, but then tapers out too quickly. Therefore, he proposes that post-conflict agreements should include guidance on the behavior of donors and international security regime, where they should be committed for longer periods of time.

Chauvet (2003) uses an index of variables of violent, social, and elite instability to quantify the impact of socio-political instability on aid allocation. She finds that socio-political instability influences donor attitudes and that aid levels differ depending on the type of instability: while social instability has a negative effect, the influence of violent and elite instability is positive. Chauvet (2003) also finds that aid allocation depends on the kind of aid received (bilateral versus multilateral) and the characteristics of the recipient country (poverty versus oil exports).

Kang and Meernik (2004) analyze the determinants of foreign aid given by the OECD countries to countries involved in conflicts. They test aid flows using two categories of

variables: those related to conflict characteristics and those attributed to national characteristics of recipient countries. Kang and Meernik (2004) find that both conflict characteristics such as external involvement and conflict issue, as well as country characteristics such as economic openness, humanitarian need, and regime transition, affect aid levels. Further, their findings show that the amount of aid provided to all conflict affected nations after the Cold War is smaller, albeit there have been particular nations (Bosnia and Herzegovina, the Palestinian Authority, Haiti) that have attracted substantial amounts of aid. Finally, Kang and Meernik (2004) show that aid levels tend to increase after conflicts, but then begin to dry out after several years. Unlike Collier and Hoeffler (2004) who find that aid peaks are achieved in the second and third post-conflict years, Kang and Meernik (2004) results indicate that aid peak is achieved in the fourth post-conflict year.

After having controlled for level of development and donor economic and political interests, Balla and Rheinhardt (2008) find that most of the donors give smaller amounts of aid to countries containing or being nearby an intense conflict. Balla and Rheinhardt (2008), however, contend that aid is conditioned on conflict by bilateral donors; in particular the United States allocates large amounts of aid to countries bordering a conflict in both pre-and post-Cold War periods.

In 2009, an entire volume in *Journal of African Economies* focuses post-conflict reconstruction and development in Sub-Saharan Africa. Mlambo et al. (2009) analyze the mechanisms for financing post-conflict recovery and development in Sub-Saharan Africa. After having examined the recent aid trends in ODA to conflict affected countries in Sub-Saharan Africa, Mlambo et al. (2009) argue that for a successful financing in post-conflict situations, a variety of mechanisms and instruments should be used by the donor community. The mechanisms range from creation of common vision among donors, development of a transitional support program or a poverty reduction program, creation of a joint action plan by

all collaborating partners, coordination and management through a lead agency, to a clear definition of the financing mechanisms as well as monitoring and tracking of the expenditures. Moreover, the authors identify the instruments that should be used by the donor community to accomodate flexible and fast-disbursing funds for post-conflict countries. These instruments include emergency assistance, budget lines, post-conflict facilities, trust funds, cost sharing arrangements, and special financing windows (Mlambo et al., 2009).

For the present analysis, the model of Kang and Meernik (2004) is the preferred starting point because a more complete investigation of determinants of post-conflict aid can be conducted if the patterns of donor responses are analyzed and compared in pre-conflict as well as post-conflict years. Kang and Meernik (2004) examine the determinants of aid allocation for each post-conflict country by covering two periods, before and after the conflict. The sample of conflict affected countries used by them covers countries affected by both interstate and intrastate armed conflicts: this provides a broader starting point as it enables examination of perceived differences in donor response to different types of armed conflicts.

Kang and Meernik (2004) are preferred to other empirical studies on aid allocation and conflict whose focus goes beyond the scope of this paper. Chauvet (2003) focuses on a broader notion of socio-political instability which covers heterogeneous events, such as coup d'état, demonstrations, riots, strikes, and civil wars. Balla and Rheinhardt's (2008) analysis covers a broader sample including both countries containing and being nearby a conflict. Thus, not all of the dimensions of these analyses may be applicable to armed conflicts only.

The focus of this dissertation is on civil conflicts for several reasons. First, civil wars have become the dominant form of war: out of 19 major armed conflicts listed by Stockholm International Peace Research Institute in 2003, only two were fought between states.[2] Second, the majority of these conflicts are fought in developing countries, jeopardizing their stability

[2] http://www.sipri.org/yearbook/2004/03 (accessed January 10, 2011).

and future development. Third, civil conflicts last longer than inter-state conflicts and are considered to be 'the most devastating type of conflict' as the extent of destructive effects on the economies and societies of conflict affected countries is greater than in interstate conflicts (Elbadawi, 2008: 3). Consequently, the emerging research on causes and consequences of conflict, limits its focus on countries involved in civil wars (e.g., Collier and Hoeffler 2004a; Elbawi et al., 2008; Chen et al., 2008). Hence, after having examined the sample of countries that have undergone both inter and intrastate conflicts (as done by Kang and Meernik, 2004), I continue the analysis on a sample of countries recovering from civil conflicts only (see the methodology and data section).

2.3. Defining the Conflict Sample

The exact number of conflicts and their inclusion in the datasets of armed conflicts depend on how we define and operationalize this concept. Most of the lists of armed conflicts are based on the datasets compiled by the Correlates of War Project: International and Civil War data, 1816-1992 (Singer and Small, 1972, 1994; Small and Singer, 1982). Sambanis (2004) argues that Correlates of War Project data have been used by many quantitative studies without even being questioned, whereas some studies have made only minor changes to it. Thus, the debate on how to improve data quality has taken place within the frame of this particular project.

Center for the Study of Civil War (Institute of Peace Research in Oslo, PRIO) and Uppsala Conflict Data Program, UCDP (Uppsala University) offers datasets on both internal and international armed conflicts and it covers 1946-2008 (Gleditsch et al., 2002).[3] According to Gleditsch et al. (2002), conflict is defined as 'a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths.'[4] The separate elements of this definition are: use of armed force, 25 battle deaths per year and per dyad in an

[3] http://www.prio.no/CSCW/Datasets/Armed-Conflict
[4] http://www.prio.no/sptrans/1795428530/Code_book.pd

incompatibility, parties involved in conflict, state, and incompatibility concerning governance or territory.[5]

This project defines four types of conflicts: extrasystemic, interstate, internal, and internationalized internal armed conflicts.[6] Type 1 conflicts belong to extrasystemic wars which occur between a state and a non-state group outside its own territory such as colonial and imperial wars, which do not fall into the period under analysis. Interstate conflicts are those armed conflicts that occur between two or more states and are coded as type 2 conflicts. Civil wars are defined as internal and internationalized internal armed conflicts (type 3 and 4). Internal armed conflict occurs between the government of a state and one or more internal opposition group(s) without intervention from other states, whereas internationalized internal armed conflict occurs between the government of a state and one or more internal opposition group(s) with intervention from other states (secondary parties) on one or both sides.

Conflict is also categorized according to the intensity of violence. The intensity variables are coded in the 'minor' category with between 25 and 999 battle related deaths in a given year and 'war' category with at least 1000 battle related deaths in a given year. The cumulative intensity variable takes into account the temporal dimension of the conflict. It is a dummy variable that codes whether the conflict since the onset has exceeded 1000 battle related deaths: it is coded as one, if conflict has over time exceeded 1000 battle related deaths, and zero otherwise.

Sambanis (2004) argues that disagreements within the quantitative literature on civil war are about the ways in which the onset and termination of wars is coded and this is important for deciding when a post-conflict situation arises. To be able to validate coding decisions as transparently as possible, Sambanis (2004) suggests robustness tests that use different civil war lists. For this purpose, lists of civil wars reported in various studies (Singer

[5] A dyad consists of two conflicting primary parties.
[6] Available at www.pcr.uu.se/publications/UCDP_pub/Codebook_v4-2006b.pdf

and Small, 1994; Fearon and Laitin, 2001; Collier and Hoeffler 2004, 2004a; UNDP, 2008) are consulted; see Appendix A for a list.

To define the concept of conflict and to differentiate between different types of conflicts, I use UCDP/PRIO Armed Conflict Dataset Codebook (Gledtisch et al., 2002). The country is considered as post-conflict after the conflict is coded as inactive and the conflict episode has ended. In the UCDP/PRIO Armed Conflict Dataset, the end of conflict episodes is coded by the EpEnd dummy variable. Specifically, to enter the list, a country should have undergone a high intensity conflict and it should be war-free 10 years after the conflict episode ended.

2.4. Defining and Measuring Aid

According to the OECD Glossary (2007), the words 'aid' and 'assistance' refer to flows which qualify as Official Development Assistance (ODA) or Official Aid (OA). ODA flows encompass an official financing of developing countries by donor government agencies which are concessional in character and have a grant element of at least 25 percent. [7] OA flows are dedicated to transition countries and are defined as flows that 'meet conditions of eligibility for inclusion in Official Development Assistance (ODA), other than the fact that the recipients are on Part II of the Development Assistance Committee (DAC) List of Aid Recipients'. Hence, OA is mainly dedicated to countries of Eastern Europe and Former Soviet Union, which in fact are included in ODA flows.

Foreign aid is measured by the use of conventional concept of ODA, as introduced and compiled by the OECD since the early 1970s. Chang et al. (1998) argue that conventional aid measures suffer from methodological shortcomings. To address these shortcomings, they propose a new aid measure—Effective Development Assistance (EDA), which uses a new valuation approach of aid flows by summing grants and grant equivalents of official loans.

[7] http://stats.oecd.org/glossary.

EDA is somewhat lower than ODA: it excludes technical assistance and it counts only the grant element of development loans—regardless of how concessional these loans are. EDA is used by Burnside and Dollar (2000); Collier and Dehn (2001), and Dalgaard et al. (2004). Yet, the traditional approach (ODA flows) seems to be broadly favored by aid scholars as it covers the total amount disbursed by donors—the variable considered by donors and influenced by recipient country conditions (Chauvet, 2003). Aid impact on public finance seems to be better traced by the net disbursements than grant equivalents (Guillaumont and Chauvet, 2001). Moreover, Dalgaard and Hansen (2000: 15) show that difference between EDA and ODA 'seems to be a simple transformation' as the correlation between the two measures is 0.98 using both standard Pearson correlations and Spearman's rank correlations.

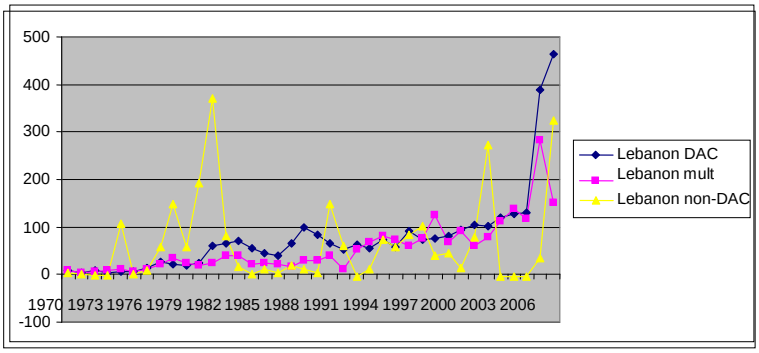
Another important issue concerning aid measurement is use of ODA commitment versus ODA disbursements. Commitments are defined by the OECD (2007) as 'a firm obligation expressed in writing', whereas disbursements 'record the actual international transfer of financial resources'. In the aid allocation literature, ODA commitments are commonly used measures (Dudely and Montmarquette, 1976; McGillivray and White, 1993; Berthélemy, 2006) as they are considered to be better controlled by donors.

One of the major shortcomings of relying on OECD databases is lack of detailed information on some donor countries/agencies. For example, the OECD databases offer only aggregated data on Arab ODA which cannot be disaggregated by individual donor level.[8] In a similar manner, the Arab multilateral aid data comprise aggregated data on four main Arab agencies: the Arab Bank for Economic Development in Africa (BADEA), the Arab Fund for Economic and Social Development (AFESD), the Islamic Development Bank, and the OPEC Fund for International Development (OFID). It is rather difficult to remedy this shortcoming because data from other sources such as individual Arab institutions are also incomplete—

[8] Until 1992, the Arab aid data covered 7 countries: Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and United Arab Emirates. From 1993, only Kuwait, Saudi Arabia, and United Arab Emirates are found under the label of Arab countries (OECD, 2006).

with exception of Kuwait (Kuwait Fund for Arab Economic Development); for example, data available from Abu Dhabi and Saudi Fund are not disaggregated by aid recipient level.[9] Arab aid is important for the analysis of some post-conflict countries given that non-DAC, notably Arab donors, present an important source of their funding. For example the graph below shows dramatic increases in bilateral aid from non-DAC countries during and after the civil war (1975-1990), as well as during and after the conflict episodes in the last decade in Lebanon.[10]

Figure 2: ODA evolution in Lebanon (1970-2007)



Source: OECD International Development Statistics
Note: amounts are in USD million in current prices

Finally, it is worth pointing out the issue of NGO aid which is not covered in the OECD database. In the past two decades, NGOs have grown important in the donor community. They have become known for better targeting of aid to the neediest. However, allocation of aid by NGOs has been rarely examined. The reason for this lies in poor data: there are no comprehensive datasets on NGO aid. Given the lack of accurate data on NGO activities, their increasing number, and the level of diversification, scholars have made use of subsets of NGO aid and country specific NGOs. Nunnekamp and Thiele (2009) use data for Switzerland and Sweden; Dreher, Mölders, and Nunnekamp (2009) also focus on Sweden,

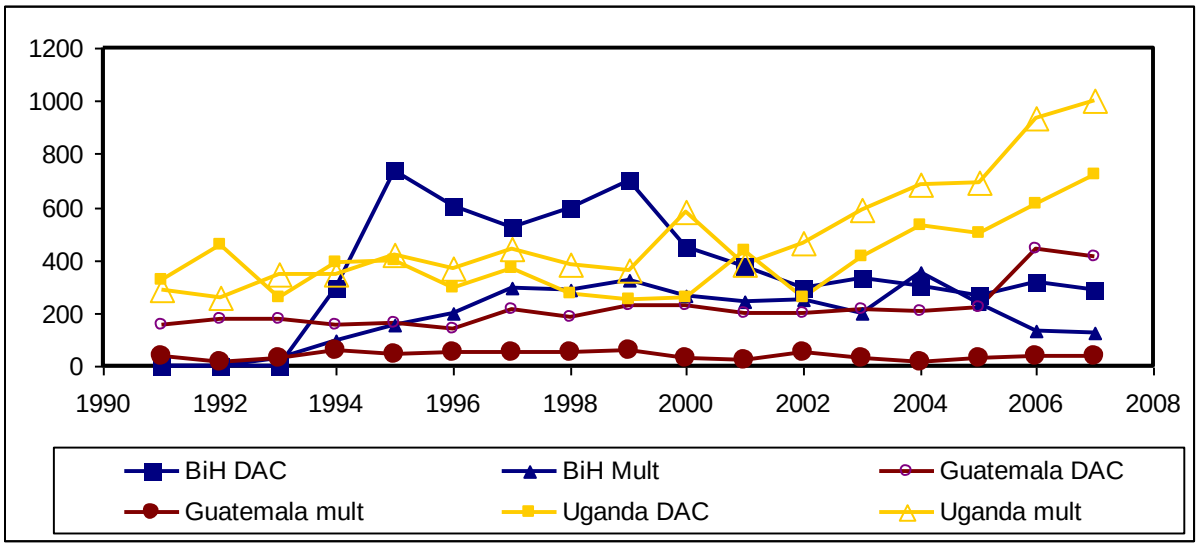
[9] Kuwait Fund for Arab Economic Development (KFAED) offers online annual reports starting from 1992/1993-2005/2006. The reports provide geographical distribution of aid recipients for the period covered in the reports.
[10] In the case of Lebanon, close to 100 percent of aid flows labeled under non-DAC come from Arab countries.

where data are available and detailed. Gilles and Yontcheva (2006) build a dataset covering data on NGO activities supported by institutional donors. These datasets comprise European NGOs co-financed by the European Union. Due to the unavailability of comprehensive and accurate datasets on NGO aid it is questionable whether the use of available data (sub)sets can better reflect NGO decisions in allocating aid. These shortcomings notwithstanding, the OECD database which covers DAC and non-DAC members is the most important source of aid data.[11]

In conclusion, for aid allocation analysis (section 2.5.1) I follow Kang and Meernik (2004) and use ODA commitments, which seem to better reflect the donor's calculus. The International Development Statistics (IDS) of the OECD provides data for donor *i* in year *t*, for recipient country *j*.[12] I prefer aid per capita to total aid flows to be able to account for the size of the countries since large countries receive more aid in absolute volumes (Dowling and Hiemenz, 1985). Further, use of aid volumes might lead to heteroscedasticity issues since the residuals for larger recipients might be much bigger (Berthélemy and Tichit, 2004). To investigate the time-scale of aid to countries in post-conflict (section 2.5.2; second dataset), I prefer disbursed amounts of aid as per Collier and Hoeffler (2004). Actual amounts of aid allow me to better trace aid patterns in relation to outcome variables (e.g., economic growth) and link them to the effectiveness debate—as will be discussed in Chapter 3.

[11] DAC members: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States, European Commission. Non-DAC members: Czech Republic, Hungary, Iceland, Korea, Mexico, Poland, Slovak Republic, Turkey.
[12] Available at http://stats.oecd.org/qwids.

Figure 3: Bilateral and Multilateral flows in the Post-Conflict Decade



Source: OECD International Development Statistics
Note: amounts are in USD million in current prices

Lastly, this chapter distinguishes between bilateral and multilateral aid. As can be seen from Figure 3, aid flows from bilateral and multilateral donors have evolved differently in the post-conflict countries, like Guatemala, Uganda, and Bosnia and Herzegovina. In Guatemala and particularly in Bosnia and Herzegovina there has been a surge in post-conflict bilateral aid as compared to multilateral aid. Bilateral and multilateral aid in Uganda has evolved somewhat at the same pace—with multilateral aid exceeding that of bilateral donors. This is indicative of the possibility that different types of aid/donors react differently to post-conflict situations. Through this analysis, it is possible to investigate the extent to which donor decision-making processes differ.

2.5. Methodology and Data

The econometric analysis in this chapter is conducted in two steps. In the first step, I extend the analysis on determinants of post-conflict aid as per Kang and Meernik (2004); and in the second step I examine temporal patterns of aid allocation limited to a sample of civil conflicts, largely grounded on Collier and Hoeffler (2004). Accordingly, the estimations are derived from two different datasets that will be dicussed in turn.

2.5.1. The extended analysis

The results presented in Tables 1-5 are drawn from the first dataset that is an extension of Kang and Meernik (2004). In this dataset, the calendar years are transformed into event years, that is, the year conflict started, five years before the conflict started, and five years after the conflict ended (11 years). For example, if a conflict started in 1973 and ended in 1980, the period under analysis covers: 1968-72 (five years before the conflict episode started); 1973 (the year the conflict episode started); and 1981-1985 (after the conflict episode ended).

The analysis of Kang and Meernik (2004) is extended in three aspects. First, the dataset is expanded through more years/conflicts and it contains 227 conflict episodes/countries. Thus, the series are extended from 1968-2001 to 1968-2007 covering conflicts that started in 1973-onward and ended up by 2002. This is in line with the availability of time series data, which start from 1968. Second, this chapter extends to the examination of aid determinants on the sub-groups of total aid (multilateral and bilateral aid) and on subsections of armed conflict dataset (interstate and intrastate conflict). Third, it applies robustness tests by adding control variables, removing outliers, and using fixed effects approaches. Kang and Meernik (2004) do not address two important issues when interpreting their results. First issue has to do with the use of the random effects techniques and the potential presence of biased estimates. Second, they do not address the issue of sensitivity of the results in the presence of outliers, which are present in the dataset (see scatter plot figures

in Appendix C). Hence, to address these issues, I run robustness tests through fixed effects approaches; I include/exclude Israel which appears to be an outlier; and add control variables (Population size, Infant Mortality Rates, and Oil/gas exporting countries) which are expected to account for donor responses to post-conflict situations.

Since the starting point of this analysis extends Kang and Meernik (2004), I follow their estimation technique to be able to make comparisons between the results derived from the original and the extended sample. Thus, the parameters are estimated with the GLS random effects estimator following a first order autoregressive disturbance term (proposed in Baltagi-Wu, 1999):

$$y_{it} = \alpha + x_{it}\beta + \nu_i + \varepsilon_{it,} \quad (2)$$

$$\varepsilon_{it} = \rho\varepsilon_{i,t-1} + \eta_{it,} \quad (3)$$

where $\rho < 1$ is the autocorrelation parameter and η_{it} is independent and identically distributed (iid) with zero mean and variance σ_η^2.

By doing so, today's value of dependent variable y is predicted with a ρ that is constant across time. If ν_i are assumed to be fixed parameters, then the model is a fixed-effects model. The random effects GLS regression with AR(1) disturbances uniquely reports the modified Durbin Watson statistic and the Baltagi-Wu locally best invariant test statistic for autocorrelation.

In estimating the model, care has to be taken with regard to the serial correlation which might be present due to the nature and properties of time series cross sectional data and incremental nature of aid flows (Kang and Meernik, 2004). A Wooldridge test indicates the presence of the first-order serial correlation in the dataset suggesting that OLS will report biased estimates of standard errors.[13] This happens since the level of the dependent variable

[13] Wooldridge test for first order autocorrelation in panel data: F(1, 213), Prob>F=0.0000

(foreign aid per capita) is determined by changes that occurred during the present period *t* and memory of its level in the period *t-1* (an autoregressive process).

2.5.2. Aid allocation and civil conflicts

In the next step (Tables 7-8), I construct a second dataset to examine the patterns of aid disbursement during the first post-conflict decade. The sample consists of four-year panels for 75 developing countries covering the period 1970-2009; 40 of these countries experienced civil conflicts of high intensity and were war-free 10 years after the conflict ended.

The dataset consists of four ten-year periods between 1970-2009.[14] I construct post-conflict dummies as per Collier and Hoeffler (2004) and Elbadawi et al. (2008): Peace onset consists of the year the conflict ended and one year after that (years 0-1); Post-conflict1 consists of years 2-5 after the conflict ended; and post-conflict2 consists of years 6-9 after the conflict ended (see Appendix A and K). Post-conflict periods are coded based on the majority of years that dominate during the four-year periods (Elbadawi et al., 2008). If within a four year period, there are two years of peace onset, one year of war, and one year postconflict1, the period is coded as peace onset. For example, the war in Bosnia ended in 1995, and so the post-conflict episodes are coded as follows: 1994-97 is coded as peace onset (one year of war, two years of peace onset, and one year of postconflict1); 1998-01 is coded as postconflict1 (3 years postconflict1 and one year postconflict2); 2002-2005 is coded as postconflict2 (3 years postconf2 and one year after postconf2).

The parameters are estimated by a fixed effects estimator. I do so, since I am interested in investigating the temporal allocation of aid during first post-conflict decade. A fixed effects approach accounts for unit effects such as the influence of colonial and historical links.

[14] Four year periods: (1970-73); (1974-77); (1978-81); (1982-85); (1986-89); (1990-93); (1994-97); (1998-01); (2002-05); (2006-09).

2.5.3. Aid and recipient related characteristics

Democracy and Polity in Transition. Burnside and Dollar (2000), who assert the role of good policy environment for aid effectiveness, sparked debates among scholars as well as donor community about aid selectivity criteria. As a result, donors have widely recognized the importance of good policy conditions for aid effectiveness and some of them have started to attach more emphasis on the importance of good policy environment.

Rusett (1993) and Demirel-Pegg and Moskowitz (2009) argue that more democratic countries are expected to be more peaceful: they are less likely to engage in militarized disputes and even if they do so, the disputes are less likely to escalate. In this sense, it is important to consider the extent to which donors attach significance to the regime type of recipient countries, in particular to those affected by conflict. This analysis tests whether countries that are more democratic and are undergoing a change in polity receive higher amounts of economic assistance.

The Polity IV project at the Center for Systemic Peace provides the longest time series measures of features of 161 countries' political systems starting from 1800 to 2007 (Marshall and Jaggers, 2009). It also offers indexes on regimes in transition—the level at which a polity is in transition and has no sovereign government.[15] The Polity IV project is favored to other sources, such as the Freedom House and the World Governance Indicators, as it covers the longest time coverage and it also provides indexes on polity in transition, an important measure of institutions for countries coming out of conflict.

Level of income/per capita GDP. Countries in the immediate aftermath of conflict are faced with destruction of their economic and social fabric and hence the magnitude of the drop in economic output is large. McGillivray (2004) argues that 'donor performance'

[15] http://www.cidcm.umd.edu/inscr/polity/index.htm

increases with increase in their preferences towards needy countries. In general, poor countries, with low per capita income are considered to be the neediest.

I introduce the square of income to account for the potential middle-income bias: initially, per capita aid rises with income and then drops off at higher levels of income (Dowling and Hiemenz, 1985; Alesina and Dollar, 2000; Chauvet, 2002). Other measures of living standards are composite indexes like Human Development Index and Human Poverty Index; they are considered to better reflect the level of development in recipient countries, as they include both income and non-income dimensions of development. However, these indicators are not available for the whole period under study (1968-2007).

Infant Mortality Rate: Infant mortality rates deteriorate substantially during and after the conflict (Hoeffler and Reynal-Querol, 2003). I introduce this variable in the second model (the first five post-conflict years) to account for the deterioration in the physical quality of life in countries affected by conflict/s and expect that donors will give more aid to countries with higher rates of infant mortality.

In the first dataset, I use data from Abouharb and Kimbal (2007), who provide a comprehensive source of data on Infant Mortality Rates (1816-2002). In the second dataset, I use the WDI data (WB, 2010) for two reasons. First, the WDI datasets cover most recent years (beyond 2002) that are not available from Abouharb and Kimbal (2007); second, although the WDI database have more gaps in annual data (as compared to Abouharb and Kimbal, 2007), in the second dataset, I use values at the beginning of each four-year period which considerably remedies for these gaps.

Openness. The empirical literature uses several measures of openness, although Edwards (1998) argues that many of these indexes are subject to limitations. Sachs and Warner (1995) openness index is considered to be an improvement over earlier attempts to measure openness. It is a composite index using 5 trade indicators: tariffs, quotas coverage,

black market premia, social organization, and the existence of export marketing boards. It has also been used in aid literature (e.g., Alesina and Dollar, 2000; Burnside and Dollar, 2000).

The main limitation of this measure is its dichotomous classification of countries (open or closed), and thus equal classification of countries with varying degrees of openness (Edwards, 1998). Also, its time series end in 1992—period not long enough for the present study. Similarly, the Heritage Foundation's index of trade policy, which classifies countries based on trade distortions does not provide long enough data series as they start in 1995.

Openness to trade is widely measured through the value of total trade over GDP. The main problem with this measure is that it does not take into account other characteristics of countries such as geographical and economic characteristics. Notwithstanding this, I favor this measure due to the availability of data: the WDI database (WB, 2010) provides time series on trade and GDP for most of the countries that have been included in the sample and for the whole period under consideration.

2.5.4. Aid and conflict related characteristics

Military intervention. Nye (1997) analyzes intervention, in its broad definition, as influencing domestic politics in another state through the use of different scales of coercion. While military action and invasion lies in the upper end of spectrum, economic aid lies more toward low coercion spectrum. This implies that both military and economic intervention may be means to the same end if aid is donor interest driven rather than humanitarian. Once a country has been the site of external military involvement, it is expected that it will also attract more donor attention.

From a more altruistic viewpoint, larger amounts of post-conflict aid might also mirror OECD commitment to successful post-conflict reconstruction and stable peace building process (e.g., Bosnia and Herzegovina, Kosovo, Afghanistan, and Iraq). In either case, it is

expected that military intervention of one or more OECD countries in a conflict will be followed by higher attention among the OECD countries and hence larger aid shares.

UN peacekeeping operations. UN peacekeeping operations are seen as important mechanisms to deal with conflicts. These missions are large and complex involving different components, such as military, police, humanitarian, and electoral (Howard, 2007). Scholars argue that with the end of the Cold War, there were more opportunities for the UN to get involved in solving conflicts albeit their performance results have been mixed. Similar to the case of OECD military involvement, it is expected that UN presence will also be complemented by high aid flows from donor countries.

Intensity of conflict. Gleditsch et al. (2002) classifies conflicts based on their intensity of violence. The intensity variables are coded in the 'minor' category with between 25 and 999 battle related deaths in a given year and 'war' category with at least 1000 battle related deaths in a given year. This analysis tests the hypothesis that more intensive conflicts (with higher number of battle related deaths) will be followed by more donor assistance.

Incompatibility/governance vs. territorial conflicts. Incompatibility concerning governance or territory is one of the separate elements of the armed conflict definition. As Kang and Meernik (2004) assert, territorial conflicts are more likely to repeat as compared to those over governance and hence it is considered that they are more difficult to be resolved. This implies that donors might not want to commit high levels of economic assistance to countries with higher probability of recurring conflicts.

Post cold war period. The beginning of 1990s recorded a decrease in foreign aid from many donors. At the same time, it has been argued that with the end of the Cold War, geopolitics received less importance in aid allocation while other developmental criteria received stronger emphasis (e.g., promotion of democracy, support for social and economic transitions, and mitigation of conflicts).

Population size. To account for the small country effect, I control for total population of recipient country whereby the inverse relationship between per capita aid and the population size is tested. Each country receives aid from a number of donors and the smaller ones benefit disproportionately (Dowling and Hiemenz, 1985). Since small countries tend to be more open, they are more vulnerable to external shocks and thus attract more aid. Also, smaller countries have a disproportional representation in international organizations and this could be used to buy favorable votes in UN (Claessens et al. 2009). Hence, the small country effect can be interpreted as reflection of donor interests.

Oil/gas exporting countries. Following Chauvet (2003), to capture another strategic aspect of aid allocation, I include a dummy variable for countries that export oil and gas.

2.5.5. Econometric equations

After having presented all the variables included in the model, to test for aid allocation before and after the conflict, the following equation is specified:

$$Y_{it} = \alpha + \beta_1 X_{it} + \beta_2 postcw_{it} + \beta_3 postconf_{it} + \varepsilon_{it}, (4)$$

Y_{it} is aid per capita adjusted for inflation; X_{it} is the set of recipient countries' characteristics; $postcw_{it}$ is a dummy for post Cold War period; $postconf_{it}$ is a dummy denoting the end of conflict; and ε_{it} is the error term.

To take into account the post-conflict period only, I restrict the sample to post-conflict years by denoting five post-conflict years through time dummies, with the first one as the reference year. This equation includes variables that are related to conflict characteristics Z_{it}, as explained in the previous section.

$$Y_{it} = \alpha + \beta_1 X_{it} + \beta_2 Z_{it} + \beta_3 postcw_{it} + \beta_4 time2_{it} + \beta_5 time3_{it} + \beta_6 time4 + \beta_7 time5 + \varepsilon_{it}, (5)$$

The econometric equation run on the sample of civil wars, and relied on the fixed effects technique is specified as follows:

$$Y_{it} = \alpha + \beta_1 X_{it} + \beta_2 time0_{it} + \beta_3 onset_{it} + \beta_4 postconf1_{it} + \beta_7 postconf2_{it} + \nu_i + \varepsilon_{it}, (6)$$

Y_{it} is aid as a share of GDP; X_{it} is a set of control variables; $time0_{it}$, $onset_{it}$, $postconf1_{it}$, $postconf2_{it}$ are the conflict related dummies; ν_i are unit fixed effects.

As the focus of this analysis will be on aid inflows across different periods during the conflict cycle, I also estimate differences in variable means across pairs of periods, through simple paired comparisons or paired-differences *t*-test. The objective in this estimation technique is to test the null hypothesis that mean weight at period1 is the same as mean weight at period 2 (e.g., peace onset and postconf1). The equation takes the following form:

$$D_i = \delta + (\varepsilon_{i2} - \varepsilon_{i1}), (7)$$

D_i is the difference score; δ denotes the change in the average from time 1 to time 2; $\varepsilon_{i2}, \varepsilon_{i1}$ are the disturbance terms representing random variation that is specific to a particular unit at a particular point in time.

2.6. Regression Results

This section presents the regression results related to each aid determinant, different conflict samples, and different donors. In the first part, I present the results based on the extended sample (for all armed conflicts 1973-2002 and OECD donors) and compare them to Kang and Meernik (2004). Then, I present findings on sub-samples of conflicts and donors. All the regression tables have an additional column with results derived from the extended model. In the second part, I analyze findings about patterns of actual aid flows estimated via fixed effects approaches that have been drawn from the second dataset.

2.6.1. Aid determinants: sample of all armed conflicts

The econometric results derived from the extended dataset are partially consistent with Kang and Meernik (2004). GDP Per Capita, Openness, and OECD Military Intervention are consistently significant in both the regressions, whereas Regime in Transition, Post-Cold War, Post-Conflict, and Conflict Incompatibility lose their significance (column 2 in Tables 1 and 2).

As can be seen from the Tables 1 and 2, the overall R-squared in the extended model is lower than in Kang and Meernik (2004) and the fourth column in both the models shows that additional variables have added more explanatory power to the model. As compared to Kang and Meernik (2004), the autocorrelation coefficients are higher in the extended analysis. The increase in autocorrelation might be due to the inclusion of a higher number of conflicts, in particular of those civil conflicts which tended to have more than one conflict episode. The inclusion of multiple conflict episodes might lead to overlapping of pre-and-post conflict years' data and hence add to the problem of serial correlation in the datasets (the issue of multiple conflicts is discussed in more detail in section 5.4). When testing for multicollinearity, the highest value of Variance Inflation Test (VIF) is above 2. This meets the acceptability criteria set by Neter et al. (1989), who recommend that any value greater than 10 is an indication of potential multicollinearity problems (see Table 2 in Appendix B).

Table 1: All Armed Conflicts: OECD Aid to Conflict Nations Before and After Conflict

	Kang and Meernik 2004 (1)	Extended sample (2)	Without Israel (3)	New Variables (4)
Democratic State	2.0879 (0.77)	7.661 (2.26)**	4.328 (1.56)	5.731 (1.89)*
Polity in Transition	6.5130 (1.81)*	4.942 (1.57)	5.661 (2.07)**	4.782 (1.58)
Openness	.2658 (6.12)***	.2538 (5.09)***	.2511 (6.34)***	.1436 (3.18)***
Recipient GDP Per Capita	-.0014 (-2.54)**	.0049 (3.98)***	-0.018 (-1.98)**	
Ln of GDP Per Capita				53.153 (3.48)***
(Ln of GDP Per Capita)squared				-3.990 (-3.53)***
Recipients' Population				-11.154 (-10.43)***
Oil/Gas Exporters				-19.775 (-4.91)***
Israel				393.554 (19.11)***
Post-Cold War	-6.8063 (-2.83)**	-2.864 (-0.94)	-1.638 (-0.66)	-.8678 (-0.33)
Post-Conflict Period	5.2853 (2.71)**	1.1308 (0.55)	.3638 (0.19)	2.514 (1.10)
Constant	11.73988 (3.72)***	11.806 (2.54)**	17.052 (5.07)***	41.588 (0.79)
N	1483	2035	2018	2059
R-sq overall	.17	.13	.12	.50
Rho AR1	.28	.66	.57	.66
Wald χ^2	50.09	52.61	46.05	711.28
Prob> χ^2	0.0000	0.0000	0.0000	0.0000

Source: Author's calculations based on data described in the text
t statistics in parentheses; *significant at 10 percent level; **significant at 5 percent level; ***significant at 1 percent level

Tables 1 and 2 show that the income level of the residents of recipients' countries is consistently significant throughout different models and samples but its sign is sensitive to sample changes and the use of polynomial specifications. Specifically, when I tests for income elasticity, the results suggest the presence of a middle income bias towards aid recipients which has been found in other studies (Dowling and Hiemenz, 1985; Alesina and Dollar, 2000; Chauvet, 2003). The scatter plot diagrams in appendix C show that Israel stands out as an outlier in four out of five years. After having excluded Israel from the sample, the coefficient on GDP variable changes its sign from positive to negative and is statistically

significant at the 5 percent level. Hence, after taking into account extreme outlier cases, the results show that donors do tend to give more aid to poorer countries.

Positive results between openness and foreign aid indicate that more open economies are more capable of absorbing larger aid inflows and attracting donors' attention. Moreover, this positive relationship is premised on the assumption that more open economies are larger markets and there will be a donor interest; it is, thus, a donor interest variable.

Democratic states seem to determine the behavior of donor aid allocation only partially. Unlike in Kang and Meernik (2004), this variable has the expected sign and is statistically significant at the 5 percent level when pre-and-after conflict period is taken into account. In the post-conflict period only, the variable loses its statistical significance. An explanation could be that donors account for the fact that countries in early post-conflict years tend to perform poorly in terms of policy and institutional quality and penalizing them is considered as an inappropriate policy. This would not help their recovery; on the contrary, the poorer they are, the greater would the risk of recurring conflict be (Addison and McGillivray, 2004).

Table 2: All Armed Conflicts: OECD Aid to Conflict Nations After Conflict

	Kang and Meernik 2004 (1)	Extended sample (2)	Without Israel (3)	New Variables (4)	Extended sample Fixed Effects (5)
Democratic State	5.033 (1.39)	5.545 (1.08)	4.373 (1.10)	5.442 (1.31)	5.971 (0.93)
Polity in Transition	10.296 (1.95)*	7.731 (1.31)	8.646 (1.81)*	8.689 (1.66)	6.543 (0.98)
Openness	.3097 (5.26)***	.2411 (3.36)***	.1801 (3.23)***	.0593 (0.97)	.1227 (1.16)
Recipient GDP Per Capita	-.0029 (-4.09)***	.0042 (2.14)**	-.0035 (-2.26)**		-.0049 (-1.00)
Ln of GDP Per Capita				64.657 (3.23)***	
(Ln of GDP Per Capita)squared				-5.130 (-3.40)***	
Ln of Recipients' Population				-13.287 (-9.23)***	
Ln of Infant Mortality Rate				-12.446 (-2.89)**	
OECD Military Intervention	51.822 (7.096)***	54.222 (4.88)***	44.056 (5.21)***	16.062 (2.14)**	58.472 (2.61)**
UN Peacekeeping	5.894 (0.85)	8.622 (1.12)	4.025 (0.67)	3.594 (0.64)	1.903 (0.18)
Level of Violence	-5.223 (-1.39)	-1.179 (-0.14)	-7.743 (-1.50)	-.1939 (-0.04)	
Conflict over Governance	8.778 (2.21)**	4.645 (0.67)	13.894 (2.66)**	-4.974 (-1.10)	
Post-Cold War	-13.799 (-3.80)***	-6.900 (-1.38)	-3.603 (-0.92)	-6.665 (-1.78)*	-1.123 (-0.17)
Oil/gas Exporters				-22.677 (-4.81)***	
Israel				463.018 (15.63)***	
Post-Conflict year 2	2.726 (0.93)	5.021 (2.05)*	3.040 (1.47)	4.999 (2.13)**	4.889 (1.60)
Post-Conflict year 3	5.899 (1.90)*	6.8341 (2.29)**	4.197 (1.74)*	5.317 (1.87)*	6.523 (2.09)**
Post-Conflict year 4	9.102 (2.89)**	3.337 (1.03)	.2365 (0.09)	2.312 (0.72)	2.907 (0.91)
Post-Conflict year 5	5.554 (1.75)*	.2353 (0.07)	-2.824 (-1.09)	.1804 (0.05)	.1418 (0.04)
Constant	-.0835 (-0.01)	.8309 (0.07)	1.132 (0.13)	121.783 (1.65)	21.099 (2.28)**
N	782	908	903	839	908
R-sq overall	.32	.22	.18	.66	.07
Rho AR1	.11	.46	.33	.51	
Wald χ^2	157.94	75.88	71.16	608.76	(11, 702)
Prob> χ^2	0.0000	0.0000	0.0000	0.0000	0.0487

Source: Author's calculations based on data described in text
t statistics in parentheses; *significant at 10 percent level; **significant at 5 percent level; ***significant at 1 percent level; in the last column, F-test statistics are reported

The explanatory variables added to the original model like population size and oil exporting countries are statistically significant at 1 percent level in both the regressions. The coefficient on population has the negative sign and confirms findings from much of the literature that smaller countries, on average, receive more aid per capita. This is consistent with previous findings suggesting a bias against larger countries and the donors' desire to 'show the flag' widely (Knack, 2004: 9). Surprisingly, oil/gas exporters tend to receive roughly, 20$ less per capita aid. This suggests that post-conflict aid is not determined by the countries that are rich with oil and gas.

Among the group of conflict characteristics, the OECD Military Intervention does the main work; the variable is robust to changes in samples and estimators. The results indicate that countries that have been site of OECD military involvement tend to receive roughly 54$ per capita more of OECD aid. The inclusion of the dummy variable for Israel (column 4) seems to have absorbed part of the variation from the military intervention variable, whose coefficient becomes smaller but remains significant at the 5 percent level.

The coefficient on Infant Mortality Rate, as a measure of physical quality of life in post-conflict period, is significant at 1 percent level but it has a negative sign suggesting that 1 percent increase in Infant Mortality Rate leads to 0.11$ decrease in aid per capita. This portrays a rather unsatisfactory picture of donor behavior which seems to punish countries with increasing rates of infant mortality. However, as it will be shown in the following section, these results are largely driven by the presence of interstate conflicts in the sample.

2.6.2. Interstate and intrastate conflicts

The regression results run on sub-samples of armed conflicts reveal that in large part, the importance of post-conflict aid determinants vary between interstate and intrastate conflicts. Democracy, Polity in Transition, and OECD Military Intervention seem to direct more of donors' attention in the case of civil conflicts. In the pre-and-after conflict periods, donors tend to provide roughly 8$ more of aid per capita to countries affected by civil conflict(s) that score higher on a democracy scale. The coefficient on OECD Military Involvement (columns 3 and 4 in Table 4) is significant at 1 percent level and suggests that countries affected by conflict receive on average 30-45$ more of per capita aid.

The presence of UN Peacekeeping Operations in countries that have been sites of interstate conflict attracts on average 66$ more of aid per capita. Also, for interstate conflicts, the Infant Mortality Rate is significant but with negative sign, meaning that countries affected by interstate conflict that have higher infant mortality rate receive less aid.

Yet, there is a set of variables that are equally important in attracting donors' attention in the case of both types of conflicts. These variables are Recipients' Population, Openness (in the first model), variable dummies for Oil/Gas Exporters and Israel. The relationship between the level of income and aid per capita exhibits mixed results: the coefficient on GDP per capita is positive and significant in both types of conflicts in the first model, whereas in the second model it has different signs. The negative sign on the sample of civil conflicts might also be attributed to the lack of aid data on Israel after 1997, which ranks among the highest income countries in the sample and hence exerts influence in the overall results.[16] The squared relationship between aid per capita and GDP of the recipient countries is found to be statistically significant in the case of civil conflicts only (column 4 in Tables 3 and 4).

[16] Conflict episode 1990-1999 with Hezbollah (Gledtisch et al., 2002)

Table 3: Interstate and Intrastate Conflicts: OECD Aid to Conflict Nations Before and After Conflict

	Interstate conflicts (1)	Interstate conflicts (2)	Civil conflicts (3)	Civil conflicts (4)
Democratic State	9.207	1.243	8.236	7.582
	(0.82)	(0.12)	(2.54)**	(2.54)**
Polity in Transition	.0094	-2.026	6.297	6.867
	(0.00)	(-0.22)	(2.05)*	(2.31)*
Openness	.5115	.3212	.2120	.1165
	(2.83)**	(1.89)*	(4.47)***	(2.63)**
Recipient GDP Per Capita	.0039		.0046	
	(1.80)		(2.88)**	
Ln of GDP Per Capita		8.090		68.159
		(0.19)		(3.72)***
(Ln of GDP Per Capita) squared		-.7253		-5.164
		(-0.24)		(-3.74)***
Ln of Recipients' Population		-7.693		-12.033
		(-2.41)**		(-9.77)***
Oil/Gas Exporters		-26.176		-17.854
		(-2.06)**		(-3.99)***
Israel		325.157		488.652
		(8.13)***		(16.30)***
Post-Cold War	-10.170	-5.244	-1.774	-.4888
	(-1.08)	(-0.63)	(-0.60)	(-0.18)
Post-Conflict Period	15.549*	16.182	-3.563	-1.596
	(2.25)	(2.49)**	(-1.57)	(-0.73)
Constant	-10.776	118.053	17.712	11.919
	(-0.85)	(0.80)	(3.69)**	(0.19)
N	407	407	1628	1628
R-sq overall	.24	.55	.099	.53
Rho AR1	.74	.74	.57	.57
Wald χ^2	22.75	137.90	39.26	510.14
Prob> χ^2	0.0019	0.0000	0.0000	0.0000

Source: Author's calculations based on data described in text
t statistics in parentheses; *significant at 10 percent level; **significant at 5 percent level; ***significant at 1 percent level. Note: (1) and (3) extended sample; (2) and (4) new additional variables.

Table 4: Interstate and Intrastate Conflicts: OECD Aid to Conflict Nations after Conflict

	Interstate conflicts (1)	Interstate conflicts (2)	Civil conflicts (3)	Civil conflicts (4)
Democratic State	-55.183	-9.805	5.885	7.870
	(-2.70)**	(-0.52)	(1.63)	(2.68)**
Polity in Transition	.6559	-1.356	11.996	9.693
	(0.03)	(-0.08)	(2.60)**	(2.65)**
Openness	.4949	.0202	.1181	.-03006
	(1.73)*	(0.07)	(2.30)**	(-0.66)
Recipient GDP Per Capita	.0352		-.0041	
	(6.46)***		(-2.86)**	
Ln of GDP Per Capita		26.432		78.606
		(0.32)		(4.23)**
(Ln of GDP per capita)squared		-2.671		-6.013
		(-0.42)		(-4.29)**
Ln of Recipients' Population		-16.389		-12.166
		(-3.74)**		(-8.47)**
Ln of Infant Mortality Rate		-35.924		-.8811
		(-2.09)*		(-0.22)
OECD Military Intervention	-41.259	-6.226	45.406	30.748**
	(-1.48)	(-0.23)	(5.08)**	(4.11)
UN Peacekeeping	66.231	22.254	7.878	6.568
	(2.60)**	(0.85)	(1.39)	(1.46)
Level of Violence	-13.924	-2.080	-6.972	-1.812
	(-0.66)	(-0.11)	(-1.40)	(-0.43)
Conflict over Governance	86.690	73.150	12.291	-4.126
	(1.70)	(1.73)	(2.41)**	(-0.89)
Post-Cold War	-16.143	-14.694	-.6415	.1445
	(-1.28)	(-1.36)	(-0.15)	(0.04)
Oil/Gas Exporters		-34.716		-13.964
		(-2.24)*		(-2.97)**
Israel		439.966		
		(6.82)**		
Post-Conflict year 2	14.953	18.117	2.151	1.5457
	(1.70)	(2.19)*	(1.05)	(0.92)
Post-Conflict year 3	19.464	23.931	3.081	.3818
	(1.73)	(2.22)*	(1.39)	(0.21)
Post-Conflict year 4	12.737	15.856	.9391	-.6277
	(1.04)	(1.37)	(0.41)	(-0.33)
Post-Conflict year 5	9.405	12.527	-2.010	-3.023
	(0.73)	(1.03)	(-0.86)	(-1.55)
Constant	-107.521	324.448	3.867	-4.734
	(-2.18)*	(1.19)	(0.41)	(-0.07)
N	198	192	710	635
R-sq overall	.60	.79	.20	0.46
Rho AR1	.59	.57	.16	.16
Wald χ^2	101.10	237.93	70.54	197.82
Prob> χ^2	0.0000	0.0000	0.0000	0.0000

Source: Author's calculations based on data described in text
t statistics in parentheses; *significant at 10 percent level; **significant at 5 percent level; ***significant at 1 percent level. Note: (1) and (3) extended sample; (2) and (4) new additional variables.

2.6.3. Multilateral versus bilateral aid

Bilateral and multilateral donors seem to be attracted similarly to aid determinates like Population size and GDP Per Capita. First column in Table 5 shows that both bilateral and multilateral aid goes to richer countries whereas in the second model, multilateral donors give more aid to poorer countries. The latter is in line with much of the exiting literature contending that multilateral donors tend to reward needy recipients. When tested for nonlinearity (second model), the sign of GDP per capita changes for both donors indicating a squared relationship between aid levels and changes in income per capita.

Yet, aid allocation by multilateral and bilateral donors is not framed by the same set of determinants. For bilateral donor countries, in both the models, the Openness variable and the variable indicator for Israel are positive and statistically significant at 1 percent level showing their consideration for countries of economic and strategic importance. The effect of the OECD military intervention, which is highly significant in the first column in Table 5 seems to be absorbed by the variation coming from dummy on Israel whose coefficient is large and highly significant.

Multilateral donors seem to discard political and strategic motives (Military intervention and Israel) and reward countries that are changing their authority regimes. Also, they appear to give on average 3$ per capita more aid to countries affected by conflict of lower intensity and conflicts with disputes over governance. This indicates that multilateral donors are more averse towards higher intensity conflicts and conflicts with disputes over territories—known for lasting longer than conflicts over governance. This reconfirms that while bilateral aid is driven by political consideration, multilateral aid is driven more by recipients' countries merits.

Table 5: Different Types of Aid: OECD Aid to Conflict Nations Before and After Conflict*

	Bilateral (1)	Bilateral (2)	Multilat. (3)	Multilat. (4)	Bilateral (5)	Bilateral (6)	Multilat. (7)	Multilat. (8)
Democratic state	7.108	4.813	.4966	1.237	11.806	12.622	-.2820	-.8444
	(2.16)**	(1.64)	(0.92)	(2.37)**	(1.31)	(1.74)*	(-0.34)	(0.98)
Polity in transition	3.540	3.315	2.014	2.063	-3.726	1.903	2.635	2.285
	(1.15)	(1.13)	(3.74)***	(3.92)***	(-0.33)	(0.21)	(2.63)**	(2.21)**
Openness	.2543	.1563	.0216	-.0035	.5132	.2892	.0126	.0043
	(5.26)**	(3.58)**	(2.87)**	(-0.46)	(3.76)***	(2.38)**	(0.94)	(0.28)
Recipient GDP p.c.	.0053		-.0002		.0181		-.0010	
	(4.47)***		(-0.80)		(6.74)***		(-3.06)***	
Ln(GDP p.c.)		45.327		10.622	-40.601		.2797	
		(3.10)***		(3.13)***	(-1.21)		(0.06)	
(Ln of GDP p.c.)sqrd		-3.336		-.8440	2.747		-.1454	
		(-3.09)***		(-3.21)***	(-1.07)		(-0.43)	
Ln (population)		-9.273		-1.986	-7.670		-1.199	
		(-9.02)***		(-10.75)***	(-2.90)**		(-3.46)***	
Ln (IMR)					-5.545		.1126	
					(-0.76)		(-0.13)	
OECD Military					63.604	.7730	2.600	.9245
Intervention					(3.37)***	(0.06)	(1.42)	(0.57)
UN peacekeeping					-5.142	-1.990	-.2942	.3153
					(-0.42)	(-0.23)	(-0.26)	(-1.21)
Level of Violence					-.8.721	4.021	-2.606	-1.123
					(-0.82)	(0.57)	(-2.64)**	(-1.21)
Conflict over Governance					-21.525	-12.050	2.857	1.509
					(-2.22)**	(-1.77)*	(2.90)**	(1.56)
Post-Cold War	-1.871	-.1323	-.1864	-.1002	-7.449	-10.463	.7326	.1995
	(-0.65)	(-0.05)	(-0.40)	(-0.03)	(-0.92)	(-1.75)*	9((0.92)	(0.25)
Post-conflict period	-.5178	-1.099	-.4400	.1002				
	(-0.15)	(-0.35)	(-0.83)	(0.20)				
Oil/gas exports		-16.873		-2.646		-3.962		-1.544
		(-4.42)***		(-3.72)***		(-0.56)		(-1.57)
Israel		394.836				440.719		
		(20.09)***				(12.85)***		
Constant	7.445	27.890	4.693	6.798	8.328	315.371	.6772	26.648
	(1.67)	(0.55)	(7.32)***	(0.62)	(0.49)	(2.62)**	(0.42)	(1.63)
N	2035	2035	1554	1554	370	344	287	263
R-squared	.14	.50	0.07	.29	.53	.82	.30	.44
Rho AR1	.6659	.6642	.4803	.4831	.5575	.5517	.30286	.3093
Wald $\chi 2$	56.83	731.82	22.78	175.75	122.32	529.20	46.73	84.74
Prob> $\chi 2$	0.0000	0.0000	0.0019	0.0000	0.0000	0.0000	0.0000	0.0000

Source: Author's calculations based on data described in text; t statistics in parentheses; *significant at 10 percent level; **significant at 5 percent level; ***significant at 1 percent level; *Regression results (1)-(4) belong to the first model and (5)-(8) belong to the second model, restricted to post-conflict period only.

2.6.4. Aid in the post-conflict period

The results in Table 1 and 2 show that post-conflict countries, on average, receive 5$ and 7$ more of per capita aid in the second and third years, respectively. The fourth column suggests the same time-scaling of aid flows albeit with smaller coefficients. The aid peak is recorded in the third year. Previous findings (Kang and Meernik, 2004; Collier and Hoeffler, 2004) differ precisely at the point that aid starts to level off. The results from Table 1 and 2 are closer to those of Collier and Hoeffler (2004), who find that aid tends to increase more in the first two years after a conflict ends and then begin to decrease in subsequent years.

The coefficients on aid flows are sensitive to the presence of outliers, as well as sample changes. As shown in the column 3 of Table 2, when Israel is dropped from the analysis all but the third indicator variable on aid flows are insignificant. Coefficients on aid inflow variables attain statistical significance for some particular sub-samples (interstate conflicts) and donors (bilateral donors). These cases show consistently that the aid peak is achieved in the third post-conflict year. This is confirmed with the fixed effects approach as shown in the last column of Table 2, although the explanatory power of the model is significantly reduced.

In the following, I discuss the estimations derived from the second dataset that consists of 75 developing countries (35 non-conflict and 40 conflict affected countries).

Table 6. Aid allocation (fixed effects estimates)

Variables	**Aid/GDP**	**Log(Aid/GDP)**
Log(initial GDP per capita)	-6.4887	-.6402
	(-4.76)***	(-7.39)***
Polity IV index	.4616	.0381
	(5.10)***	(6.63)***
Log of Infant Mortality	-2.7264	.0233
	(-1.64)	(0.22)
Log of Population	.94580	.1675
	(0.39)	(1.09)
Time0 (pre-peace)	2.1099	-.0867
	(1.16)	(-0.75)
Peace Onset	2.2805	.1340
	(1.57)	(1.45)
Post-conflict1	2.4162	.0308
	(1.72)*	(0.35)
Post-conflict2	-.2299	.0006
	(-0.17)	(0.01)
Constant	52.210	3.6550
	(1.33)	(1.46)
No of observations	376	376
No of countries	66	66
R squared	.19	.35

Source: Author's calculations based on data described in text
t statistics in parentheses; *significant at 10 percent level; **significant at 5 percent level; ***significant at 1 percent level.

Table 7. Differences in variable means across pairs of periods before and after the conflict

	Aid/GDP	AidCap
Peace onset=PrePeace	.0141971	8.298154
	(0.81)	(1.24)
No of countries	31	36
Postconf1=PeaceOnset	.0043528	10.76848
	(0.41)	(1.95)**
No of countries	33	37
Postconf2= Postconf1	-0345727	-4.53742
	(-1.98)**	(-1.32)
No of countries	33	36

Source: Author's calculations based on data described in text
t statistics in parentheses; *significant at 10 percent level; **significant at 5 percent level; ***significant at 1 percent level

The results confirm claims that aid reduces considerably during the postconflict2 period: after the 5th year during the full peace period, aid is not significantly different from non-conflict countries. Table 6 shows that the peace onset variable is not significant, while the postconflict1 period is marginally significant and substantial. Hence, at a marginal

significance, the results suggest that aid in post-conflict countries reduces by the end of the first post-conflict decade, after having achieved its peak in the first four years after the conflict.

This last result is confirmed by simple paired means tests, where aid in the postconflict2 is substantially reduced and is significantly lower than in the postconflict1 period. These estimations show that aid is significantly lower after the postconflict1 by 3 percent of GDP, whereas aid is higher in the postconflict1 by some 10 dollars per capita. Surprisingly, the evidence shows no statistical difference between the peaceonset and prepeace period, which is in contrast to Collier and Hoeffler's (2004) findings.

2.7. Conclusions and Caveats

The econometric analysis in this chapter provides evidence about determinants and time-frame of post-conflict aid and raises some important issues related to successful recovery and development in post-conflict societies.

The results based on the first dataset (extended analysis) are largely consistent with previous studies showing that donors consider both national and conflict characteristics in allocating aid to countries affected by conflict. Recipients' country characteristics like the level of income and openness, as well as military intervention by OECD countries are consistently significant, although other aid determinants like changes in authority regimes and sources of conflict seem to lose their importance in the extended analysis.

In addition, the results run on sub-samples of types of conflict and types of aid reveal differences in aid responses to countries/conflict characteristics. Correlations of political and geostrategical objectives with bilateral aid imply that aid to conflict affected countries flows within a politicized environment and thereby follows a selective approach. Shifts in the global security agenda following the War on Terror have increased concerns by the development

community that aid funding might be diverted from poorer countries to those of geostrategical importance. This raises doubts about the deliverance of effective aid and sustenance of the human development goals on the forefront of the changing policy agendas.

The central question posited in the beginning of this chapter is related to the timescale and volatility of aid flows in post-conflict countries. The econometric results on foreign aid amounts and timing provide positive and significant results for indicator variables on second and third post-conflict years, showing that aid comes in larger amounts in the second and third year and drops off in subsequent years. This is confirmed through fixed effects estimates, although the explanatory power of the model is considerably reduced. In the case of civil conflicts, which is the focus of the next two chapters, two important conclusions can be drawn, albeit the results are marginally significant: aid is higher around the first post-conflict period (years 2-5) and it significantly reduces afterwards; and there is no significant difference between the pre-peace and peace onset period (years 0-1), which is in contrast to Collier and Hoeffler's (2004) findings.

These findings tell a familiar story about donor weariness shown after the 5^{th} year in post-conflict, where aid flows are not significantly different from non-conflict countries. If aid inflows are not in line with the time-frame of growth opportunities during the post-conflict decade, as argued by Collier and Hoeffler (2004), the deliverance of effective aid is hindered. As such, proper time-sequencing and scaling of aid flows is the crux of aid effectiveness.

The estimates of post-conflict aid determinants such as those of Kang and Meernik (2004) are sensitive to sample changes. Their results are fragile with respect to the outliers (case of Israel) as well as polynomial specifications. The potential presence of biased results which are based on random effects model is a source of fragility in all the results. This problem is addressed by the use of fixed effects approaches.

There are also data caveats, which might make the results sensitive to changes in samples and model specification and presumably conceal real aid patterns in post-conflict period. The first caveat is related to multiple conflicts, that is, countries that have experienced several conflicts in different parts of their territory within a decade.[17] For example, according to PRIO dataset (Gleditsch et al., 2002), in the 1990s, there were seven conflict episodes in the territory of Myanmar. This implies that the first post-conflict year for Myanmar (in the 1990s) ranges from 1993 to 1997. For example, 1997 enters the dataset twice for two separate conflicts in Mynamar: one as the first post-conflict year, and the other as the last one. This makes results sensitive to changes; while at the same time unclear aid peak patterns may prevail.

Second, the introduction of the explanatory variable on intensity of conflicts (level of violence=war2) adds more to the issue of multiple conflicts. To enter this variable, in some cases, a single conflict episode had been split into two conflicts. This was the case for conflicts, whose intensity of violence escalated from low to high level (e.g., if a conflict episode started in 1998 and ended in 1999 and its intensity level changed, then this conflict was split into two single episodes: 1998 low intensity conflict (war2=0) and 1999 high intensity conflict(war2=1). The issue of multiple conflicts is mitigated in the second step of analysis, whereby the second dataset covers only those countries that have been war-free for 10 years after the conflict/s ended; but at the same time this reduces considerably the number of post-conflict countries.

The last point is attributed to the way the three post-conflict periods are coded. The coding procedure calls for some discretion, where a four-year panel might consist of one year of war, two years of peace onset, and one of postconflict1. As explained in section 2.5.2., 'the rule of thumb' is to code a period based on number of years from each post-conflict group

[17] e.g., Iran, Iraq, Myanmar, India, Lebanon, Congo, Somalia, Angola, Croatia, Bosnia, and some former Soviet countries (See Appendix A for a list).

(peace onset, postconflict1, and postconflict2) that dominate during the four-year periods (Elbadawi et al. 2008: 127). This can be a bigger problem in five-year panels that might, for example, consist of one year of war, two years of peace onset, and two years of postconflict1. In my case, this is ameliorated, to some extent, by the use of four-year panel datasets.

In spite of these data and econometric problems, the results consistently show that more of bilateral aid flows to countries of geostragetical interests and that aid peak is recorded around the first post-conflict period; beyond this period, aid flows are not significantly different from other non-conflict countries. The question as to whether the prevailed time-scaling of aid is in line with recovery needs and patterns in post-conflict countries deserves further investigation. Hence, the time-frame, the politicized nature of foreign aid flows, and their possible links to the question of post-conflict aid effectiveness are analyzed in detail in the next two chapters—through cross country and case study analysis.

3. AID EFFECTIVENESS IN POST-CONFLICT COUNTRIES: A CROSS-COUNTRY ANALYSIS

3.1. Introduction

The UNDP (2008) reports that during the 1990s, 35 countries affected by civil conflicts entered a post-conflict period. The aftermath of conflict is the point when the risk is highest for these countries to 'go wrong' as they confront humanitarian catastrophes, shattered infrastructure and institutions, and displaced labor; investment and savings decisions are distorted and productive activity is suppressed (Demekas et al., 2002; Addison and McGillivray, 2004). Ex-combatants need to be re-integrated and their demobilization and disarmament requires strong national security forces. In these environments, as Addison and Brück (2009) argue, tensions exist between the goals of development and peacebuilding. Thus, an agenda that encompasses the three Ps—peace, political participation, and prosperity—goals should be in place.

In this context, foreign aid has an important role to play: although it cannot reduce the risk of conflict directly, it can do so through its effect on growth and higher employment (Collier, 2005; 2007). Addison and Brück (2009: 24) argue that growth alone cannot be the primary objective for donors: 'insofar as aid contributes to achieving the political goals, then it should facilitate the achievement of the economic and social goals'. Hence, the scope of tasks supporting post-conflict transition include democratization, investments in justice, security and institutions, reconstruction, as well as balance of payment and budgetary support (Addison, 2000).

Against this background, I examine the role played by the donor community in the process of post-conflict recovery. My goal is three-fold: I first revisit the exiting evidence about aid and growth in post-conflict contexts. Particular focus is given to the timeframe of

aid and growth recovery during their first post-conflict decade. Second, to address the issue of multi-dimensional objectives of aid, I introduce new variables, such as social outcomes, into the post-conflict framework. This is a new contribution to the debate on effectiveness of post-conflict aid. I also use variables that are specific to conflict-affected countries and control for the presence of International Peacekeeping Missions. Lastly, the methodology employed offers an additional dimension to the post-conflict aid literature. This paper follows the instrumentation strategy used by Rajan and Subramanian (2008) and Arndt et al., (2009).

3.2. Survey of the Literature: Measuring Aid Effectiveness

The impact of foreign aid on recipient countries' economies has been subject of research and debate among scholars and policymakers for more than five decades. There are two discernible strands in the literature of foreign aid effectiveness (Radelet, 2006): one argues that foreign aid spurs growth and development of the recipient countries (e.g., Stiglitz, 2002; Sachs, 2004) while the other opposes this view by arguing that aid crowds out savings and investments and thus slows down economic growth (e.g., Easterly, 2001).

In order to investigate aid impact on recipient countries' economies, the scholars have relied on econometric techniques. Aid effectiveness can be measured in terms of growth promotion, development, and welfare of the recipient countries. Changes in development concerns have broadened the focus and role of the development aid from the large scale resource transfer, which would fill the savings and foreign exchange gap, to multidimensional role including poverty alleviation, structural adjustment, and stabilization (Thorbecke, 2000).

These changes have influenced selection of theoretical frameworks, models, and databases for tracing the relationship between foreign aid and growth of recipient countries; given the differences in theoretical frameworks and techniques used, it comes as no surprise that econometric studies on foreign aid effectiveness have provided mixed results. This section provides an account on how the empirical literature on aid effectiveness has evolved

during the past 50 years of extensive research, in terms of measurements and the techniques used.

3.2.1. Aid-growth nexus

A large and growing literature measures the macroeconomic impact of aid on growth. According to Harrod-Domar model the impact of aid on growth is traced through increased rates of savings and investments. In this analytical framework, a linear relationship between output and capital is assumed, where output growth will be a function of the rate of investment. The two-gap model developed by Chenery and Strout (1966) extends this approach by assuming that developing countries have shortage of both savings and foreign exchange, and foreign aid will help to fill these gaps. This will be done through increased aid flows to fill the savings gap, or through provision of the necessary foreign exchange, to remove current account deficits (Thorbecke, 2000).

In light of the two-gap models, the empirical analysis in the beginning of 1970s, examined the link between aid-induced savings and investments and found that aid increases savings at a rate smaller than one for one (Papanek 1972, 1973). Later studies during 1980-1990 traced the impact of aid on growth through investments and found mixed results. Mosley (1987) analyzed the so called micro-macro paradox in aid effectiveness studies. By doing so, he refers to contrasting results in micro and macro studies: while aid projects are evaluated as successful in meeting the objectives set, aid does not seem to have a positive effect on aggregate.

The major criticism to Harrod-Domar and the two-gap theoretical frameworks is the assumption about the direct link between investment and growth based on a constant capital-output ratio. In addition, it is not clear whether all aid goes to investments since part of it is given for humanitarian reasons (Tarp, 2010). Another criticism is that the impact of aid can be undermined by the misuses from corrupt governments that pursue anti-developmental goals.

In this way, aid induces corrupt practices and the struggle for power, and hence it becomes counterproductive for recipient countries (Bauer, 1991).

Endogenous growth theory and advances in econometrics have allowed for further research and measurements of foreign aid effectiveness by indicating the role of human capital, institutions, and policies across recipient countries. These studies utilize mainly panel datasets, account for the endogeneity of aid, and cover more countries than previous studies. This literature analyzes recipient country conditions such as policies, political and economic stability, environment, fraction of land in tropic areas, and warfare. A typical econometric model that estimates aid effectiveness takes the following form: [18]

$$Y_{it} = \alpha + \beta_1' X_{i,t-m} + \beta_2' Z_{i,t-m} + \beta_3' A_{i,t-m} + \varepsilon_{i,t}, (8)$$

Y_{it} is the outcome variable, usually real per capita GDP growth; $X_{i,t-m}$ is vector of exogenous variables; $A_{i,t-m}$ is aid to recipient *i* in period *t-m*; $Z_{i,t-m}$ is vector of aid interactions with other variables; $\varepsilon_{i,t}$ residual term; *i,t* are recipient countries *i* in time *t*.

The vector of aid interactions usually contains an interaction term between aid and a measure of recipient country's characteristics (e.g., policies and institutions). Within this framework, Burnside and Dollar (2000) find that foreign aid is positively related to growth in countries with better policies. Findings by Burnside and Dollar (2000) have been cited widely and have sparked new empirical work on aid and growth, with some of these studies questioning the robustness of their results. Most notably, Hansen and Tarp (2001) find that the interaction term between aid and policy (as per Burnside and Dollar, 2000) is not significant. Instead, aid and aid squared are significant, suggesting that aid is effective but with diminishing returns. Easterly et al. (2004) add more countries and years to Burnside and Dollar (2000) dataset and find their results to be fragile to the use of additional data. Other influential studies that estimate aid-growth conditionality terms, find a positive relationship

[18] See McGillivray and Noorbakhsh (2007)

between foreign aid and growth, when aid is conditioned upon 'severe environments', or 'the fraction of land outside tropics' (Guillaumont and Chauvet, 2001; Collier and Dollar, 2002; Dalgaard et al., 2004; Collier and Hoeffler, 2004). Roodman (2007: 1) tests the robustness of '7 important aid-growth papers' (including Burnside and Dollar, 2000) and finds that all the results are fragile, particularly to sample expansion. His results suggest that fragility of findings found in Burnside and Dollar (2000) 'is the norm in the cross-country aid effectiveness literature' (Roodman, 2007: 17).

Recent contributions on aid and growth have applied new methods and techniques in the aid-growth debate. Rajan and Subramanian (2008), for example provide a comprehensive examination of the relationship between aid and growth and test the robustness of aid-growth results in terms of time horizons, types of aid, types of donors, timing of impact of aid, and different specifications and samples. They claim to have controlled carefully for the endogeneity of aid, as they take into account that aid can be given to both, worse and good performer countries. In response to this, they model the supply of aid based on donor-related rather than recipient-specific characteristics and start constructing their instruments from the donor-recipient relationship as done by Frankel and Romer (1999). This means that Rajan and Subramanian (2008: 648) take into account 'considerations that drive individual donors to give aid to a country other than those related to a country's level of income and growth.' Their results suggest that there is no systematic effect of aid on growth.

Using program evaluation techniques, Arndt et al. (2009) provide a different story. They use a counterfactual framework in which, for the first time, the aid growth nexus is formulated in terms of the Rubin Causal Model. Program Evaluation literature tries to establish what results were produced or caused by a program: two situations that are identical in every respect save for the program (the 'treatment'), are compared. The units of treatments are countries whereas treatment is measured by aid shares in these countries. To derive the

binary instrument, countries are sorted in ascending order of the instrument generated from the preliminary stage (from lowest to highest predicted aid shares) and then the first 30 countries are selected for the 'control' (Zi=0) and the rest for the treatment (Zi=1).

Arndt et al. (2009) use doubly robust estimators for casual effects that are considered to be robust to misspecification of either the propensity score or the outcome regression. Their results show that the average treatment effect of aid on growth is positive in both the 1960-2000 and 1970-2000 periods and that aid remains an important tool for development.

3.2.2. Aid and non-growth outcomes

One strand of recent aid literature focuses on the impact of aid on non-growth outcomes. Kosack (2002) estimates the impact of aid on HDI with and without interaction term between aid and democratization. He finds a positive and significant effect of the interacted term on HDI values, and no impact of the aid variable when the interaction term is excluded from the regression.

Earlier contributions about social indicators and the role of aid do not find a positive and statistically significant relationship between aid and infant mortality (Boone, 1996). However, Masud and Yontcheva (2005) find that aid flows from non-governmental organizations (NGOs) are significantly associated with reduced infant mortality. To disentangle the effects of different types of aid on intermediate outcomes, Mishra and Newhouse (2007) and Dreher et al. (2008) use sector-specific aid. Mishra and Nehhouse (2007) find that health aid has a statistically significant effect on infant mortality and doubling per capita health aid leads to a 2 percent reduction in the infant mortality. Positive effects of education aid on primary school enrollment is suggested by Dreher et al. (2008), who find that higher per capita aid for education significantly increases primary school enrollment, while increased domestic government spending on education does not have a positive significant

effect. These findings raise the issue of decomposition of total aid into sectoral aid flows (the shortcomings from using this measurement are discussed in the last section of this chapter).[19]

The empirical studies that investigate the role of aid on institutional quality and policies in the recipient countries exhibit mixed results. Scholars argue that higher levels of aid worsen bureaucratic quality in developing countries by bolstering rent-seeking activities and corruption (Svensson, 2000; Knack, 2001; Alesina and Weder, 2002). On the other hand, after having corrected for the potential endogeneity of aid, Tavares (2003) shows that aid does reduce corruption in recipient countries.

In sum, most of the published research on aid effectiveness focuses on the effects of aggregate aid on growth, with no conclusive results. Mavrotas (2010: 9) argues that aid effectiveness debate will not reach a consensus at all 'as long as the analysis is restricted to the aid-growth nexus.' Bourguignon and Sundberg (2007) emphasize the need to 'open the black box' and look at political economy issues such as heterogeneity of aid motives, the limitations of the tools of the analysis, and the complex causality chain that links aid to final outcomes. In response to this discussion, more disaggregated analyses of aid effectiveness have come to dominate published research. The focus of these studies goes beyond aid-growth nexus and examines poverty reduction through better outcomes in health, education and institutional development. Yet, Arndt et al., (2009) argue that aid and growth studies should not be disregarded and growth should remain the key objective of aid. Development objectives such as poverty reduction cannot be achieved 'without a substantial outward shift in the production possibilities frontier' (Arndt et al., 2009: 9).

Another emerging strand in aid effectiveness research are country case studies, which add up to cross-country analysis. For example, Feeny (2003) examines the case of Papua New

[19] Radelet et al. (2006) divide aid into three categories: humanitarian (disaster relief, food aid), early (transport, communications, energy, construction), and late impact aid (health, education, government and civil society, NGO support).

Guinea and the effectiveness of aid in terms of poverty reduction. A comprehensive study on Mozambique is conducted by Arndt et al. (2006:2), who find that 'Mozambique has benefited from sustained aid inflows in conflict, post-conflict and reconstruction periods'. However, they highlight the administrative challenges that come from the proliferation of donors and aid-supported interventions; hence high aid flows and short term-benefits might not be sustained in longer run. This again, brings forth the issue of the effectiveness of aid in post-conflict societies, which will be discussed in turn.

3.2.3. Aid effectiveness in post-conflict countries

The starting point for examining the effectiveness of post-conflict aid is the study by Collier and Hoeffler (2004), who examine the relationship between economic growth, policy, and aid in post-conflict countries. They claim to have provided the first systematic empirical analysis of aid and policy in post-conflict situations. Specifically, their study is based on a comprehensive listing of large civil wars and covers 17 countries in their first post-conflict decade.

By investigating the 'time-profile' of post-conflict growth, Collier and Hoeffler (2004: 1142) suggest that aid is considerably more effective in augmenting growth in post-conflict situations since the absorptive capacity for aid is approximately double than in non-conflict countries. Thus, aid should be phased in gradually during the first four years after the conflict, and then 'gradually taper back to normal levels by the end of the first post-conflict decade'.

Collier and Hoeffler's (2004) recommendations about aid sequencing are in line with economic recovery goals for growth but seem to conflict with other goals that have an immediate effect on peace dividends such as demobilization of soldiers and reconstruction of destroyed infrastructure. Demekas et al. (2002) suggest that aid has the greatest welfare effect immediately after the conflict whereas reconstruction aid takes time to act and hence needs to

be designed with care. They recommend that in the post-conflict environment there is need for larger amounts of humanitarian aid over a shorter period of time instead of small amounts over a longer period of time**.**

Addison (2004) argues that Collier and Hoeffler (2004) 'overemphasize the growth objective', and he points to other important objectives of aid such as revenue recovery, poverty reduction, and the use of aid as a tactical instrument to secure peace. In the first years after the conflict, aid can finance recurrent spending and invest in reconstruction and institution building projects while keeping macroeconomic stability. By financing infrastructure and service delivery in rebel areas, aid can also provide a 'partial substitute' for insufficient government resources; this investment provides a tactical case for higher aid flows in the first post-conflict years.

In light of this debate, two important issues can be summarized. First, aid seems to be more effective in post-conflict environments. As such, aid is an important tool for post-conflict recovery, if carefully designed. Second, proper sequencing of aid is contingent upon identification of recurring trade-offs and which objectives should receive higher priority, remains a point of contention. This unravels the issue of aid objectives in relation to countries' specific needs and the respective trajectory of aid inflows during the post-conflict: aid is given for a variety of purposes and consequently, it impacts growth and other outcomes in different ways at different points in time. These issues are crucial for successful post-conflict recovery, and will be subject of analysis in the present and the following chapter.

To this end, I trace aid's impact in relation to growth and non-growth outcome variables.[20] The main focus lies in the link between post-conflict aid and the infant mortality rate for three reasons. First, infant mortality rates deteriorate substantially during and after the conflict (Hoeffler and Reynal-Querol, 2003). Second, it is a comprehensive indicator of

[20] Chen et al. (2008) and Elbadawi et al. (2008) use a wide range of indicators to measure performance in the aftermath of the civil war, e.g. real exchange rate misalignment, financial development, health and education, political development, demographic development, and incidence of terrorist attacks.

changes in economic conditions of the poor encompassing access to medicines and health facilities, water and sanitation, maternal health, female literacy, and fertility patterns (Boone, 1996; Mishra and Newhouse, 2007). Third, datasets on infant mortality have a broader coverage and are also considered to be more reliant than those on life expectancy (Mishra and Newhouse, 2007).

Another important aspect to be addressed in countries coming out of conflict is the state of their institutions and policies. To build post-conflict institutions, there is need for budgetary support, and aid can play a valuable role, if properly used. Institution building and better budgetary management enable countries to absorb aid more effectively (Addison, 2004; Addison and Brück, 2009). In this context, I use another outcome variable to test for aid's impact: the Economic International Country Risk Guide (ICRGE), which was proposed by Knack and Keefer (1995) and measures institutional quality in aid recipient countries.

3.2.4. Aid and the role of peacekeeping forces

Peacekeeping missions can play a vital role when there is need to rebuild political institutions and implement complex peace agreements (Sambanis, 2008). These missions enable governments to quickly downsize their militaries whereas commitments to maintain peacekeeping through the first decade can reassure potential investors and hence accelerate economic recovery (Collier, 2009).

I control for the presence of international peacekeeping troops and examine their effect on performance outcomes in post-conflict environments. This is done through dummy variables by denoting the presence of peacekeeping forces.

3.3. Methodology and Data

Cross-country panel data analyses are commonly used approaches in studies examining the conflict affected countries. Typically they cover periods of four to five years, where dummy variables are used to mark the presence of conflict in a given country and are interacted to variables of interest (e.g., Collier and Hoeffler, 2004; Elbadawi et al., 2008; Adam et al., 2008).

3.3.1. Interaction terms

The role of aid in post-conflict situations is examined through interaction terms between conflict-related dummies and aid variables. Collier and Hoeffler (2004) use interaction terms between aid, aid squared, and post-conflict year dummies; their triple interaction terms consist of aid, post-conflict dummies, and the policy measure (Post-Conflict 1*CPIA; Post-Conflict 1*(ODA/GDP) ^{2}; Post-Conflict 1*CPIA*ODA/GDP).

Roodman (2007) raises concerns about the near-collinearity of some of these terms with the variables from which they are constructed. He refers to the inability of estimators to distinguish between interaction terms that are highly correlated with simpler interaction variables, called the black box problem. In other words, conclusions drawn on complex interaction terms might indeed refer only to the importance of variables and simpler interaction terms from which they are constructed.[21] For this reason, I avoid the use of triple interaction terms, such as aid*Post-Conflict*UN operation or aid*Post-Conflict*ICRGE.

3.3.2.Endogeneity

An important methodological issue in using panel data is to find plausible estimation techniques that account for the endogeneity in the regressors (e.g., Bazzi and Clemens, 2009). For example, if more aid is given to countries with poor policy environments, lower income,

[21] When referring to Collier and Hoeffler's results (2004), Roodman argues that their triple interaction term between aid×policy×post-conflict is highly correlated with the simpler aid×post-conflict status interaction variable.

or poor social indicators, then this raises concerns about potential simultaneity bias whereby aid might not be exogenous to outcomes like growth and social indicators. Until the mid-1990s, the aid–growth studies used Ordinary Least Squares (OLS) techniques. Subsequently, more advanced techniques, like Two-Stage Least Squares (2SLS) were preferred as a straightforward technique to deal with endogeneity.

More recently, the advanced technique of Generalized Method of Moments (GMM) became the tool of preference as it takes into account endogeneity, country fixed effects, and avoids the bias of standard panel estimates in panel settings. However, due to the highly complex nature of the growth process there is a growing concern about the presence of weak internal instruments in both Arellano-Bond and Blundell-Bond estimators. As a result of weak instruments, the estimates will be biased towards their unadjusted counterparts such as OLS or panel fixed effects (Bun and Windmeijer, 2007; Arndt et al., 2009).

Hence, an important issue is to find instruments that can reasonably determine exogenous variation in aid. These instruments are lagged levels of aid or can be derived from the literature that analyzes recipient country characteristics. Another issue is how to judge the validity of the instruments chosen. Roodman (2007), for example, identifies two alternatives: technical procedures that deal with specification tests to detect the presence of weak or invalid instruments, and conceptual approaches that judge whether the set of instruments chosen has a plausible theoretical grounding.

Rajan and Subramanian (2008) take a step further in their instrumentation strategy by modeling the supply of aid based on donor-related rather than recipient-specific characteristics. Their construction of instruments starts from bilateral relations between donors and recipients, by looking at the colonial relationship, country's relative size, and common language, as opposed to the literature that picks instruments at the level of the recipient country. This is based on the argument that donors allocate aid not just because of

low income, but also because of colonial links and influence. As Rajan and Subramanian (2008) made improvements relative to past instrumentation approaches, I follow their approach to identify my external instruments.

3.3.3. Estimation technique

To estimate parameters of interest, I use the IV-GMM estimator. This estimation procedure requests the two-step feasible efficient GMM estimator and corresponding variance-covariance matrix. First, the equation is estimated using IV and the residuals are formed. Then, the estimates from the first step are used to form the optimal weighting matrix and then to calculate the efficient GMM estimator and its variance-covariance matrix (Baum et al., 2003; 2007).[22]

To check for the robustness of the results, the Limited-Information Maximum Likelihood (LIML) option is used, which is the preferred IV estimator in Arndt et al. (2009). Their justification is that 2SLS, GMM, and LIML converge to the same point estimates in the case of single instrument and endogenous regressors. However, LIML is their preferred estimator in the context of multiple instruments. Baum et al., (2007) argue that LIML provides no asymptotic efficiency gains over two-step GMM and IV. However, they point at the recent research suggesting that LIMIL's finite-sample performance may be superior. There is also evidence suggesting that LIML perform better than IV-GMM in the presence of weak instruments.

In the context of GMM, the overidentifying restrictions are tested via Hansen J statistic. It is the most common diagnostic used in GMM estimation to evaluate the suitability of the model. A rejection of the null hypothesis implies that the instruments are not satisfying the orthogonality conditions required; that is, they are not strictly exogenous. Other statistic

[22] Ivreg2 command in Stata; the Hansen J statistic of overidentifying restrictions and Anderson canonical correlation LR statistic for feasible efficient two-step GMM are automatically reported.

used to test model identification is the Anderson's (1984) likelihood ratio test, which evaluates the identification status of the estimated equation through the null hypothesis that canonical correlation is zero. If one or more of the canonical correlations is zero, the model is underidentified or unidentified. In the first-stage, a partial R-square and the Shea measure are reported to test correlation of instrumental variables with endogenous variable. Small values of partial R-square and the Shea measure indicate that the model may be unidentified (Baum et al., 2003; 2007)

3.3.4. Econometric equation

Building largely on Collier and Hoeffler (2004) and Elbadawi et al. (2008), the econometric equation takes the form:

$$y_{it} = \alpha + \beta_1 A_{it} + \beta_2 A^2{}_{it} + \beta_3 PeaceOnset_{it} + \beta_4 PostConf\,1_{it} + \beta_5 PostConf\,2_{it} + \beta_6 A_{it} * PeaceOnset_{it} + \beta_7 A_{it} * PostConf\,1_{it} + \beta_9 A_{it} * PostConf\,2_{it} + \beta_{10} CV_{it} + \mu_t + \eta_i + \varepsilon_{it}, (9)$$

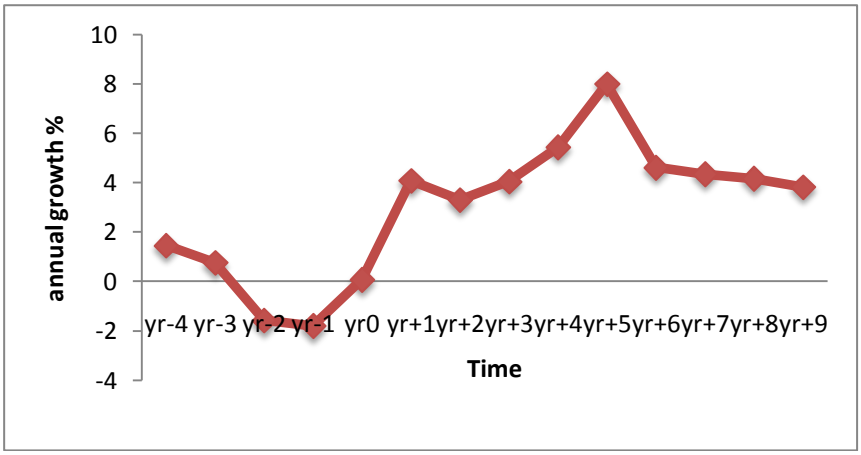
Y_{it} is dependent variable: average growth rate—first regression; infant mortality—second regression; and ICRGE index—third regression; A is Aid/GDP for the first and third regressions and Aid per capita for the second regression; $PeaceOnset_{it}$, $PostConf\,1_{it}$, and $\beta_5 PostConf\,2_{it}$ are post-conflict dummies; CV is a set of control variables; μ_t, η_i are time and country fixed effects.

To identify the control variables, I follow closely the existing literature on post-conflict aid and growth (e.g., Collier and Hoeffler, 2004; Elbadawi et al., 2008), on aid and social outcomes (e.g., Mishra and Newhouse, 2007), as well as aid and governance (e.g., Svensson, 1999; 2000). As explained in the previous chapter, the data are four-year panels for 75 developing countries covering the period 1970-2009; 40 of these countries experienced civil conflicts of high intensity and were war-free 10 years after the conflict ended.

3.4. Descriptive Statistics and Simple Paired Tests

Figure 4 shows that, on average, real GDP growth rebounds from negative rates in the pre-peace period to positive rates; growth peaks around the fourth and the fifth years in post-conflict. After this peak has been achieved, growth records a falling trend decelerating to around 3-4 percent.[23]

Figure 4. Per Capita GDP growth (average values, in percent)

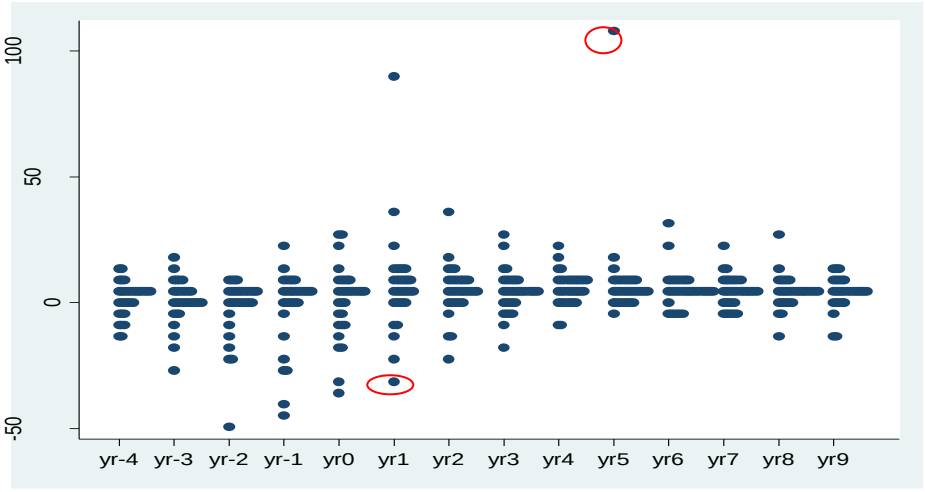


Source: Author's calculations; See Data Appendix

However, the evidence about growth performance across observations suggests that not all post-conflict countries experienced positive growth rates beyond the fourth and fifth years in post-conflict. The dotplot below shows that negative rates of growth have occurred in all post-conflict years and hence they do not exhibit a clear pattern during the first post-conflict decade. For example, the dotplot shows that growth rates in different years vary from -32.97% in the first post-conflict year, to 106% in the fifth year.

[23] The growth rates in the first post-conflict period are pulled up by Bosnia and Herzegovina: its rate of growth in the first post-conflict year exceeds 80 percent. Hence the growth averages are presented without Bosnia and Herzegovina.

Figure 5. Pre and post conflict GDP growth



Source: Author's calculations based on data described in text

A clear temporal pattern is also not supported by the event study of mean differences as presented in Table 8. The estimation results shows that we fail to reject the null that there are no changes in the rates of growth across pairs of periods in the conflict cycle. This is in line with the evidence provided by Davies (2008: 6), who argues that there is no obvious temporal pattern in post-conflict growth and suggests that 'high post-war growth cannot be taken for granted'.

Table 8: Differences in Variable means across pairs of periods before and after the conflict

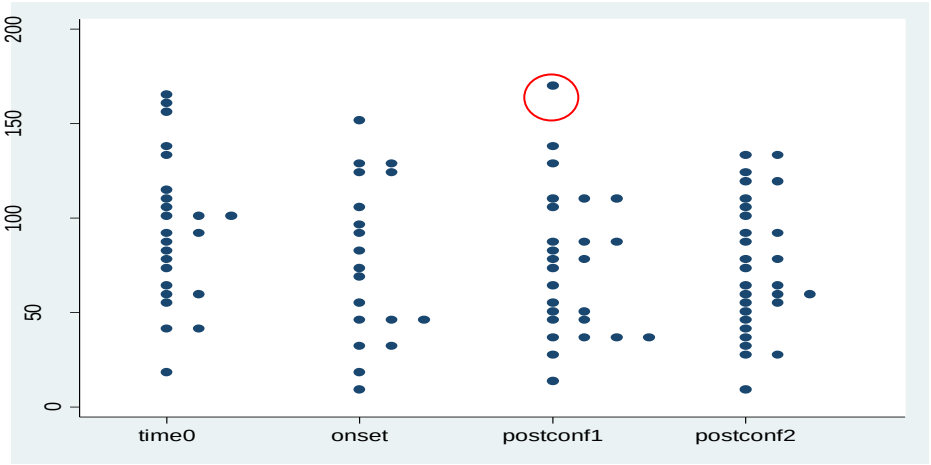
	Growth	Infant mortality
Peace onset=PrePeace	.2118103	-10.43***
	(0.1306)	(-3.9302)
No of countries	30	9
Postconf1=PeaceOnset	2.618184	-11.97***
	(0.979)	(-6.0715)
No of countries	33	10
Postconf2= Postconf1	-1.164285	-9.875***
	(1.1734)	(-5.0057)
No of countries	34	20

Source: Author's estimates; See Data Appendix.

Infant mortality rates show a slight downward trend during the conflict cycle; the rates are however still high during peace onset reaching as high as 188‰. The evidence from the

difference in means confirms the downwarding trend: the null hypothesis of no changes in infant mortality between the periods is rejected at 1 percent level.

Figure 6. Infant mortality rates before and after the conflict



Source: Author's calculations; See Data Appendix. Note: Liberia is in the circle

These results are instructive about the temporal patterns of variables but should however be taken with caution. To properly trace the associations between the variables of interest, the influence of other variables should be observed. Issues such as endogeneity and interaction terms should also be addressed (as discussed in the methodology part). The next section presents results from regressions run on a multivariate framework and addresses the abovementioned issues.

3.5. Regression Results

In what follows, the econometric results about the role of aid during the post-conflict recovery are discussed. The results are discussed in terms of growth performance and improvements made in infant mortality rates and good policies. In the end, the shortcomings of this analysis are addressed and suggestions for a future agenda are provided.

3.5.1. Aid and growth

The evidence shows that aid supports growth but with diminishing returns. The coefficients on aid and aid squared enter the regression with the expected signs in the five columns in Table 9 and are statistically significant when interaction terms are included (with the exception of the last column). The relationship between growth and aid reflects recipient countries' absorptive capacities where institutions and policies play an important role. This can be seen from the importance of the governance indicator (ICRGE), the coefficient of which is positive and significant at the 1 percent level.

Post-conflict dummies do not attain statistical significance, suggesting no clear temporal patterns of growth recovery; this is also exhibited through descriptive statistics on growth performance in post-conflict countries, as presented in the previous section. The results about the interaction of aid with post-conflict variables tell a different story from earlier contributions. Aid seems to have a negative growth effect during the peace onset period: the aid interaction term with peace onset dummy is negative and statistically significant. This result could be attributed to the composition of post-conflict aid during this period. During peace onset, aid is mainly disbursed for humanitarian relief to provide a minimum level of consumption, and as such it might not be associated with growth (see Appendix D for an illustration). This result supports claims that reconstruction and humanitarian aid have opposite effects on investments (Demekas et al., 2002), and hence there is need for a distinction between these two components in an aid-investment-growth

framework. Further, if aid in the peace onset is more effective in improving health outcomes (i.e., saving more lives), then this should have long-term effects for growth; but in the short run, this improvement could lead to a reduction of per capita income as the population size will be increasing.

Table 9. Dependent Variable: Average growth rate

Variables	**Post conflict recovery (IV-GMM robust SE)** **(1)**	**Interaction terms (IV-GMM robust SE)** **(2)**	**Interaction terms (IV-LIML bootstrapped SE)** **(3)**	**Interaction terms (IV-GMM robust SE)** **(4)**	**Interaction terms (IV-LIML Bootst. SE)** **(5)**
Aid/GDP	.1950	.7421	.9903	.6005	.5980
	(0.60)	(2.29)**	(1.99)**	(2.36)**	(1.37)
(Aid/GDP)squared	-.0039	-.0168	-.0227	-.0136	-.0132
	(-0.51)	(-2.04)**	(-1.65)	(-2.11)**	(-1.17)
Log(initial GDP per capita)	-.4259	1.013	1.714	.6835	.7714
	(-0.48)	(1.10)	(1.36)	(0.94)	(0.61)
Polity IV index	-.0173	-.0738	-.1181	-.0479	-.0495
	(-0.35)	(-1.69)	(-1.83)*	(-1.72)*	(-1.18)
Government Consumption	.0151	-.0983	-.1637	-.0617	-.0626
	(0.17)	(-1.43)	(-1.65)	(-1.38)	(-0.64)
ICRGE	.8768	.9245	.9074	.8682	.8071
	(5.49)***	(5.46)***	(3.14)***	(6.05)***	(4.68)***
Education	.9540	1.140	1.275	.9844	.8689
	(1.16)	(1.31)	(1.28)	(1.28)	(0.85)
Peace Onset	-.8585	1.344	1.001	1.394	1.492
	(-0.61)	(0.69)	(0.23)	(0.88)	(0.35)
Post-conflict1	.0712	-.2770	-.1530	-.3096	-.1934
	(0.07)	(-0.24)	(-0.07)	(-0.30)	(-0.05)
Post-conflict2	.9032	.8094	1.312	-.1339	.1340
	(0.91)	(0.72)	(0.34)	(-0.15)	(0.07)
Peace Onset*Aid/GDP		-.1941	-.1756	-.2010	-.2190
		(-1.83)*	(-0.24)	(-2.50)**	(-0.31)
Post-conflict1*Aid/GDP		.1197	.1437	.1054	.0860
		(1.21)	(0.19)	(1.43)	(0.02)
Post-conflict2*Aid/GDP		.1393	.0998	.1670	.1460
		(1.72)*	(0.04)	(2.72)**	(0.14)
Constant	-2.505	-14.81	-20.45	-11.37	-11.26
	(-0.31)	(-1.78)*	(-1.75)*	(-1.72)*	(-1.23)
No of observations	199	199	199	197	197
Anderson canon. corr. LR statistic p-value	0.0007	0.0006	0.0006	0.0011	0.0002
Hansen J statistic /Anderson Rubin Statistic p-value	0.0810	0.2930	0.3325	0.4147	0.1784
R – squared	.22	.15	.05	0.17	0.17
Partial R squared (excluded instruments)	.10	.10	.10	.10	.10

t-statistic in parentheses; *, **, and *** denote significance at 10%, 5%, and 1%.
Regressions include regional dummies. Excluded instruments for aid are colony dummies and recipients' relative sizes.
The estimates in Columns (4) and (5) are derived from the new sample without Azerbaijan and Liberia.

Source: Author's estimates; See Data Appendix.

The results on interaction terms between Aid and Post-conflict2 dummy provide some evidence about positive effects of aid in the second post-conflict period (6 –9 years). This evidence is rather fragile as the coefficient does not attain statistical significance in all specifications; the Hansen J test of overidentifying restrictions and the R-square are weak for different regressions. Moreover, findings about the time period when aid could have a larger positive growth impact are not in line with earlier contributions (Collier and Hoeffler, 2004; Elbadawi et al., 2008).

However, the results are consistent after checking for influential points and outliers. After plotting leverages against the squared residuals, two country-observations stand out: Azerbaijan and Liberia. After having them dropped from the sample, the signs of the coefficients do not change although some variables, such as Post-conflict2*Aid/GDP attain a larger explanatory power (columns 4 and 5). Also, new estimates provide larger p-values of Hansen J test implying that the instrument set satisfies better the orthogonality conditions.

3.5.2. Aid and infant mortality

The regression results presented in Table 10 suggest that aid on average has a positive effect on remedying physical miseries, such as infant mortality. This analysis finds a strongly significant effect of aid on infant mortality using total aid inflows. The coefficient on aid per capita is significant in four columns that use different specifications (with and without interaction terms), periods, and estimation procedures. In spite of existing controversies about the importance of aid as a tool for development, the evidence strongly supports the argument that aid increase is inversely related to infant mortality rate.

Following the immediate aftermath of the conflict, mortality rates remain high as shown by the Peace Onset dummy. This is in line with earlier findings (e.g., Chen et al., 2008) where infant mortality rates are expected to record a slightly increasing trend in the first years after the war and then start to drop off (see Appendix D). During the post-conflict period, aid

plays a positive role in lowering infant mortality rates as reflected by interaction effects between aid and period dummies; however the effect is significant at the 5 percent level during Post-conflict1 only. Hence, a peace dividend for health outcomes is achieved through higher aid per capita from 2nd to 5th years in post-conflict: 1 percent increase in aid leads to 0.12-0.15 percent decrease in infant mortality rate (columns 2-6). The results are robust in terms of changes in estimation procedures, GMM and LIML. Also, when I focus the analysis on the entire post-conflict period, the results remain unchanged and aid is significantly important in lowering high rates of infant mortality throughout this period (column 4).

Control variables for infant mortality exhibit the expected signs and are strongly significant in all the columns (with exception of access to water): higher income per capita, and better access to sanitation lead to lower rates of infant mortality whereas higher fertility rates are associated with higher rates of infant mortality. The presence of peacekeeping operations does not demonstrate a positive effect in improving social indicators. This result should be taken with caution as the sign of the dummy variable for the presence of peacekeeping troops can go either way and depends on countries' characteristics and the type of the deployed missions. In other words, the circumstances in conflict countries differ: they might be less or more hostile and might have different economic and social capacities. Hence, a dichotomous variable denoting the mere presence of peacekeeping troops conceals heterogeneities in the type of deployed missions and the severity of environments and could not provide enough information about their effectiveness.

Table 10. Dependent Variable: Log of Infant Mortality Rate

Variables	Post conflict recovery (IV-GMM robust SE) (1)	Interaction terms (IV-GMM robust SE) (2)	Interaction terms (IV-LIML Bootst. SE) (3)	Interaction terms (IV-GMM robust SE) (4)	Interaction terms (IV-GMM robust SE) (5)	Interaction terms (IV-LIML Bootst. SE) (6)
Log of aid per capita	-.0840 (-3.18)***	-.0645 (-2.13)**	-.0764 (-2.15)**	-.0659 (-2.15)**	-.0815 (-3.05)***	-.0878 (-3.13)***
Log(initial GDP per capita)	-.2437 (-5.55)***	-.2437 (-5.56)***	-.2716 (-5.27)***	-.2580 (-5.98)***	-.2505 (-6.61)***	-.2573 (-6.55)***
Log Fertility	.6878 (7.27)***	.6814 (7.26)***	.7030 (6.45)***	.6732 (7.22)***	.6621 (7.95)***	.6685 (7.30)***
Log of Access to clean Water (%)	-.0076 (-0.05)	-.0018 (-0.01)	.0355 (0.28)	-.2217 (-0.16)	-.0203 (-0.15)	-.0136 (-.0136)
Log of Access to Sanitation (%)	-.1518 (-2.50)***	-.1408 (-2.29)**	-.1009 (-1.71)*	-.1248 (-2.04)**	-.2478 (-4.21)***	-.2402 (-3.92)***
Peacekeeping Operations	.2036 (2.41)**	.2288 (2.59)**	.2103 (2.66)**	.1920 (2.41)**	.2002 (2.95)***	.2030 (2.44)**
Post-conflict				.3941 (2.30)**		
Peace Onset	.1857 (2.26)**	.8175 (2.27)**	.7538 (2.01)**		.9057 (2.93)**	.8905 (2.36)**
Post-conflict1	.0179 (0.19)	.5504 (2.01)**	.4382 (1.56)		.6237 (3.13)***	.5990 (2.63)**
Post-conflict2	-.0500 (-0.61)	.1602 (0.82)	.1239 (0.48)		.2718 (1.84)*	.2516 (1.78)*
Post-conflict* Log of aid per capita				-.1005 (-2.09)**		
Peace Onset* Log of aid per capita		-1782 (-1.78)*	-.1628 (-1.45)		-.1862 (-2.14)***	-.1829 (-1.73)*
Post-conflict1* Log of aid per capita		-.1544 (-2.18)**	-.1228 (-1.72)*		-.1528 (-3.00)***	-.1460 (-2.45)**
Post-conflict2* Log of aid per capita		-.0644 (-1.10)	-.0513 (-0.67)		-.0763 (-1.66)*	-.0690 (-1.73)*
Constant	5.571 (9.35)***	5.435 (8.93)***	5.340 (8.46)***	5.592 (9.49)***	6.050 (11.42)***	6.060 (10.09)***
No. of observations	234	234	234	234	224	224
Anderson canon. corr. LR statistic p-value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hansen J statistic/ Anderson Rubin Statistic p-value	0.1415	0.1111	0.0745	0.1703	0.6615	0.6602
Centered R squared	.75	.76	.76	.75	.81	.80
Partial R squared	.49	.44	.43	.43	.48	.48

t-statistic in parentheses; *, **, and *** denote significance at 10%, 5%, and 1%.
Regressions include regional dummies. Excluded instruments for aid are colony dummies (French and British colonies) and recipients' relative sizes (population size). (5) and (6) samples without Ethiopia, Eritrea and Trindiad&Tobago
Source: Author's estimates; see Data Appendix.

The Hansen J statistic suggests that the test of overidentifying restrictions cannot reject its null hypothesis, whereas in the LIML estimates, the Anderson Rubin test of overidentifying restrictions is on the borderline of rejecting its null hypothesis (at the 10% level). The latter does not give a complete confidence about the appropriateness of the instrument set.

To test for the robustness of the results, I omit those countries that have high leverage points and high squared-residuals and then re-run the regressions on a new sample. As shown in Appendix E some country observations exert a strong leverage but their residuals are small (e.g., Eritrea). The new estimates (columns 5 and 6) are more robust and the tests of overidentifying restrictions are far from rejecting the null, providing stronger confidence about the instrument set. Also, partial R square is high and Anderson's likelihood ratio test rejects the null hypothesis of no canonical correlation between the excluded instruments and endogenous regressors. The results are more efficient with unchanged signs on the coefficients; access to water enters with the right sign, but remains insignificant. This evidence provides confidence about the robustness of the results and the significantly strong effect of aid in reducing infant mortality rates.

3.5.3. Aid and the Quality of Governance

The regression results indicate that aid is detrimental to good governance in developing countries in general. This seems to support claims that aid promotes rent-seeking activities in recipient countries. Also, aid allocated for geostrategical interests strengthens dictatorships in developing countries and consequently has worsened the quality of governance.

The results depict a different picture for countries recovering from conflict. The coefficients on aid and post-conflict dummies are positively significant for the peace onset period. For the second post-conflict period, the coefficient in column 3 is significant at the 5 percent level whereas it is close to a statistically significant domain in the second column.

Among the control variables, growth, infant mortality, and democracy exhibit the expected positive effects on good governance. An interesting result is high explanatory power for the presence of peacekeeping troops as expressed by large and highly significant coefficients. This result suggests that the presence of peacekeeping troops creates conducive environments for reform and sound policies in countries recovering from conflict.

In the second column, which is the preferred equation, I run the regressions without the democracy variable in order to account for potential presence of collinearity with the governance index. Among the set of regional dummies, I omit the European dummy that appears to be insignificant in the first regression; consequently, the p-value of the Hansen test of overidentifying restrictions is larger.

Table 11. Dependent variable: ICRGE index

Variables	Interaction terms (IV-GMM robust SE)	Without polity	Interaction terms (IV-LIML bootstrapped SE)
Aid/GDP	-.0975 (-2.78)**	-.1264 (-3.22)***	-.1339 (-3.58)***
Log(initial GDP per capita)	-.0534 (-0.27)	-.0418 (-0.21)	-.0112 (-0.06)
Growth	.1231*** (5.52)	.0941 (4.08)***	.0925 (3.74)***
Log of Infant Mortality Rate	-1.117 (-5.10)***	-1.115 (-4.73)***	-1.071 (-4.63)***
Polity IV Index	.0443 (3.32)***		.0478 (3.16)***
Peacekeeping Operations	1.915 (3.38)***	1.376 (2.30)**	1.669 (3.85)***
Peace Onset	-1.592 (-4.46)***	-2.058 (-5.18)***	-1.511 (-3.07)***
Post-conflict1	-1.099 (-2.43)***	-.9562 (-2.12)**	-1.055 (-2.06)**
Post-conflict2	-.8861 (-1.85)*	-1.140 (-2.31)**	-.9362 (-1.98)*
Peace Onset*Aid/GDP	.1019 (3.07)***	.1317 (3.85)***	.1159 (2.93)**
Post-conflict1*Aid/GDP	.0121 (0.21)	.0592 (1.37)	.0748 (2.02)**
Post-conflict2*Aid/GDP	.0543 (1.49)	.0317 (0.46)	.0344 (0.70)
Constant	9.445 (4.40)***	9.571 (4.23)***	9.116 (3.92)***
No. of observations	303	319	303
Anderson canon. corr. LR statistic p-value	0.0000	0.0000	0.0000
Hansen J statistic p-value/Anderson Rubin Statistic p-value	0.0256	0.4399	0.0242
Centered R square	.25	.10	.19
Partial R square (on excluded instruments)	.13	.11	.12

t-statistic in parentheses; *, **, and *** denote significance at 10%, 5%, and 1%.
Regressions include regional dummies. Excluded instruments for aid are colony dummies and recipients' relative sizes.
Source: Author's estimates; see Appendix A.

3. 6. Conclusion and Caveats

This chapter examined the impact of post-conflict aid on growth, infant mortality, and ICRGE index. It was particularly interested on the relationship between aid and infant mortality rates, due to its importance for the socio-economic conditions of the poor. The econometric analysis was based on a sample of 40 post-conflict countries that are war–free for at least 10 years following civil conflicts between 1970-2009.

The evidence suggests that post-conflict aid supports higher growth attainment in the second post-conflict period, although the evidence about aid and growth in post-conflict environments is not robust and the pattern of recovery is not in line with earlier contributions (e.g., Collier and Hoeffler, 2004). The statistically positive effect of aid on growth for the whole sample of developing countries supports claims that aid helps developing countries finance their investment and increase productive capacities.

Post-conflict dummies do not attain statistical significance, showing no clear temporal patterns of growth recovery; this is suggested also through descriptive statistics on growth performance in post-conflict countries. Hence, conclusions about the proper sequencing of aid flows must be drawn with caution since growth effects of interactions between aid and the three post-conflict dummy variables could go either way, depending on the country-local capacities (Elbadawi et al., 2008).

The most robust results suggest that aid appears to be more effective in improving social indicators like the infant mortality rate, which is a flash indicator of human development. Aid that is effective in improving social indicators can have favorable long-term effects on economic growth. However, it takes time for the improved health indicators to translate into economic growth. Yet this is an encouraging finding about aid's impact '…as whatever the impact on economic growth rates, aid definitely does something far more important: it saves lives' (Mishra and Newhouse, 2007; citing Kristof, 2006). Aid also

supports the adoption of sound policies and this effect is significantly correlated with countries with peacekeeping missions. This provides some insights into the right mix and time sequencing between aid and peacekeeping troops in post-conflict settings.

One important caveat to be addressed in this analysis is the lack of comprehensive datasets on decomposed aid inflows. Use of sectoral aid data could provide clearer patterns about the effects (the signs) of humanitarian and reconstruction aid components on post-conflict recovery. The OECD database provides sectoral data on ODA commitments available from the Creditor Reporting System (CRS), but it does not provide data on aid disbursements before 1990, which means that researchers who adopt this approach must resort on aid commitments. However, aid commitments may not be fully disbursed and consequently the figures on actual aid flows tend to be overstated. These problems with data are even more exacerbated in the case of conflict countries. In addition, in some cases, sector-specific commitments are unreported and aid totals in the CRS are less than those in the DAC (Mishra and Newhouse 2007, Dreher et al., 2008). A way to address the heterogeneity in recovery patterns would be through case study analysis where sectoral aid data are available; and this is done in Chapter 4.

Another issue is related to the estimates of the effects of UN peacekeeping missions, whereby a selection on observables might be a possible source of bias. However, Sambanis (2008) argues that UN missions, in general are assigned to more difficult cases with deeper hostilities and lower local capacities; he suggests that the model should use interactions between peacekeeping missions and other covariates and be estimated by matching on the propensity score and on covariates.

Lastly, a future research agenda would be to augment new models of aid effectiveness literature in post-conflict contexts. The study on aid-growth nexus, framed in terms of Rubin Casual Model (Arndt et al., 2009), provides a strong motivation to expand the existing

framework by including post-conflict variables and hence testing the robustness of the results under the counterfactual framework. However, a small sample of post-conflict countries and gaps in the data leave the researcher with a very small number of observations, after the matching between the treatment and control groups has taken place. This is an inherent problem in small samples, whereby trade-offs between efficiency and bias prevail; this entails challenges in finding plausible matching algorithms among the group of propensity score matching estimators.

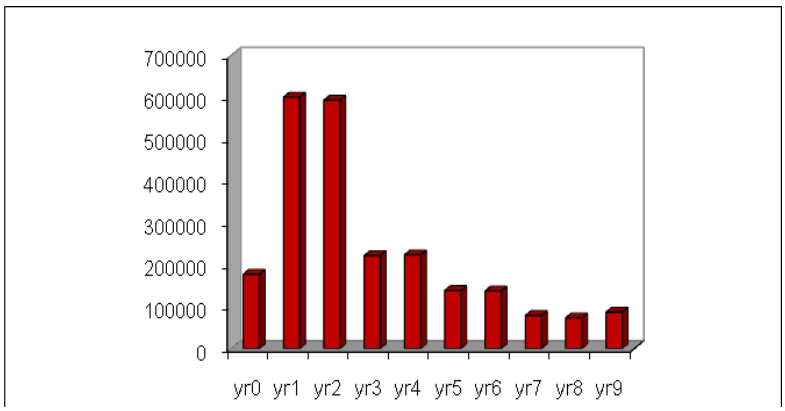
These caveats notwithstanding, the evidence provides strong support for the view that aid offsets negative effects of conflict on social outcomes, such as infant mortality. Hence, growth is important, yet not the ultimate goal of post-conflict aid, as it appears to be more effective in saving lives. These findings suggest the importance of generous aid flows during the early years after the conflict, since better absorptive capacity of aid in later periods may not be attained if countries fail to reconstruct their social capital (Addison, 2004). Consequently, the time-sequencing of aid should be governed by multiple goals, if it is to attain an immediate peace dividend. The role of foreign aid in terms of three sets of objectives: peace security, reconstruction, and institution building in post-conflict Kosovo is the focus of the next chapter.

4. POST-CONFLICT AID IN KOSOVO (1999-2008)

4.1. Introduction

Post-conflict Kosovo is an example of massive aid infusion combined with heavy international involvement in state building and policy design. During the first post-conflict decade, donor community spent 2.3 billion euro for the reconstruction and development of Kosovo, with more than 50 percent, or 300 euro per capita allocated in the first two years (Figure 7). At the same time, another 1.1 billion was spent by the UN Civil Administration and the NATO troops, making the international state building efforts in Kosovo as one of the most comprehensive projects, in terms of the money spent and the military troops involved. Two former peace builders in Kosovo estimate that 'per head, the international community has spent 25 times more money and committed 50 times as many troops to Kosovo as it has to its intervention in Afghanistan' (King and Mason, 2006).

Figure 7. Annual aid flows 1999-2008



Source: RIMS database, 2010. Note: spent amounts are in million euros.

Transition from war to peace in Kosovo was peculiar in many aspects. As Kosovo was not a sovereign state, the reconstruction process was designed and led by the UN—a new practice in international peace building, where a peacekeeping mission performs civil administration functions. As a result, the reconstruction process involved an array of challenges that could be specific to Kosovo case in the areas like fiscal and monetary policies, as well as external finance. The unresolved status raised issues of legitimacy and property rights which created uncertainties in the privatization process, with negative effects on investment and growth (del Castillo, 2008). In addition, Kosovo's economy is atypical in the regional context with its post-socialist and post-conflict characteristics and historically has been the poorest part of the region. The legacies of pre-conflict period have had a strong impact on choices of the international community on how to design and pursue a successful post-conflict recovery process.

As shown by Figure 7, in the first two post-conflict years, foreign assistance in Kosovo reached very high levels in per capita terms, but declined drastically thereafter. Within these two years, Kosovo recorded double digit growth rates, falling down to moderate rates of 3-4 percent per annum (Table 12). Kosovo is a case where aid has played an important role in boosting growth in the post-conflict period and the challenges of aid dependency (and heavy reliance on remittances) remain even one decade after conflict.

The abovementioned characteristics make Kosovo an insightful case to be examined in order to see the role of aid during the process of post-conflict recovery. Furthermore, in the context of dissertation work, this chapter sharpens understanding of the issues related to post-conflict aid and its effectiveness in a particular post-conflict environment, which attracted large amount of aid inflows and experienced a distinctive nature of post-conflict reconstruction and state building process.

Specifically, the amount and pattern of aid inflows in post-conflict Kosovo seem to be in line with the results from the cross-country analysis on the relationship between aid allocation and donor interests. The European Union (EU) and the United States (US) are the largest donors in post-conflict Kosovo and seemed to have shown a particular interest during and after the Kosovo conflict. Kosovo belonged to the list of countries that had affected US security indirectly, through media attention. Nye (1999) argues that countries belonging to this list (including Haiti, Somalia, and Bosnia) seemed to have affected public opinion through striking portrayals of human sufferings. In this way, the US interests in former Yugoslavia, including Kosovo, presented a mix of humanitarian and strategic concerns of European allies and NATO.

Large scale financial and technical assistance to Kosovo can be related to its geographic position—being in Europe—as confirmed in 2008, at the post-independence Donor Conference for Kosovo. In the venue of this event, the Enlargement Commissioner Olli Rehn called upon the donors to contribute generously to Kosovo's socio and economic development by stating clearly that 'Kosovo is a profoundly European matter' and that economic prosperity in Kosovo will help secure stability in the Western Balkans.[24]

Although lack of time series data renders it difficult to conduct a rigorous econometric analysis, the datasets on donor activities in Kosovo allow for disaggregation of the data by sector/year and hence make inferences on aid's role in terms of three sets of objectives, peace, participation, and prosperity. The strength of using this approach is the possibility to examine some important aspects of post-conflict aid in terms of non-growth objectives such as peace security, democratization, and institution building. This emphasizes the 'multiplicity of overarching goals' where growth is an important but, not the sole objective (Addison and Brück, 2009: 15). In light of this discussion, Kosovo case can therefore provide deeper

[24] http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/913&type=HTML (accessed on June 10, 2010).

insights into time sequencing and sectoral composition of aid; thus, complementing Chapters 2 and 3 that are based on cross-country analysis.

The importance of a detailed study on the role of post-conflict aid in Kosovo is underlined by the increasing dissatisfaction of academics and practitioners with international involvement into peace building and reconstruction process. Hence, this study is also timely: in spite of huge investments made, many analysts and practitioners see Kosovo case as a failure in terms of a prosperous and multi-ethnic society (King and Mason, 2006). Since post-conflict Kosovo is a typical recipient of massive aid amounts and the site of heavy international involvement in state building, the lessons learnt from this case would be relevant for future peace recovery and post-conflict reconstruction efforts.

4.2. Background

Kosovo has historically been the poorest province of former Yugoslavia. The economic activity was dominated by heavy industries, notably in the mining sector, production of raw materials, and semi-finalized products. Less developed regions of Yugoslavia exported mainly cheap raw materials, energy and labor to the more developed northern republics, which exported more expensive manufacturing products (Dallago and Uvalic, 1998); these sectors were characterized with low productivity and unfavorable terms of trade. Yugoslav investments in Kosovo in heavy industries were intended to accommodate increased needs for cheaper inputs from other parts of the country: Kosovo exported some two thirds of its energy production to other regions of Yugoslavia, mainly at artificially set lower prices, whereas most of the Kosovo mineral wealth was exported (Marengelen, 2000). The gap between economic output of Kosovo and more developed regions increased over time; for example,

the differences with Slovenia increased from 5:1 in 1955 to 8:1 in 1989 (Dallago and Uvalic, 1998).[25]

During the Milosević regime (in the 1990s), Kosovo experienced a decade of drastic decline in economic activities due to the poor economic policies, disinvestment, and halting of the technological progress. During 1989-1995 the national product almost halved (47.5 percent) falling to less than $500 per capita; around 150,000 K-Albanian employees were expelled from their jobs in public and Government sector, whereas industries operated with low capacities. Consequently, people started to migrate abroad or work in a private sector, performing mainly activities different from what they were educated for, which lead to depletion of human capital. Declining economic activity—mostly in industries—resulted in rapid fall of exports and the collapse of trade relations with foreign partners (Riinvest, 1998).

After a decade of repression by the Serbian police, political segregation, and growing ethnic tensions between K-Serbs and K-Albanians the situation escalated into an armed conflict. The conflict in 1998-99, between the Yugoslav Army and the Kosovo Liberation Army (KLA) and the following NATO air campaign brought an end to the control of Serbian regime over the Kosovo territory. The war caused massive destruction of productive capacities and physical infrastructure; about 13,000 people were killed during the war; about a million K-Albanians fled to neighboring countries, and 500,000 people were internally displaced; after the hostilities were over, about 100,000 K-Serbs fled Kosovo in fear of retaliation (UNHCR, 1999).[26] In June 1999, Kosovo economy was wrecked by war damages, a decade of poor economic policies, investment backlog, and the collapse of trade and financial relations.

Immediately after the end of NATO bombing in June 1999, a UN mission was deployed in Kosovo with the mandate to 'provide transitional administration while

[25] Kosovo, Macedonia, Bosnia and Herzegovina, and Montenegro were the less developed regions of Yugoslavia whereas Slovenia, Croatia, Central Serbia and Vojvodina belonged to the most developed regions.
[26] http://www.unhcr.org/refworld/pdfid/3c2b204a0.pdf (accessed on April 25, 2011).

establishing and overseeing the development of provisional democratic self-governing institutions to ensure conditions for a peaceful and normal life for all inhabitants of Kosovo' (UNSC 1244, 1999: 3).[27] The international civil presence in Kosovo was organized in four pillars: Pillar I – Police and Justice; Pillar II – UN lead civil administration, Pillar III – OSCE for institution building and democratization; and Pillar IV – EU led reconstruction and development process.

Initially, the United Nations Mission Interim in Kosovo (UNMIK) was focused on establishing a secure environment so that all refugees and internally displaced persons would be able to safely return to their homes. Another priority was the development of the institutional infrastructure through Kosovar Provisional Institutions of Self-Government (PISG). Huge amounts of aid were channeled toward supporting reconstruction and rehabilitation of the housing stock and provision of essential food and clothing to population. Gradually, donor community increased funding for supporting economic development. Starting from a very low base and supported by huge aid inflows and remittances, Kosovo managed to record impressive growth rates in the first years after the conflict. As foreign assistance started to fall, the economy experienced moderate rates of growth at an average rate of 4 percent per annum (see Table 12).

In the first five years of its mandate, UNMIK was relatively successful in building domestic institutional capacities for self-governance. The Central Banking Authority (later Central Bank of Kosovo), with competencies in overseeing the payment system and monitoring the banking system, was established; departments (later ministries) for provisional self-government were created; free elections were held; country dollarized (official adoption of Deutsche Mark as a legal tender in 1999, followed by Euro); and with donors' support, a new fully funded pension scheme was put in place. As agreed, Kosovo Liberation Army

[27] http://www.unmikonline.org/misc/N9917289.pdf (accessed on July 18, 2010).

(KLA) fighters were demilitarized and integrated into the KPC (Kosovo Protection Corps), an unarmed body with competencies in providing disaster response services; demining; providing humanitarian assistance in remote areas and contributing to rebuilding infrastructure.

UNMIK administration and PISGs focused in developing a market economy and hence adopting liberal trade policies. The private entrepreneurial spirit of K-Albanians, which was developed in former Yugoslavia due to discriminatory employment policies, enabled a rapid development of small businesses in the first post-conflict years. Fiscal policies have arguably supported this process, as personal and corporate income taxes were continually decreased to marginal rates of 10 percent. At the same time, KTA (Kosovo Trust Agency) was established; an UNMIK supervised agency, in charge of implementing the privatization of socially owned enterprises and restructuring state owned companies. KTA was later transformed into the KPA (Kosovo Privatization Agency) and handed over to Kosovar institutions; it is one of the most criticized institutions, mainly for mismanagement and possible corruptive cases.

Establishing a sound and sustainable tax system was one of the major challenges in post-war Kosovo. The tax administration had to be build from zero; a completely new tax legislation was to be drafted and implemented; and tax payers had to be educated. However, within only few years, the country managed to cover all of its budget expenditures through its own tax revenues. This success was mainly attributed to the heavy reliance on taxes on international trade as about two-third of tax revenues were collected from imported goods and services. On the expenditure side, Kosovo recorded budget surpluses for several years in a row (see Table 12). This paradoxical development, which came as an outcome of the adopted (i.e., imposed) annual balanced budget philosophy and its division into the PISG and UNMIK

components, represented one the weakest aspects of the post-conflict developments in the public sector. Yet, the situation has not improved after the declaration of independence.

Table 12: Kosovo Macroeconomic Indicators

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Nominal GDP (in million euros IMF, 2004)	---	1,848	2,240	2,797	2,884	2,977	3,099	3,464	3,724	3,792
GDP per capita		989	1,179	1,447	1,467	1,438	1,475	1,629	1,722	1,724
Real growth rates %		21.2	1.2	3.1	3.2	2.0	3.9	5.0	5.4	3.8
Donors' direct contribution to GDP	274	376	314	254	221	179	171	170	185	187
Donor contribution to GDP (in % of GDP)	--	20.3	14.0	9.1	7.6	6.0	5.5	5.0	5.0	5.0
Budget revenues		321.3	499.6	589.7	601.3	638.4	712.6	903.0	942.5	1,146.7
Border taxes		*243.4*	*364.5*	*424.9*	*430.0*	*426.1*	*456.4*	*531.6*	*604.2*	*634.0*
Budget Expenditure		239.5	401.6	542.6	748.5	696.1	635.5	661.2	950.5	1,232.4
Budget Balance		81.8	98	47.1	-147.2	-57.7	77.1	241.8	-8	-85.7
Exports		10.56	27.59	35.62	56.56	56.28	110.77	165.11	198.46	165.3
Imports		684.5	854.7	973.2	1,063.3	1,157.4	1,305.8	1,576.1	1,928.2	1,935.5
Trade Balance		-673.9	-827.1	-937.6	-1,006.7	-1,101.2	-1,195.1	-1,411.	-1,729.7	-1,770.2
Worker's Remittances		217	241	241	244	274	359	431	438	439
Population		1,868	1,900	1,932	1,965	2,070	2,100	2,126	2,162	2,199

Sources: IMF Staff Mission to Kosovo, July 14 – 25 (2005); IMF Mission Concluding Statement (2009)[28]; WB (2004); SOK (2010)
Note: GDP figures presented in this table are based on IMF Authorities' calculations after their revisions made in 2009; I have recalculated GDP figures for 2001-2003, in light of the IMF revisions.

The declaration of independence in February 2008 was coordinated with relevant international stakeholders and came as an outcome of long UN-led negotiations with Serbia. Soon after the independence, Kosovo became a full member of the two important international institutions, the World Bank (WB) and the International Monetary Fund (IMF). KPC were advanced to a Security Force (KSF) and many of the remained UNMIK competencies were transferred to the Kosovar government. This transfer of competencies was seen as an important event as UNMIK was growing inept in promoting economic development and attracting foreign investors in Kosovo. However, due to the supervised

[28] http://www.imf.org/external/np/ms/2009/091609.htm

nature of the independence, the international influence in decision-making remains, although this time under the EU umbrella. The International Civilian Office (ICO) is in charge of monitoring the independence and EU Mission called EULEX maintains broad competences in the area of security, justice, and customs. Negotiations with Serbia on the final status led also to the creation of new municipalities with Serb majority; however the implementation of the decentralization process was only partially possible due to the resistance of Serb minority (in some municipalities) to recognize the independence.

Notwithstanding all these achievements, Kosovo still faces very high unemployment rates in international comparisons, at 48 percent (ESK, 2009). Kosovar companies face massive obstacles to penetrate in the regional and international markets, largely due to non-tariff barriers and political blockade from Serbia and Bosnia and Herzegovina. Consequently, Kosovo post-conflict trade deficit has been high and persisting. As seen from Table 12, Kosovo is heavily dependent on imports (imports constitute around 50 per cent of GDP) and the trends indicate that in a short-run no major changes are to be expected. During 2002-2008, scrap metal and mineral products comprised, on average, about 60 per cent of total exports.

Poverty rates are still the highest in Europe, with some 45% of the population living below the poverty threshold as defined by the World Bank (WB, 2007). Human Development Index (HDI) ranks Kosovo in the lowest end of the neighboring countries (Figure 1 in Appendix I). Budgetary spending on education and health is relatively low whereas investments in physical infrastructure seem to be on the forefront of government agenda.

4.3. Methodology and Data

In this chapter, I examine sectoral composition and geographic distribution of aid in relation to Kosovo's needs. This methodology involves a description of annual aid flows and patterns by year and region (when distinguished) and then assesses the impact of post-conflict aid on promoting economic development and poverty reduction. Through this approach, I distinguish

between humanitarian and reconstruction aid and first, I analyze the role played by donors in providing emergency relief and ensuring peace security (e.g., demobilization and reintegration of former combatants) and then I examine aid inflows related to the rehabilitation and reconstruction process.

The reconstruction aid is not merely about rehabilitation of physical infrastructure; hence I examine other areas of intervention such as institution building and democratic governance. Finally, the impact of aid on poverty alleviation will be inferred through final outcomes in education, health, infrastructure, etc., by looking at the delivery of the services to the targeted groups and improvements in the coverage and quality of these services. Thus, through sectoral analysis I look at the role of aid in relation to the three sets of objectives: peace and security, institution building and democratization, and economic prosperity.

This approach follows partially previous studies that examine aid impact in a particular country. For example, in a case study on the role of aid on poverty reduction in Papua New Guinea, Feeny (2003) examines allocation of aid among three components: promotion of economic growth, direct targeting of the poor, and the provision of safety nets and direct transfers. In the same vein, Arndt et al. (2006) look at the delivery of health and education services to the targeted groups and improvements in the quality of these services and make inferences about aid's impact in Mozambique.

In the second part, I examine macroeconomic indicators such as GDP growth, consumption, investment and the role of foreign aid since 1999. IMF Authorities (Moalla-Fetini et al., 2004) use a theoretical framework through which they calculate the impact of the presence of expatriates in Kosovo (UN staff, police, and KFOR soldiers), whereby consumption of Kosovar goods and services by them is seen as a virtual export market. A rigorous econometric estimation of the relationship between foreign aid, and other macroeconomic indicators cannot be carried out due to the insufficient variation in the data as

a result of the too short time span (2000-2008). One possibility would be to add pre-conflict time series data, which are not available for Kosovo. The other possibility would be to use municipalities as units of analysis and construct a ten year-panel dataset but most of the donor projects are ascribed to the category 'different regions', which makes it impossible to construct a panel dataset. Thus, the backbone in assessing aid effectiveness would be the sectoral analysis, through which aid inflows are disaggregated into different sectors of economy.

To conduct the research, I use data from both primary and secondary sources. The primary source for sectoral analysis is the Reconstruction Intervention Monitoring System (RIMS) database, which has been created by the Ministry of Finance and Economy (MFE) in 1999 and covers donor activities in post-conflict Kosovo. The data are obtained from a standard questionnaire filled by bilateral and multilateral donors operating in Kosovo. The questionnaire asks for information about the amount of assistance committed, contracted, and spent, as allocated by sector/program description and their geographic concentrations (MFE, 2005). The collected data on donor activities are disaggregated by intervention type of aid (e.g., capital investments, technical assistance), by year, donor, municipality, and sector. For this study, I use amounts that have been spent during the first post-conflict decade (1999-2008). Within the macroeconomic analysis, I use other data sources on different economic sectors and macroeconomic indicators from the WB, IMF, Statistical Office of Kosovo (SOK),[29] UNMIK, and UNDP.

4.4. Sectoral Analysis

By the end of the conflict in June 1999, Kosovo economy had collapsed. Thousands of houses were damaged and destroyed by the Yugoslav Army. One month after the conflict ended, the International Management Group (IMG), funded by the European Commission (EC),

[29] In Albanian: Enti i Statistikave te Kosoves (ESK).

conducted a rapid assessment of the housing situation in Kosovo and found that around 120,000 houses (out of 250,000 housing stock) were destroyed and damaged during the war; around 70,000 houses were severely damaged and needed urgent reconstruction (category 3 and 4). UN Agencies reported that within a month, most of the refugees have returned home and needed food and shelters before the onset of the winter. The landscape posed a threat to the returnees due to landmines and unexploded ordnance (UXO); only in the first month after the refugees began to return, mine and UXO caused up to 170 casualties (UNHCR, 1999). Power stations and bridges were hit hard and damaged by NATO bombs during its 78-days campaign.

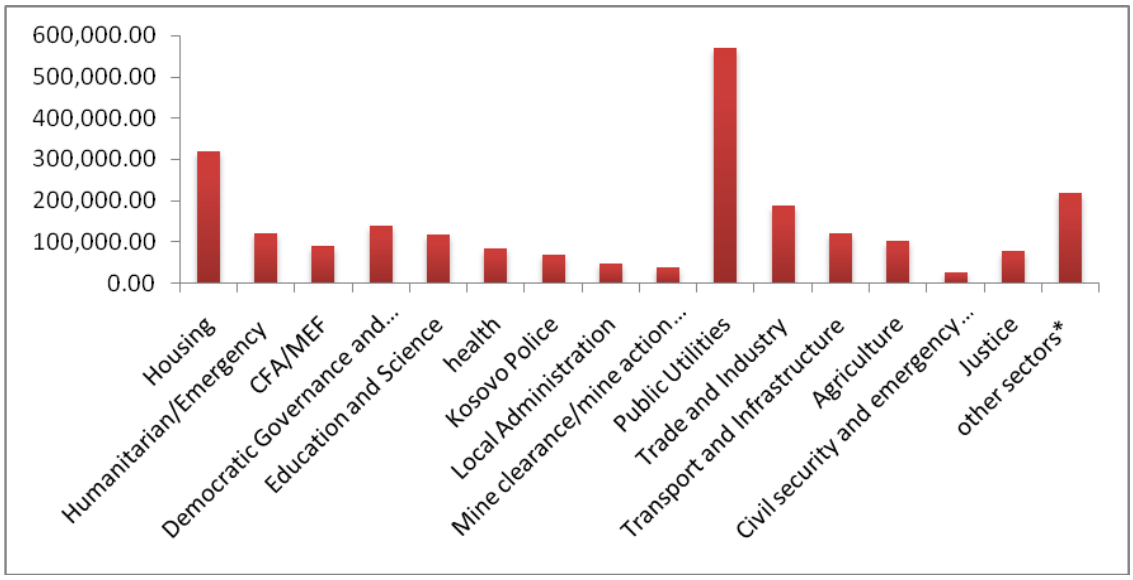
Aid agencies identified the emergent needs of Kosovo for food, clothing, medicines, shelter and de-mining to ensure a safe return and reintegration of people into their communities. There was an immediate need for the reconstruction process to start. To this end, UN Agencies appealed for the Kosovo emergent needs in the Donors' Conference that was organized in Brussels on July 28 (1999), by the EC and the WB. Donor pledges made at the Conference reached around 2 billion euro including funding already disbursed during the first half of 1999; US and EC were the largest contributors (see Table in Appendix F). The EU established the European Agency for Reconstruction (EAR) to help Kosovo with the rehabilitation and reconstruction process. Creation of EAR was seen as an attempt to improve aid allocation to Kosovo after having drawn lesson from Bosnia and Herzegovina: an EU office on the ground was expected to shorten the time to distribute money from the headquarters in Brussels and it would also play a coordinating role in Kosovo (Kosovar Stability Initiative, 2007).

The cumulative portfolio spent by the donor community in Kosovo during the first post-conflict decade amounts to 2.34 billion euro. Public Utilities and the Housing sectors are the largest absorbers of foreign assistance with 890 million euro, which makes up around 40

percent of total aid. This reflects specific circumstances in Kosovo caused by the war damages in the housing stock. At the same time, little aid has been disbursed for health, education, and agriculture (Figure 8).

The pattern of annual aid flows and their composition mirror the unique characteristics of post-conflict aid. As discussed, foreign assistance in Kosovo reached very high levels in per capita terms in 2000 and 2001, but then typically declined. Humanitarian and reconstruction components evolved in different amounts and directions: as humanitarian emergencies were met, humanitarian aid fell drastically whereas aid for reconstruction and development takes in the largest portion of external funding. Except for the physical infrastructure, a significant part of this funding was spent on institution building efforts (tax administration, local administration), as well as strengthening of the democratic governance and judiciary (see Appendix G).

Figure 8: Sectoral distribution of aid in Kosovo (Spent 1999-2008)



Source: RIMS database, 2010. Note: spent amounts are in million euros.
* inlcuding sectors with less than 1 percent of total aid (e.g, culture, youth, environment, minority rights)

The next section presents the analysis of the pattern of annual aid inflows by year, amount, main donors, and geographic distribution. The analysis is followed with an

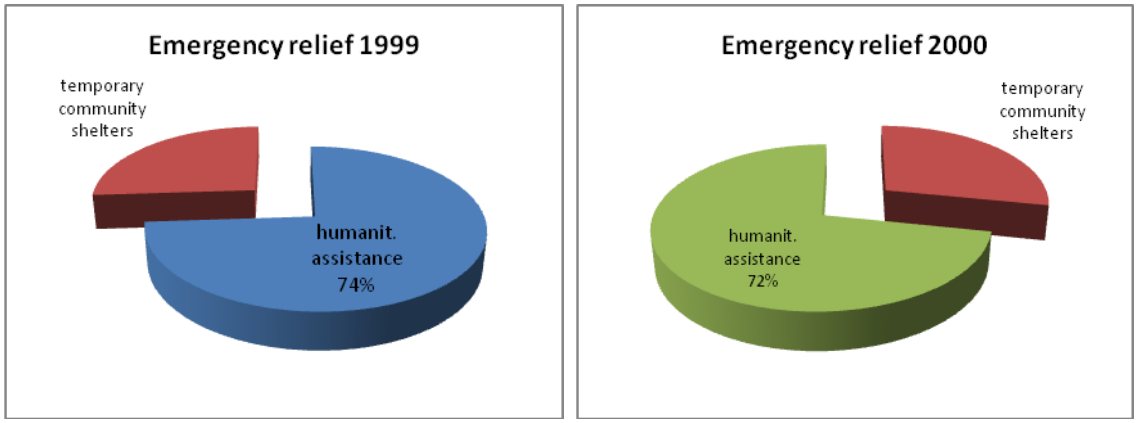
assessment of aid impact in rehabilitation and reconstruction process in the first post-conflict decade in Kosovo.

4.4.1. Aid, Security and Emergency Relief

4.4.1.1. Emergency Relief

As seen from table in Appendix G, up to 60 percent of the total aid in 1999 was allocated to emergency relief; in two years this assistance amounted to 120 million euro. During 1999, UNHCR received funds from the donor community (e.g., Japan, Denmark and EAR) for the Kosovo emergency program that provided mainly food, medicines, and prefabricated shelters. Humanitarian organizations distributed food to more than 900,000 people; wood stoves and firewood were also distributed to ensure that the returnees survive the winter (Tarnoff, 2001).

Figure 9. Emergency relief 1999-2000



Source: RIMS database, 2010. Note: figures are in percentages

Another component of emergency relief was to provide temporary shelters to the returned refugees and internally displaced persons. The Temporary Community Shelters program (as part of the Social Welfare Sector in RIMS dataset) makes up one third of the total aid spent on emergency relief (see Figure 9). As the humanitarian crisis abated, after 2000 the humanitarian aid inflows fell drastically, to negligible portions.

4.4.1.2. Mine Action and Coordination Center

As the refugees began to return to Kosovo, threats from landmines and UXO posed a serious danger. Most of the casualties during the first month were caused by landmines. WHO, UNHCR, and mine clearers warned about the high risk from mine accidents as people start to work in the fields and collect firewood; Kosovo was ranked as high as Cambodia and Afghanistan for its mine risk (UNHCR, 1999).

To deal effectively with threats posed to returned refugees and internally displaced persons from landmines and UXO, UN Mission in Kosovo established The Mine Action and Coordination Center for Kosovo (MAAC). The Center was designed as a coordination body with no assets of its own but relying on donors for funding and on other organizations for conducting mine cleaning operations (UN departments, NGOs, and corporations). Some 10 percent of total aid in 1999 went for the MACC activities, notably mine and UXO clearance.

Table 13. Mine Action Co-ordination Center

Subsector	1999	2000	2001	%
Planning. Management and Finance	1001.03	4692	489.60	**16.19**
Mine Awareness Education	4835.82	599.86	67.32	**14.41**
Mine/UXO* Clearance	11333.91	5311.65	9867.87	**69.41**
Total	**17170.76**	**10603.51**	**10424.79**	**100.00**

Source: RIMS database, 2010; *unexploded ordnance. Note: spent amounts are in million euro.

Organizations involved in mine cleaning operations performed their activities in their area of specialization and combined them under the umbrella of MACC. For example, HALO Trust, which was bilaterally funded by DFID, conducted a field survey of the land and then

provided demining organizations with necessary information (The Praxis Group, 2002).[30] At the same time, donors financed mine awareness and victim assistance programs through the International Committee of the Red Cross (ICRC) and Handicap International (HI). Mine awareness activities were also provided out of Kosovo (e.g., Montenegro) to equip returning refugees and NGO staff with knowledge about landmine threats as they traveled in and out of Kosovo.

The mine action program in Kosovo was a successful combination between the donor community efforts, engagement of the NGOs, and Kosovars themselves who cleaned the land (The Praxis Group, 2002). As a result, MACC managed to clear the territory of landmines in less than three years and is thus called as 'the most successful mine action program ever' (Scott, 2002). By the end of 2001, the country was declared generally impact-free of mines: 45,000 lethal devices were destroyed, and over 30 million square meters of land were restored to their pre-conflict state. Accordingly, the number of accidents caused by mine and UXO fell drastically as presented in the table below.

Table 14. Civilian Accidents in Kosovo

	Jun-Dec 1999	Jan-Dec 2000	Jan-Sep 2001	Total All Years
Injured	267	84	12	363
Killed	74	9	4	87
Total	**341**	**93**	**16**	**450**

Source: The Praxis Group, 2002

[30] Immediately after the NATO troops entered Kosovo, on the next day, June 13 1999, the HALO Trust started a rapid assessment of the mine/UXO contamination throughout the country to provide the UN and donors with a clearer overall picture of the situation. DFID was praised for this rapid response to crisis.

Further, in the case of Kosovo, mine action organizations were the experts, who informed local residents about landmine threats, instead of the local residents serving as the primary source of information, which has been the case in other countries. This unique situation was created due to the large scale displacement of the local residents during the war on one hand, and rapid response of mine action organizations and donors, on the other (Messick, 2000).

4.4.1.3. Civil Security and Emergency Preparedeness

Donor community spent some 26 million euro for civil security and emergency preparedness in the first three post-conflict years. The highest share of this donor funding was channeled toward demobilization and transformation of the KLA combatants, as stipulated in the UNSC Resolution 1244.

Bilaterally financed through various donors (Japan, US, EAR, Germany, UNTF), UNMIK and KFOR entrusted the IOM as an implementing organization in the transformation process of the KLA combatants into the KPC. This process focused on the recruitment of former KLA fighters into the KPC troops that were constituted in 2000 and provide them with training. According to UNMIK regulations, the KPC was responsible for the following tasks: provide disaster response services; perform search and rescue; provide a capacity for humanitarian assistance in isolated areas; assist in demining; and contribute to rebuilding infrastructure and communities.

Table 15. Civil Security and Emergency Preparedness

Subsector	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	%
KPC		13247.03	7495.49	4507.14	-	-	-	-	-	-	**97.33**
Kosovo fire services		22.95	670.65	-	-	-	-	-	-	-	**2.67**
Total		**13269.98**	**8166.14**	**4507.14**	**-**	**-**	**-**	**-**	**-**	**-**	**100.00**

Source: RIMS database, 2010; Note: spent amounts are in million euro.

Another channel of integrating KLA fighters is through their transformation into the Kosovo Police (KPS), with an initially high quota agreed for the KLA fighters (Pozhidaev and Andzhelich, 2005). For those demilitarized combatants that were left out of the KPC (and KPS), the IOM established Information Counseling and Referral Service (ICRS). This program offered counseling and referral services to the KLA fighters, as well as grants and services to help them reintegrate into society.

4.4.1.4. Assessment of the effectiveness of donor activities in responding to emergency needs

Donors moved quickly to respond to emergency needs in Kosovo's post-conflict environment. Massive infusion of aid assistance after June 1999 facilitated the return of refugees and provision of food, basic medication, and shelters to prepare people for the incoming winter. The UN and participating donors targeted around 350,000 people with their winterization activities: 60,000 emergency repair kits were provided, more than 10,000 roofing kits distributed, thousand of tents were also distributed and temporary community centers were made available (Tarnoff, 2002).

Another successful aspect of emergency assistance in Kosovo is the influx of mine action resources after the conflict. This is very important for the post-conflict security given that casualties by land mines increase demands on overstretched health services, disrupt transportation, and prevent people from using their land for farming (Addison, 2000). As shown in Table 14, the number on accidents/casualties caused by mine/UXO dropped substantially (from 341 to 16) in three years time. Threats to mined areas were almost completely eliminated and restored to their pre-conflict state. MACC annual reports suggest that awareness activities reached a considerable part of dangerous areas that have experienced higher number of casualties (The Praxis Group, 2002). These indicators suggest that mine

action programs in Kosovo have been successful in demining and raising awareness within a short period of time (mid 1999-end 2001).

Peace security is contingent upon successful demobilization, disarmament and reintegration (DDR) of the combatants. According to del Castillo (2008), the transformation of the KLA fighters into the KPC, instead of their integration into productive capacities, was a risky move and presented a source of instability for the Kosovo security situation. However, the DDR process should be analyzed in terms of socio-economic challenges that exist in the first post-conflict years: limited economic capacities cannot provide employment opportunities for its citizens, including ex-combatants. In that context, one way to deal with ex-combatants is by ensuring their societal prestige and finding new roles that would give them a similar amount of status (Nilsson 2005). This was the case in Kosovo, where UNMIK and KFOR acquiescenced the preferential treatment and quota for the KLA combatants in both KPC and KPS. Since these two bodies could not absorb the KLA combatants entirely, donors provided education and training programs as a way of keeping them away from activities that might hinder the peace process in the first post-conflict years. These are seen as important instruments to secure peace until more stable environments are created and the revived economic activities could provide longer-term job perspectives for former combatants.

Another important aspect that facilitated the DDR process in Kosovo is that former combatants seemed to have less problematic characteristics than those in different African countries. The IOM survey conducted with the KLA fighters in 2000, shows that the majority of the caseload have a settled family life, have finished high school, and have fought for only one year; child soldiers is also not an issue in the case of Kosovo since the majority of combatants were between the age of 20 and 40 years (Özerdem and Barakat, 2005; Pozhidaev and Andzhelich, 2005).

4.4.2. Aid , Reconstruction and Service Provision

4.4.2.1. Housing Sector

Housing sector in Kosovo suffered considerable damages during the conflict. Based on the IMG preliminary assessment that was done in July 1999, the number of total damaged houses in the 29 municipalities of Kosovo was 119, 518. Out of this stock, 66 percent fell into the 3rd and 4th category, that is, houses that were destroyed for more than 40 percent (Appendix H). The damage has been mainly caused by the fire, but also by gunfire and artillery. Landmines caused difficulties to start with the reconstruction process; therefore, in absolute terms, donors gave more money for the housing sector in 2000, one year after the conflict ended.

Table 16. Aid inflows to Housing Sector 1999-2008

Subsector	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**%**
House reconstr.	26894.5	155530.6	90831.6	17159.0	11512.5	3079.5	3154.80	-	-	-	**96.71**
Social housing	-	-	-	-	1184.44	2000	3600	3650	34.3	-	**3.28**
Total	**26894.5**	**155530.6**	**90831.6**	**17159.0**	**12697.0**	**5079.5**	**6754.80**	**3650**	**34.3**	-	**100.00**
No of reconstr. and rehab. Houses	11713	19264	12484	2039	659	60	--	-	-	-	-

Source: RIMS database, 2010; Note: spent amounts are in million euro.

EAR and numerous donors have engaged in supporting the immediate reconstruction and rehabilitation of damaged and destroyed houses. During 1999-2008, the housing sector received about 320 million euro, which makes up 13 percent of the cumulative portfolio of foreign assistance. In 1999, donors spent around 27 million euro for the reconstruction of roofs of the damaged and destroyed houses by targeting badly hit parts of Central and Western Kosovo (Drenas, Skënderaj, Deçan, Gjakovë, Malishevë, and Pejë). From the project descriptions in RIMS database, it can be calculated that by the end of 2002 donors assisted roof reconstruction of around 12,000 houses and rehabilitation of other 30,000

damaged houses[31]. KDSP Secretariat (2006) however, provides a figure of 60,000 houses that were rebuilt by the donor community; this implies that not all the houses were tallied in the RIMS dataset.

The pattern of annual disbursement of aid flows for the housing sector follows that of emergency needs for reconstruction: it increases rapidly in the first two-three years and then starts to drop off. Most of the donor reconstruction schemes, notably that of EAR ceased by the end of 2002. From 2003, social housing gains more importance but with negligible amounts. These schemes targeted vulnerable persons living in Temporary Community Shelters. In 2003, the SDC project aimed at providing durable solutions for this group (in Istog and Deçan, and later in Mitrovica) by providing necessary technical and social infrastructure to improve their general living conditions.[32]

Donor community played a significant role in rehabilitation of the housing stock. Within three years, it financed half of the damaged houses and the other half was rehabilitated or rebuilt by the private efforts of the Kosovars (UNDP, 2007a). This can be seen as a successful way of responding and complementing activities between donor community and local people. Another joint effort between the Government, participating municipalities, and the donor community is creation of adequate housing conditions for vulnerable households, in particular those living in Temporary Collective Centers. As a result of these efforts, Ministry of Environment and Spatial Planning (MESP) reports that 160 housing facilities have been built/provided to most vulnerable groups (female headed households and non-Serb minorities) during 2003-2007 (UNDP, 2007a).

[31] I have counted the number of the reconstructed and renovated houses from the RIMS dataset. To do so, I have used the project description section in the housing sector to add up the total number of houses reconstructed and renovated in different years by different donors and municipalities, for each given project (e.g., 'roof reconstruction for 9 houses' or 'rehabilitation of 3 houses' etc.)

[32] http://www.swisscooperation.admin.ch/kosovo/en/Home/Domains_of_Cooperation/Completed_projects_under_the_Social_Area_domain/Durable_Solutions_in_Istog_and_Mitrovica_Municipalities (accessed on August 6, 2010).

4.4.2.2. Transport and Infrastructure

The highest amount of aid to this sector was given in first two post-conflict years (7-8 percent of the total aid disbursed). In the following years it decreased drastically in both absolute terms and in relation to other sectors. Donor dependency of this sector decreased as certain level of improvements were achieved (Appendix B).

Half of aid inflows to Transport and Infrastructure went for the rehabilitation of roads and bridges. The IMG reported that the roads in Kosovo did not suffer much from the war but they have been degraded due to the lack of investments and maintenance during the 1990s. Hence, this subsector was needy of donor support for the supply of equipment and financial assistance to public companies due to a decade of investment backlog in physical infrastructure. Further, the report identified 13 destroyed bridges that needed repair.

The RIMS directory of the projects/programs reports that in 1999, donor funding was disbursed by the IOM for the rehabilitation of the roads all over Kosovo and the Lepenc bridge reconstruction. In the following years, the roads sector remained the largest absorber of the donor assistance. Until 2003, donor community supported rehabilitation of 435 km of roads and 5 bridges (MFE, 2004). The assistance to the Planning, Finance, and Management subsector was provided mainly for institution building to the Directorate of Roads.

Table 17. Aid inflows to Transport and Infrastructure 1999-2008

Subsector	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	%
Planning. Manag. and Finance			637.5	1375	597.49	902.31	1731.25	1021.27	877.38	-	**5.86**
Airport - Landside and airside		10549.1	121.6	-	-	-	-	-	-	-	**8.76**
Public Transport		2856	1178	-	-	-	-	1503.55	-	-	**4.55**
Railway		8462.89	7573	2607.7	1679.87	53.43	-	-	-	-	**16.73**
Roads	174.17	25834.9	33504	5684.6	7961.88	1000	1798.54	-	504	1618.37	**64.10**
Total	**174.17**	**47702.9**	**43015**	**9667.3**	**10239.24**	**1955.74**	**3529.797**	**2524.82**	**1381.38**	**1618.37**	**100.0**

Source: RIMS database, 2010; Note: spent amounts are in million euro.

Based on IMG estimations, Pristina Airport needed and urgent rehabilitation at a cost of 10 million euro. Accordingly, in 2000, donors spent 10.5 million euros on rehabilitation of both landside and airside of the Prishtina Airport. These initial investments enabled the re-opening of the airport to commercial traffic in January 2000 and round-the-clock operations in the beginning of May (Department of Reconstruction, 2001). As seen from the Table 1 in Appendix I, the number of passengers flying to and from Prishtina increased continually. In 2006, Prishtina Airport was awarded with a 'Best Airport 2006 Award' from Airports Council International, in the category of small airports; this reflects a satisfactory progress made in airport's transformation from a former military base into a modern civilian airport.[33]

4.4.2.3. Health, Education and Science

As of the end of 2008, health and education sectors received altogether 204.2 million euro, some 8.7 percent of total amount spent by the donor community (3.6 percent for health; 5.1 percent for education); this seems to be a modest figure as compared to other sectors, like housing, public utilities, democratization and civil society. In absolute terms, the largest

[33] http://www.airportpristina.com/en/page/sub/id/c5/s47/ (accessed on August 23, 2010)

amount of donor funds spent in these two sectors is recorded in the first post-conflict year (2000), with the lion share channeled toward rehabilitation and reconstruction of health and education facilities. In the following two years, the amounts of donor funds spent decreased drastically and have fluctuated since.

Within the sector of education and science, building reconstruction and rehabilitation received some 58 percent of donor money; other subsectors, such as vocational education and teacher training received smaller aid portions (around 7-8 percent of total each). Another objective of the donor community was modernization and the reform of the education system, notably that of higher education, by implementing the Bologna process and the Tempus program.

Table 18. Aid Inflows to Education and Science 1999-2008

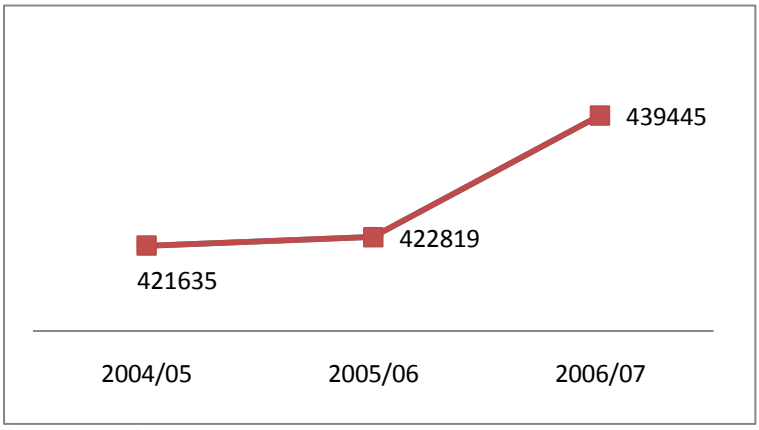
	1999	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**%**
Planning. Manag. and Finance	-	54.06	1076.05	1451.19	826.09	1435.73	1841.97	535.46	1629.88	-	**7.38**
Building Reconst. and Rehab.	6968.75	38427.9	22316.9	1346.58	-	242.65	783.96	128.48	183.77	-	**58.70**
Pre-University education	119.85	560.9	1147.57	759.77	251.33	3196.39	533.52	1016.72	1307.94	55	**7.46**
Higher education	-	498.13	589.18	1317.48	228.72	1272	670.74	2016.3	665.21	1792.5	**7.55**
Special needs education	-	347.82	769.11	-	556.62	360.84	60	-	936.15	802.31	**3.20**
Teacher training	-	307.02	264	2698.88	3252.33	1128.02	797.55	225	29.45		**7.26**
Vocational education	-	418.3	464.1	-	-	1450	1434.21	3287.1	1350	1734.7	**8.45**
Total	**7088.6**	**40614.14**	**26626.9**	**7573.9**	**5115.09**	**9085.63**	**6121.95**	**7209.1**	**6102.40**	**4384.7**	**100.00**

Source: RIMS database, 2010; Note: spent amounts are in million euro.

Considerable results have been achieved in terms of stabilizing the education system. Donor community engaged in the successful rehabilitation of school facilities all over Kosovo. MFE (2004a) reports that during 1999-2003, 310 school buildings were rehabilitated and 151 schools were constructed; the student center in Prishtina was also rehabilitated with

the assistance of donor funding. The return of students to their schools in 1999/2000 can be seen as a satisfactory result. All the more, K-Albanian students that have been expelled by force in the previous decade could access formal education facilities and a reach a satisfactory attendance level in only few months. The number of students enrolled in primary and secondary schools (pre-University level) have recorded and increasing trend, as shown by the figure below.

Figure 10. Number of students (pre-University) 2004/05-2006/07



Source: MEST, 2008

Positive developments have been noted in education system in post-conflict Kosovo, although there is need for further improvements. Donor funding has decreased drastically over the years—from about 40 million euro in 2000 to 4 million euro in 2008. Limited capacities of the Kosovo budget and this drastic fall in donor funding pose a challenge to the quality improvements in the education. One challenge is to increase enrollment rates in pre-school and tertiary education (UNDP, 2007a).

Within the health sector, the largest portions of donor funds were absorbed by hospitals and by the subsector of planning, management and finance. Prishtina University Hospital and Peja Hospital were the largest beneficiaries of the donor rehabilitation funds in 2000-2001, with DFID and the Italian Government as the largest contributors. In four years after the conflict, donors financed reconstruction of 237 health centers and hospitals; in

addition, another 41 health centers were constructed (MFE, 2004a). For the subsector of planning, management and finance, EAR provided assistance to capacity building efforts and activating of the health care system.

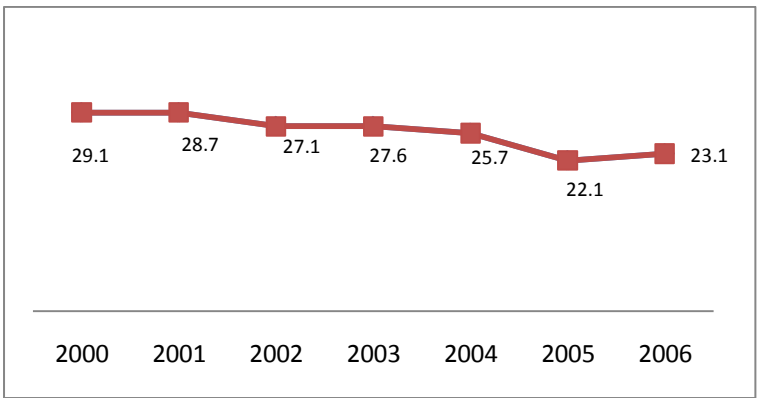
Table 19. Aid inflows to Health Sector 1999-2008

Subesctors	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	%
Planning. Management and Finance	54.06	2311.8	12765	433.89	3532.47	3922.59	2284.7	1158.81	630.28	-	**32.14**
Hospitals	545.39	7214.45	7268	80	230.64	1228.01	2271.7	3425.13	1639.219	715.468	**29.20**
Primary health care	736.94	4139.05	3563	813.3	52.71	-	-	-	-	-	**11.04**
Mental Health		484.5	751.9	1325.12	225.03	-	504.93	0.177	-	178.73	**4.12**
Public Health		6247.52	3869	770.2	2841.31	1540.29	481.9	1168.52	1455.90	1439.758	**23.50**
Total	**1336.39**	**20397.32**	**28217**	**3422.51**	**6882.16**	**6690.89**	**5543.3**	**5752.64**	**3725.406**	**2333.95**	**100.00**

Source: RIMS database, 2010; Note: spent amounts are in million euro.

These efforts by the donor community helped restore basic service provision in health centers and hospitals throughout Kosovo. Yet Kosovo ranks low in terms of health indicators. Available data show that perinatal and maternal mortality rates have fallen since 2000, but remain among the highest in Europe (MoH, 2008).

Figure 11: Perinatal Mortality Rate 2000-2006



Source: (MoH, 2008)

Data on infant mortality is contradictory and figures differ substantially from different sources, namely SOK and DHS.[34] One of the main challenges for the health sector is to develop capacities for gathering data and tracking health statistics (UNDP, 2007a). Another weakness in the health sector in Kosovo is mismanagement of health resources and low compensation of health workers, which has led to deterioration in motivation of health workers and increase in incidence of informal payments. These weaknesses give rise to poor quality and quantity performance. Notwithstanding these weaknesses, the health sector remains one of the most under-financed sectors of the economy; the level of government spending on health is the lowest in the region.

4.4.2.4. Public Utilities

The sector of public utilities absorbed one-fourth of total aid inflows during 1999-2008 (Figure 8 and Appendix G). This sector consists of three main sub-sectors: energy, water, and solid waste disposal. As shown in Table 20, the energy sub-sector received the largest amount (462 million euro) of donor assistance, 83 percent of total. In this way, the pattern of aid disbursed to energy shapes that of the whole sector; 2007 is an exception with a shift of emphasis on the water sector rehabilitation.

Bilateral and multilateral donors, notably EAR, allocated large funds for a variety of projects related to the rehabilitation of the energy sector such as, the rehabilitation of the power plants (Kosovo A and B), reparation of the electricity lines, electricity import during winter, and technical assistance for the Kosovo Energy Corporation (KEK) management. In the years following the reconstruction period (after 2003), the largest share of funds spent on energy sector went for technical assistance through provision of consultancy and training to KEK and District Heating management, as well as for environmental actions in coal mines. In

[34] According to Statistical Office in Kosovo, the Infant Mortality rate in 2004 was 11.8‰, while the Demographic Health Study (DHS) 2003 reports an alarming Infant Mortality rate of 35 and 49‰, and Under 5 mortality rate at 69‰.

2008, the energy sector received assistance for the South-West mine in Sibovc as part of the CARDS-2005 program.

The results achieved in the energy sub-sector present one of the weakest points when it comes to assessing aid effectiveness in post-conflict Kosovo. Developments in the energy sector in post-conflict Kosovo can be used as an exemplary argument for aid skeptics: huge aid inflows (around half a billion euro in 9 years) have been followed by mixed and controversial outcomes, as well as corruptive practices by local and international officers alike. One of the most discussed corruption incidents during the post-conflict recovery involved a former UN official, the then President of the KEK Board. He was accused and sentenced in Germany for stealing around four million euro from the KEK budget (Kosovar Stability Initiative, 2007).

There have certainly been improvements in the energy sector and with the support of donor funding, the power plants and lignite mines have been reactivated for energy production. Table 1 in Appendix I shows that there has been a continual increase in electricity production and consumption in the post-conflict years suggesting for improvements made in this sector. However, high energy imports during the winter indicate the existing gap between production and consumption of electricity. This is in contrary to what Kosovo used to be in the pre-conflict period—a regional electricity exporter. Lack of sufficient energy produced by the Kosovo power plants and the need for huge imports during the winter has been followed by frequent blackouts in power supply during the post-conflict years. Moreover, due to low electricity billing and collection, the public company of KEK continually operates with losses and has been highly subsidized by foreign funding and/or Government budget.

Table 20. Aid Inflows to Public Utilities 1999-2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	%
Energy Sector Rehab.	16006.2	111245.77	153826	52835.1	54039.96	47482.6	10391.7	2840.94	1343.61	12165.73	**83.35**
Solid Waste Disposal Rehab.	164.69	9180.23	9240.03	300	-	450	418	-	-	-	**3.56**
Water Sector Rehab.	683.36	7267.58	30144.5	6058.55	5967.39	3916.27	6062.24	1618	6402.69	4479.99	**13.09**
Total	**16854.25**	**127693.58**	**193210**	**59193.65**	**60007.35**	**51848.87**	**16871.9**	**4458.94**	**7746.31**	**16645.72**	**100.00**

Source: RIMS database, 2010; Note: spent amounts are in million euro.

Consequently, lack of energy remains one of the daunting issues in the Kosovar society and donor community seems to recognize the contradictory results achieved in this area. At the Donors' Conference in 2008 (post-independence), when donors made pledges for Kosovo's socio-economic development they urged Kosovo Government 'to reform its energy sector by taking convincing measures to increase electricity billing and collection, reduce non-technical losses, and to improve the overall financial management and governance to the electricity utility.'[35]

The priorities in the water sub-sector were related to increase of system efficiency, reliability and water quality (Department of Reconstruction, 2001). Donor projects in this sub-sector aimed at the rehabilitation of the water supply and sewage, water pipelines, and pumping stations; provision of vehicle and network spares to all water companies in Kosovo. This resulted in continual increases in citizens' access to safe drinking water (WB, 2007). Other big projects aimed at the improvement of management and the efficiency of the water companies through training and technical assistance. A small amount of funds was spent for

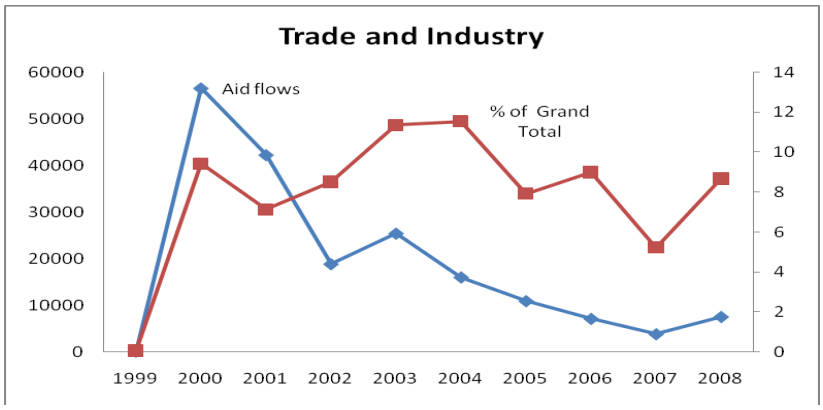
[35] http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/913&type=HTML (accessed on June 20, 2010).

the supply of collection equipments and improvement of the management of the solid wastes companies.

4.4.2.5. Trade, Industry, and Agriculture

Trade and Industry sector received around 190 million euros or 8 percent of total aid allocated to post-conflict reconstruction of Kosovo. Some 75 percent of the amount spent went for Private Sector Development. First two years (1999 and 2000) involved reconstruction and rehabilitation of private sector activities and the Trepça Mining Complex. Donors also supported SMEs by provision of credit lines through the KfW. In later years (2006 and 2007) aid funds were spent on economic development subsector: for the Cluster Business Support, the Kosovo Development Plan (DFID), and Projects on Economic Development Initiatives (USAID). The pillars of Kosovo Privatization Agency and Investment and Employment Promotion are main absorbers of aid flows spent for the private sector development in 2008.

Figure 12. Aid Inflows to Trade and Industry 1999-2008

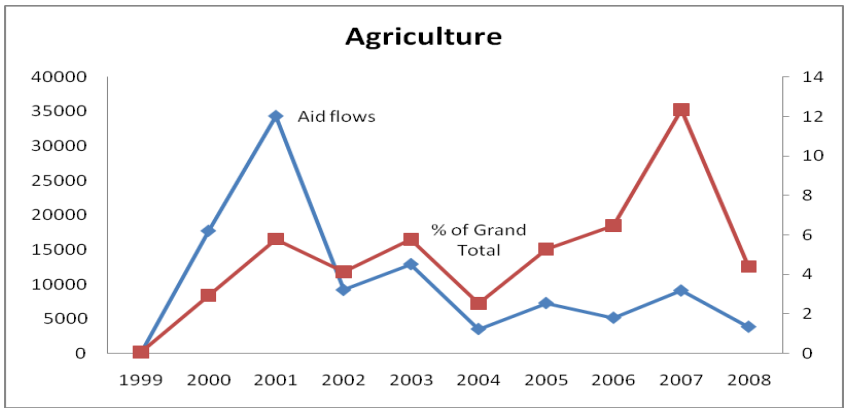


Source: RIMS datasets, 2010; Aid flows are in million euro

Agriculture sector suffered huge damages due to the conflict in terms of its capital, machinery, and livestock; This sector received 4 percent of total aid, which has oscillated and does not show a clear pattern of donor spending. Following the end of conflict, donors made emergency interventions to restore livestock inventory, repair and provide new machinery,

and rebuild capacity of the agricultural institutions. The agricultural sector showed improvements but could not rebound quickly to the pre-war levels (WB, 2004). In later years, and notably, in 2007 donors increased their funds to the agriculture sector. This amount was boosted by the introduction of the Horticultural Project funded by Switzerland to help producers in the horticultural agribusiness sector improve their competitiveness and enable them to produce and sell high quality production that could considerably substitute for the imported products.

Figure 13. Aid Inflows to Agriculture 1999-2008



Source: RIMS datasets, 2010; Aid flows are in million euro

Donor activities in the sectors of Trade, Industry, and Agriculture have produced results, in particular, within small and medium enterprises (SMEs). The number of registered SMEs in Kosovo records and increasing trend: from 29,564 in 2000 to 90,929 in 2008, mainly focused on trade and services (MTI, 2009). Kosovar businesses still face barriers related to the legislation, lack of energy, and unfair competition. Kosovo farmers have been harmed by unfair competition from the imported agricultural products that receive export subsidies. These subsidies that are given in many originating countries enable better quality products with lower prices to enter the market in Kosovo.[36]

[36] For example, in the case of milk, subsidies of 8.5; 6.6 and 6.0 cents per liter were provided in Montenegro, Slovenia and Serbia respectively (WB, 2004).

Problems related to export promotion in Kosovo are also of political nature. In 2008, Kosovar exports were blocked from two CEFTA countries, Serbia and Bosnia and Herzegovina due to lack of recognition of Kosovo Customs Authority. This trade embargo and the need to use other (indirect) transit routes to penetrate into other European markets has had overall negative effects on Kosovo trade in 2008 and 2009 (WB, 2010).

4.4.3. Institution Building and Democratization

4.4.3.1. Central Fiscal Authority

After the conflict, Kosovo lacked supporting institutions and policies for economic recovery. In the first post-conflict years, functioning of the public sector was mainly donor-financed. The development of fiscal institutions was one of the main priorities of the UNMIK administration. This entailed creation of the legislative framework for the introduction of new taxes, as well as establishment of the Central Fiscal Authority (CFA). This process involved extensive engagement of international community, notably IMF, the WB and USAID, who continually provided economic policy assistance to this institution.

Table 21. Aid inflows to CFA/MFE 1999-2008

Subsector	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**%**
Revenue Generation	3044.7	1813.56	-	1618.85	-	-	-	-	-	-	**10.29**
Planning. Management and Finance	-	5612	-	11171.13	17104.73	6214.64	9859.64	6485.69	-	-	**89.71**
Total	**3044.7**	**7425.56**	**-**	**12789.98**	**17104.73**	**6214.64**	**9859.63**	**6485.69**	-	-	**100.00**

Source: RIMS database, 2010; Note: spent amounts are in million euro.

In addition to this, donors allocated money for the revenue generation through supply of equipments and technical assistance to the Customs Service; SIDA funded the supply of equipments for free balance software. The CFA (administered by UNMIK), transferred its

competencies to the MFE in 2002, whereby USAID continued to provide economic policy assistance to the MFE departments.

The success achieved with tax system was impressive and after only three years, Kosovo was able to ensure internal financing of all budget expenditures. Introduction of the new taxes during 2001 and 2002, economic growth, and the continual strengthening of the tax administration contributed to substantial increases in tax revenues (MFE, 2004). However, the following years recorded a rather stable trend with modest revenue increase (Table 12).

On the expenditure side, Kosovo recorded budget surpluses for several years—an irrational situation for an economy with huge demands for public services. This situation came as an outcome of annual balanced budget philosophy stipulating that the level of expenditures should not exceed the level of collected taxes. In addition, division of the budget into the PISG and UNMIK entities (which has often complicated the implementation of the budget expenditures) and the lack of administrative capacities had an impact in the accumulation of budget surpluses.[37]

Donor efforts in building fiscal institutions in Kosovo could be assessed as successful, given that the whole institution building process started from the scratch. In only four years, the Kosovo Consolidated Budget was totally covered by domestic sources. These achievements prompted the IMF staff (2004) to assess the performance of the tax system as,'…the single most positive features in all economic developments since the end of the conflict.' These positive achievements have somewhat been tarnished by an excessive amount of money being spent on technical cooperation, notably on foreign consultants who end up performing duties on behalf of local officers. For example, in 2005 and 2006, technical cooperation constitutes the greatest source of aid to Kosovo amounting to 80 and 67 percent

[37] Kosovo budget ran with two surpluses: an accumulated budget surplus, carried forward from the previous year and the surplus of the respective year as a result of higher revenues over expenditures (e.g. 2002 surplus consists of the combined surplus of 2000 and 2001 which is carried forward and 2002 surplus coming as a result of revenue minus expenditure).

of total aid. After the institutions have been successfully built and consolidated, the most effective way for donors to spend aid in Kosovar institutions would be the transfer of knowledge and expertise from foreign experts to local people, instead of performing duties that go beyond the scope of their advisory jobs.

4.4.3.2. Democratization and Civil Society

The total amount of donor funds spent in this sector during 1999-2008, was 137.8 million euro; this makes up around 6 percent of the total aid spent. The trend of annual inflows provided for this sector shows a continual increase in the first three years followed by fluctuations in the next years until 2008. More than half of aid spent in this sector went for democratization thereby making it to be the largest absorber.

Table 22. Aid inflows to Democratization and Civil Society 1999-2008

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	%
Democratization General	172.12	3946.79	8875.23	14767.22	6932.78	16052.21	10861.9	8876.02	3375.27	3490.65	**56.0**
Equal Opportunity Initiative	0.41	215.42	236.13	3689.5	273.08	-	515.48	315.49	926.65	831.52	**5.1**
Media Affairs (Non-PRIP)	744.99	5246.41	10090.13	4300	2025.62	736.08	1393.37		1245.49	-	**18.7**
Media Support initiative	57.12	882.91	1037.03	1213.52	4726.38	646.05	417.99	1472.69	643.49	-	**8.0**
NGO and Civil Society Initiative	-	-	1052.99	4510.3	1383.85	910	3671.32	2086.77	2049.82	984.57	**12.1**
Total	**974.64**	**10291.53**	**21291.51**	**28480.54**	**15341.71**	**18344.34**	**16860.06**	**12750.98**	**8240.73**	**5306.75**	**100**

Source: RIMS database, 2010; Note: spent amounts are in million euro.

Kosovo has received assistance in building democratic institutions as the competencies began to be transferred from international administration to local institutions. The international community largely supported political party development and election organization and supervision. From 1999 until the declaration of independence in 2008, the OSCE (pillar II of UNMIK) has organized and controlled the entire electoral process in Kosovo. One of the largest NDI programs in Kosovo, funded by the USAID (under the Democratization rubric), has focused on political parties development with the objective of

reaching all political parties and challenging them to enhance their voter outreach, define their policies, and strengthen their internal structures. [38]

Building of Kosovo's institutions of self-government followed a 'decentralized approach': first local elections were held in 2000 followed by the establishment of municipal assemblies; and then Kosovo-wide elections were held in 2001, out of which central bodies like the Kosovo Assembly and the Kosovo Government (Provisional Institutions of Self-Government PISG) were established. The first municipal elections and general elections were successfully completed and were praised for having met democratic standards for free and fair elections. Voter participation was also very high during these elections, with turnouts above 90 percent. This success was considered to have drawn 'significantly from the long democratic underground tradition of the Kosovo-Albanian community during the 1990s' (Narten, 2009: 3). The turnout figures declined continually in the following years, for example, voters' turnout in 2009 elections was around 45 percent whereas due to heavy pressure from Belgrade, the postwar elections have been boycotted by the majority of Serb voters.

In sum, development of political parties, organization of successful elections followed by establishment of the then-PISGs, can be seen as successful achievements of the international community in rebuilding of an emergent post-war democracy. It is difficult to assess the pace and the extent to which these institutions would have been built and advanced into a functioning democracy in the absence of external funding and technical assistance. However, Narten (2009) argues that without external assistance, the Kosovar Institutions would have likely been able to continue their democratic culture of free elections but 'most probably they would have not been able to include the current level of legal provisions for minority protection, municipal decentralization, and self-governance into its constitutional

[38] See http://www.ndi.org/kosovo (accessed on August 25, 2010)

framework and its post-UDI constitution.'[39] Hence, the donor community has been the key factor in the democratization process in Kosovo.

Various donor projects that aimed media development absorbed altogether one quarter of total subsector aid (26 percent); whereas those on civil society received some 12 percent. Civil society in Kosovo emerged in the end of 1980s and throughout the 1990s as a response to events related to the dissolution of Yugoslavia and revocation of the Kosovo autonomy by the Serbian regime. The pre-conflict civil society in Kosovo gradually took the shape of a non-violent civil resistance and attained a good public image.[40]

The post-conflict period is characterized by the so called 'NGO mushrooming' that came as a response to the availability of donor funding. The civil society analysts in Kosovo claim that in some cases, foreign donors 'subtly or unsubtly' defined by themselves parameters of the role played by the civil society (UNDP, 2008a). Although there are some well-established and active NGOs, a large number of post-conflict NGOs remain inactive and ineffective due to the lack of funding and profile. As compared to the 1990s, the market-oriented behavior of some NGOs after the war has clouded their image and diminished their overall effectiveness.

4.4.4. Assessment of Aid's role on post-conflict reconstruction

During the first post-conflict decade, donor community spent 2.34 billion euro for reconstruction and development of Kosovo. As discussed in section 3.1., donors' rapid response to emergent needs of the returnees, ensuring of overall public security through successful disarmament and demobilization of KLA combatants, as well as cleaning of the territory from landmines and UXOs in only three years can be clearly seen as a success story.

[39] Post-independence Constitutions of Kosovo is based on the 2007 Ahtisaari Proposal and the counsel of U.S. and EU experts. Note: Author refers to UDI as 'Unilaterally Declared Independence'.

[40] For example, Council for the Defence of Human Rights and Freedoms—Këshilli për Mbrojtjen e të Drejtave dhe Lirive të Njeriut (KMDLNJ); Mother Teresa Association; Motrat Qiriazi (see, UNDP 2008a on a history of civil society development in Kosovo).

This assessment can be extended to nearly all fields of physical reconstruction and rehabilitation of infrastructure that was hardly hit and damaged during the war. Specifically, half of the destroyed houses were rehabilitated by the donor support; basic education and health services were reactivated immediately after the war. Rehabilitation of roads, bridges, and the Prishtina Airport enabled reactivation and improvement of the transport of goods and passengers in and out Kosovo. Institutional infrastructure, based on free elections was built from the scratch with support and supervision of international community. The tax system was built from zero and in only three years after the conflict ended, Kosovo was able to ensure internal financing of all budget expenditures. Donor community has been the key factor in this process and their involvement can be rated as a successful achievement.

Shortcomings of donor assistance in Kosovo are evident in several aspects. Frequent collapses of power plants and huge import needs suggest that the situation in the energy sector is not satisfactory, in spite of huge inflow of funds from both donors and the Kosovo budget. This implies that aid has not been effective in this sector and the results achieved in the first post-conflict decade leave much to be desired.

After the reconstruction phase, donors showed a tendency to over-fund some sectors that either suffered from mismanagement, like energy sector, or involved heavy technical assistance like democratization, economic policies, media, and civil society. As UNMIK was in charge of negotiating the modalities for technical cooperation, while the PISGs were in their nascent shape, the most technical cooperation was based on donor-related proposals (supply driven) rather than on requests from the beneficiaries (Donor Coordination Center, 2007). This leads to excessive involvement of foreign experts in Kosovo institutions by accomplishing tasks that should fall on local responsibilities. By doing so, donors undermine efforts to build local capacities through technical assistance. Aid would be most effective if,

after a decade, international experts in Kosovo would be transferring their expertise to local people.

Further, education and health, as the main sources for human capital accumulation are among the under-funded sectors with only 5 and 3.5 percent, respectively. In a comparative context, Kosovo has the lowest human development indicators, notably in health sector. Yet, the developments in these two sectors do not seem to have drawn any particular attention from donors (and the Kosovo Government) and the level of investments in these two sectors remains low. This situation could backfire in the long run as Kosovo has the youngest society in Europe with very high unemployment rates. A precondition to integrate younger generation into the labor market is to upgrade the educational and health system in the following years. [41] This is a key challenge for both Kosovo Government and international community.

In sum, foreign assistance spent on ensuring of physical securities and rebuilding of physical and institutional infrastructure was effective. Donor objectives, however, did not address properly major issues surrounding Kosovar environment, such as poverty reduction and job creation, before aid was drastically reduced after 2002. In what follows, the impact of aid on economic growth and poverty alleviation is analyzed.

4.5. Aid, Growth, and Poverty Reduction

Before moving on with the analysis on growth and aid in Kosovo, it should be noted that GDP figures on post-war Kosovo vary from different sources. They have changed even within the same source (eg., the IMF calculations); it is thus difficult to find a single study that reports GDP time series for the first post-conflict decade in Kosovo (1999-2008). Instead, IMF and Kosovo authorities estimates, provide segmented periods on basic indicators for periods 2000-2004; 2004-onwards; and 2005 onwards. As there was a weak statistical base, the data were

[41] UNDP (2004) reports that 63 percent of all Kosovars are aged between 15 and 24 years.

constructed based on assumptions and have been revised throughout. Constant revisions on GDP figures render it difficult to combine all these year-calculations into one table. For example, in March 2008, IMF changed its GDP figures based on the revision of private household consumption for the whole period covering 2004-2006, by about 750 million euro each year, and this led to a considerable jump of the GDP in 2004 and 2005, as shown in Table 12.

4.5.1. Aid and Growth

The direct impact of aid on post-conflict recovery can be analyzed through the role that international community played in promoting growth and employment opportunities. Lack of time series data before the conflict and a short time span of the data after the conflict (2000-2009) make it impossible to use econometric techniques to calculate aid impact on macroeconomic indicators. This analysis is then based on the work done by the IMF authorities (Moalla-Fetini et al., 2004), through which they calculate the direct impact of foreign assistance to GDP. In their analytical framework, they divide the Kosovo economy among three sectors: the donor sector, the government, and households and firms. Donor sector is then decomposed into six components:

Expatriates' wages $W_{\exp}$; wages of local employees W_{le}; and spending on goods and services done by UNMIK G_{UNMIK}; PIP component I_{PIP}; and KFOR G_{KFOR}.

The amount of aid that was analyzed in the previous section (the sectoral analysis) presents direct donor spending on reconstruction and rehabilitation projects, technical assistance and training, and capital participation in local banks and is calculated under the umbrella of the so called Public Investment Program (PIP) including Donor Designated Grants (DDGs). As per calculations done by Moalla-Fetini et al. (2004), donor sector budget

consists of PIP including DDGs as well as UNMIK and KFOR spending; thus, the figure on aid to Kosovo in 2001 exceeds 1 billion euro, reaching at 70 percent of GDP.

Within this framework, the role of foreign aid in Kosovo is seen as a 'virtual export market' for Kosovar goods and services through three channels: wages of local employees that have been hired by the donor community, purchase of domestic goods and services for expatriates and KFOR soldiers, as well as donor-financed projects (Moalla-Fetini et al., 2004: 14).

The direct sectoral effects of donor financed projects in Kosovo (PIP component) were mainly felt in the housing and services sector, involving labor intensive activities. Huge aid inflows given for reconstruction and rehabilitation of the houses and other infrastructure induced a post-conflict construction boom; this enhanced the demand for construction companies and it also provided a source of employment for unskilled labor force.[42]

The presence of international community, notably UNMIK, is seen as another source for creation of an 'export market' for Kosovar goods and services. In an analysis of the economic impact of peacekeeping missions, Carnahan et al., (2006) find that, of the nine missions, the local impact was over six percent of GDP and was around ten percent in two cases (Timor Leste and Liberia). Kosovo ranked fourth, and this high impact is attributable to the high percentage of mission budget spent locally. The peak of international engagement in Kosovo in terms of both aid inflows and employed officers is recorded in 2000 and 2001 (Table 23). The employed staff by UNMIK in 2006 accounted for about 1% of official employment in Kosovo only. However, the employment structure suggests that younger people and minorities were disproportionately represented in UNMIK jobs (EPO, 2006).

[42] By the way of example, The Winterization program in Mitrovica (Cooperative Housing Foundation) employed 36 local Kosovars directly in the area of construction, trained over 300 individuals through the 'self-help method' of construction and provided opportunities for sales and services of local products (CHF, 2000).

Table 23. Employment by UNMIK (total)

UNMIK total	2000	2001	2002	2003	2004	2005	2006
Employment of international staff	3,506	6,385	6,488	6,101	5,208	4,747	3,708
Employment of local staff	4,111	5,242	4,777	4,436	4,056	3,838	3,263
Total	**7,617**	**11,627**	**11,265**	**10,537**	**9,264**	**8,585**	**6,971**

Source: UNMIK EOP, 2006

The effect is gauged through the amount of the money that international community spends locally on housing and services sector—involving labor intensive activities—such as hotels, restaurants, retail stores, cleaning, and security. This is calculated as the local content of peacekeeping's injections into the economy in terms of the wages of local employees paid by UNMIK, international staff spending, and outsourced service contracts to local companies.

Specifically, the direct contribution of foreign assistance to GDP ($DCFA_{GDP}$) is obtained by subtracting import contents of the respective expenditure items and then summing up their domestic components:

$$DCFA_{GDP} = \left(G_{UNMIK} - M^{G}_{UNMIK}\right) + \left(G_{KFOR} - M^{G}_{KFOR}\right) + \left(I_{PIP} - M^{I}_{PIP}\right) + \left(C_{\exp} - M^{C}_{\exp}\right)$$

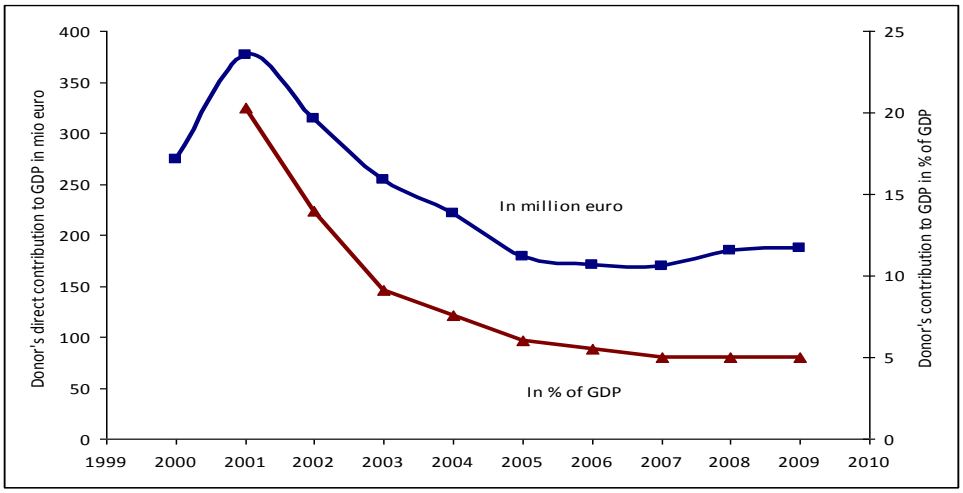
To calculate the direct contribution of foreign assistance to GNDI ($DCFA_{GNDI}$), the wages of local employees are added to the latter:

$$DCFA_{GNDI} = DCFA_{GDP} + W_{le}$$

This exercise involves large margins of error as Moalla-Fetini et al. (2004) base their calculations on somewhat arbitrary assumptions: import content of spending on goods and services by UNMIK and PIP is assumed to be 30 percent of total, based on shares reported by Pillar III and IV; expatriates spend around 15 percent of their wages on local products and services, based on average spending estimates of 542 euro per month; and wages to local employees present a full injection to the local economy. Spending incurred by the donor sector (wage bill and spending on goods and services) is treated as public consumption, with

the exception of PIP component of spending on goods and services, which is considered as an investment spending and is added to investment total.

Figure 14. Donor's direct contribution to GDP



Source: Based on IMF calculations (2004, 2007, and 2009)

Figure 14 reveals that donor community contributed directly to the Kosovo GDP by spending around 300 million euro in Kosovo's goods and services during 2000-2001 and boosted economic activity to the extent of 14-20 percent. By the end of the first post-conflict decade, this direct aid effect scaled down to the tune of 6-5 percent; yet sluggish growth of export sector in Kosovo remains lower than the one created by the donor sector, in both absolute terms and as a share of GDP (see Table 12). This suggests that despite solid growth rates, aid dependency remains one of the thorny issues for a sustainable economic performance, as in the medium term, external funding should be replaced with export earnings and foreign investments.

4.5.2. Poverty Profile

Kosovo has the highest estimated level of poverty in the region. The first report on Poverty Assessment in post-conflict Kosovo was based on the Living Standard Measurement Survey (LSMS) and presented a staggering 50 percent of population living below the poverty line,

with 12 percent being extremely poor (WB, 2007). The next two WB reports used Household Budget Surveys (HBS) that were conducted in 2002/2003 and 2005/2006 showing that poverty remained persistently high. The 2005 WB Poverty Assessment Report provided an estimated rate of poverty at 37 percent, whereas in 2007 the poverty rate was estimated to be about 45 percent. While these assessments reported that poverty is high, the figures are not comparable as the reports used three different datasets that have used different methodologies during the data collection and consumption income. The HBS surveys were made non-comparable due to changes in the length of the reporting period of consumed goods and consumption of own produced items. Hence, making comparisons with other reporting periods, involves a high level of caution.

Table 24. Poverty Headcount by Location

	2002/03	2003/04	2004/05	2005/06
Total	38.7	43.5	34.8	45.1
Rural	34.4	44.2	37.2	49.2
Urban	46.6	42.1	30.3	37.2

Source: World Bank, 2007

As seen from the table above, the 2005/06 survey shows that about 45 percent of the population in Kosovo is poor as estimated by the poverty line which in 2002 prices was set to 43 euro per adult equivalent month; out of this, about 15 percent of individuals report to have difficulty in meeting their basic needs—extreme poverty. Although poverty is widespread, it has been estimated that large fraction of the population is just around the poverty line and that an average increase on consumption of 10 percent is needed for these people to escape the poverty line (WB, 2010).

Large families, female headed households, the unemployed, and the low skilled are at the highest risk of poverty. As shown in the Table 25, most of the poor are concentrated in rural areas. Households with more than 7 members are at a higher risk of being poor for at least 7 percentage points. Those households headed by women have a 4 percentage point

higher risk than male headed households to become poor. The poverty incidence for unemployed households is 20 percent higher than for those being employed. The employed poor belong mainly to the category of per diem workers. Higher education levels are followed with a lower incidence of poverty due to their increased opportunities to find jobs and better pays: 70 percent of the households with higher education (tertiary and vocational) are salaried employees as opposed to 25 percent of those with secondary education (WB, 2007).

Non-income dimensions of poverty show better outcomes, but the results point at problems with quality and equity of service provision. As opposed to persisting income poverty, Kosovo has reached a near-universal access to education and the gaps between male/female and rural/urban disparities are negligible and have recorded a decreasing trend; in the case of tertiary enrollment rates, the disparities are higher than in the countries in the region.[43] Further, figures on access to safe water, and living in safe dwellings report an increase between 2003 and 2005. During this period, there has also been an increased access to safe water in rural areas for all quintiles (Appendix I).

4.5.3. Aid and Poverty Reduction

The evidence about the widespread, albeit shallow, income poverty is disappointing. Income poverty in Kosovo is related to the lack of sustainable and inclusive growth as well as generation of employment opportunities. The economy has made improvements during the first post-conflict decade but has failed to provide sustainable growth and employment opportunities; this implies that there was lack of structural changes in the domestic economy, notably in the field of trade, industry, and agriculture production.

As argued earlier, poverty and unemployment in Kosovo are not war-triggered phenomenon and are rooted back to Yugoslav times. Legacies of the socialist system and the

[43] The gap in secondary enrollment rates between rural and urban areas was about 20 percentage points in 2003/04 and fell down to 10 in 2005/06. Similarly, for tertiary education this gap was about 15 percent in 2003/04 and fell down to 10 in 2005/06 (WB, 2007).

decade of neglect, as well as the unresolved status complicated the issue of property rights in larger companies that were developed during the socialism.[44] Augusted Knudsen (2010) points at uncertainties related to the legal framework for privatization in Kosovo, that was designed and implemented by UNMIK during 2002-2008, and argues that the framework leaves it unclear whether socially owned immovable property becomes private after privatization. These uncertainties became a major hindrance to reactivation of investments (in particular attraction of serious investors) and employment opportunities in the then leading exporting activities such as mining and metallurgy.

Given all these uncertainties and the huge needs of the post-conflict Kosovo, the donor community was directed toward reconstruction of the housing stock, rehabilitation of infrastructure, promotion of private investments within small and medium enterprises, as well the reactivation of agriculture and agro-business activities. This is illustrated by the sectoral distribution of aid inflows as shown in Figure 8. Reconstruction spending, that was mainly donor financed, boosted growth but the challenges of aid dependency and heavy reliance on remittances remained. This situation is suggestive of very weak underlying fundamentals: low domestic savings and wide current account deficits (Moalla-Fetini et al., 2004). Hence, high rates of income poverty reflect the failure of the economic recovery to offer sustainable employment opportunities. Further, Kosovar businesses face barriers that are related to the legislation and lack of electricity supply (which increases their cost of production), as well as trade embargos from the neighboring countries. Kosovo farmers are also considered to have been harmed by unfair competition from the imported agricultural products that receive export subsidies.

[44] An well-known example is the Trepça mining and metallurgical complex, that for the Mitrovica region was 'source of pride, income, employment, and ethnic conflict' for many years (del Castillo, 2008: 152). Trepça's past property rights could not be resolved and future uncertainties about property rights have resulted in the lack of investors' interest.

While income poverty remains high, non-income dimensions of poverty, like education, health, and access to water have shown continual improvements in terms of coverage and respondent's satisfaction with these services. From the sectoral analysis it can be inferred that improvements made in these sectors would have not been possible without large aid inflows. As seen from the Table 1 in Appendix I, within four years (1999-2003), donor sector supported rehabilitation of 310 schools and the construction of 151 new ones. School rehabilitation projects yield several benefits for the community and can reduce non-income poverty through effects on education and health. For example, school rehabilitation and reconstruction have direct positive effects on school enrolment and attendance rates of the pupils. Better school condition (heating system, new windows etc.) also improve children's health by reducing the incidence of respiratory diseases during the cold winters (Lokshin and Yemtsov, 2004). The outcomes can be illustrated by the continual increase in school enrolment as presented in the WB Poverty Assessment Report (2007). This suggests that donor assistance in reviving education services has been successful and this has had positive impacts on enrolment rates that are near-universal at the primary and secondary levels. At the same time, perinatal mortality rates have recorded a decreasing trend during 2000-2006, although situation with the health services is less satisfactory due to the reasons of under-funding and mismanagement in this sector.

In terms of equity, in principle, all Kosovars are aimed to have access to education and health care services. In practice, general access to health care services is hindered by the cost of service which is mainly related to informal payments to the medical staff; this is seen as a consequence of low salaries received by them. Furthermore, due to continuing ethnic tensions between the majority K-Albanians and K-Serbs, there is a segregation of health and education services between these two ethnicities: Serbian minority runs parallel health and education services entirely funded by the Serbian Government along with semi parallel structures

receiving funds both from Serbia and Kosovo Institutions. Non-Serb minorities like Bosniaks, Turks, Croats, and Gorans have integrated more fully into Kosovo's society and within services provided by the Kosovo Government. A persistent problem is related with access of Roma, Ashkalinj, and Egyptians (RAE) community, who are considered to have security, transport, and financial concerns that limit their access to health facilities (Bloom et al., 2006).

Figures on access to safe water, and living in safe dwellings report an increase between 2003 and 2005. During this period, there has also been an increased access to safe water in rural areas for all quintiles (WB, 2007; See Appendix I). This can be translated into better health outcomes through a reduction of water-borne diseases. The Early Warning Report (EWR) polls show an increase in the proportion of respondents satisfied with water services; education sector, although with fluctuations, tops the list of public services. These results are suggestive about improvements made in these two sectors. There is also an improvement of respondents' satisfaction with healthcare services, whereas electricity supply remains at the lowest end of the list.

Table 25. Respondents' satisfaction with Public Services in Kosovo (different opinion polls)

	2007	2008	2009	2010
Water	43	47	50	53
Education	66	47	78	57
Healthcare	38	23	45	45
KEK	14	8	22	20

Source: UNDP 2007; 2008b; 2008c; 2010. Figures are in percentages.

These improvements in non-income dimensions of poverty are however plagued with the low quality of service provision. In the education sector, there is need for continuing efforts in modernization of the education system and curriculum change as well as to induce competitive teaching to obtain better quality outcomes. There are disparities in access to indoor water tap between the richest and the poorest quintile, whereas inadequate electricity supply remains one of the most daunting issues of public service provision.

4.6. Conclusions

This chapter examined the role played by the donor community in Kosovo during the first post-conflict decade (1999-2008). It particularly evaluated the effectiveness of foreign aid in the recovery process of post-conflict Kosovo, by looking at the time and sectoral composition of aid flows in terms of emergency needs, security issues, and reconstruction efforts. In so doing, it added specificity to the analysis of aid allocation and effectiveness, conducted in Chapters 2 and 3.

Kosovo has made a remarkable progress with reconstruction efforts. The donor community managed to mobilize extensive financial support for the reconstruction of Kosovo immediately after the conflict, by spending more than one billion euros in only two years. This frontloaded aid came as a response to huge needs of the refugees to return to their homes, ensuring of overall public safety, and starting with the rebuilding of the infrastructure. It brought about considerable improvements in areas of road infrastructure, building of the local institutions, education, and health. Within a short period of time, Kosovo progressed in terms of rebuilding institutions and reviving public services.

However, failure of growth oriented policies to generate sustainable employment opportunities and reduce high rates of poverty has been disappointing. Starting from a very low base and driven by donor-supported reconstruction spending, national output grew at impressive rates of more than 20 percent in the first two years, but decelerated to moderate rates of 3-4 percent annually after 2001.

Although at high rates, poverty in Kosovo has been reported to be shallow. By properly addressing emergent needs in the first post-conflict years, the opportunity for sustainable development seemed to have been within reach. However, in some aspects of the international involvement—with privatization and energy policy being more prominent examples—the donor community was not able to design a strategy that addresses properly the

legacies of Kosovo's pre-conflict history. The donor community was effective in addressing short term issues, but seemed to have failed in producing favorable long-term results. Part of this failure can be attributed to the insufficient involvement of local stakeholders and not holding UNMIK officials accountable for their decisions and policies.

Following this elaboration, a simple conclusion would be that aid has not been effective in reducing poverty in post-conflict Kosovo. But this ignores, as Feeny (2003) rightly argues, the issue of a counterfactual: what would have been the poverty rate in the absence of large amounts of aid in the first place. Figures of post-conflict Kosovo indicate that the country has recorded a decreasing trend in perinatal and maternal mortality rates, has achieved near-universal enrolment rates for primary education, and has an increasing number for people with access to safe dwelling and drinking water.

This assessment exhibits similarities with the cross-country results from the preceding chapter in two aspects: aid boosts post-conflict growth, but the timing of the effects is ambiguous; and aid is more effective in reducing infant mortality. Similarly, Kosovo experienced an aid-driven growth decade, but with limited and ambiguous effects on employment and income poverty; at the same time, aid in Kosovo seems to have been more effective in improving non-income dimensions of poverty such as education outcomes, better housing conditions, and access to safe drinking water—all of them having positive effects in improving the quality of life.

These results highlight the existence of multiple goals in post-conflict settings, whereby different aid strategies might have a different impact on goals such as peace and security, poverty reduction, and institution building. For example, a project to train police personnel might have a high score on the conflict prevention dimension; it could have some impact on improving governance, but might have little impact on the poverty reduction objective. On the other hand, training health workers might have little impact on conflict

prevention, but a significant impact on the poverty reduction dimension (Anand, 2009). All this has produced different results in various sectors of the economy; and addressing these trade-offs is one of the crucial elements for a successful post-conflict recovery.

Consequently, the second question that arises is related to whether the existing sectoral strategy and time patterns of aid have been appropriate for a successful recovery of Kosovo. In the Kosovo context, the frontloaded aid has been more than necessary given that everything had to be built from zero. With the support of the donor community, Kosovo now has a sound banking system, a completely new pension system scheme—capital based; the economy is officially euroized since 1999 and has not experienced high inflation rates since; and a new tax system has been drafted and implemented. In terms of sectoral composition, to produce long-term favorable effects, donors' focus on sectors like health and education should have lasted for the whole decade (not only for infrastructure rehabilitation projects), given the age-structure of Kosovo.

Sound macroeconomic structure and institutional stability that were achieved in the first post-conflict decade in Kosovo seemed not to provide sufficient conditions for investment and job creation which would in turn support reduction of poverty rates. In this case, lack of success could be attributed to the persisting political risks that were related to the unresolved political status. Due to the presence of an open-ended and intrusive UN mission, lack of a clear trajectory toward political status, which had severe consequences on the issue of property rights and trade relations, and persisting tensions between the K-Albanians and K-Serbs, Kosovo seems to have missed the opportunity in attracting investments and hence unlock its export and growth potentials. As such, its economy remains dependent on external financing, notably aid and remittances.

The task of raising income and reducing poverty in Kosovo should first of all involve efforts that will lead to a sustainable political solution for Kosovo, improving its investment

climate, invest in human capital, and bring in line its production factors, which have not been fully utilized so far.

5. OVERALL CONCLUSIONS AND POLICY IMPLICATIONS

This dissertation examined the role of foreign aid in the recovery process of post-conflict countries. It particularly focused the determinants of post-conflict aid and the links between post-conflict aid, growth, and non-growth outcomes. The analysis is timely in the context of reevaluation of aid effectiveness and increasing concerns about fragile states, whereby post-conflict countries are especially significant as they are less likely to meet MDGs, but at the same time have to compete for the same pool of aid funding (with other non-conflict countries).

The contribution of this analysis to the debate about foreign aid effectiveness is threefold. First, to trace temporal patterns of post-conflict aid inflows and potential impact on recovery outcomes, I relied on both strands of aid literature: aid allocation and aid effectiveness. Second, under the same framework, I examined aid effectiveness through different recovery outcomes, such as growth, infant mortality, and good policy environments. Lastly, I combined both modes of analysis: cross-country analysis and a country case study.

These relationships are examined in three interlinked chapters (Chapters 2, 3, and 4). Chapter 2 identified the determinants of post-conflict aid, the nature of allocated aid, and their possible relationship to aid effectiveness. The preferred starting point was Kang and Meernik (2004), which employ an event study methodology, through which the calendar time is transformed into 'event time'; that is, the time when conflict ended. Thereby, donor responses to conflict affected countries can be analyzed and compared in pre-conflict as well as post-conflict years.

Chapter 3 examined the impact of aid on the process of post-conflict recovery. First, I revisited the existing evidence about aid and growth in post-conflict contexts, emphasizing the timeframe of aid and growth recovery in the first post-conflict decade. The growth regressions are then followed by the introduction of new variables, such as infant mortality rates, into the

post-conflict framework. Lastly, I tested the effect of aid in improving countries' policies and institutions by using the ICRGE index. These relationships are tested in a sample of 40 countries recovering from large civil conflicts.

The fourth Chapter examined the role played by the donor community in Kosovo during the first post-conflict decade (1999-2009). It specifically evaluated the effectiveness of aid in the recovery process of post-conflict Kosovo, by looking at the time and sectoral composition of aid flows in terms of emergency needs, security issues, and reconstruction efforts. This chapter sharpened understanding of issues related to post-conflict aid and its effectiveness in a particular post-conflict environment.

The fundamental findings of this analysis are that aid disbursed after attainment of peace is effective in reducing physical miseries such as infant mortality, and this may have favorable long-term effects on growth. In the short-term, there is some evidence that post-conflict aid supports higher growth attainment in the second post-conflict period but the results are not completely robust. Aid also supports the adoption of sound policies and this effect is positively correlated with the presence of peacekeeping missions.

Further, the econometric results on foreign aid allocation confirm concerns about donor fatigue and impact of donor interests in giving aid. Aid flows are not significantly different from aid to non-conflict countries beyond the fifth post-conflict year, and more of bilateral aid tends to flow to countries of geostrategical and political interests. The peak of aid inflows is recorded around the first post-conflict years (from the second to fifth years), although the results are not entirely robust and fixed effects estimates exhibit a marginal significance level.

The cross country evidence is supported by the case study of Kosovo. During its first post-conflict decade (1999-2008), Kosovo absorbed 2.3 billion euro in financial and technical assistance, where more than 50 percent or 300 euro per capita was spent in the first two years.

Further, Kosovo experienced an aid-driven growth decade, but with limited and ambiguous effects on employment and income poverty. At the same time, aid in Kosovo seems to have been more effective in improving non-income dimensions of poverty such as education, better housing conditions, and access to safe drinking water—all of them having positive effects in improving the quality of life. The Kosovo case highlights tensions between overarching goals in post-conflict environments, where different types of aid have had a different impact on goals such as peace recovery, poverty reduction, and institution building.

The findings of this analysis unravel the heterogeneous impact of post-conflict aid on different recovery outcomes. Although the effects of post-conflict aid on growth seem more ambiguous, in post-conflict settings, aid is more effective in saving lives, reconstructing physical and institutional infrastructure, and adopting good policies. This supports the view that aid does offset negative effects of conflict on recipient societies. These findings suggest the importance of generous aid flows during the early years after the conflict, since better absorptive capacities of aid in later periods may not be attained if a country fails to build its institutions and reconstruct its social capital. Consequently, the time-sequencing of aid should be governed by multiple goals, if it is to attain an immediate peace dividend.

Based on the main conclusions drawn, I would summarize three important points that can have policy implications for post-conflict aid. First, although controversial, aid remains an important tool for countries recovering from conflict. As such, aid is important for the development of countries, in particular for those recovering from conflict. This is supported by the empirical evidence provided in this dissertation.

Second, conclusions about the proper sequencing of aid flows must be drawn with caution since growth effects of interactions between aid and post-conflict dummies depend on the country-local capacities. Based on the empirical evidence, it should be seen with cautious as to when the supra normal growth occurs, since different countries have different

characteristics and thus a clear growth pattern in the post-conflict period cannot be taken for granted. Hence, in a post-conflict environment, for aid allocation and its sequencing, growth is important, yet not the ultimate goal of post-conflict aid.

Lastly, donors need to pay a special attention to the country characteristics and the history of the conflict in order to be able to frame a clear path towards reconciliation and development. Accordingly, recovery of the conflict affected countries should be treated in a broader context and not just as development as usual. This could be illustrated by the Kosovo case. Although the country reached sound macroeconomic indicators—stable inflation rates and budget surpluses—high rates of unemployment and poverty remain persistent. Lack of success could be related to persisting political risks and the structural weaknesses of the economy rooted back to its pre-conflict history. If the thorniest issues are not properly addressed, the post-conflict recovery process will fail to produce positive effects on peace during and beyond the first post-conflict period.

Aspects for future research

The aid effectiveness literature has experienced methodological advances in dealing with the identification of causality from aid to outcome variables and estimations in dynamic panel models. Hence, my future steps entail further research on other (new) external instruments to be able to derive robust casual conclusions from observational data.

The study on aid-growth nexus, framed in terms of Rubin Casual Model (Arndt et al., 2009), provides a strong motivation to expand the existing framework by including post-conflict variables and hence testing the robustness of the results under the counterfactual framework. However, a small sample of post-conflict countries and gaps in the data leave the researcher with a very small number of observations, after the matching between the treatment and control groups has taken place. This is an inherent problem in small samples,

whereby trade-offs between efficiency and bias prevail; this entails challenges in finding plausible matching algorithms among the group of propensity score matching estimators.

Denoting the mere presence of peacekeeping mission in conflict countries could not provide enough information about their effectiveness as some missions involve state building and transitional administrations and are expected to have a direct impact on post-conflict economies (e.g., Timor Leste, Kosovo). My future research will address this issue by distinguishing between different types of UN missions (e.g., facilitative and transformational) as done by Sambanis (2008) and interact them with aid variables to examine their impact on post-conflict societies.

Kosovo case study demonstrates the mechanisms by which post-conflict reconstruction takes place in an environment which experiences heavy presence of international community and large-scale economic assistance. However, individual post-conflict recoveries involve different trajectories and to be able to compare and contrast these recovery processes investigation of other country cases is warranted. By doing so, I will examine the role of aid in terms of the severity of post-conflict environments (type and duration of conflict, casualties etc.,); the presence and type of peacekeeping missions; and the level of local involvement in the recovery processes. This is a future research agenda.

BIBILOGRAPHY

Abouharb, M. R. and A.L. Kimball (2007). 'A New Dataset, Infant Mortality rates, 1816-2002'. *Journal of Peace Research*, 44(6): 743-54.

Adam, C., P. Collier, and V.A.B. Davies (2008). 'Postconflict Monetary Reconstruction'. *The World Bank Economic Review,* 22(1): 87-112.

Addison, T. (2000). 'Aid and Conflict'. In F. Tarp and P. Hjertholm (eds), *Foreign Aid and Development: Lessons Learnt and Directions for the Future*. New York: Routledge.

Addison, T. (2004). 'Perspective Paper 3.2'. In B. Lomborg (ed.), *Global Crises, Global Solutions*. Cambridge: Cambridge University Press.

Addison, T., and M. McGillivray (2004). 'Aid to Conflict-Affected Countries: Lessons for Donors'. *Conflict, Security, and Development* 4(3): 347-67.

Addison, T. and T. Brück (2009). 'Achieving Peace, Participation and Prosperity'. In T. Addison, and T. Brück (eds), *Making Peace Work: The Challenges of Social and Economic Reconstruction.* New York: Palgrave Macmillan.

Agjencia për mbështetjen e NVM-ve (2009). *Ndërtojnë të ardhmën: Raport Vjetor 2009.* Prishtinë: Ministria e Tregtisë dhe Industrisë.

Alesina, A. and B. Weder (2002). 'Do Corrupt Governments Receive Less Foreign Aid?'. American Economic Review, 92(4): 1126-37.

Alesina, A. and D. Dollar (2000). 'Who gives foreign aid to whom and why'. *Journal of Economic Growth*, 5(1): 33-63.

Anand, P.B. (2009). 'Infrastructure Development in Post-Conflict Reconstruction'. In T. Addison, and T. Brück (eds), *Making Peace Work: The Challenges of Social and Economic Reconstruction.* New York: Palgrave Macmillan.

Arcand, J.-L. and L. Chauvet (2001). 'Foreign Aid, Rent-Seeking Behavior, and Civil War'. *CERDI-CNRS, Université d'Auvergne Working Paper,* No. 200327.

Arellano, M. and S. Bond (1991). 'Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations'. *The Review of Economic Studies*, 58(2): 277-79.

Arndt C., S. Jones and F. Tarp (2009). 'Aid and Growth: Have We Come Full Circle?'. *UNU-WIDER Discussion Paper No. 2009/05*.

Arndt C., S.Jones and F. Tarp, (2006). 'Aid and Development: The Mozambican Case'. *Discussion Papers* 06-13, University of Copenhagen.

Augestad Knudsen, R. (2010). *Privatization in Kosovo: The International Project 1999-2008*. Norwegian Institute of International Affairs.

Balla, E. and G. Y. Reinhardt (2008). 'Giving and Receiving Foreign Aid: Does Conflict Count?'. *World Development*, 36(12): 2566-86.

Baltagi, B. H. and P.X. Wu (1999). 'Unequally Spaced Panel Data Regression with AR(1) Disturbances' *Econometric Theory*, 15: 814-23.

Baltagi, Badi H. (2005). *Econometric Analysis of Panel Data*, Chichester: John Wiley & Sons Ltd.

Bandyopadhyay, S., and H. J. Wall (2007). 'The Determinants of Aid in the Post-Cold War Era'. In Sajal Lahiri (ed) *Theory and Practice of Foreign Aid*. Amsterdam: Elsevier.

Bauer, P. (1991). *The Development Frontier—Essays in Applied Economics*, London: Harvester Wheatsheaf.

Baum, C. F., M. E. Schaffer, and S. Stillman (2003). 'Instrumental Variables and GMM: Estimation and Testing', *Boston College Working Papers in Economics 545*.

Baum, C. F., M. E. Schaffer, and S. Stillman (2007). 'Enhanced routines for instrumental variables/GMM estimation and testing', *Boston College Working Papers in Economics 667*.

Beck, N. (2001). 'Time-Series Cross-Section Data: What Have We Learned in the Past Few Years?'. *Annual Review of Political Science*, 4(1): 271-93.
Berthélemy, J.-C. (2006). 'Bilateral Donors' Interest vs. Recipients' Development Motives in Aid Allocation: Do All Donors Behave the Same?'. *Review of Development Economics* 10(2):179–94.
Berthélemy, J.-C. and A. Tichit (2004). 'Bilateral Donors' Aid Allocation Decisions—A Three Dimensional Panel Analysis'. *International Review of Economics and Finance*, 13(3): 253–74
Bigombe, B., P. Collier, and N. Sambanis (2000). 'Policies for Building Post-Conflict Peace'. *Journal of African Economics*, 9(3): 323-48.
Bloom, J.D., I. Hoxha, D. Sambunjak, and E. Sondorp (2006). 'Ethnic segregation in Kosovo's post-war health care system'. *European Journal of Public Health*, 17(5): 430–36.
Boone, P. (1996). 'Politics and the effectiveness of foreign aid'. *European Economic Review*, 40(2): 289-329.
Bourguignon, F., and M. Sundberg (2007). 'Aid Effectiveness: Opening the Black Box'. *American Economic Review*, 97(2): 316–21.
Bun, M., and F. Windmeijer (2007). 'The Weak Instrument Problem of the System GMM Estimator in Dynamic Panel Data Models'. *CeMMAP Working Paper* CWP08/7.
Burnside, C., and D. Dollar (2000). 'Aid, Policies, and Growth'. *American Economic Review*, 90(4): 847–68.
Carnahan, M., W. Durch, and S. Gilmore (2006). *Economic Impact of Peacekeeping*. Peace Dividend Trust for the Department of Peacekeeping Operations of the United Nations, available at http://www.peacedividendtrust.org.
Chang, C. C., E. Fernandez-Arias, and L. Servén (1998). 'Measuring Aid Flows: A New Approach'. *Inter-American Development Bank, Working Paper 387*.
Chauvet, L. (2003). 'Socio-political instability and the allocation of international aid by donors'. *European Journal of Political Economy*, 19(1): 33-59.
Chen S., N. V. Loayaza, and M. Reynal-Querol (2008). 'The aftermath of civil conflict'. *The World Bank Economic Review*, 22(1): 63-85.
Chenery, H. B., and A. M. Strout (1966). 'Foreign Assistance and Economic Development'. *American Economic Review*, 56(4): 679-733.
Claessens, S., D. Cassimon, and B.van Campenhout (2009). 'Evidence on Changes in Aid Allocation Criteria'. *The World Bank Economic Review*, 23(2): 185-208.
Clemens, M. and S. Bazzi (2009). 'Blunt Instruments: On Establishing the Causes of Economic Growth,' *Working Papers 171, Center for Global Development*.
Cogneau, D. and J.D. Naudet (2006). 'Who Deserves Aid? Equality of Opportunity, International Aid, and Poverty Reduction'. *World Development*, 35(1): 104-20.
Collier, P. (2005). 'Economic Policy in Post-Conflict Societies'. In A.K. Fosu and P. Collier (eds.), *Post-Conflict Economies in Africa*. New York: Palgrave Macmillan.
Collier, P. (2007). *The Bottom Billion: Why the Poorest Countries are Failing and What Can be Done About It*. Oxford: Oxford University Press.
Collier, P. (2009). 'Post-Conflict Recovery: How Should Strategies Be Distinctive?'. *Journal of African Economies*, 18(1): 53-76.
Collier, P., and A. Hoeffler (2002). 'Aid, Policy and Peace: Reducing the Risks of Civil Conflict'. *Defence and Peace Economics*, 13(6): 435-50.
Collier, P., and D. Dollar (2002). 'Aid allocation and poverty reduction'. *European Economic Review*, 26(8): 475–500.
Collier, P., and A. Hoeffler (2004). 'Aid, Policy and Growth in Post-Conflict Societies'. *European Economic Review*, 48 (5): 1125–45.

Collier, P., and A. Hoeffler (2004a). 'Greed and Grievance in Civil War'. *Oxford Economic Papers*, 56: 563-92.
Collier, P., and J.Dehn (2001). 'Aid, Shocks, and Growth'. *Policy Research Working Paper 2688. World Bank*, Washington D.C.
Collier, P., and V.L. Elliott, H. Hegre, A. Hoeffler, M. Reynal-Querol, and N.Sambanis (2003). *Breaking the Conflict Trap: Civil War and Development Policy*. The World Bank and Oxford University Press.
Cooperative Housing Foundation CHF (2000). *Kosovo Winterization Program - Kosovo Final Report*. Silver Spring MD USA, available at http://pdf.usaid.gov/pdf_docs/PDABS315.pdf
Dalgaard, C. J., H. Hansen, and F. Tarp (2004). 'On The Empirics of Foreign Aid and Growth'. *Economic Journal*, 114(496): 191-216.
Dalgaard, C.J., and H. Hansen (2000). 'On Aid, Growth, and Good Policies'. *CREDIT Research Paper*, University of Nottingham.
Dallago, B., and M. Uvalic (1998). 'The distributive consequences of nationalism: The case of Former Yugoslavia'. *Europe-Asia Studies*, 50(1): 71-90.
Davies, V.A.B., (2008). 'The Macroeconomics of Post-Conflict Economic Recovery'. Background Paper for *Post-Conflict Economic Recovery: Enabling Local Ingenuity*, UNDP, Bureau for Crisis Prevention and Recovery, New York. Available at: http://www.undp.org/cpr/content/economic_recovery/Background_4.pdf
Del Castillo, G. (2001). 'Post-Conflict Reconstruction and the Challenge to International Organizations: The Case of El Salvador'. *World Development*, 29(12): 1967-985.
Del Castillo, G. (2008). *Rebuilding War-Torn States: The Challenge of Post-Conflict Economic Reconstruction*. New York: Oxford University Press.
Demekas, D., J. McHugh, and T. Kosma (2002). 'The Economics of Post Conflict Aid'. *IMF Working Paper 02/198*, International Monetary Fund.
Demirel-Pegg, T. and J. Moskowitz (2009). 'US Aid Allocation: The Nexus of Human Rights, Democracy, and Development'. *Journal of Peace Research*, (46)2: 181-98.
Department of Reconstruction (2001). *Partnership in Kosovo: Reconstruction 1999 – 2000 An overview by the Department of Reconstruction*. Available at: http://ec.europa.eu/enlargement/archives/seerecon/kosovo/documents/partnership.pdf.
Donor Coordination Center (2008). *Aid Effectiveness-Paris Declaration Survey*. Prishtina: Kosovo Government (internal document).
Dowling, J.M. and U. Hiemenz (1985). 'Biases in the Allocation of Foreign Aid: Some New Evidence'. *World Development*, 13(4): 535-41.
Doyle, M.W., and N. Sambanis (2000). 'International Peacebuilding: A Theoretical and Quantitative Analysis'. *American Political Science Review*, 94(4):779-801.
Doyle, M. W., and N. Sambanis (2007). 'Peacekeeping Operations'. In Thomas G. Weiss and Sam Daws (eds.), *The Oxford Handbook on the United Nations*. New York: Oxford University Press.
Dreher, A., F. Mölders, and P. Nunnekamp (2010). 'Aid Delivery through Non-Governmental Organisations: Does the Aid Channel Matter for the Targeting of Swedish Aid?'. *World Economy*, 33(2): 147:76.
Dreher. A., P. Nunnenkamp, and R. Thiele (2008). 'Does Aid for Education Educate Children? Evidence from Panel Data'. *World Bank Economic Review*, 22(2): 291-314.
Dudley, L. and C. Montmarquette (1976). 'A Model of the Supply of Bilateral Foreign Aid'. *American Economic Review*, 66(1): 132-42.
Duponchel, M. (2008). 'Can Aid Break the Conflict Trap?'. University Paris 1 Pantheon-Sorbonne and CNRS, available at http://www.csae.ox.ac.uk/conferences/2008-EDiA/papers/316-Duponchel.pdf

Easterly, W. (2003). 'Can Foreign Aid Buy Growth?'. *Journal of Economic Perspectives*, 17(3): 23–48.

Easterly. W., R. Levine, and D. Roodman (2004). 'New Data, New Doubts: A Comment on Burnside and Dollar's "Aid, Policies, and Growth (2000)".' *American Economic Review* 94(3): 774-780.

Economic Policy Office (2006). '*UNMIK's Impact on the Kosovo Economy: Spending Effects 1999-2006 and Potential Consequences of Downsizing'*. UNMIK European Union Pillar, available at: http://www.unmikonline.org/archives/euinkosovo/upload/EPO%20UNMIK%20Impact%20on%20Kosovo%20Economy%20July%202006%20LR.pdf.

Edwards, S. (1998). 'Openness, Productivity and Growth: What Do We Really Know?'. *The Economic Journal*, 108(447): 383-98.

Elbadawi, I.A. (2008). 'Postconflict Transitions: An Overview'. *The World Bank Economic Review*, 22(1): 1-7.

Elbadawi, I.A., L. Kaltani, and K. Schmidt-Hebbel (2008). 'Foreign Aid, the Real Exchange Rate, and Economic Growth in the Aftermath of Civil Wars'. *The World Bank Economic Review*, 22(1): 113-40.

Enti i Statistikës së Kosovës (2009). *Kosova në Shifra 2008, Seria 1: Statistikat e Përgjithshme*. Prishtinë.

Fearon, J.D., and D.D. Laitin (2001). 'Ethnicity, Insurgency, and Civil War'. *American Political Science Review*, 97(1): 75-90.

Feeny, S. (2003). 'The Impact of Foreign Aid on Poverty and Human Well Being in Papua New Guinea'. *Asia-Pacific Development Journal*, 10(2): 73-93.

Feeny, S., and M. McGillivray (2008). 'What Determines Bilateral Aid Allocations? Evidence from Time Series Data'. *Review of Development Economics*, 12(3): 515-29.

Flores, T.E., and I. Nooruddin (2009). 'Financing the peace: Evaluating World Bank post-conflict assistance programs'. *The Review of International Organizations* 4(1): 1-27.

Fukuda-Parr, Sakiko (2010). 'Conflict Prevention as a Policy Objective of Development Aid'. In G. Mavrotas (ed.), *Foreign Aid for Development: Issues, Challenges, and the New Agenda*. New York: Oxford University Press.

Gilles, N., and B. Yontcheva (2006). 'Does NGO Aid Go to the Poor? Empirical Evidence from Europe'. *IMF Working Paper* 06/39, International Monetary Fund.

Gleditsch, N. P., P.Wallensteen, M. Eriksson, M. Sollenberg, and H. Strand (2002). 'Armed Conflict 1946–2001: A New Dataset'. *Journal of Peace Research*, 39(5): 615–37.

Grossman, H.I., (1992). 'Foreign Aid and Insurrections'. Peace and *Defence Economics*, 3(4): 275-88.

Guidolin, M., and E. La Ferrara (2007). 'Diamonds are Forever, Wars Are Not. Is Conflict Bad for Private Firms?'. *American Economic Review*, 97(5): 1978-993.

Guillaumont, P., and L. Chauvet (2001). 'Aid and Performance: A Reassessment'. *Journal of Development Studies*, 37(6): 66–92.

Guillaumont, P. (2008). 'Adapting Aid Allocation Criteria to Development Goals'. *CERDI Working Papers* 200810

Hansen, H., and F.Tarp (2000). 'Aid Effectiveness Disputed'. *Journal of International Development*, 12(3): 375-98.

Hansen, H. and F. Tarp (2001). "Aid and Growth Regressions." *Journal of Development Economics* 64(2): 547–70.

Hoeffler, A., and M. Reynal-Querol (2003). 'Measuring the Costs of Conflict'. Centre for the Study of African Economies and St Antony's College, University of Oxford.

Howard, L. M., (2007), *UN Peacekeeping in Civil Wars*, Cambridge: Cambridge University Press.
Imbens, G. W., and J. M. Wooldridge (2009). 'Recent Developments in the Econometrics of Program Evaluation'. *Journal of Economic Literature*, 47 (1): 5–86.
International Management Group (1999). *Emergency Assessment of Damaged Housing and Local/village Infrastructure in Kosovo*. European Commission Damage Assessment Kosovo. Available at: http://www.img-int.org/Central/Public08/Documents.aspx.
Kang, S., and J. Meernik (2004). 'Determinants of Post-Conflict Economic Assistance'. *Journal of Peace Research*, 41(2): 149-66.
Kaufmann, D., and A. Kraay (2008). 'Governance Indicators: Where Are We, Where Should We Be Going?'. *Policy Research Working Paper Series*, 4370, The World Bank.
Kosovo Development Strategy and Plan (2006). *Sectoral and Cross-Sectoral Strategies* KDSP Secretariat (internal draft). Prishtina.
Keohane, R.O. (1967). 'The study of political influence in the General Assembly'. *International Organization*, 21(2): 221–37.
King, I., and W. Mason (2006). *Peace at Any Price: How the World Failed Kosovo*. London: Hurst.
Knack, S., and P.Keefer (1995). 'Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures'. *Economics and Politics*, 7(3):207-27.
Knack, S. (2001). 'Aid Dependence and the Quality of Governance'. *Southern Economic Journal*, 68(2): 310–329.
Knack, S. (2004). 'Does foreign aid promote democracy?'. *International Studies Quarterly*, 48 (1):251–66.
Kosack, S. (2003). 'Effective Aid: How Democracy Allows Development Aid to Improve the Quality of Life'. *World Development*, 31(1): 1-22.
Kosovar Stability Initiative (2007). *Reconstruction Survey, Kosovo 2007*. Pristina: IKS and London: Tiri.
Kristof, N. (2006). 'Foreign Aid Has Flaws. So What?' *The New York Times*, June 13.
Lokshin, M., and R. Yemtsov (2004). 'Evaluating the Impact of Infrastructure Rehabilitation Projects on Household Welfare in Rural Georgia'. *Policy Research Working Paper Series* 3155, The World Bank.
Maizels, A., and M. K. Nissanke (1984). 'Motivations for Aid to Developing Countries'. *World Development*, 12(9): 879-900.
Marengelen, V. (2000). *Ekonomia e Kosovës në Vargonjtë e Politikës Jugosllave: 1945–1990*. Tiranë: Mësonjëtorja e Parë.
Marshall, M.G., and T. R. Gurr (2005). *Peace and Conflict: A Global Survey of Armed Conflicts, Self-Determination Movements, and Democracy*. Center for International Development and Conflict Management, University of Maryland.
Marshall, M. G., and K. Jaggers (2009). *Polity IV Project: Political Regime Characteristics and Transitions, 1800-2007*. Available at: http://www.systemicpeace.org/inscr/inscr.htm as found on 10 March 2009.
Masud, N., and B. Yontcheva (2005). 'Does Foreign Aid Reduce Poverty? Empirical Evidence from Nongovernmental and Bilateral Aid'. *IMF Working Paper* 05/100, International Monetary Fund.
Mavrotas, G. (2010). *Foreign Aid for Development: Issues, Challenges, and the New Agenda*, New York: Oxford University Press.
McGillivray, M. (2003). 'Modelling Aid Allocation: Issues, Approaches and Results'. *UNU-WIDER Discussion Paper* 2003/49, UNU-WIDER, Helsinki.

McGillivray, M. (2004). 'Descriptive and prescriptive analyses of aid allocation: Approaches, issues, and consequences'. *International Review of Economics and Finance*, 13(3): 275-92.
McGillivray M., and F. Noorbakhsh (2007). 'Aid, Conflict and Human Development'. Business School - Economics, University of Glasgow, Working Papers 2007-03.
McGillivray, M., and H. White (1993). 'Explanatory Studies of Aid Allocation among Developing Countries: A Critical Survey'. *Institute of Social Studies Working Paper* 148, The Hague.
McGillivray, M., and H.White (1994). 'Development criteria for the allocation and aid and assessment of donor performance'. *CREDIT Research Paper*, 94/7, University of Nottingham.
McKinlay, R.D., and R. Little (1979). 'The US aid relationship: a test of the recipient need and the donor interest models'. *Political Studies*, 27(2): 236-250.
Messick, S. (2000). *Kosovo (FRY) Landmine Impact Survey*, Survey Action Center V.V.A.f. Washington DC. Available at: http://www.mineaction.org/docs/1006648832_.asp.
Ministry of Education Science and Technology (2008). *Indicators and Statistical data in Education: Data School Years 2004/05, 05/06, 06/07*. Prishtina: Kosovo Government.
Ministry of Finance and Economy (2004). *Government of Kosovo-Budget 2004*. Prishtina: Kosovo Government.
Ministry of Finance and Economy (2004a). *The Impact of Donor activities on the Economic Development of Kosova.* Prishtina: Kosovo Government.
Ministry of Finance and Economy (2005). *Report on Donor Activities: Kosovo 2005 Report*. Prishtina: Kosovo Government.
Mishra, P., and D. L. Newhouse (2007). 'Health Aid and Infant Mortality'. *IMF Working Paper*, 07/100, International Monetary Fund.
Mlambo, M. K., A. B. Kamara, and M. Nyende (2009). 'Financing Post-Conflict Recovery in Africa: The Role of International Development Assistance'. *Journal of African Economies*, 18(1): 53-76.
Ministry of Health (2008). *Perinatal Situation in Kosovo, 2000–2006*. Joint project with WHO, UNFPA, UNICEF, KOGA. Prishtina.
Moalla-Fetini, R., H. Hatanpää, S. Hussein, and N. Koliadina (2004). *Kosovo-Gearing Policies Toward Growth and Development*. International Monetary Fund. Available at: http://www.imf.org/external/pubs/ft/kosovo/2005/gpgd.pdf.
Mosley, P. (1987). *Overseas Aid*: *Its Defence and Reform*. Brighton: Wheatshed Books.
Moyo, D. (2009). Dead Aid: *Why Aid is not Working and How there is Another Way for Africa*. London: Penguin Books.
Nahem J. and S. Matthew (2004), *Governance Indicators: A Users Guide*. Available at http://www.undp.org/oslocentre/docs04/UserGuide.pdf.
Narten, J. (2009). 'Assessing Kosovo's Postwar Democratization: Between External Imposition and Local Self-Government'. *Taiwan Journal of Democracy*, 5(1): 127-162.
Neter, J., W., Wasserman, and M. H. Kutner (1989). *Applied Linear Regression Models*. Irwin: Homewood, IL.
Neumayer, E. (2003). 'What factors determine the Allocation of Aid by Arab Countries and Multilateral Agencies?'. *Journal of Development Studies*, 39(4): 134-147.
Nilsson, A. (2005). *Reintegrating Ex-Combatants in Post-War Societies*. Stockholm: Swedish International Development Cooperation Agency (Sida),
Nunnenkamp, P. and R. Thiele (2009), 'Sind Nichtregierungsorganisationen di besseren Entwicklungshelfer?'. *Arbeitspapier* 1484, Institut für Weltwirtschaft, Kiel.

Nye, J.S. Jr (1997) *Understanding International Conflicts: An Introduction to Theory and History*. New York: Addison Wesley Longman.
Nye, J. S. Jr (1999). 'Redefining the National Interest'. *Foreign Affairs*, 78(4): 22-35.
Obwona, M., and M. Guloba (2009). **'**Poverty Reduction Strategies During Post-conflict Recovery in Africa'. *Journal of African Economies*, 18(1): 77-98.
Organization for Economic Co-operation and Development (2007). *Glossary of Statistical Terms*. OECD, Paris. Available at: http://stats.oecd.org/glossary/.
Özerdem A., and S. Barakat (2005). 'Impact of reintegration of former KLA combatants in the post-war recovery of Kosovo'. *The International Journal of Peace Studies*, 10(1): 27-45.
Özerdem A. (2004). 'Lessons learned from the reintegration of former Kosovo Liberation Army combatants'. *Development in Practice*, 14(3): 440-444.
Papanek, G.F. (1972). 'The effects of aid and other resource transfers on savings and growth in less developed countries'. *Economic Journal*, 82(327): 934-50.
Papanek, G.F. (1973). 'Aid, foreign private investment, savings, and growth in less developed countries'. *Journal of Political Economy*, 81(1): 120:130.
Pozhidaev, D., and R. Andzhelich (2005). *Beating Swords into Plowshares: Reintegration of Former Combatants in Kosovo*. Center for Political and Social Research, Prishtina. Available at: http://unddr.org/docs/Beating%20Swords%20Into%20Plowshares.pdf.
Praxis Group, the (2002). *Willing To Listen: An Evaluation of the United Nations Mine Action Programme in Kosovo 1999-2001*. The Praxis Group, Geneva: Ltd.Riverside.
Radelet, S., M. Clemens, and R. Bhavnani (2006). 'Aid and Growth: The Current Debate and Some New Evidence'. In P. Isard, L. Lipschitz, A. Mourmouras, and B. Yontcheva (eds.), *The Macroeconomic Management of Foreign Aid: Opportunities and Pitfalls*. Washington D.C: International Monetary Fund.
Rajan R.G., and A. Subramanian (2008). 'Aid and Growth: What does the cross-country evidence really show?'. *The Review of Economics and Statistics*, 90(4): 643-665.
Riinvest (1998). *Economic Activities and Democratic Development of Kosova*. Prishtina.
Roodman, D. (2007). 'Macro Aid Effectiveness Research: A Guide for the Perplexed'. *Center for Global Development Working Paper*, 134.
Roodman, D. (2007). 'The Anarchy of Numbers: Aid, Development, and Cross-Country Empirics.' *World Bank Economic Review* 21(2): 225-77.
Russett, B. (1993). *Grasping the Democratic Peace*. Princeton, NJ: Princeton University Press.
Sachs, J. D., and A. M. Warner (1995). 'Economic Convergence and Economic Policies'. *NBER Working Papers* 5039, National Bureau of Economic Research, Inc.
Sambanis, N. (2008). 'Short- and Long-Term Effects of United Nations Peace Operations'. *The World Bank Economic Review*, 22(1): 9-32.
Sambanis, N. (2004). 'What Is Civil War? Conceptual and Empirical Complexities of an Operational Definition'. *Journal of Conflict Resolution*, 48(6): 814-858.
Saunders, S. (2003). 'Kosovo, After the UNMACC and Beyond'. *Journal of Mine Action*, 7(2): 36–38.
Scott, J.J. (2002). 'The Kosovo MACC: The Most Successful Mine Action Program Ever'. *Journal of Mine Action*, 6(1): 26–32.
Singer, J. D., and M. Small (1972). *The wages of war, 1816-1965: A statistical handbook*. New York: John Wiley.
Singer, J. D., and M. Small (1994). *The Correlate of War Project: International and Civil War Data, 1816–1992*. Inter-University Consortium for Political and Social Research, Ann Arbor, MI.

Small, M., and J. D. Singer (1982). *Resort to arms: International and civil war, 1816-1980*. Beverly Hills, CA: Sage.
Suhrke, A., E.Villanger and S.L. Woodward (2005). 'Economic Aid to Post-Conflict Countries: A Methodological Critique of Collier and Hoeffler,' *CMI Working Paper* 2005: 4, Chr. Michelsen Institute Development Studies and Human Rights.
Svensson, J. (1999). 'Aid, Growth and Democracy'. *Economics and Politics* 11(3): 275–97.
Svensson, J. (2000). 'Foreign Aid and Rent-Seeking'. *Journal of International Economics*, 51(2): 437–61.
Tarnoff, C. (2001). *Kosovo: Reconstruction and Development Assistance*. CRS Report for Congress. Congressional Research Service, The Library of Congress.
Tarp, F. (2010). 'Aid, growth and development'. In G. Mavrotas (ed.), *Foreign Aid for Development: Issues, Challenges and the New Agenda*. New York: Oxford University Press.
Tavares, J. (2003). 'Does foreign aid corrupt?'. *Economics Letters*, 79(1): 99-106.
Thorbecke, E. (2000). 'The Evolution of the development doctrine and the role of foreign aid, 1950-2000'. In F. Tarp and P. Hjertholm (eds.), *Foreign Aid and Development: Lessons learnt and directions for the future*. New York: Routledge.
Trumbull, W.N., and H. J. Wall (1994). 'Estimating aid-allocation criteria with panel data'. *Economic Journal*, 104(425): 876-82.
United Nations Development Program (2004). *The Rise of the Citizen: Challenges and Choices*. Kosovo Human Development Report, Prishtina. Available at: http://hdr.undp.org/fr/rapports/national/europecei/kosovo/kosovo_2004_en.pdf
United Nations Development Program (2006). *A New Generation for a new Kosovo*. Kosovo Human Development Report, Prishtina. Available at: http://www.ks.undp.org/repository/docs/hdr_eng.pdf
United Nations Development Program (2007). *Early Warning Report Kosovo*. Report no 18. Prishtina.
United Nations Development Program (2007a). *Energy for development*. Kosovo Human Development Report, Prishtina. Available at: http://www.ks.undp.org/repository/docs/KHDR_eng_opt.pdf.
United Nations Development Program (2008). *Post-Conflict Economic Recovery: Enabling Local Ingenuity*. Bureau for Crisis Prevention and Recovery. Available at: http://www.undp.org/cpr/content/economic_recovery/PCERreport.pdf.
United Nations Development Program (2008a). *Civil Society and Development*. Kosovo Human Development Report, Prishtina. Available at: http://www.ks.undp.org/repository/docs/HDR_final_eng_small.pdf.
United Nations Development Program (2008b). *Early Warning Report Kosovo*. Report no 20/21 Special Edition. Prishtina.
United Nations Development Program (2010). *Early Warning Report Kosovo*. Report no 28. Prishtina.
United Nations High Commission on Refugees (1999). 'CR Fact Sheet on Kosovo Relief Effort'. USIA, Available at: http://www.ess.uwe.ac.uk/kosovo/Kosovo-Refugees93.htm.
United Nations (1996). *The Blue Helmets: A Review of United Nations Peace-keeping*, Department of Public Information, New York.
Wall, H.J. (1995). 'The Allocation of Official Development Assistance'. *Journal of Policy Modeling*, 17(3): 307-14.
White, H., and M. McGillivray (1995). 'How well is aid allocated? Descriptive measures of aid allocation: A survey of methodology and results'. *Development and Change*, 26(1): 163–83.

Wittkopf, E.R. (1973). 'Foreign Aid and United Nations Votes: A Comparative Study'. *The American Political Science Review*, 67(3): 868-88.

World Bank (2010). World Development Indicators CD-ROM. World Bank, Washington DC.

World Bank (2004). *Kosovo Economic Memorandum, Report No. 28023-KOS*. Poverty Reduction and Economic Management Unit Europe and Central Asia Region.

World Bank (2007). *Kosovo Poverty Assessment, Volume I: Accelerating Inclusive Growth to Reduce Widespread Poverty, Report No. 39737-XK*. Poverty Reduction and Economic Management Unit Europe and Central Asia Region.

World Bank (2010). *Kosovo Unlocking Growth Potential: Strategies, Policies, Actions, Report No. 53185-XK*. Poverty Reduction and Economic Management Unit, Europe and Central Asia Region.

APPENDIX A

Extended dataset based on Kang and Meernik (2004); conflict/country characteristics

Conflict	Year/conflict episodes	Intensity of Violence	Type of conflict	External military intervention by OECD country/ies	GDP per capita (when conflict started)	Political regime (when conflict started)
Iran (Kurdistan)	1979; 1990; 1993; 1996	High	Intrastate (civil)		$1747; $1292; $1422; $1485	
Philippines	1997	High	Intrastate (civil)		$970	Democracy
India vs. Pakistan	1984; 1987; 1989	High	Interstate		India: $251; $272; $305 Pakistan: $378; 422; $453	Democracy (for Pakistan, beyond 1987)
Paraguay	1989	High	Intrastate (civil)		$1404	
Myanmar (Karen)	1995	High	Intrastate (civil)		n/a	
Myanmar (Karen)	1992; 1996	Low	Intrastate (civil)		n/a	
Myanmar	1990; 1994	High	Intrastate (civil)		n/a	
Myanmar (Arakan)	1991; 1994	Low	Intrastate (civil)		n/a	
Myanmar (Mon)	1990; 1996	Low	Intrastate (civil)		n/a	
India	1990	High	Intrastate (civil)		$317	Democracy
Yemen, AR	1980	High	Intrastate (civil)		n/a	
Thailand	1974	High	Intrastate (civil)		$600	
Argentina	1974	Low	Intrastate (civil)		$9116	Democracy
Argentina	1976	High	Intrastate (civil)		$6838	
India (Nagaland)	1992; 2000	High	Intrastate (civil)		$324; $452	Democracy
Iraq	1982; 1987	Low	Intrastate (civil)		n/a	
Iraq	1991	High	Intrastate (civil)		n/a	
Lebanon	1975; 1982;	Low	Intrastate (civil)		n/a	
Lebanon	1985; 1989	High	Intrastate (civil)	Yes	n/a; $2441	
Malaysia	1974; 1981	Low	Intrastate (civil)		$1399	
Myanmar (Shan)	1994	High	Intrastate (civil)		n/a	
Ethiopia	1972	High	Intrastate (civil)		n/a	
Somalia vs. Ethiopia	1973; 1983; 1987	Low	Interstate		Somalia: $493; $195; $198 Ethiopia: n/a; $140; $134	
Iraq (Kurdistan)	1973; 1995	High	Intrastate (civil)			
Venezuela	1992	Low	Intrastate (civil)		$5366	Democracy
Congo, DR (Zaire)	1977	High	Intrastate (civil)		$283	
Burundi	1991	Low	Intrastate (civil)		$156	
Chad	1976; 1986; 1989; 1997	High	Intrastate (civil)	Yes	$206; $180; $195; $175;	
Indonesia (West Papua)	1976	High	Intrastate (civil)		$313	
Peru	1981	High	Intrastate (civil)		$2359	Democracy
Cambodia vs. Thailand	1977	Low	Interstate		Cambodia: n/a Thailand: $703	
Ghana	1981; 1983	Low	Intrastate (civil)		$218; $180	
Syria	1979	Low	Intrastate (civil)		$932	
Syria	1982	High	Intrastate (civil)		$1044	
Cambodia	1978	High	Intrastate (civil)		n/a	
Egypt vs. Israel (Suez/Sinai)	1973	High	Interstate	Yes	Egypt: $573 Israel: $10842	Israel: democracy
Israel vs. Syria (Golan heights)	1973	High	Interstate	Yes	Syria: $625	
Guinea	2000	Low	Intrastate (civil)		$369	
Sudan	1976	Low	Intrastate (civil)		$327	
Sri Lanka	1989	High	Intrastate (civil)		$548	Democracy
Uganda	1974; 1978	Low	Intrastate (civil)		n/a	
El Salvador	1979	Low	Intrastate (civil)		$2184	
El Salvador	1981; 1991	High	Intrastate (civil)		$1299; $1051	
DR, Yemen, PR Yemen, AR Yemen (common border)	1978	Low	Interstate		n/a	
Chile	1973	Low	Intrastate (civil)		$2147	
Bangladesh	1975	Low	Intrastate (civil)		$227	
Bangladesh	1988	High	Intrastate (civil)		$272	
Cyprus vs. Turkey	1974	High	Interstate		Cyprus: n/a	Cyprus: Democracy
Iran vs. Iraq	1974	Low	Interstate		Iran: $1943 Iraq: n/a	

Iran vs. Iraq	1980	High	Interstate		Iran: $1464 Iraq: n/a	
Pakistan (Baluchistan)	1974; 1975	High	Interstate		$279; $282	Democracy
Eritrea	1997; 1999	Low	Intrastate (civil)		$212	
Angola	1975; 1998	High	Intrastate (civil)		n/a; $650	
Cambodia vs. DR of Vietnam (common border)	1975	Low	Interstate		n/a	
Ethiopia (Ogaden)	1976; 1996; 1998	High	Intrastate (civil)		n/a; $120; $114	
Indonesia (East Timor)	1975; 1992; 1997	High	Intrastate (civil)		$303; $691; $906	
Morocco (Western Sahara)	1975	High	Intrastate (civil)		$825	
Mozambique	1977	Low	Intrastate (civil)		n/a	
Mozambique	1981	High	Intrastate (civil)		$191	
Afghanistan	1978	High	Intrastate (civil)		n/a	
China vs. Vietnam	1978	Low	Interstate		China: $164 Vietnam: n/a	
China vs. Vietnam	1983; 1986	High	Interstate		China: $227; $310 Vietnam: n/a; $202	
India (Tripura)	1978; 1992; 1995	Low	Intrastate (civil)		$231; $324; $372	Democracy
Nicaragua	1978; 1981	High	Intrastate (civil)		$1457; 1078	
Somalia	1978; 1982	Low	Intrastate (civil)		$208; $206	
Somalia	1986; 2001	High	Intrastate (civil)		$210; n/a	
Equatorial Guinea	1979	Low	Intrastate (civil)		n/a	
Iran	1986; 1991; 1997; 1999	High	Intrastate (civil)		$1291; $1431; $1511; $1535	
Iran (Arabistan)	1979	Low	Intrastate (civil)		$1747	
Saudi Arabia	1979	Low	Intrastate (civil)		$15941	
Liberia	1980; 1989	Low	Intrastate (civil)		$744; $409	
Liberia	1991	High	Intrastate (civil)		$176	
Tunisia	1980	Low	Intrastate (civil)		$1350	
Gambia, The	1981	Low	Intrastate (civil)		$327	Democracy
South Africa	1981	High	Intrastate (civil)		$3561	Democracy
South Africa	1982; 1985	Low	Intrastate (civil)		$3459; $3262	Democracy
Argentina vs. UK (Malvinas/Falkland)	1982	Low	Interstate	Yes	$6565	
India (Manipur)	1982; 1992	Low	Intrastate (civil)		$235; $324	Democracy
Kenya	1982	Low	Intrastate (civil)		$424	
Chad vs. Nigeria	1983	Low	Interstate		Chad: $164 Nigeria: $347	Nigeria: Democracy
Grenada vs. US	1983	Low	Interstate		$2029	
India (Punjabi)	1983	Low	Intrastate (civil)		$246	Democracy
India (Punjabi)	1987	High	Intrastate (civil)		$272	Democracy
Sri-Lanka (Eealam)	1984	Low	Intrastate (civil)		$506	Democracy
Sri-Lanka (Eealam)	1985; 2001	High	Intrastate (civil)		$523; $858	Democracy in 1985 (not after 2000)
Cameroon	1984	Low	Intrastate (civil)		$936	
Burkina Faso vs. Mali	1985	Low	Interstate		Burkina Faso: $208 Mali: $172	
Laos vs. Thailand	1986	Low	Interstate		Laos: $215 Thailand: $997	
Surinam	1986	Low	Intrastate (civil)		$2044	
Togo	1986; 1991	Low	Intrastate (civil)		$276; 467	
Democratic Republic of Yemen, People's Republic of Yemen	1986	High	Intrastate (civil)		n/a	
Burkina Faso	1987	Low	Intrastate (civil)		$211	
Chad vs. Libya	1987	High	Interstate		Chad: $171 Libya: $2053	
Comoros	1989	Low	Intrastate (civil)		$405	
Ethiopia (Afar)	1975; 1989; 1996	Low	Intrastate (civil)		n/a; $123; $120	
India (Kashmir insurgents)	1989; 1990	Low	Intrastate (civil)		$305; $371	Democracy
Indonesia (Aceh)	1990	High	Intrastate (civil)		$612	Democracy
Panama	1989	Low	Intrastate (civil)		$2777	Democracy
Panama vs. USA	1989	Low	Interstate	Yes	$2777	
Papua New Guinea	1989; 1992	Low	Intrastate (civil)		$562; $630	Democracy
Iraq vs. Kuwait	1990	Low	Interstate	Yes	Iraq: n/a Kuwait: n/a	
Mali (Azawad)	1990; 1994	Low	Intrastate (civil)		$183; $179	Democracy after 1992
Niger (Air and Azawad)	1992; 1994	Low	Intrastate (civil)		$160; $158	Democracy
Rwanda	1990; 1997	High	Intrastate (civil)		$251; $236	
Senegal (Casamance)	1990; 1992; 1995; 1997	Low	Intrastate (civil)		$411; $396; $387; $400	

Senegal (Casamance)	1999	High	Intrastate (civil)		$421	
Trinidad and Tobago	1990	Low	Intrastate (civil)		$4918	Democracy
Djibouti	1991; 1999	Low	Intrastate (civil)		$1099; $791	
Georgia	1991	Low	Intrastate (civil)		$1188	
Haiti	1989; 1991	Low	Intrastate (civil)		$639; 641	
Sierra Leone	1991	Low	Intrastate (civil)		$253	
Sierra Leone	1994	High	Intrastate (civil)	Yes	$204	
Turkey	1991	Low	Intrastate (civil)		$2471	Democracy
Algeria	1991	Low	Intrastate (civil)		$1767	
Angola (Cabinda)	1991; 1994; 1996; 2002	Low	Intrastate (civil)		$770; $508; $591; $737	
Azerbaijan (Nagorno-Karabakh)	1995	High	Intrastate (civil)		$487	
Bosna (Rep. Srpska)	1992	High	Intrastate (civil)	Yes	n/a	
Croatia (Serbian irregulars, Serbian Republic of Krajina)	1992; 1995	Low	Intrastate (civil)	Yes	$3350; $3336	
Egypt	1993	Low	Intrastate (civil)		$1206	
Georgia (Abkhazia)	1992	High	Intrastate (civil)		$664	
Georgia (South Ossetia)	1992	Low	Intrastate (civil)		$664	
Tajikistan	1992; 1998	High	Intrastate (civil)		$307; 145	
Azerbaijan	1993; 1995	Low	Intrastate (civil)		$706; $487	
Bosnia (Bihaca Krajina; Croatian irregulars)	1993	Low	Intrastate (civil)	Yes	n/a	
Mexico	1994; 1996	Low	Intrastate (civil)		$5309; $5063	
Yemen, AR (South Yemen)	1994	High	Intrastate (civil)		$443	
Ecuador vs. Peru (Cordillera del Condor)	1995	Low	Interstate	Yes	Ecuador: $1334 Peru: $1977	Ecuador: Democracy
Pakistan	1990; 1995	Low	Intrastate (civil)		$461; $510	Democracy
Cameroon vs. Nigeria (Bakassi)	1996	Low	Interstate		Cameroon: $615 Nigeria: $386	
Ethiopia (Somali)	1996; 1999	Low	Interstate (civil)		$120; $118	
Niger (Eastern Niger)	1996	Low	Interstate (civil)		$157	
Comoros (Anjouan)	1997	Low	Interstate (civil)		$380	Democracy
Congo, the Republic	1993	Low	Interstate (civil)		$1052	
Congo, the Republic	1997; 2002	High	Interstate (civil)		$949; $955	
Eritrea vs. Ethiopia	1998	High	Interstate		Eritrea: $220 Ethiopia: $220	
Guinea Bissau	1998	High	Intrastate (civil)		$143	
Lesotho	1998	Low	Intrastate (civil)		$481	
Yugoslavia/Serbia (Kosovo)	1998	High	Intrastate (civil)	Yes	$940	
Ethiopia (Oromiya)	1977	Low	Intrastate (civil)		n/a	
Ethiopia (Oromiya)	1980; 1983; 1988	High	Intrastate (civil)		n/a; $140; $130	
Uzbekistan	2000	Low	Intrastate (civil)		$558	
Central African Republic	2001	Low	Intrastate (civil)		$252	
Macedonia	2001	Low	Intrastate (civil)		$1698	Democracy
India (Bodoland)	1989	Low	Intrastate (civil)		$305	Democracy
Myanmar (Wa)	1997	Low	Intrastate (civil)		n/a	
Israel (South. Lebanon)	1990	Low	Intrastate (civil)		$14505	Democracy
Tanzania vs. Uganda	1978	Low	Interstate		n/a	
Mauritania (Western Sahara)	1975	Low	Intrastate (civil)	Yes	$423	
Turkey (Kurdistan)	1984	Low	Intrastate (civil)		$2091	Democracy

Source: Gleditsch et al., 2002 ; WDI, 2008; Polity IV, 2008

List of Civil Wars (different sources)

CIVIL WARS	Singer and Small, 1994 (COW)	Fearon and Laitin, 2001	Gleditsch et al., 2002 UCDP/PRIO
Afghanistan	1978-ongoing	1978-1992, 1992-	1978-01, 2005-2007
Algeria	1962-63	1962-1963, 1992-	1993-01
Angola	1975-91, 1992	1975-, 1992-	1975-1995, 1998-02
Argentina	1955	1955, 1973-1977	
Azerbaijan		1992-1994	1992-93
Bolivia	1952		1946
Bosnia and Herzegovina (Serbian rebellion)	1992	1992-1995	1992-93
Bosnia and Herzegovina (Bihacka Krajina)			1993
Burundi	1972, 1988, 1991-	1993-	1998, 2000-2002
Cambodia (Kampuchea)	1970-75, 1979-91	1970-1975, 1978-1992	1967, 1989, 1970-75, 1978
Chad	1980-88	1965-, 1994-1998	1978-79, 1980, 1987, 1990, 2006
China	1946-50, 1947, 1967-68	1946-50, 1950-1951, 1956-1959, 1991-	1946-49, 1956, 1959
Colombia	1948, 1949-62, 1984-	1948-1962, 1963-	2001-02, 2004-05
Costa Rica	1948		1948
Cuba	1958-59	1958-1959	1958
Dominican Republic	1965		
Congo		1998-	1997
DR, Congo (Zaire)	1960-65	1960-65, 1977-78, 1996-97, 1998-	1964-65, 1997-98
El Salvador	1979-92	1979-1992	1981-90
Ethiopia		1974-1992	1975-79, 1976, 1977-78, 1980-91, 1982-85, 1987-90, 1981
Georgia	1991	1992-1994	1993
Greece`123	1944-49	1945-1949	1946-1949
Guatemala	1954, 1966-72, 1970-71, 1985-	1968-96	
Guinea Bissau		1992-1994	1988
Hyberdad		na	1947-48
India	1985-ongoing	1952-, 1982-1993, 1989-	1948-51, 1988-92, 1990-93, 1999-05
Indonesia	1950, 1953, 1956-60	1950, 1953, 1958-1960, 1965-, 1975-1999, 1991-	1950, 1953, 1958-59, 1961, 1975-78, 1990
Iran	1978-79, 1981-82	1978-1979, 1979-1993	1979-80, 1981-82
Iraq	1959, 1985-	1959, 1961-1974	1961-63, 1965-66, 1969, 1974-75, 1988, 1991, 2004-07
Jordan	1970		
Laos	1960-62, 1963-73	1960-1973	1959, 1960-61, 1963-73
Lebanon	1958, 1975-90	1958, 1975-1990	1958, 1976, 1984
Liberia	1989-90, 1992-	1989-1996	1990-92, 2003
Morocco		1975-88	
Mozambique	1979-	1976-95	1981-1992
Myanmar (Burma)	1948-51, 1968-80, 1983-	1948-	1949-50, 1955, 1971, 1983-84, 1992, 1948-53, 1968-80, 1982, 1986, 1988, 1961-75, 1984, 1964-70, 1994
Nepal		1997-	2002-05
Nicaragua	1978-79, 1982-90	1978-1979, 1981-1988	1978-79, 1983-88
Nigeria	1967-70, 1980-81, 1984	1967-70	1967-70
Pakistan	1971, 1973-77	1971, 1973-1977, 1993-1999	1971, 1974
Paraguay	1947	na	1947

Peru	1982-	1981-95	1981-85, 1988-93
Philippines	1950-52, 1972-	1946-1952, 1968-, 1972-1994	1946-54, 1978, 1981, 1982-86, 1989, 1991-92, 2000
Cameroon			1960
Vietnam, Republic of	1960-65	1960-75	1955-61, 1962-64,
Republic of Korea		1949-50	
Russia (Soviet Union)	1991 (Nagorno Karabakh)	1946-1959, 1945-1947, 1945-1948, 1994-1996, 1999-	1946-47, 1946-48, 1995-96, 1999-01, 2004
Rwanda	1963-64, 1990	1962-1965, 1990-	1991-1992, 1998, 2001
Romania	1989		
Sierra Leone		1991-	1998-99
Somalia	1982-	1981-1991, 1991-	1988, 1990-92, 2007
South Africa		1983-94	1980-83, 1986-88
South Yemen	1986	1994	
Sri Lanka (Ceylon)	1971, 1987-89, 1983-	1971, 1983-, 1987-1989	1971, 1987,1989, 1990-01, 2006-07
Sudan	1963-72, 1983-	1963-1972, 1983-, 1987-1989	1963-72, 1983-92, 1995-04, 2006
Syria		na	1982
Tajikistan	1992-	1992-97	1992-93
Turkey	1991-	1977-1980, 1984-1999	1992-1997
Uganda	1966, 1980-88	1981-1987, 1993	1979, 1981-89, 1991, 2004
Yemen AR	1948, 1962-69	1948, 1962-1994	1948, 1963-64, 1966-67, 1994
Yugoslavia (Serbia)	1991-92	1991	1991, 1998-99
Zimbabwe	1976-79	1972-1979, 1983-1987	1976-79

Source: Singer and Small 1994; Fearon and Laitin 2001; Gleditsch et al., 2002

Countries included in the second dataset

Conflict countries: Angola, Argentina, Azerbaijan, Bangladesh, BiH, Burundi, Cambodia, Cameroon, Chad, Congo Brazzaville, El Salvador, Eritrea, Ethiopia,Georgia, Guatemala, Guinea-Bissau, Indonesia, Iran, Iraq, Laos, Lebanon, Liberia, Morocco, Mozambique, Nicaragua, Nigeria, Paraguay, Peru, Rwanda, Senegal, Serbia, Sierra-Leone, Somalia, South Africa, Sri-Lanka, Sudan, Syria, Tajikistan, Thailand, Timor-Leste.

Non-conflict countries: Bahrain, Barbados, Belize, Bhutan, Bolivia, Botswana, Brazil, Cape Verde, Chile, Costa Rica, Ecuador, Fiji, the Gambia, Ghana, Haiti, Honduras, Jamaica, Jordan, Kenya, Kuwait, Madagascar, Malawi, Mauritius, Oman, Saudi Arabia, the Seychelles, the Solomon Islands, Suriname, Tonga, Trinidad and Tobago, Tunisia, Uruguay, Vanuatu, Venezuela, Zambia

APPENDIX B: SUMMARY STATISTICS

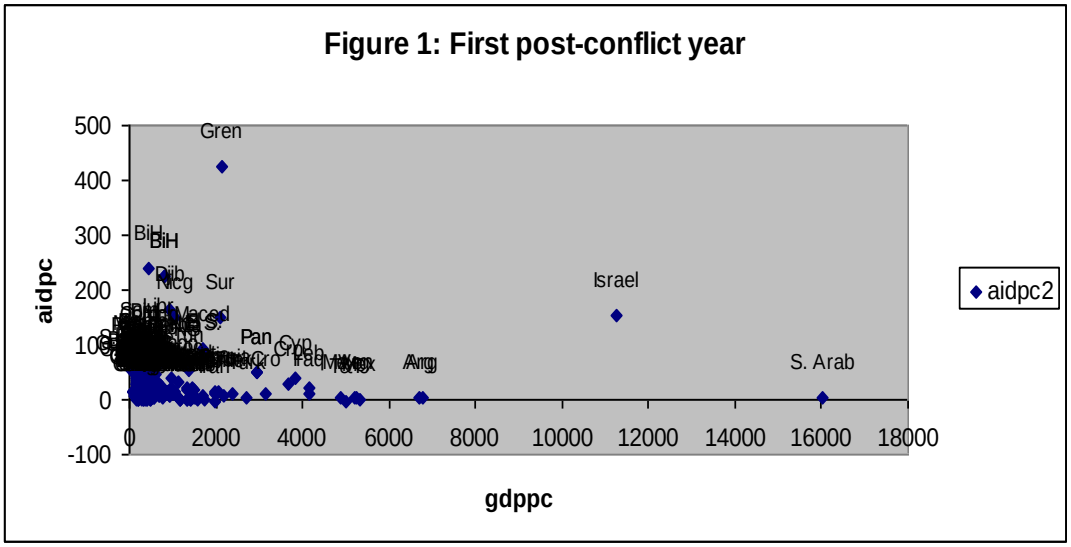
Table 1: Summary Statistics (within and between variations)

Variable		Mean	Std. Dev.	Min	Max	Observations
aidpc2	overall	29.83529	53.70861	.0012963	747.9403	N = 2599
	between		49.40249	.0404	494.225	n = 251
	within		31.17973	-188.103	434.7304	T-bar = 10.3546
gdpconpc	overall	1227.111	2240.46	59.45317	19048.42	N = 2192
	between		2308.309	108.2114	15602.6	n = 224
	within		348.3234	-2974.54	6063.863	T-bar = 9.78571
tradegdp	overall	54.10771	36.21916	.4187321	196.2162	N = 2334
	between		34.63115	2.604407	158.0854	n = 234
	within		13.389	-29.42187	141.532	T-bar = 9.97436
popula~n	overall	9.47e+07	2.37e+08	89000	1.18e+09	N = 2768
	between		2.35e+08	90281.98	1.08e+09	n = 253
	within		2.13e+07	-5.15e+07	2.62e+08	T-bar = 10.9407
imr	overall	90.05901	43.89588	7.3	284.78	N = 2555
	between		42.95807	8.981111	201.1873	n = 252
	within		12.96163	14.82264	207.0276	T-bar = 10.1389
postcris	overall	.4157384	.4929374	0	1	N = 2783
	between		.1288696	0	.5454545	n = 253
	within		.4758594	-.1297161	.9990717	T-bar = 11
postcw	overall	.4725117	.4993335	0	1	N = 2783
	between		.3842514	0	1	n = 253
	within		.3197117	-.4365792	1.381603	T-bar = 11
incompab	overall	1.450593	.4976424	1	2	N = 2783
	between		.4985392	1	2	n = 253
	within		0	1.450593	1.450593	T-bar = 11
democ3	overall	.2112828	.4082919	0	1	N = 2783
	between		.3523419	0	1	n = 253
	within		.2073734	-.606899	1.120374	T-bar = 11
war2	overall	.4189723	.4934795	0	1	N = 2783
	between		.4943688	0	1	n = 253
	within		0	.4189723	.4189723	T-bar = 11
interv3	overall	.0923464	.2895663	0	1	N = 2783
	between		.2881599	0	1	n = 253
	within		.0333322	-.1803809	1.001437	T-bar = 11
unopp	overall	.1200144	.3250367	0	1	N = 2783
	between		.2690387	0	1	n = 253
	within		.1831044	-.7890765	1.029105	T-bar = 11
transit	overall	.0945023	.2925789	0	1	N = 2783
	between		.1899015	0	1	n = 253
	within		.2228664	-.6327704	1.011169	T-bar = 11

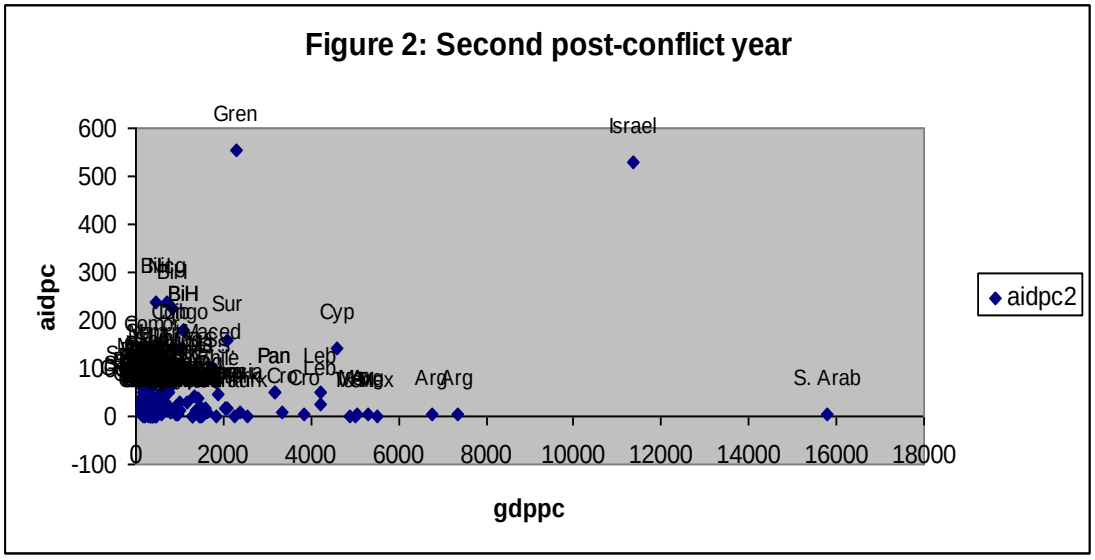
Table 2: Variance Inflation Factor Test

Variable	VIF	1/VIF
lnpop	2.12	0.471283
gdpconpc	1.95	0.511898
tradegdp	1.89	0.530058
lnimr	1.64	0.611195
time3	1.57	0.638893
time2	1.56	0.639357
time4	1.55	0.645342
time5	1.54	0.648387
israel	1.44	0.694862
democ3	1.43	0.699819
oilgasexp	1.40	0.711960
unopp	1.37	0.732493
interv3	1.33	0.750217
incompab	1.32	0.758195
postcw	1.24	0.808435
war2	1.22	0.818684
transit	1.21	0.824385
Mean VIF	1.52	

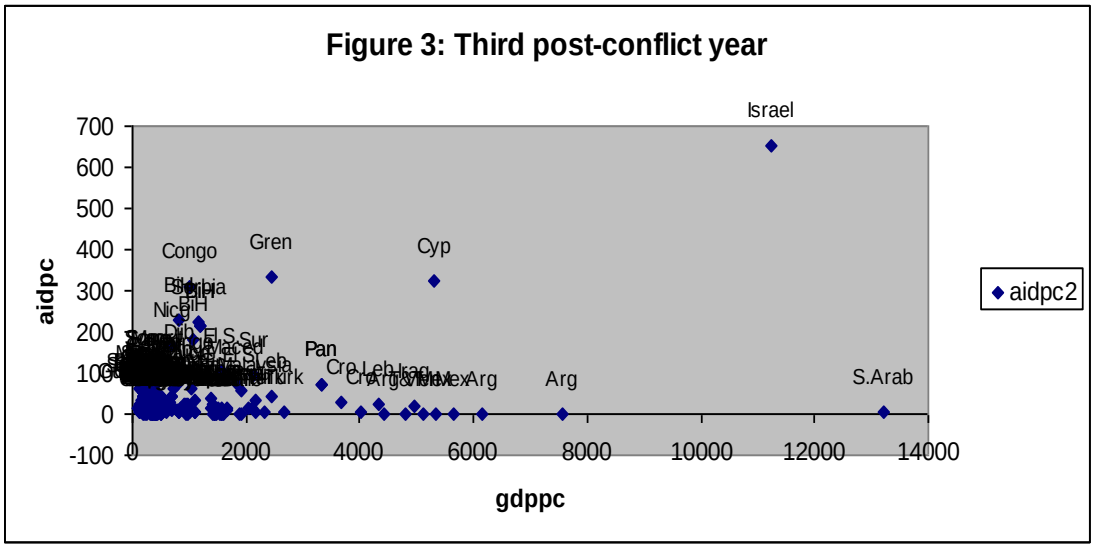
APPENDIX C: SCATTER PLOTS for EACH POST-CONFLICT YEAR



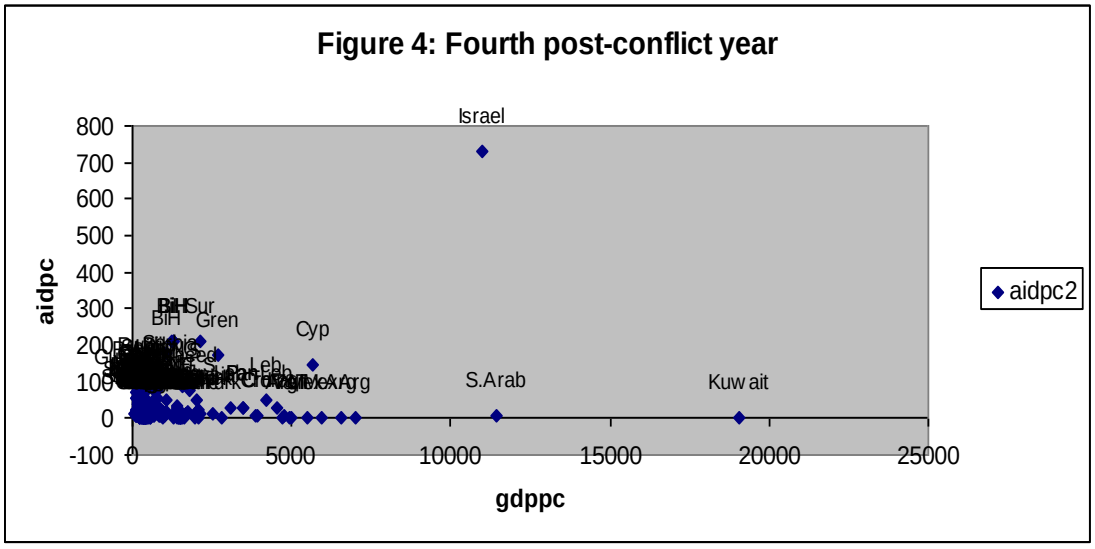
Source: OECD International Development Statistics, 2009



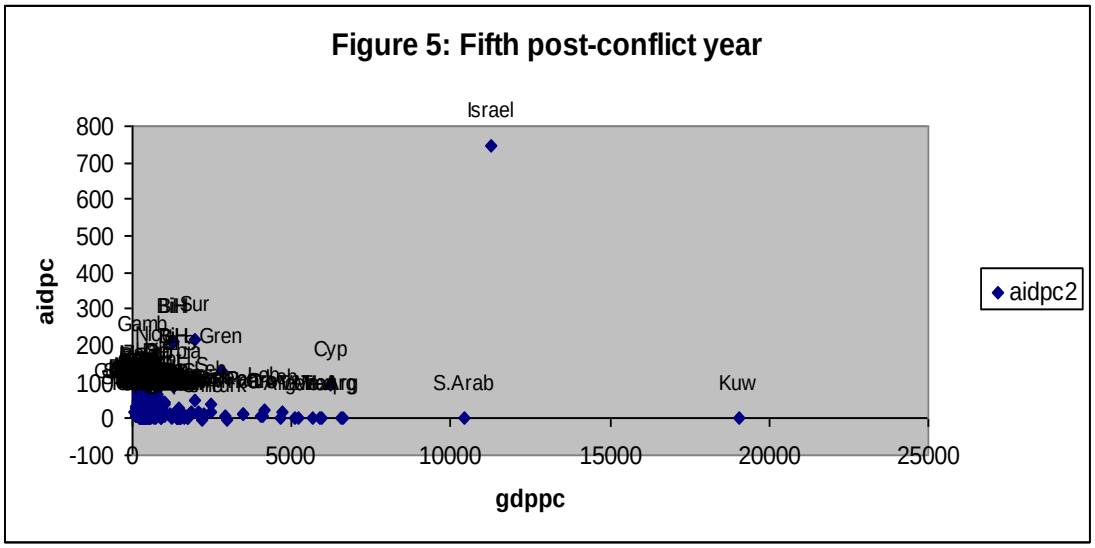
Source: OECD International Development Statistics, 2009



Source: OECD International Development Statistics, 2009



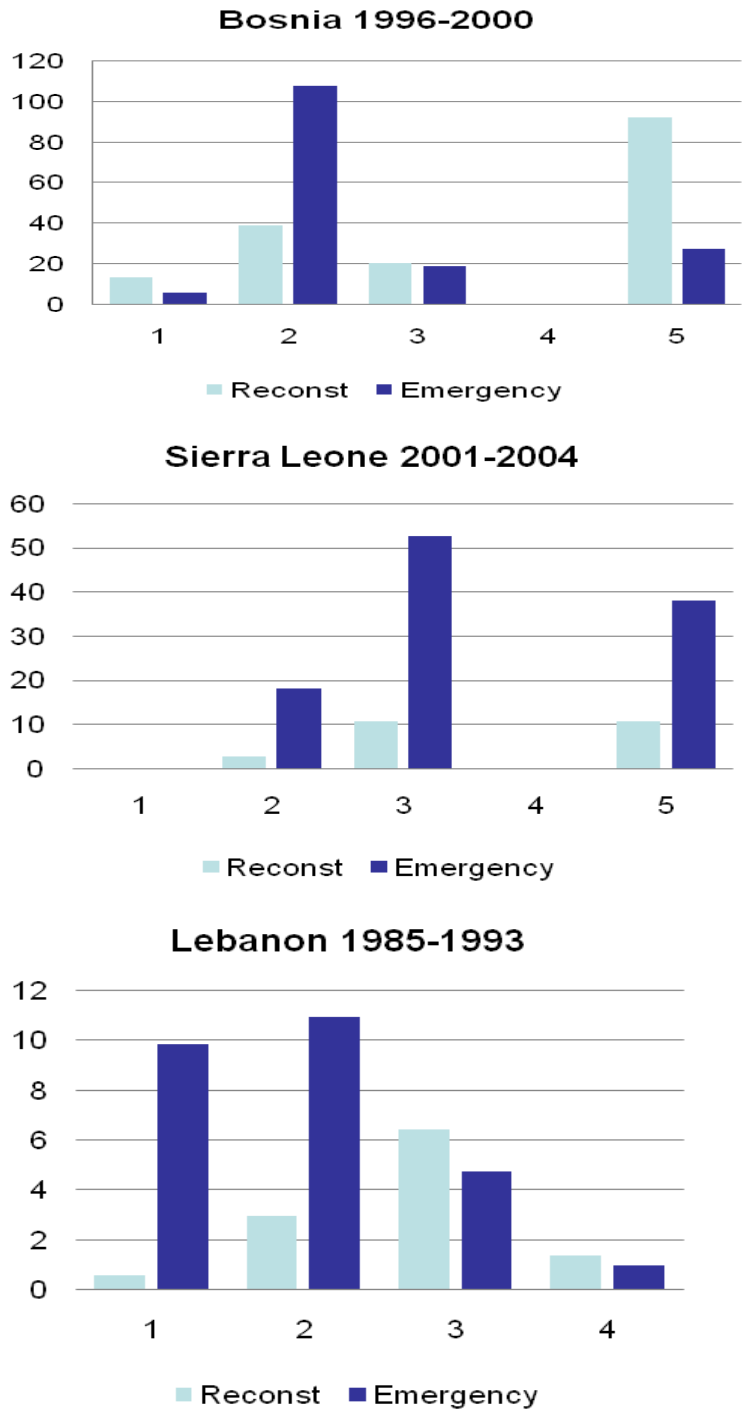
Source: OECD International Development Statistics,



Source: OECD International Development Statistics, 200

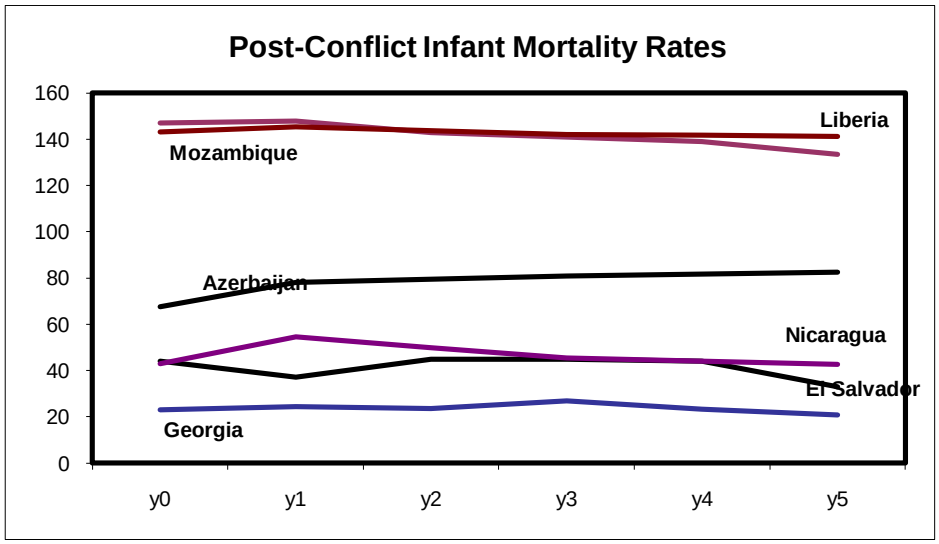
APPENDIX D

Figure 1. Emergency versus Reconstruction Aid (post-conflict years)



Source: Credit Reporting System, OECD 2009
Note: amounts are in USD million

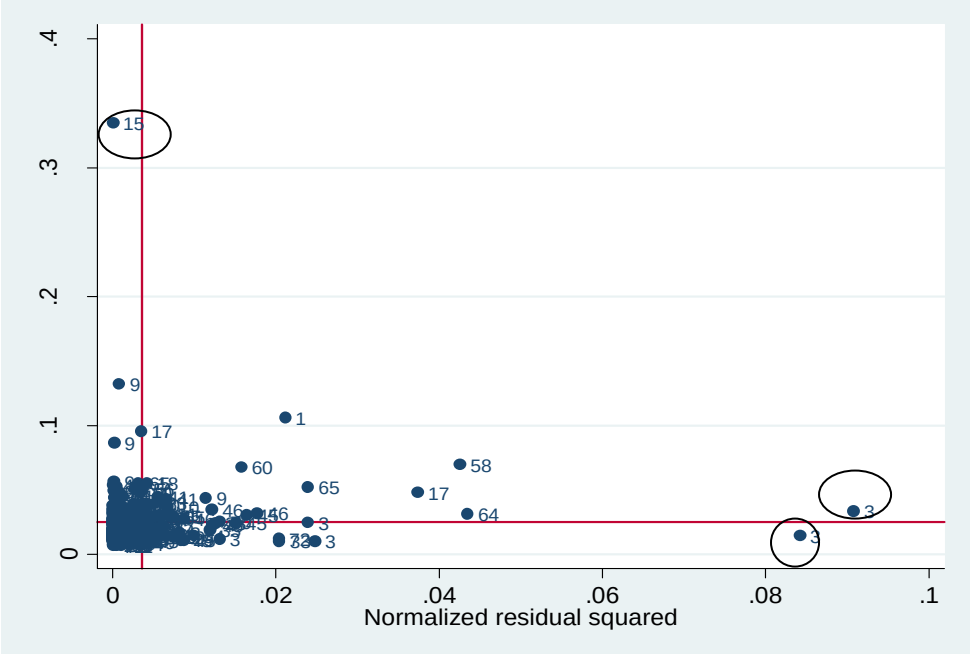
Figure 3. Selected Countries: Infant Mortality Rate in the first five post-conflict years



Source: WDI, CD ROM (2010)

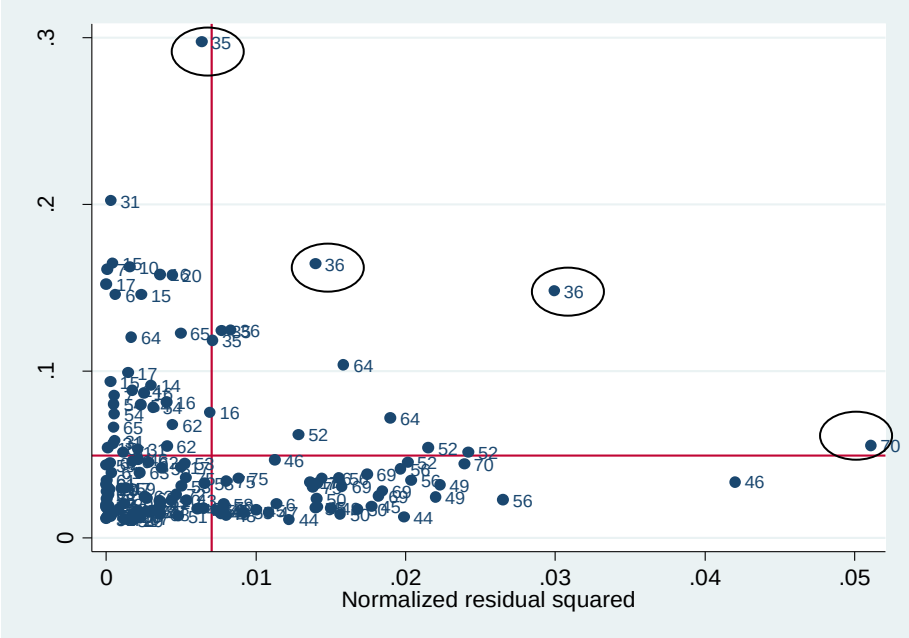
APPENDIX E Outliers and Influential Points

Leverage plot for growth variable



Source: WDI, CD ROM (2010)
Note: Country codes: 30= Azerbaijan and 15= Liberia

Leverage plot for infant mortality variable



Source: WDI, CD ROM (2010)
Note: Country codes: 36=Ethiopia, 35=Eritrea, 70=Trinidad and Tobago

Appendix F. Donor Pledges: First Donor's Conference for Kosovo

DONORS		Total Amount in millions of EURO	Total Amount in millions of USD
COUNTRIES		**1,482.782**	**1,536.756**
Australia	AUD	48.494	50.260
Austria	ATS	36.336	37.659
Denmark	USD	71.401	74.000
Finland	EUR	18.200	18.862
France	EUR	51.000	52.856
Germany	DEM	166.170	172.218
Ireland	IRL	4.444	4.606
Italy	USD	4.535	4.700
Japan	USD	154.381	160.000
Norway	NOK	48.664	50.435
Slovakia	USD	0.034	0.035
Spain	USD	10.035	10.400
Sweden	SEK	41.636	43.151
Switzerland	CHF	71.821	74.435
The Netherlands	USD	42.455	44.000
Turkey	USD	38.595	40.000
United Kingdom	UKL	137.531	142.537
United States	USD	537.051	556.600
ORGANIZATIONS		**608.663**	**630.819**
European Community	EUR	515.000	533.746
World Bank	USD	57.893	60.000
CE Social Development Fund	EUR	2.000	2.073
UNDP	USD	4.824	5.000
UNICEF	USD	28.946	30.000
Total EC + 15 Member States		**1,098.742**	**1,138.736**
Grand Total		**2,091.446**	**2,167.574**

Source: European Commission, 1999; available at:

http://ec.europa.eu/enlargement/archives/seerecon/calendar/1999/events/kdc/pledges.htm

Appendix G. Sectoral Composition of Aid Inflows (spent 1999-2008)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Housing	15.15	25.78	15.38	7.73	5.67	3.66	4.90	4.60	0.05	
Humanitarian/Emergency	57.67	4.02	0.00						0.00	
CFA/MEF	1.72	1.22	4.84	5.76	7.64	4.47	7.15	8.18	0.00	
Democratic Governance and Civil Society	0.55	1.69	3.59	12.83	6.85	13.20	12.22	16.08	11.20	6.09
Ed&Sc	3.17	6.69	4.49	3.41	2.28	6.54	4.44	9.09	8.29	5.03
Health	0.75	3.36	4.76	1.54	3.07	4.82	4.02	7.26	5.06	2.68
KPS	1.22	4.56	0.91	8.02	2.33	1.28	5.38	0.35	1.51	0.15
Loc. Admin.	0.09	1.08	2.09	2.08	7.37	1.14	3.16	1.71	0.00	
Mine clearance/mine action coordination	9.67	1.75	1.76	0.00	0.10	0.00	0.72	0.00	0.00	
PTK	0.02	0.41	0.89	0.00	0.29	0.00	0.32	0.00	0.00	
Public Utilities	9.49	21.02	32.57	30.87	29.40	37.32	12.23	5.62	10.53	19.11
Trade&Industry	0.07	9.31	7.12	8.50	11.35	11.54	7.93	9.00	5.23	8.67
Transport& Infrastructure	0.10	7.85	7.25	4.35	4.57	1.41	2.56	3.18	1.88	1.86
Agriculture	0.07	2.92	5.80	4.13	5.76	2.52	5.27	6.48	12.35	4.41
Civil security&emergency	0.00	2.18	1.38	2.03	0.00	0.27	0.45	0.00	0.27	
Justice	0.00	1.36	2.12	3.56	3.82	6.29	6.73	7.16	9.82	9.46
Minority rights&returns	0.00	0.00	0.00	0.00	0.00	0.00	7.89	7.07	5.28	3.05
Public Administration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.99	10.75
Public Financial Management	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.79	1.39
Others	0.26	4.78	5.06	5.19	9.50	5.54	14.65	14.20	11.77	27.35
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: RIMS database, 2010. Note: figures are in percentages.

Appendix H.

Table 1. Damage on housing stock

	No of damaged houses	%
Category I (5-20%)	23062	19,29584
Category II (20-40%)	18003	15,063
Category III (40-60%)	31855	26,65289
Category IV (more 60%)	46598	38,98827
Total	**119518**	**100**

Source: Author's compilation from the IMG (EC damage assessment, July 1999)

Table 2. Damage on Health Facilities

	Units of damaged health facilities	%
Category I (5-20%)	116	48,333
Category II (20-40%)	41	17,083
Category III (40-60%)	32	13,333
Category IV (more 60%)	51	21,25
Total	**240**	**100**

Source: Author's compilation from the IMG (EC damage assessment, July 1999)

Table 3. Damage on Education facilities

	Units of damaged educ. facilities	%
Category I (5-20%)	257	48,12734
Category II (20-40%)	88	16,4794
Category III (40-60%)	88	16,4794
Category IV (more 60%)	101	18,91386
Total	**534**	**100**

Source: Author's compilation from the IMG (EC damage assessment, July 1999)

Table 4. Damage on Electricity Local Distribution Network

	Units damaged	%
Size I	257	41,653
Size II	154	24,959
Size III	138	22,366
Size IV	68	11,021
Total	**617**	**100**

Table 5. Damage on Water Local Distribution Network

	Units damaged	%
Size I	140	31,81818
Size II	134	30,45455
Size III	96	21,81818
Size IV	70	15,90909
Total	**440**	**100**

Source: Author's compilation from the IMG (EC damage assessment, July 1999)

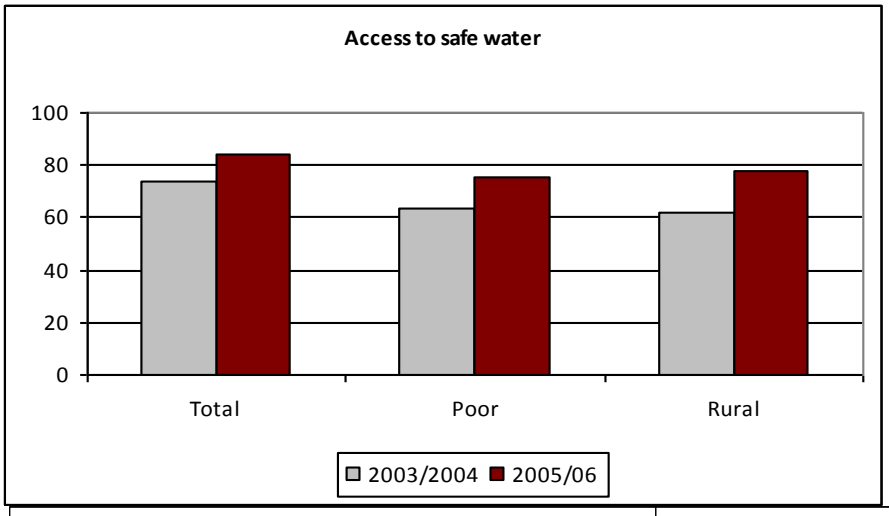
Appendix I.

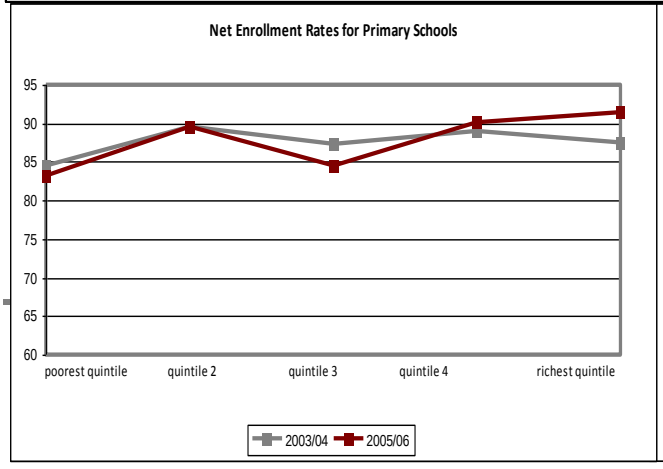
Table 1. Some selected outcome indicators of reconstructed and repaired infrastructure

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Km. of repaired road		487	926	36	26	n/a	n/a	n/a	n/a	1475
No. of rehab. and constr. Schools	81	89	111	100	80	n/a	n/a	n/a	n/a	461
No of rehab. and const. health centers and hospitals	11	38	62	37	130	n/a	n/a	n/a	n/a	278
Electricity cons. Gwh	n/a	n/a	n/a	1950.4	2041.1	2139.3	2109.4	2154.9	2391.6	2941.0
Gross prod. of energy Gwh	n/a	n/a	n/a	3151.7	3221.1	3481.1	3999.5	3970.5	4309.5	4505.8
No of flights Pristina Airport	n/a	n/a	n/a	n/a	n/a	910796	930620	882731	990952	1130639
No of passengers flying from KS	n/a	232.1	403408	441305	383836	470907	478258	483330	506962	578649

Source: Donor Coordination Unit, MFE (2004a); Enti i Statistikës së Kosovës, ESK (2009)

Figure 1. Improvements made in access to water and enrollment rates





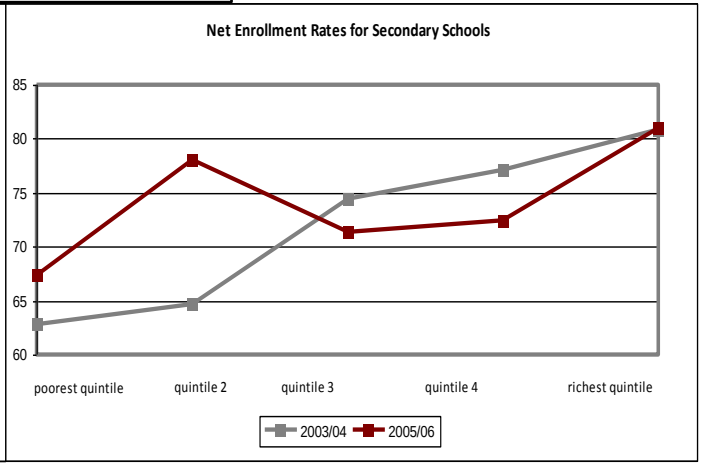
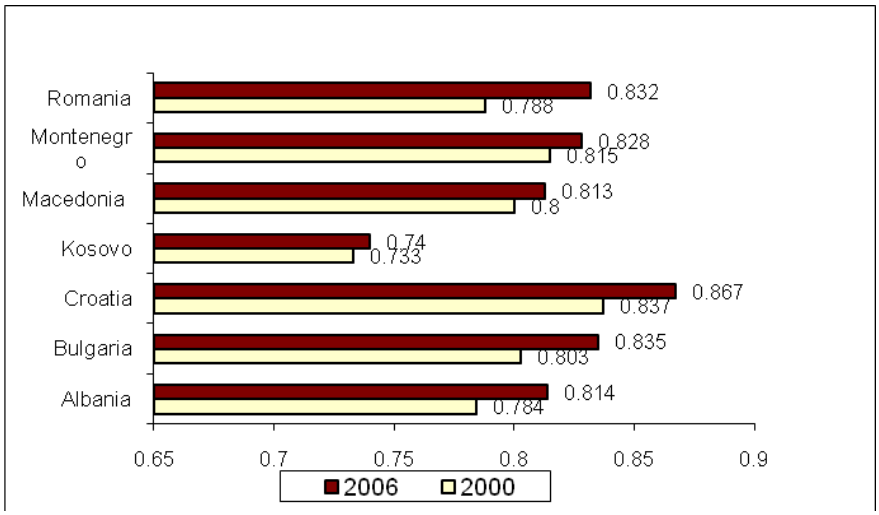


Figure 2. HDI: Kosovo and the region



Source: UNDP 2006

APPENDIX K. Description and Sources of Variables Used

First dataset (extension of Kang and Meernik, 2004)

Variable	Definition	Source
Aid	Aid commitments in USD millions (per capita, adjusted for inflation); annual data	OECD-DAC Online source (2009)
Democratic state	Presence of democracy using Polity IV democracy index 0-10 scale: 0 being least democratic to 10 most democratic countries. Countries with values from 6-10 on the Polity IV scale are considered democracies. Dummy variable: one if greater than 6, zero otherwise.	Marshall and Jaggers (2009)
Polity in Transition	Countries whose authorities underwent transition, interruption, and/or interregnum periods (coded as '-66', '-77', and '-88'). Dummy variable	Marshall and Jaggers (2009)
Openness	Total trade/GDP (annual data)	WDI, CD ROM WB (2008)
Per capita GDP	Per capita GDP (in constant PPP prices); annual data	WDI, CD ROM WB (2008)
Population	Log of total population; annual data	WDI, CD ROM WB (2008)
Infant Mortality Rate	Log of Mortality rate, infant (per 1,000 live births); annual data	Abouharb and Kimbal (2007)
Openness	Total trade/GDP (annual data)	WDI, CD ROM WB (2008)
OECD Military Intervention	Whether there has been an involvement in conflict by OECD countries with troops to support side A and/or B (sideA2nd and Sideb2nd in PRIO database). . Dummy variable.	Gleditsch et al., 2002
UN Peacekeeping	Was there a UN peace operation? Dummy variable	Author's construction using Doyle&Sambanis (2000); the Blue Helmets (1998); United Nations Peace-keeping website
Level of Violence	Whether the conflict since the onset has exceeded 1000 battle related deaths. Dummy variable	Author's construction based on Gleditsch et al. (2002)
Conflict over Governance	Governance versus territorial conflicts. Dummy variable	Author's construction based on Gleditsch et al. (2002)
Post cold war period	Before and after 1989. Dummy variable	As per Kang and Meernik (2004)
Oil/gas exporting countries	An oil/gas export dummy is set to one in cases where the recipients' country exports comprise more than 10 percent of oil and gas	WDI, CD ROM WB (2008)
Post-conflict Period	The first five years after the conflict episode ended are coded as post-conflict period. Dummy variable.	As per Kang and Meernik (2004)
Post-conflict years	Individual years in post-conflict period: year1, year2, year3, year4, and year5. Dummy variable.	As per Kang and Meernik (2004)

Second dataset: Chapter 2 (Tables 6 -7) and Chapter 3 (Tables 8-11)

Variable	Definition	Source
Aid	ODA, total net disbursements in current prices (USD millions).; four-year averages.	OECD-DAC Online source (2010)
GDP	Log of Gross Domestic Product in current US dollars at the beginning of the four-year periods	WB-WDI Online source (2010)
Per capita GDP	Per capita GDP (in constant PPP prices) at the beginning of the four-year period	WB-WDI Online source (2010)
Growth	GDP growth, annual %; four-year averages	WB-WDI Online source (2010)
Government Consumption	General government final consumption expenditure (% of GDP); four-year averages	WB-WDI Online source (2010)
Polity IV	Presence of democracy using Polity IV democracy index on a 0-10 scale: four-year averages.	Marshall and Jaggers (2009)
ICRGE	The Economic Risk Rating Index (four-year averages)	The PRS Group, 2010
Education	Log of primary school completion rate, total	WB-WDI Online source (2010)
Infant Mortality Rate	Log of Mortality rate, infant (per 1,000 live births) at the beginning of the panel period	WB-WDI Online source (2010)
Log of Fertility	Log of fertility rate, total (births per woman) at the beginning of the panel period	WB-WDI Online source (2010)
Log of water	Log of improved water source (% of population with access) at the beginning of the panel period	WDI, CD ROM WB (2010)
Log of sanitation	Log of improved sanitation facilities (% of population with access) at the beginning of the panel period	WDI, CD ROM WB (2010)
Peacekeeping operations	Was there a UN peace operation? Dummy variable	Author's construction using Doyle&Sambanis (2000); the Blue Helmets (1998); United Nations Peace-keeping website
Population	Log of total population at the beginning of the four-year period	WDI, CD ROM WB (2010)
Post-conflict dummies	Peace onset: the year the conflict ended and one year after the conflict (years 0 and 1). Post-conflict1: years 2-5; post-conflict2: years 6-9; Prepeace years (time 0): four years before the end of conflict (-4 to-1) Dummy variable	Author's construction using conflict dataset from UCDP/PRIO (2009); as per Collier and Hoeffler (2004)
Colony dummies	Dummies for British, French, Portuguese, and Spanish Colony	Author's construction as per Rose (2004)
SSA, CENTAM, EUROPE and EASIA	Regional dummies	Author's construction, as per Roodman's dataset (2008)

Reconstruction Aid	Aid commitments (per capita, adjusted for inflation)=Real sector investments in transportation (including roads), communications, energy, banking, agriculture, industry, commodity and general program assistance, money spent on policy formulation is subtracted (e.g., transportation policy and administrative management; money spent on post-conflict peace building, demobilization and land mine clearance	Source: Credit Reporting System, OECD 2009 (online source); classification as per Clemens et al. (2006)
Emergency Aid	Aid commitment flows (per capita, adjusted for inflation): Food Aid/Food Security Assistance, Emergency Food Aid, Emergency/Distress Relief, Aid to refugees (in donor country), Aid to refugees (in recipient country)	Source: Credit Reporting System, OECD 2009 (online source); classification as per Clemens et al. (2006)