

WORKING PAPER

**THE ROLE OF AID ON PEACE
CONSOLIDATION IN POST-CONFLICT SRI
LANKA**

December 30, 2018

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1 Introduction

Whether foreign aid is actually helpful or not in promoting economic growth and development is a much heated debate amongst economists. We should be aware that even if economic growth is achieved it does not necessarily translate into development. The effect and efficiency of aid depends on the specific conditions in the recipient country; a key element is the quality of governance and institutions. It is important to know whether it is “simply” a poor developing country, whether it is a country in conflict, or whether the country is in post-conflict situation. The particular country circumstances will determine how a donor country should approach its aid policy.

There are theoretically four strategies a donor country can choose to facilitate improvements in governance in recipient countries. Governance can loosely be defined as activities, institutions, and processes involved in effectively managing and running a country’s affairs in all its different spheres; economically, politically, and administratively. The four theoretical strategies a donor country can choose are:

1. Persuasion strategy: Donors use their formal and informal contracts with recipient countries to persuade them into giving up their resistance and improve their governance.
2. Capacity building: Donors channel some of the aid into projects whose objective is to build up the capacity for good governance. This strategy is especially useful when the recipient’s bad governance is a consequence of lacking capacity rather lack of will.
3. Conditionality strategy: Donors can impose conditions on the aid that countries receive to affect their policies and submit to specified criteria of good governance. There are some problems with this strategy. First, it interferes with the sovereignty of the recipient country. Second, it is doubtful whether good governance can be externally imposed via conditions. The reason is that bad governance is usually deeply entrenched in a country’s political system with those in power benefitting systematically from the bad governance. Thus, externally imposing conditions to change a possibly unidentified deeply rooted problem in a country’s political system is a challenge. Third, conditionality cannot tackle the root causes of bad governance and is instead targeted at easily observable aspects of governance such as macroeconomic stabilization policies that do not require further structural or insti-

tutional changes in the governance. Doornbos (2001) clearly discredits the notion that political conditionality can “buy” better policies and promote sound institutions.

4. Selective strategy: Donors can try to allocate non-conditional aid to reward countries with a proven past record of good governance and punish those with bad governance. This strategy suspects that bad governance is mostly due to those in power systematically benefitting from bad governance. Hence, it doesn't see the benefit in rewarding bad governance with aid flows. Instead, this strategy sends out a clear signal that those who are willing to establish to a system of good governance are rewarded with higher aid flows, while those are not willing receive low or no aid flows.

According to Neumayer (2003), the selectivity strategy combined with the capacity building strategy is the best cocktail for donors who intend to achieve improvements in governance in receiving countries. This combination of strategies might even alleviate the aid fatigue in many donor countries where support for aid programs by voters and policy makers have been decreasing. However, according to Collier (1997) there is very limited selectivity in aid allocation. If selectivity is followed, it is followed inconsistently.

Doornbus (2001) raises the difficulty of categorizing countries in terms of either good or bad governance. In reality most of the poor and the developing countries stand somewhere in between. Moreover, there is no guarantee that good governance institutions would automatically lead to reduction of poverty and promotion of sustainable development. We cannot overlook the fact that poverty, infant mortality and illiteracy rates have remained high in several countries that have established democratic governance norms and institutions for decades. For instance, India has not been able to reduce poverty despite having strong democratic institutions and processes such as free press, civil liberties, an independent judiciary and the rule of law. On the other hand, one finds that rapid economic growth and massive reduction in poverty levels occurred in several Asian countries under what some might qualify as “poor” governance structures and centralized regimes such as China.

In an empirical study on aid dependence and quality of governance, Knack (2000) found that aid has led to increased corruption, draining scarce talent from the bureaucracy, and weakening of institutional capacity and accountability. Additionally, Ridell (2007) mentions the following key factors limiting the aggregate impact of aid:

1. Aid, taxes, and fungibility: Studies have shown that aid inflows have not led to the expenditure gains and fiscal stimuli as expected. This phenomenon is known as the fungibility of aid. Furthermore, aid results in governments reducing commitments to raise taxes, which is what Boyce (2007) and Ndikumana (2015) argue is important in having a legitimate and capable state.
2. Aid and exchange rate: There is an upward pressure on the exchange rate of the recipient countries. This is the so-called “Dutch disease effect”. When the exchange rate strengthens, the relative competitiveness of the economy falls, limiting export expansion, and reducing the potential for further wealth creation.
3. Aid and absorptive capacity: providing aid in such large amounts that the recipient is unable to absorb it or to use it well may lead to inefficient use of the additional funds provided. It may even cause the already provided aid to be used less effectively.

In the literature, the discussion on whether received aid is equally distributed across a nation is vastly neglected. Hence, in the setting of postwar Sri Lanka this essay explores whether regional distribution of aid has an effect on relative post-conflict performance across regions in Sri Lanka? The rest of the paper is structured as follows: section XX gives a little bit of the background to the conflict in Sri Lanka, section XX. covers a review of the literature on the effect of aid in conflict countries and the effect of aid in post-conflict countries, section XX. states the research questions, section XX

1.1 Historical background of the conflict in Sri Lanka

Sri Lanka, once known as the “Pearl of the Indian Ocean,” now more commonly known as “the Teardrop of India,” has been subject to a long and depressive story of the horrors 1983-2009 associated with the war between the Sri Lankan state (representing the interests of the majority ethnic group, the Sinhalese), and the Liberation Tigers of Tamil Eelam (LTTE), representing the minority ethnic group, the Tamils. There exist several competing narratives about the causes of civil war. On the political right, it is agreed that the conflict stems from longstanding ethnic and religious hatred. The centrist view argues that the conflict is due to an absence of democracy and that violence occurs where chances for a peaceful solution of political disputes are lacking. The political left’s view is that it is due to economic inequalities, political exclusion or to a deep-rooted legacy of colonialism. In an empirical study of civil wars across countries, Collier and Hoeffler

(1998) show that while ethno-linguistic fractionalization is a significant factor in certain cases, more fractionalized societies are not necessarily more prone to civil war. The risk of civil war arises when the society is polarized into two dominant groups. The case of Sri Lanka seems to be a mix of all the above theories. The major causes of the Sri Lankan conflict were inequality in terms of education, job opportunities, urban development, benefits from agricultural development, and political exclusion. Since the end of the war, the government has been focused on rebuilding and developing the entire island with help from international loans and donors. However, the country still deals with many of the issues which existed in the pre-war period.

The 2011 national census estimated Sri Lanka's current population at around 20 million. This number represents a highly heterogeneous population along ethnic, religious, linguistic, caste and regional lines. Nonetheless, the country's population is most often distinguished along ethnic lines. The Sinhalese (75% of the population), Sri Lankan Tamils (11%), Sri Lankan Moor (9 %) and Indian Tamils (4%) are the largest ethnic groups (census 2011). These groupings have tended to be the basis for most political conflicts in Sri Lanka. When Sri Lanka gained independence from Britain in 1948, a number of people in the Sinhalese population felt they had not received their fair share of economic opportunity while the Tamils feared that their political, economic and cultural rights would need to be protected against destruction by the former (this narrative is explored in greater detail below). In the late 1950s, the Sinhalese Buddhist middle and lower-middle classes asserted themselves both in the political and economic spheres. They used the fact that Sinhalese were the majority to justify an expansion in opportunities for the Sinhalese. Those opportunities included greater access to government jobs, university education, etc. These ideas were given greater political currency as the two major Sinhalese-dominated political parties wanted to outdo each other in promising to correct the Tamil advantage. To the majority of the Sinhalese people, these were seen as just measures to re-establish their rightful position. To most Tamils, these policies were seen as discriminatory (Srisankandarajah, 2005). In the decades after independence, Tamil political leaders voiced concerns over their exclusion from political power and began to communicate increasingly radical nationalist positions. Tamil separatism was fueled by the marginalization of the Indian Tamils, several incidents of anti-Tamil violence, growing Tamil frustration at the broken promises of Sinhalese leaders, and anger over state-sponsored Sinhalese settlements in the northeastern regions of the island traditionally inhabited by Sri Lankan Tamils and Moors.

Among the policies that sought to rectify the Tamil advantage, four political themes stand out; the first is the controversial language policy and its effect on employment. The Official Language Act of 1956 (known as the “Sinhala Only Act”) declared Sinhala as the single official language. It was the first of many similar regulations that were introduced to restrict economic opportunities for non-Sinhala speakers. While Sinhala gradually became the primarily spoken language in the public sector, the medium of instruction at primary, secondary and, later on, tertiary levels of education was to be in the individual’s native language. This meant that Tamils who had, until that point in time, studied in English in order to get public service jobs were now required to pass Sinhala examinations, or were limited to a few regional Tamil-speaking positions. Meanwhile, Sinhala-speakers were given more employment opportunities. In 1972, the ruling coalition in Parliament had a large enough majority to change the constitution; the new constitution declared Sinhala the official language and gave Buddhism the leading place as a religion.

The second political reform was a set of policies related to education, more particularly university admissions. Until 1969, admission to a university in Sri Lanka was based on results from a set of final secondary school examinations (“A”-levels). In 1971, the government implemented a system of different quotas and cut-off marks based almost solely on the medium of education. As a consequence, lower qualifying marks for Sinhala medium students were required such that a more politically acceptable proportion of Sinhalese students could be admitted to the university (Sriskandarajah, 2005). During the mid-1970s, further revisions included the introduction of standardization of raw marks across all language media and a district quota system to allocate university places according to the local population. These provisions, which resulted in reductions in the numbers and proportions of Tamils entering higher levels of education in the early 1970s, were construed as unfair by an increasingly frustrated Sri Lankan Tamil youth.

A third factor of political significance was that by the 1970s, state control of the economy was so substantial that opportunities for political investments extended to land, housing, industrial licenses, school admissions, credit, foreign exchange, and jobs. During this time, the frequent change of government may have meant that the material comfort of supporters of the two major Sinhalese-dominated political parties changed periodically but, for Tamils, permanent exclusion from government also meant permanent exclusion from opportunities for political investments. For example, beginning in 1979, almost all recruitment to the lower grades of the public sector was through the Job Bank scheme under which each

Member of Parliament (MP) could recommend up to 1000 job seekers for employment. Despite high levels of youth unemployment in the Northeast, Tamil MPs from the region had only limited access to this scheme. For example, by May 1982, only 1,470 of the 11,000 applicants chosen by MPs from the Tamil United Liberation Front (TULF), an alliance of Tamil nationalist parties, were presented with government jobs. This was a remarkably lower success rate than other parties (Sriskandarajah, 2005). A fourth major grievance among Sri Lankan Tamils was that regional development was uneven and exclusionary against Tamils. Over time, state-initiated infrastructure and investment became particularly important to Sri Lanka's development strategy. Almost all state-initiated industrial expansion happened in or around the capital of Colombo while the Northeast was relatively neglected. As the Sri Lankan state justified the regional concentration of industrial investment on the basis of economies of location, Sri Lankan Tamils raised the issue that there was large regional disproportionality in development financing and employment. Similarly, the country's largest development project, the Mahaweli Development Project raised political passion as Tamil leaders complained that it both neglected Tamil areas and was intended to support colonization programs in which Sinhalese were being moved to largely Tamil areas (Shastri, 1990).

Till this day, many of these issues remain in Sri Lanka. For example, even though the government officially has announced that both Sinhalese and Tamil are official languages, all official letters from public institutions are still sent out in Sinhalese.

2 Literature review on peace and aid

The first part of this section reviews the literature on how aid can help facilitate an end to a civil war. The literature is rather scarce on this topic. This is then followed by a review of the literature on the role of aid in peacebuilding post-conflict, which is more extensive

2.1 The effect of aid in conflict countries

In a probability analysis of the role of aid on ongoing conflict in 39 Sub-Saharan African countries, de Ree and Nillesen (2009) find a statistically significant and economically important negative effect of foreign aid flows on the probability of ongoing civil conflicts to continue. Hence, they find that increasing aid flows tend to decrease the duration of a civil conflict. One issue here is that the analysis needs to be qualified better. The conclusion reached by de Ree and Nillesen (2009) suggests that the civil conflicts came about mostly due to lack of monetary

resources and thus can be resolved with injection of monetary resources. Ishihara (2012) reaches a different conclusion. Through an analysis of aid effectiveness in 78 countries using a survey monitoring the Paris Declaration (the PD survey), Ishihara finds that the aid performance of fragile and conflict-affected countries is significantly worse than non-fragile and conflict-affected countries. Although the analysis suffers from some uncertainty¹ due to the chosen methodology, the results tell us that in a state of conflict, countries are less efficient in the use of received aid. In that case, increasing aid to try to resolve a conflict is an ineffective strategy. However, that fragile and conflict-affected countries perform worse than their counterpart is not surprising since those countries are often in a complete political chaos without a credible, legitimate functional state. It would seem that there is room for a greater donor role here. A donor could improve aid effectiveness by making aid conditional on certain performance goals. However, there are limitations to the effect of aid conditionality during a conflict. For example, Sindre (2014) point to the fact that any kind of aid conditionality (political or economic) is inefficient in controlling rebel destructive behavior and in encouraging peace settlements. Ofstad (2002) argues that an aid program, similar to the "principled common programming" implemented in Afghanistan should be implemented during any conflict. The aid program in Afghanistan intended to support the peace process, human rights, and humanitarian concerns. Thus, for Ofstad (2002) aid assistance should not give any direct political or militarily advantage to any of the warring parties, and should be conditional on political goals.

It is then worth asking whether aid conditional on political goals or economic goal is effective in moving a country from conflict to peace. Imagine that you are a donor country and that you are conditioning your aid on human rights not being violated - how do you monitor whether this condition is being fulfilled in the midst of a ravaging conflict where chaos is prevailing? How do you make sure that the assistance does not give a political or military advantage? Certainly, the task appears very difficult.

2.2 The effect of aid in post-conflict countries

Aid in a post-conflict state is somewhat different, and the positive effects of aid on peace building are more explicit in the literature. In an empirical analysis of aid and policy reform Collier and Hoeffler (2004) have two overall conclusions.

¹The author had to create standardized scores to be able to compare the index values across countries.

Firstly, they find that aid is much more effective in promoting growth in post-conflict countries than in other developing countries. Secondly, the pattern of aid payout should gradually reduce back to lower levels by the end of the first post-conflict decade. The reason for this is that aid has a greater effect later on in post-conflict countries than immediately after a conflict. Hence, less money is necessary later in post-conflict countries. This could be due to the fact that the state of the country is less chaotic many years after a civil conflict, which implies a stronger state that is able to use the received money more efficiently. Collier and Hoeffler (2014)'s results also seem to indicate that it is actually hard to evaluate how effective aid is in the early years post-conflict, because the government and the country are not yet capable.

Just as Collier and Hoeffler (2004) find that aid can promote economic growth, Knight and Hodler (2012) also find empirical evidence of aid effectiveness. However, their estimates suggest that foreign aid promotes growth only in ethnically homogenous countries. Knight and Hodler (2012) find that aid is ineffective or even harmful in ethnically fractionalized countries most of which are located in Sub-Saharan Africa. The authors argue that their findings are consistent with the hypothesis that there is a direct positive effect of foreign aid on economic growth which is offset in fractionalized countries in which aid may provoke damaging rent-seeking competitions. Knight and Hodler (2012) suggest that aid to ethnically fractionalized countries should be conditional on the degree of integration of distinct groups in a country and it should be monitored closely. What if it is the case that the government or the state's position in ethnically fractionalized countries has less legitimacy? If the state was stronger (and able to accompany and mediate the wishes of different ethnic groups), could it be that foreign aid promotes growth equally in all countries? The role of the state and possibly aid conditionality on political or economic performance seem crucial in post-conflict peacebuilding.

Sindre (2014) argues that peace conditionality may be an efficient tool in ensuring peace in the post-conflict period. They find that in the stage of peacebuilding it is important to include the rebels in decisions regarding aid distribution, as it may encourage a transformation from militarist structure to secure political stability. On a similar note, Boyce (2002) also argues that peace conditionality can make aid a more effective instrument for peacebuilding, but in order for that to be true a reconstruction of aid itself is necessary. In particular, Boyce argues

that donors need to cooperate and agree on conditions for aid in order for it to be successful. But is cooperation between the donors enough to ensure success through peace conditionality? Peace conditionality means that the donors can push their own political agendas, and what if the recipient does not agree with it? Without respecting the recipient country's sovereignty and without their cooperation, aid conditionality can be highly inefficient. Especially, now that the "traditional" donor powers are becoming less important as more non-traditional powers emerge, such as China and India. These do not subject aid on any form of conditionality, at least China. That means that recipients who do not want to deal with conditionalities can just choose another donor - China provides a good alternative option. Then imposing peace conditionality would not increase the efficiency of aid.

In case the donor does respect the sovereignty of the recipient and both come to some sort of agreement on building peace, what is the guarantee that it will be in line with conventional peacebuilding? For example, in an analysis of the timing and sequencing of post-conflict reconstruction and peacebuilding in Burundi Nkurunziza (2015) finds that the sequencing of the implementation of the negotiated agreements seemed to reflect the ruling elite's preferences. This did not necessarily coincide with post-conflict peacebuilding priorities. Nkurunziza (2015) argues that the peace negotiations played little to no role in ending the war. During the peace negotiations the two warring groups (Hutu and Tutsi) were excluded. Hence, it could not lead to any peace solution. Nkurunziza (2015) also emphasizes the importance of economic growth for peacebuilding to be possible.

A similar conclusion about post-conflict inequality is found in a case study of Fiji by Gounder (2005). Gounder (2005) finds that the segregation and discriminatory policies in Fiji led to poor economic performance and high economic cost. In addition, he suggests that horizontal inequality is the most important challenge for a government in a post-conflict state. In order to eliminate it the government should prevent unemployment, social, ethnic and nationalist tensions, such that violence can be limited.

In order for the government to alleviate those various issues in a country, the government needs to be capable and strong. In an institutional analysis of the role of the state, Pritchett et al. (2012) find that many developing countries are in a capability trap, where if they stay, it would take them a very long time to reach high levels of state capability, as seen in the case of Singapore. Pritchett et

al. (2012) refer to a fourfold transformation of the state's functional capacity in that economic development contains advancement in a nation's capacity to manage its economy, polity, society, and public administration. This understanding of economic development underlines the crucial role of the state. Pritchett et al. (2012) argue that international interventions (aid) can "hinder the emergence of domestic, organically-evolved functional organizations" (p.9), because they might be pushing too hard too soon, and that ruins the state's capability. But then, how can aid help in improving the state's capability? According to a micro-level longitudinal study by Bohnke and Zurche (2013) of 80 communities in Northeast Afghanistan in the years of 2007-2009, foreign aid has a significantly positive effect on state legitimacy, and they underline that it is not the sheer amount of aid that determines aid effectiveness, but the visibility and perceived usefulness of the given aid. This could potentially indicate that conditionality of aid plays an important role. On a similar note, Kadirova (2014), who used data from personal interviews, estimated a linear additive model to test project aid effectiveness in Afghanistan from 2002 to 2008 supplemented by macro data analysis. They find that high level of cooperation and support from the national government combined with strong leadership in the international project implementation side ensures highly successful projects. Kadirova (2014) found that the support from the national government to aid projects is reciprocal. The national government was only willing to be cooperative if their sovereignty was respected and if they were included in the projects, one way or the other. This can be enhanced by the international teams through capacity building interaction and support. Hence, the significance of a state cooperation and the capability of the state are crucial elements of peacebuilding.

3 Research question

A country in a post-conflict state is more than likely to be unstable. It needs time and help to rebuild the infrastructure, the state and the general economy. The major causes of the almost three decade long conflict were inequality in terms of education, job opportunity, urban development, benefits from agricultural development, and political exclusion. Since the end of the war, the government has been focused on rebuilding and developing the entire island with help from international loans and donors. However, the picture painted by non-domestic media, researchers, and the Tamil diaspora is that the country still deals with many of the issues which existed in the pre-war period. In peacebuilding and post-conflict reconciliation this type of peace would be called 'negative peace'. Johan Galtung

(1996) defines negative peace simply as the absence of violence. Positive peace, in contrast, is the absence of violence, the presence of a process of reconciliation and government capacity building that can serve the needs of the entire population. The aim of any type of peace building should indeed be positive peace. The literature on the effect of aid in postwar countries suggests that aid can be helpful in creating positive peace, or in other words that aid indeed does have an important role to play in rebuilding postwar countries. Thus, if the aid is not equally distributed across the country and across ethnic groups, then the gain from aid has to be unequal. An unequal gain from aid does not fit well with the term peace consolidation which is what a postwar country should strive for.

Hence, the research question this paper aims to answer is *'Does regional distributions of aid have an effect on relative post-conflict performance across regions in Sri Lanka?'*

4 Data

In order to investigate my research question I apply three different data sets; AidData, ODA, and Asian Development Bank.

4.1 AidData

The first dataset used in the analysis is AidData. This data is available at [<http://aiddata.org/datasets>]. The data I choose to use is called 'World Bank Geocoded Research Release, Version 1.4.2'. The data was published in 2017 and covers the time period 1995 to 2014. It includes all approved projects of the World Bank IBRD/IDA lending lines. The dataset tracks 5,684 projects across 61,243 locations. Moreover, it tracks \$630,187,678,017.21 in geocoded commitments and \$389,037,095,461.60 in geocoded disbursements. For Sri Lanka the dataset covers 2002-2011. The projects covered by this dataset are the following (as it appears in the dataset):

- Agriculture, fishing, and forestry
- Education
- Energy and mining
- Finance
- Health and other social services

- Industry and trade
- Information and communication
- Public Administration, Law, and Justice
- Transportation
- Water, sanitation and flood protection

4.2 Distribution of official development assistance (ODA)

The second dataset used in the analysis is ODA. The data can be accessed via <http://stats.oecd.org/Index.aspx>. The data is defined as geographical aid allocations.

The dataset is geographically broken down by donor, recipient and for some types of aid (e.g. grant, loan, technical co-operation) on a disbursement basis (i.e. actual inflows). The data cover flows from all bilateral and multilateral donors. The OECD Development Assistance Committee's "List of ODA Recipients" shows developing countries and territories eligible for ODA. The list is revised every three years. This indicator is measured in million USD constant prices, using 2015 as the base year. The dataset I picked out has the following characteristics:

- Aid type: ODA: Total net
- Recipient: Sri Lanka
- Unit: US Dollar, Millions, 2015
- Time span: 1999 to 2015
- It includes all bilateral and multilateral donors

4.3 Aid from the Asian Development Bank

The third data set used in the analysis is constructed using aid projects funded by Asian Development Bank. The projects run by Asian Development Bank in Sri Lanka can be found at <https://www.adb.org/projects/country/sri>. There are projects from 1968 to 2017. Since I would want to geocode these projects and use them in combination with AidData, I would only want to geocode from 2002-2014. That means that I would have to approximately geocode 119 projects. The projects are categorized as follows:

- Agriculture, natural resources and rural development

- Education
- Energy
- Finance
- Health
- Industry and trade
- Information and communication technology
- Multisector
- Public sector management
- Transport
- Water and other urban infrastructure and services

5 Methodology

The paper will use GIS analysis. After the tsunami, NGOs were faced with some severe restrictions from the government which meant that a lot of them had to stop their work. Hence, pledged amounts from donors were not disbursed as planned only due to government restriction. Also some donor projects were stopped before they finished. Thus, I would like to create a map showing the donor projects from before the tsunami and the pattern changed after. The idea would be to investigate whether there was a geographical pattern in the stopped projects. In particular, there exists a narrative that the LTTE controlled areas (which were predominantly Tamil) were not allowed NGO relief immediately after the tsunami. Essentially, I want to use this Tsunami as a natural experiment which investigates whether a bias in aid allocation exists or not. One would expect that after a natural catastrophe aid would be allocated to the most impacted areas. If this is not the case some political bias must be in place. In order to determine this, a simple OLS can be run:

$$Aidprojects = \beta_0 + \beta_1 war_affected_areas + \epsilon \quad (1)$$

A second map should illustrate the locations of the post-war donor projects. Again, the idea would be to investigate whether there is a correlation between the project locations and the ethnicity of local population. Furthermore, this map

should include an analysis of whether the projects are relevant to those geographical places.

One concern is that except the AidData the data on aid is not geocoded. Hence, in addition to using the AidData and I want to geocode the Asian Development Bank's projects in Sri Lanka. It is important to notice that the World Bank approved projects combined with the ADB approved projects does not even make out 50% of total aid to Sri Lanka. Even so, I choose these two databases since the ADB and WB have their projects available on their websites.

Following that, I want to identify possible explanations for why there are less development projects in the war torn areas, if that is what the data shows. Or, if the data shows that compared to population shares there are equal development projects in the areas affected by the war, then it would be important to identify why the existing narrative is misleading. In order to reach a conclusion about spatial dependency in aid projects, I aim to test for spatial autocorrelation. Spatial autocorrelation definition measures how close objects are in comparison with other close objects. Moran's I can be classified as positive, negative and no spatial auto-correlation. Positive spatial autocorrelation is when similar values cluster together in a map. Negative spatial autocorrelation is when dissimilar values cluster together in a map.

If it turns out that there is in fact spatial autocorrelation it means that the spatial dependencies are significant. Then I would have to use a special model which takes spatial dependencies into account

6 Descriptive statistics and some preliminary results

Figure 1 illustrates which percentage of aid come from which bank. It's clear that the percentage from World Bank and Asian Development Bank make out just about 50% or even lower throughout the years. In 2012 and 2013 the percentage of total aid coming from ADB was even negative. We can also observe that in general the share of aid coming from ADB and WB has increased over the years. This is consistent with the fact that 'traditional' donors have been hesitant in aiding Sri Lanka since the government refuses to investigate their war crime charges.

Ever since Mahinda Rajapaksa became president in 2005, there has been a decline in aid received from ‘traditional’ donors, and donors such as China has been filling the void.

Figure 2 shows the total aid flows from 1999 to 2015. We can see that there has been a spike in aid flows after the Tsunami in 2003. As the war intensified around 2008 and 2009 the aid flow is decreasing.

Figure 3 is a map created using GIS showing the population of Sri Lanka by ethnicity and geographical location. As can be observed, the north east of the island (the Tamil homeland) is mostly inhabited by Sri Lankan Tamils, the central south of the country is inhabited by Indian Tamils, and the greater south is clearly inhabited by the Sinhalese.

Figure 1: Aid to Sri Lanka, 1999-2015

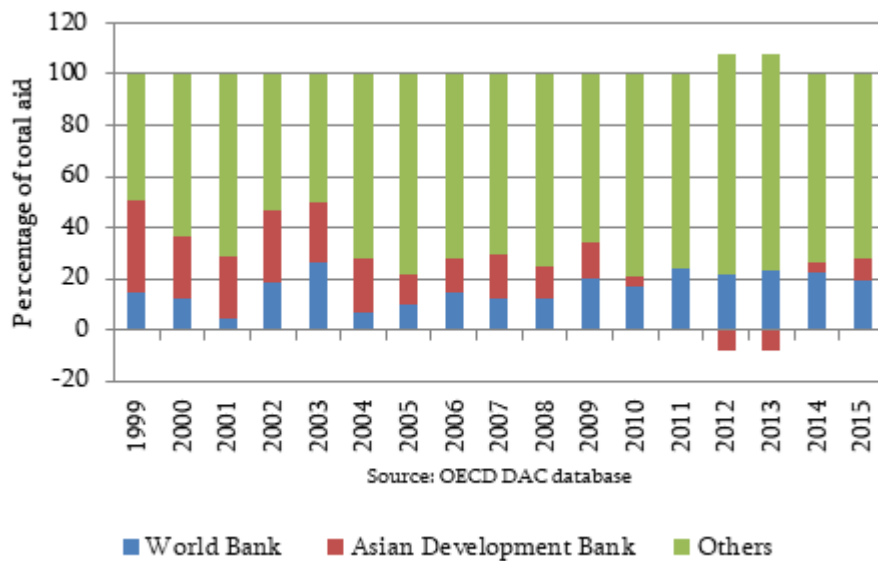


Figure 2: Total aid flows, 1999-2015

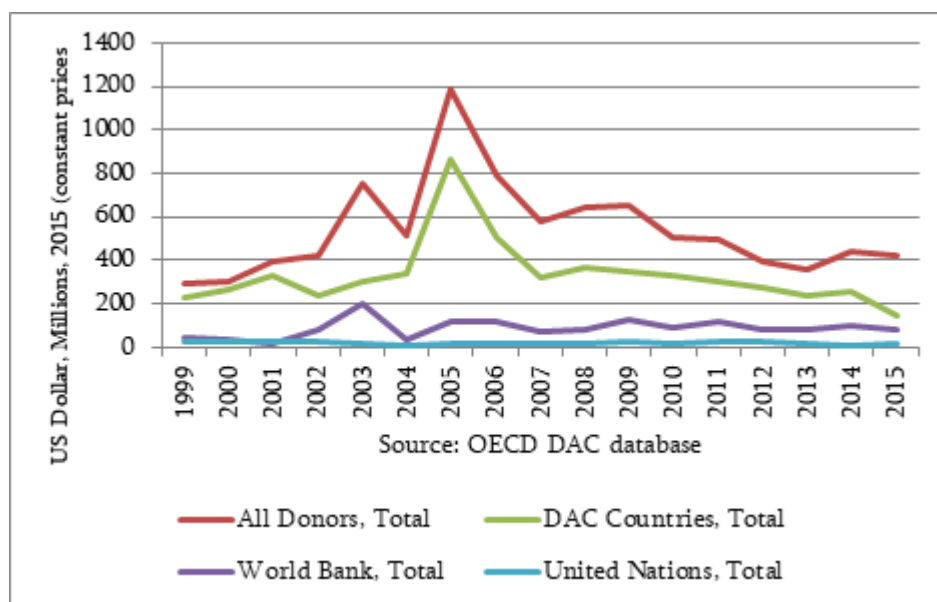


Figure 3: Population by ethnicity

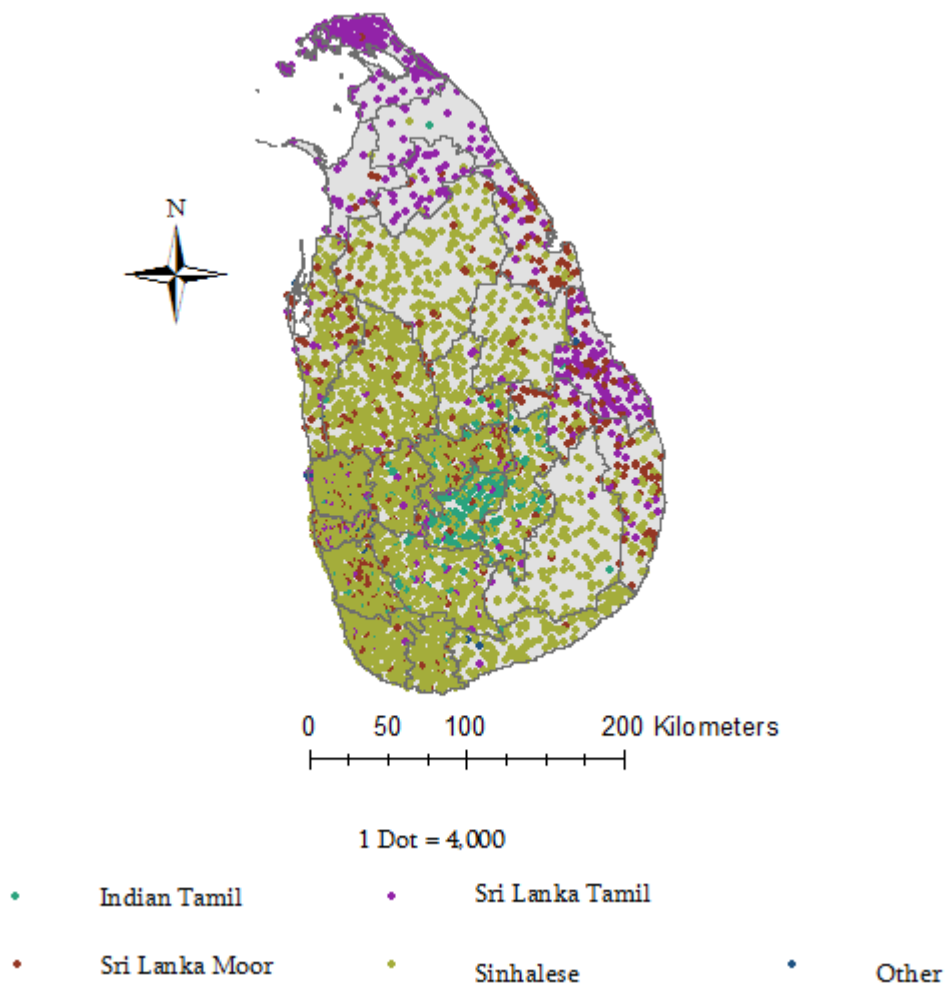


Figure 4: Aid projects before the tsunami in 2004



Figure 5: Aid projects after the tsunami until 2009

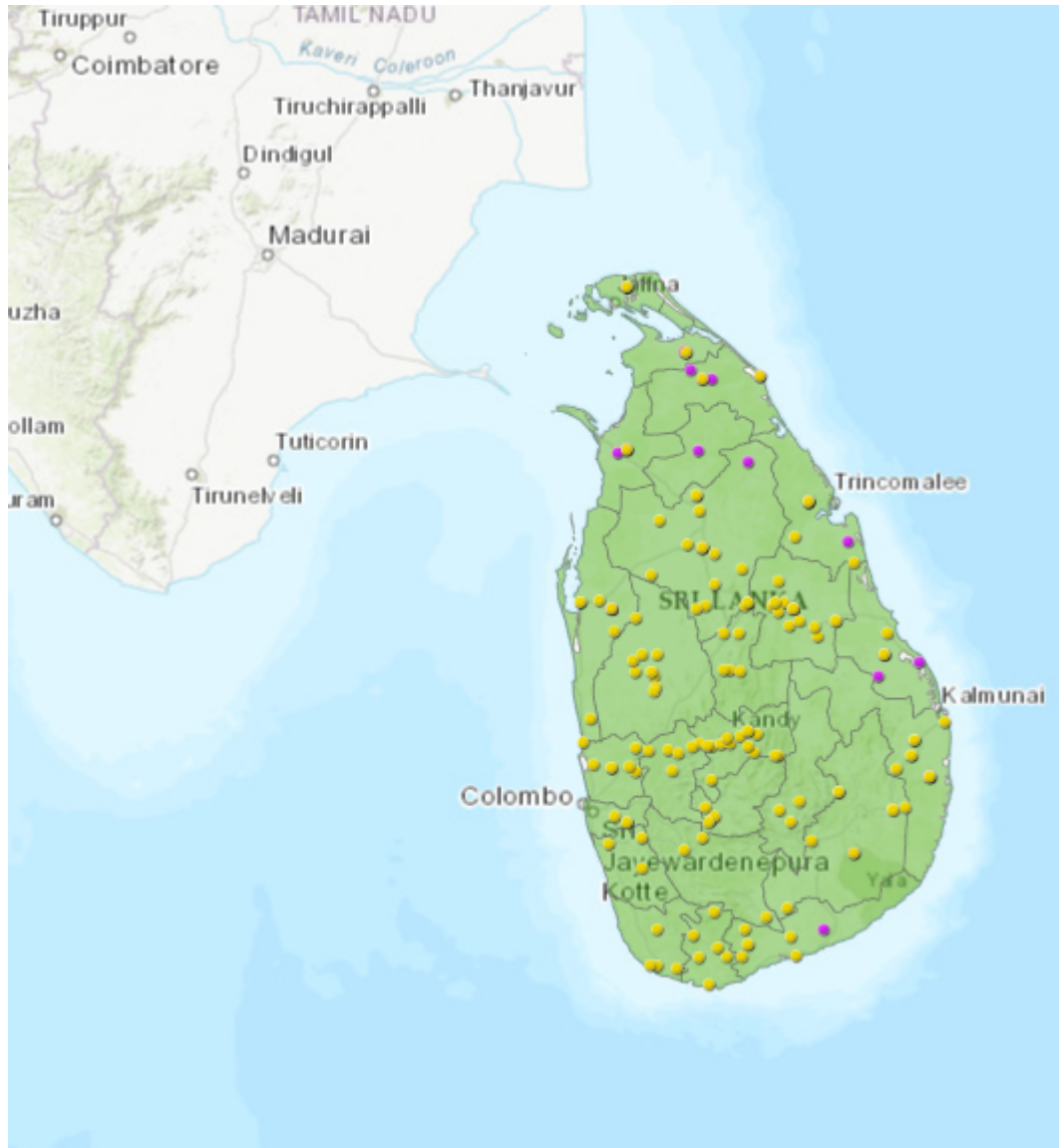


Figure 6: Aid projects after the war

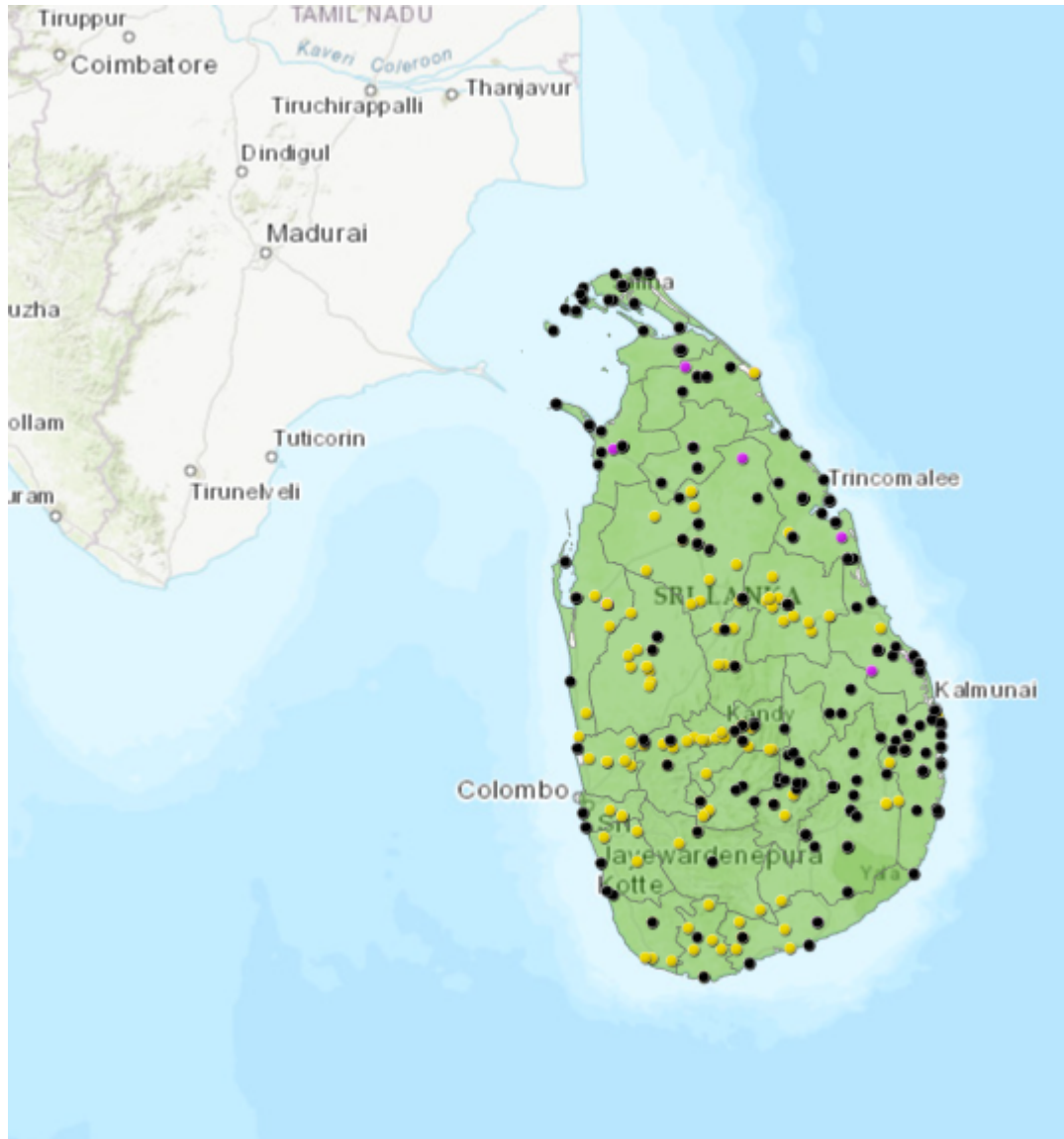


Figure 7: All aid projects from 2002-2011, cluster analysis

