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'Global Factors Influencing the Risk of Conflict and Fragility'

Growth, aid and policies in countries recovering from war

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Note to the reader

This paper is one of eight thematic papers supporting the OECD DAC INCAF project on Global Factors Influencing the Risk of Conflict and Fragility. Each paper explores a specific global factor. The synthesis report, *Think Global, Act Global: Confronting global factors influencing conflict and fragility* (OECD, 2012), can be found at:

www.oecd.org/dac/conflictandfragility/globalfactors.htm

While the thematic papers have been subjected to a robust peer review process, they remain working papers rather than for publication in peer-reviewed journals.

Abstract

What happens to countries after civil war or other conflict comes to an end? This paper shows that post-war economies can experience a peace dividend involving higher than average growth rates, and that aid can increase this dividend. Since post-war countries face the twin challenges of avoiding further conflict and rebuilding their economies, enhancing the peace dividend is a high priority. While there is evidence that this peace dividend can be increased through aid it is not well understood why this may be the case. The paper considers policy reform and particular types of aid but finds no evidence that they hold the key to understanding why aid increases post-war growth. To rebuild their economies and thus prevent them reverting to conflict, there are distinct policies that post-war governments should pursue in the short term: high aid, low taxation, independent public service delivery and low inflation. Post-war societies face enormous needs while having very limited revenue. Aid should fill the gap in the short run, but in the long run aid dependence can be avoided by phasing in a cap on aid. This cap should be relative to tax revenue.

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1. Introduction

After a civil war countries face two main challenges: economic recovery and avoiding renewed conflict. However, about 40% of post-war countries revert back to civil war within a decade; a phenomenon referred to as the "conflict trap" (Collier *et al.*, 2008; 2003). Economic recovery is an important determinant of peace: higher growth rates prolong the duration of peace and thus stabilise the country (Collier *et al.*, 2008).[1] In this paper I focus on the challenge of economic recovery after war by providing a review of the relevant literature. The emphasis is placed on the empirical literature in order to provide evidence-based policy recommendations.

To start with I review the incidence of conflict in fragile states (Section 2), before reviewing their post-war growth experience (Section 3). There is strong cross-country evidence of a peace dividend: on average countries grow at higher rates during the post-war decade. In addition to the cross-country evidence Section 4 discusses the policy response to date and examines whether aid has an impact on the peace dividend. Some policy recommendations for how aid can best help post-war economies are discussed in Section 5. While such economies face enormous social needs they have very little revenue to address them. Aid should be used to fill this gap but longer-term aid should be capped in order to avoid aid dependence and the associated political economy issues. Section 6 concludes and makes some suggestions for further research.

[1] His research was based on the statistical examination of 67 post-war countries.

2. Fragility and conflict

The concept of governance is central to the definitions of fragile states (Box 2.1). The quality of governance is important for the capacity of citizens to earn a living. In states with poor governance the ability of people to lift themselves out of poverty is severely limited. The prevalence of poverty is high in fragile states: 55% of their citizens are poor if one takes an income of USD 1.25 a day as the poverty headcount measure. About one-third of the world's poor live in fragile states even though these states only account for 15% of the global population.[1]

Conflict, fragility and poor development are closely related. There is a large gap in attainment of the Millennium Development Goals (MDGs) between fragile and conflict-affected states (FCAS) and other developing countries (Gates *et al.,* 2012). While acknowledging that causality works in both directions, these authors conclude that conflict and fragility are indeed major obstacles to development.

Box 2.1. What do we mean by conflict and fragility?

In this paper I talk about fragile and conflict-affected states (FCAS). But what do I mean by "conflict and fragility"?

Fragility

The OECD defines a fragile state broadly as follows: "A fragile state has weak capacity to carry out basic functions of governing a population and its territory, and lacks the ability to develop mutually constructive and reinforcing relations with society" (OECD, 2011). Another definition explains how fragility characterises states that are unable to provide two basic functions: security and economic opportunity (Chauvet *et al*., 2010 & 2011). The most basic role of the state is to provide physical security to its citizens through maintaining a "monopoly of organised violence" within society. Where the government fails to do this and rival organisations of violence emerge, the state descends into civil war. Governments also play some role as regulators of private economic activity, and as suppliers of public goods such as transport infrastructure, health and education.

The OECD (2010) has compiled a list of 43 fragile states (listed in Annex A). This empirical research focuses on that list. Although it is unclear which cut-off points were used to categorise these countries as "fragile", it is a useful list for empirical purposes.

Conflict

To my knowledge there is no OECD definition of conflict. In this paper I define conflict following Gleditsch *et al.* (2002), who make a distinction between "major" and "minor" armed conflict. Major armed conflicts or wars cause at least 1 000 battle-related deaths a year (military and civilian deaths). Civil war is large-scale armed violence (causing at least 1 000 battle-related deaths a year) that is internal to a country and involves organised, effective and violent opposition to the government (Gleditsch *et al.*, 2002). On average, civil wars last eight years (Hoeffler, *et al*., 2011).

Although not all fragile states are affected by violent conflict, most fragile countries experienced armed violence between 1990 and 2009. Using the Gleditsch *et al* (2002) definition of conflict (Box 2.1) only 11 out of the OECD (2010) list of 43 fragile countries experienced no organised violence (causing 25 or more deaths) over this period: Cameroon, Equatorial Guinea, Gambia, Kenya, Kiribati, North Korea, Sao Tome and Principe, Solomon Islands, East Timor, Tonga and Zimbabwe. However, some of these fragile countries did experience civil unrest and communal violence:

[1] Based on data from the World Bank's World Development Indicators (ESDS International, 2011)

- Kenya experienced almost 1 000 deaths and about 60 000 people were displaced in the aftermath of the 2007 elections.
- East Timor is a post-war country, it became independent from Indonesia after a long civil war which ended in 1999. In 2006 riots in Dili prompted a deployment of troops from Australia, Portugal, New Zealand, and Malaysia to quell the violence.
- The Solomon Islands have also experienced organised violent conflict. In 1999 civil unrest broke out and despite a peace agreement in 2000 and an Australian-led security operation in 2003 the security situation remains fragile. In 2006 the capital experienced rioting.[2]
- In other countries such as North Korea, Equatorial Guinea and Zimbabwe autocratic regimes violently repress opposition.

Hence, almost all fragile states have a history of civil conflict or war.

[2] For a study of conflict in the Pacific see Collier *et al*. (2010).

3. The relevance and nature of post-conflict growth: from conflict trap to peace dividend

Post-war economic recovery is important for FCAS because about 40% of civil war countries revert back to war within a decade (Collier *et al.*, 2008). Walter (2011) finds strong evidence for a "conflict trap": 57% of all countries that suffered from one civil war during 1945-2009 experienced at least one conflict thereafter. She argues that recurring civil wars have become the dominant form of armed conflict in the world today. In fact, since 2003 every civil war that has started has been a continuation of a previous civil war. Thus, countries with a violent past are more likely to experience new conflict.

What other characteristics make a country more conflict prone? Over the past 15 years strong evidence has emerged that economic characteristics are important determinants of conflict risk. Large n-studies (studies with a large set of observations) show that income levels and growth are robustly correlated with conflict onset (Fearon and Laitin, 2003; Collier and Hoeffler, 2004; Hegre and Sambanis, 2006; Miguel *et al*., 2004). Thus, the strength of the economic recovery is crucial in avoiding a cycle of war and underdevelopment.

There is strong evidence that countries experience higher than average growth rates once the civil war has ended: this is known as the peace dividend (Collier and Hoeffler, 2004; Hoeffler, *et al.*, 2011). The economies of countries affected by conflict grow by about 1.6% less than peaceful states per year, but once the war ends their economic growth rate increases by 1%. This general pattern means that it tends to take 22 years on average for these economies to recover, *i.e.* to revert back to pre-war income levels.

Looking closely at the 10 years after war reveals that the post-war recovery sets in slowly and is strongest during about the fourth, fifth and sixth year after the end of the war (Hoeffler, *et al*. 2011). However, this peace dividend is not automatic. Just as the case of Burundi suggests (see below), in many countries low-level violence (defined as causing 25-999 deaths a year) continues after the end of the war. Panel regressions show that in these cases there was no peace dividend, *i.e.* growth was no higher than in other countries. Thus, in order to catch up countries must end low levels of armed conflict.

Table 3.1 classifies fragile states by how their economies and conflict have been intertwined. Some countries (mostly Asian) maintained positive income growth throughout and after civil war, while other countries (mostly African) experienced pronounced income collapses prior to the war. After the war most countries experience a strong recovery. Only three countries have not experienced a recovery: Eritrea, Burundi and Liberia. It may be too early to tell whether Liberia is recovering from the war and in the case of Burundi the civil war was followed by years of minor armed conflict.

Table 3.1. Income growth experiences of civil war countries

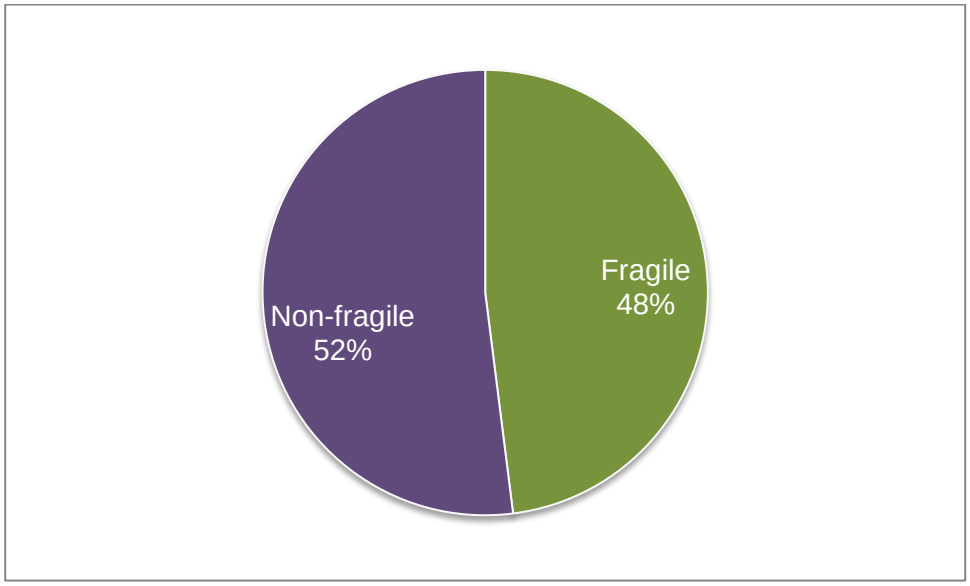
Growth throughout pre-war, war, post-war	Income collapse prior to the War	No recovery post-war	Timid recovery post-war	Strong recovery post-war
Columbia	Algeria	Burundi	Chad	Algeria
India	Burundi	Eritrea*	Georgia	Angola
Indonesia	DRC	Liberia	Nicaragua	Azerbaijan
Nepal	Congo		Serbia&Mont.	El Salvador
Pakistan	El Salvador		South Africa	Ethiopia
Philippines	Georgia		Tajikistan	Mozambique
Sri Lanka	Liberia			Peru
Sudan	Sierra Leone			Rwanda
Turkey				Sierra Leone
				Uganda
				Syria*
				Bosnia*
				Cambodia*
				Lebanon*
				Yemen*

Note: * data only available for the post-war period so it is more difficult to make before and after comparisons.
Source: Hoeffler, A., S.S. Ijaz and S. von Billerbeck (2011), "Post-conflict Recovery and Peace Building", Background Paper for the *World Development Report 2011*.

4. The relationship between aid and post-conflict growth

Recently international development organisations have focused their attention on fragile states. For example, the problems associated with state fragility are central to the *European Reports on Development* 2009 and 2010 (ERD 2009; 2010), the *2011 World Development Report* (World Bank, 2011), the OECD (2011) guidelines on *Supporting Statebuilding in Situations of Conflict and Fragility* and the International Dialogue's *New Deal for Engagement in Fragile States* (IDPS, 2011). In 2009 about USD 90 billion were spent on aid. Almost half of this aid went to fragile states (Figure 4.1). There is evidently both a strong commitment to help countries affected by conflict and fragility, as well as significant concern and a demand from policy makers to understand how to "turn around" fragile states.

Figure 4.1. Aid allocated to fragile and non-fragile states, 2009



Source: OECD Creditor Reporting System, own calculations.

However, there is very little research on the causes and prevention of state fragility and how fragile states can be assisted. There are two main reasons for this research gap: firstly, only since the end of the Cold War in the 1990s has the topic of state fragility been able to be researched free from ideological concerns; and secondly, data availability in fragile states has been extremely poor.

So in this section I ask whether aid has helped to increase the peace dividend. I first review the debate on aid and growth in general before examining whether aid has a different effect in post-war situations. Since there is some discussion about the degree to which the policy environment influences the effectiveness of aid, I examine the relationship between aid and policy post-war. This section concludes by examining which type of aid may be most growth enhancing in post-war economies.

4.1. Aid, policy and growth

There is a longstanding debate on the economic impact of aid on growth. Over the past decade the most controversial contribution has been an article by Burnside and Dollar (2000) entitled "Aid, Growth and Policies" and published in the *American Economic Review*. They found that although aid has in general no impact on growth, it does enhance growth in good policy environments. Their definition of good policy rests on a policy index comprised of budget surplus, inflation, and trade openness. Burnside and Dollar (2000) interpreted their results to show that the better the policy, the greater the impact of aid on growth,

but that more aid does not necessarily result in more growth. The authors therefore advocate prioritising countries with good policies when allocating aid.

This research has received a lot of attention and continues to inform and influence policy makers. In academic circles their contribution has been discussed and re-examined in a large number of papers. Roodman (2007) and Beynon (2002) provide excellent and accessible overviews of the issues, which include a number of econometric concerns.[i]

Other researchers have re-assessed the issue in a way that tackles these concerns very carefully. For example, Rajan and Subramanian (2008) provide a very careful econometric re-assessment – using the generalized method of moments (GMM) techniques – to address the endogeneity issues and to deal with the omitted variable problem. They conclude that there is there is no robust positive relationship between aid and growth. They also find no evidence that aid works better in better policy or geographical environments, nor that certain types of aid work better than others.

However, can aid help stabilise post-conflict countries by enhancing the peace dividend? We explored these links further in our research. Using standard cross-country growth regressions we found evidence that aid *can* have a moderate but positive effect on growth in post-war economies (Collier and Hoeffler, 2004; Hoeffler, *et al*., 2011). We found that an extra 1% of aid increases growth by 0.05-0.1%.[ii] However, aid in violent post-war situations has no effect on growth. We also examined whether policy reforms can support post-war recovery. We found robust evidence that countries with good policies achieve higher growth, but no evidence that aid is more effective in good policy environments. We used the World Bank's annual rating of recipient countries, the Country Policy Institutional Assessment (CPIA) to define and measure good policies and their improvement. This rating takes four main policy areas into consideration:

1. macroeconomic management and sustainability of reforms;
2. structural policies for sustainable and equitable growth;
3. policies for social inclusion; and
4. public sector management.

Post-war countries tend to have weak institutions and one of the important issues is how they should prioritise and sequence their policy and institutional reforms. An analysis of policy reforms found no evidence that any particular area (economic management, structural policies, policies for social inclusion/equity and public sector management and institutions) should be prioritised.

4.2. What type of aid enhances post-war growth?

The evidence discussed so far suggests that aid is beneficial for growth in post-war countries. However, there is no link between specific policy reforms or particular types of aid and growth to explain *why* aid is growth enhancing. In this section I focus on three questions: (1) What type of aid do post-war economies receive? (2) What type of aid enhances growth? (3) Does aid increase growth via investment?

Aid by purpose: what do post-war countries receive?

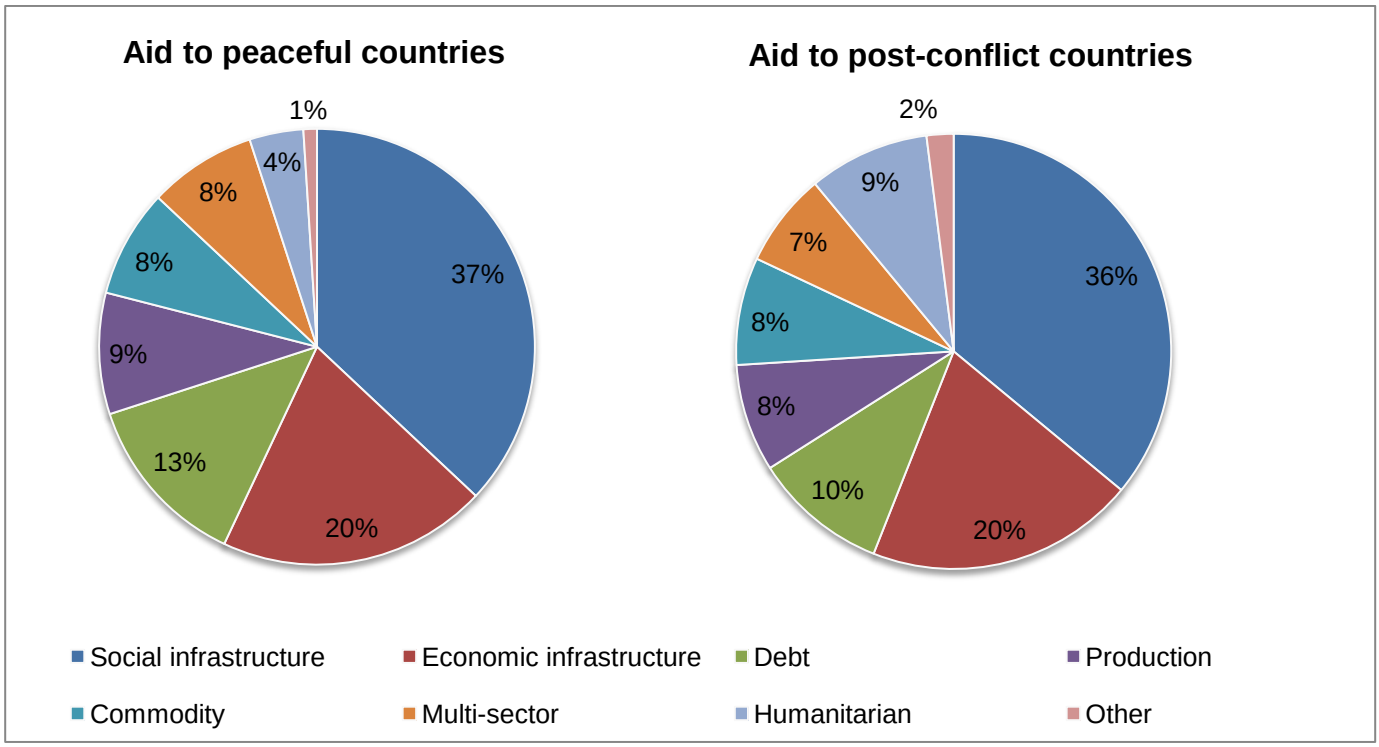
In Figure 4.2, I compare countries at peace and post-war to see if there are differences in the type of aid they receive. The graphs show little difference in aid between countries at peace and post-war. The only differences are in the importance of humanitarian aid and debt forgiveness. Humanitarian aid only makes up about 4% of aid to peaceful countries, but around 10% in war and post-war countries. Proportionally, debt forgiveness is lower for post-war (10%) than for peace countries (13%). Aid for social (education and health) and economic infrastructure makes up half of total aid. There is little difference in the proportion of aid allocated to education, health and physical infrastructure between countries at peace or during the post-war decade. Despite their reconstruction needs, post-war countries do not receive more aid for economic infrastructure.

Aid by purpose: what type enhances growth?

As mentioned above, the econometric evidence suggests that total aid increases the peace dividend (Hoeffler, *et al.*, 2011). We also examined whether there is a type of aid that may be particularly beneficial to growth in post-war countries. However, we found no statistical evidence to say that one particular type of aid is more beneficial than another.

As Figures 4.2 indicates, the particular needs of post-war countries in terms of physical infrastructure reconstruction and rehabilitation do not seem to be matched by more aid for this purpose. However, an evaluation of community-driven reconstruction programmes suggests that communities often prioritise education and health over economic infrastructure projects (Frey, 2010). More than half of the participating communities in the Democratic Republic of Congo chose to rebuild schools. This suggests that the allocation of aid for social *versus* economic infrastructure may be appropriate to meet the needs in war-torn societies. However, more country evidence is required to assess the allocation of aid by purpose.

Figure 4.2. Aid to peaceful and post-war countries by purpose, 1995-2008



Source: OECD Creditor Reporting System, author's calculations for 1995-2008.

Does aid increase growth via investment?

Although the evidence suggests that aid is beneficial for growth in post-war countries, there is no evidence that either policy reforms or particular types of aid explain *why* aid is growth enhancing. It may be that aid increases growth through an investment effect. Traditionally economists have argued that developing countries cannot take advantage of their investment opportunities due to a shortage of domestic savings and/or foreign exchange (the two gap model).[iii] Proponents of this view argue that aid can plug this investment gap. However, while there is a huge literature on whether aid works (for example Bauer, 1972; Easterly, 2006; Sachs, 2006), there is no consensus on how investment and aid affect growth.

I used a simple analysis of investment to deepen my previous research findings on the peace dividend. I measured investment as a percentage of GDP and broke it down into public and private investment[iv]

Simple regressions of aid against total investment showed no evidence of a link – a result confirmed by other researchers (Dollar and Easterly, 1999). However, disaggregating investment into public and private suggests that there is a positive relationship between aid and public investment but a negative one between aid and private investment.[v] An econometric study by Arslanalp *et al.* (2010) investigates the link between public capital and growth in 26 middle and low-income countries (not specifically post-war countries). Their results indicate that increases in the public capital stock are positively correlated with growth, after controlling for the initial level of public capital.

Looking more closely (Table 4.1)[vi] it seems that private investment significantly increases towards the end of the post-war decade (shaded cells, column 3). Further investigation showed that this is only the case if there is no further conflict. This matches investor ratings: according to the *International Country Risk Guide*,[vii] ratings continue to fall during the beginning of the post-war period, and only recover slowly (Hoeffler, *et al*., 2011). Furthermore, Table 4.1 suggests that public investment decreases during the post-conflict decade (column 2) and that it recovers only to normal (peace) levels 7-10 years after the end of the war. Thus, if aid is positively linked with public investment and public investment remains depressed within the post-war decade it may be that aid is growth enhancing because it substitutes for public investment. At this point this is only conjecture; it would need to be confirmed by an econometric investigation of the effect of aid and investment on growth post-war, allowing for possible endogeneity.

Table 4.1. When does investment pick up?

	Post-Conflict Decade		**Specific Post-Conflict Phases**	
	(1)	**(2)**	**(3)**	**(4)**
	Private investment	Public investment	Private investment	Public investment
Ln GDP per capita	2.145 (0.121)***	-0.290 (0.089)***	2.139 (0.121)***	-0.297 (0.089)***
Civil war years	0.255 (0.493)	-2.194 (0.379)***	0.251 (0.493)	-2.198 (0.379)***
Post-war entire decade	0.095 (0.377)	-1.282 (0.297)***		
Post-war years 1-3			-0.456 (0.520)	-1.985 (0.376)***
Post-war years 4-6			-0.406 (0.543)	-1.769 (0.459)***
Post-war years 7-10			1.258 (0.726)*	0.057 (0.591)
Constant	-0.617 (0.858)	10.668 (0.634)***	-0.574 (0.858)	10.719 (0.634)***
No. observations	2885	2882	2885	2882
R-squared	0.10	0.01	0.10	0.02

Notes: The dependent variables are either public or private investment as a percentage of GDP. The explanatory variables are: lnGDP (the natural logarithm of per capita GDP) and dummy variables for civil war years and post-war years. Robust standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%.

NOTES

[i] There are essentially three econometric concerns with the Burnside and Dollar (2000) work: (1) their results do not seem to be robust to small changes in the sample, (2) aid is endogenous and thus should be instrumented in the aid-growth models, and (3) omitted variables may be driving the results.

[ii] Aid is measured as a percentage of gross domestic income.

[iii] For a discussion see for example Todaro and Smith (2012).

[iv] The World Development Indicators (ESDS International, 2011) provide data on gross fixed capital formation (formerly gross domestic fixed investment), which includes land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. Data are provided for total gross fixed capital formation and private gross fixed capital formation. I subtracted private from total gross fixed capital formation to derive public gross fixed capital formation.

[v] This is based on the two simple regressions of public/private investment on aid: Public investment=7.49+0.12(11.9)Aid; Private investment=15.43-0.18(11.8)Aid; t-statistics in parentheses.

[vi] Due to data limitations I was not able to control for the capital stock, I include (the log of) per capita income instead.

[vii] Produced by Political Risk Services and available at *www.prsgroup.com/icrg.aspx*.

5. Entry points for follow-up initiatives

5.1. Reducing the risk of conflict

Post-war economies face a particularly high risk of conflict recurring; this risk is significantly reduced by strong economic recovery (Collier *et al.*, 2008). While initiatives aiming to induce development through sectoral change are important in the long run, governments and international organisations should prioritise short-term growth strategies in order to stabilise peace. Collier (2009) suggests the best strategy would be a package involving low taxation, high aid, intense scrutiny of public spending and low inflation. In this section I discuss these suggestions.

All of Collier's (2009) suggestions focus on the policy response and strategy for the immediate post-war years. The generation of employment for young people is of particular importance. Cross-country evidence suggests that countries with a large proportion of the population aged between 14 and 25 (referred to as a "youth bulge") face a higher risk of civil conflict (Urdal, 2006). With large youth cohorts, job opportunities are limited and thus *e.g.* military or militia recruitment costs are lower. These youth bulges are significant factors in regressions seeking to explain terrorism, rioting, violent demonstrations, and low-level violent conflict, but not the onset of civil war. Thus, a peace dividend crucially depends on employment opportunities for young people as an important condition for growth. Survey evidence from Colombia, the Democratic Republic of Congo, Côte d'Ivoire, Gaza, Mali, Sierra Leone and the West Bank also suggests that unemployment and idleness are the main reasons why young people join rebels groups and gangs (World Bank, 2011). In order to reduce the motivation to join organised violent groups any economic policy should consider the impact on employment.

5.2. Public revenue: Taxation and aid

Creating jobs is only one of many challenges post-war economies face. Other challenges include the reconstruction of infrastructure, the health and education sectors and the revival of the private sector. Post-war countries typically have a very low capacity to raise revenues to address these needs. How should revenues be raised post-war? How should public service delivery be organised and how high should the fiscal deficit be?

Typically tax revenue will be low in post-war economies, although the cross-country evidence is sparse. Boyce and Forman (2010) provide figures for selected FCAS and demonstrate that their tax revenue as a percentage is lower than regional averages. Tax revenues are likely to be low for several reasons:

(1) The need for high military expenditure during the war is likely to have distorted the tax system.[1]

(2) The tax authorities may have become extremely corrupt.

(3) The formal sector of the economy will have shrunk disproportionally during the war. Since the formal sector provides the main tax base, tax revenues will have decreased.

In the longer term taxation is an integral part of statebuilding (Brautigam *et al.,* 2008; Besley and Persson, 2011), not only for providing revenue but also for generating government accountability (Ross, 2004; Boyce and O'Donnell, 2009). However, according to Collier (2009) aggressive taxation would only exacerbate the issues listed above. If the revenue authority is given a target of collecting more revenue it may be tempted to allow its tax collectors to make more aggressive demands of firms. This, combined with corruption in the tax administration, will make private firms more likely to conceal profits. Tax

[1] Boyce and Forman (2010) provide evidence for distortions in the public sector. They suggest that in post-war countries the ratio of military to public health spending can be very high. For example Burundi has a ratio of 6.5, compared to the sub-Saharan Africa average of about 0.5.

collectors may then have to look for visible signs of profitability, for example investments. A profit tax would then turn into an investment tax. However, investment is very valuable in post-war economies and should be encouraged, not discouraged. The sections below suggest some ways of raising revenues that do not stifle growth.

Taxing natural resource rights

One revenue opportunity that post-war countries can take advantage of is to tax natural resources. During the war the exploration and extraction of sub-soil assets will have dramatically declined. After the war countries with such natural resources will therefore experience a commodity boom. If correctly handled, such booms can generate much-needed public funds to assist the recovery. There are three potential points at which natural resources can be taxed:

1) commodity exports;

2) firms' profits from extracting and exporting; and

3) the sale of the rights to extraction.

However, customs services may not have the capacity to enforce export taxation, and as noted above, firms' profits may not be accurately reported and so may generate relatively little tax. Thus the taxation of the rights to resource extraction is the most promising avenue in these circumstances. Post-war governments often have the opportunity to re-negotiate old contracts or to enter new contracts. As post-war governance is often weak and in order to maximise revenue and minimise rent-seeking, governments should hold auctions of extraction rights (Collier, 2009). Even in low corruption environments governments often do not have the information to negotiate contracts to their full advantage. For example the UK Treasury estimated the value of the rights to the 3G mobile telephone networks at GBP 2bn. Paul Klemperer and other Oxford economists persuaded the government to hold an auction: the rights were sold for GBP 20bn. If the very capable UK Treasury can underestimate revenues by a factor of 10, it is likely that post-war governments will only maximise their revenue by holding auctions. The rights to natural resource extraction should only be sold for a relatively short period of time, after which they revert to the state. Auctions need to be designed carefully (Cramton *et al.*, 2006. If post-war countries are not able to organise such auctions, the rights of a post-war government to sell natural resource rights should be monitored and the sale assisted by regional organisations. For example the African Union, and implementation agencies, such as the African Development Bank, could encourage transparency and accountability by assisting in designing and overseeing such auctions. The OECD could assist in providing funds and technical assistance to the regional and implementation agencies.

Countries dependent on agricultural commodities are also likely to experience a boom. The return to peace will encourage farmers to come out of subsistence agriculture and to produce higher quantities for domestic as well as overseas markets. Aggressive taxation will prevent this boom, thus closing off rural income and employment opportunities.

Capping aid

As we have seen, there is a strong donor commitment to help countries affected by conflict and fragility. Most donors now have post-war programmes, and allocate more aid to these countries (Figure 4.1).

However, the income arising from natural resource booms and aid have longer-term consequences. Both lead to an appreciation of the exchange rate, making exports non-competitive. This prevents, among other things, the development of a manufacturing export sector. While some argue that governments should not be concerned with these long-term consequences in the immediate post-war years (Collier, 2009), the longer-term consequences of aid dependence deserve serious consideration. High aid dependence

undermines good governance by distorting political accountability. Governments who are dependent on aid pay too much attention to donors and too little to their citizens (Wood, 2008). Wood proposes capping aid to developing countries at "…50 per cent of the amount of tax revenue that the aid-receiving government raises from its own citizens, by non-coercive means and excluding revenue from oil and minerals." Although this proposal is not specific to post-war countries it would prevent a long-term dependence on aid. If aid were capped at 50% of tax revenue, governments would have an incentive to pay more attention to their own citizens. A cap should be phased in gradually – possibly over a decade for aid-dependent peaceful countries and 15 years for post-war countries. The biggest challenge would be to get donors to agree and collectively implement the limit (Wood, 2008) in a climate where donors have different motives,[2] separate delivery mechanisms and a lack of common rules. The OECD could lead the gradual introduction of a cap on aid.

5.3. Delivering public services

The willingness to pay taxes crucially depends on whether the state is seen to be providing public services. In this section I therefore discuss how these public services should be delivered.

Many countries have never been able to build an effective public sector (Collier, 2009). A civil war and its aftermath typically make it even harder to deliver public services like health care and education. Post-war situations provide opportunities to rethink and reform public service delivery. However, many public administrations are either unable or unwilling to deliver public services (Kimenyi and Ajakaiye, 2012) and often the poor have little or no access to public services. Chad is a particularly shocking example of the leakage of public funds and failure to deliver services. A public expenditure tracking survey in 2004 found that corruption meant that only about 1% of the Ministry of Health's budget actually reached health centres, despite these being the frontline providers and the entry point for the population (Gauthier and Wane, 2007).

Instead of relying on a conventional system of public administration within spending ministries, Collier (2009) advocates the development of a system of Independent Service Authorities (ISAs). The role of an ISA is to contract a range of suppliers to deliver core public services, health and education through local governments, NGOs and private firms. This would separate the function of setting policies from the function of implementing the service delivery. Policy remains the responsibility of ministers and ministries, but implementation is decentralised to a quasi-independent public agency.

However, other researchers argue strongly against the establishment of a dual public sector such as that created by ISAs (Boyce and O'Donnell, 2008). A dual public sector can also arise when, in an attempt to increase efficiency, donors generate and manage their own parallel public sector. This can drain the government public sector, since the donors can pay larger salaries than the government (Boyce and O'Donnell, 2008). However, the introduction of a dual public sector has to be evaluated by comparing the efficiency gains in revenue mobilisation and public service delivery against the sovereignty and accountability issues arising from administering a public sector system by donors who are unaccountable to the local population. To my knowledge no study has yet assessed the efficiency of a dual public sector in this way, so we cannot say for sure that it is always a bad idea.

Finally, every government has to decide the size of their fiscal deficit, also referred to as the fiscal "space". Collier (2009) advocates the use of aid rather than taxation to maintain high levels of spending in situations of great social need. Furthermore, inflation is to be avoided because post-war economies are particularly sensitive to capital flight. In order to avoid further capital flight and to encourage repatriation of capital, post-war countries should abstain from inflationary finance.

[2] Hoeffler and Outram (2011) provide a detailed analysis of donor self-interest versus recipient need and merit in the allocation of aid.

6. Conclusions and areas for further research

The analysis presented here confirms that post-war fragile states can experience a peace dividend in terms of higher than average growth rates. However, this peace dividend is not automatic; it will only occur if there is true peace, with no low-key violence.

It also seems that aid can contribute to higher growth in post-conflict societies, again as long as there is no continuation of violence. However, we do not fully understand why this might be the case. Aid in post-war situations increases growth independently of the policy environment. The proportion of aid given for particular purposes (for example for economic or social infrastructure, debt relief or humanitarian needs) does not seem to be different across recipients: post-war countries receive a very similar aid package to peaceful developing countries. For example, the specific need of post-war societies in terms of infrastructure reconstruction does not seem to be matched by higher aid provision for that purpose. The econometric evidence does not provide us with any clues as to which type of aid may be most likely to enhance growth. It may be that aid makes investment particularly productive in post-war economies. A preliminary data analysis suggests that public investment is significantly lower post-war and that aid may be substituting for public investment. However, an econometric analysis of the relationship between aid and investment, controlling for the (private and public) capital stocks is required to examine why aid increases post-war growth. Currently, there are no capital stock data for most of the post-war countries. To summarise, although there is evidence of a peace dividend and that it is enhanced by aid, we do not fully understand why this might be the case. More research is required to improve our understanding of the impact of aid on growth in post-war countries.

What are the best strategies for post-war recovery? Collier (2009) suggests a package of policies focusing on high aid, low taxation, independent service delivery authorities and low inflation. In the face of great social need, governments in post-war societies should not be tempted to tax aggressively. High taxation hinders the recovery of the private sector, the engine of economic growth. Instead governments should rely on income from natural resources or, if the economy is dependent on agriculture, on aid.

However, while this is the correct strategy for the immediate post-war phase, aid dependence has long-term consequences. Essentially, aid dependency makes governments accountable to foreign donors instead of their own citizens. To avoid this, aid could be capped at 50% of tax revenue (Wood, 2008), phased in over 10 to 15 years. One of the major challenges is to get donors to agree on such a cap and implement it. The OECD could take the lead in the reform of aid to post-war countries.

More research is required to improve our understanding of the impact of aid on growth in post-war countries. This should focus on two areas:

- Broadening the aid analysis to include other external flows, namely remittances and foreign direct investment (FDI), to understand their impact in post-conflict environments. As with the analysis of aid on post-war growth, endogeneity issues will have to be carefully considered and suitable instruments will have to be found.

- An econometric analysis of the relationship between aid and investment, controlling for the (private and public) capital stocks to examine why aid increases post-war growth. Currently, there are no capital stock data for most of the post-war countries.

Annex A: Country Definitions

High income OECD: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Rep., Luxembourg, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Spain, Sweden, Switzerland, United Kingdom, United States.

Other high income: Andorra, Antigua and Barbuda, Aruba, Bahamas, The, Bahrain, Barbados, Bermuda, Brunei Darussalam, Cayman Islands, Channel Islands, Cyprus, Estonia
Faeroe Islands, French Polynesia, Greenland, Guam, Hong Kong, Isle of Man, Israel, Kuwait, Liechtenstein, Macao, Malta, New Caledonia, Northern Mariana Islands, Oman, Puerto Rico, Qatar, San Marino, Saudi Arabia, Singapore, Slovenia, South Africa, Trinidad and Tobago, United Arab Emirates, Virgin Islands (U.S.)

Middle income and poor: Albania, Algeria, American Samoa, Argentina, Armenia, Azerbaijan, Bangladesh, Belarus, Belize, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Burkina Faso, Cambodia, Cape Verde, Chile, China, Colombia, Costa Rica, Croatia, Cuba, Dominica, Dominican Republic, Ecuador, Egypt, Arab Rep. ,El Salvador, Fiji, Gabon, Georgia, Ghana, Grenada, Guatemala, Guyana, Honduras, India, Indonesia, Iran, Jamaica, Jordan, Kazakhstan, Kyrgyz Republic, Lao PDR, Latvia, Lebanon, Lesotho, Libya, Lithuania, Macedonia, Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritania, Mauritius, Mayotte, Mexico, Micronesia, Moldova, Mongolia, Morocco, Mozambique, Namibia, Nicaragua, Palau, Panama, Paraguay, Peru, Philippines, Poland, Romania, Russian Federation, Samoa, Senegal, Serbia, Seychelles, Sri Lanka, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Swaziland, Syrian Arab Republic, Tanzania, Thailand, Tunisia, Turkey, Turkmenistan, Ukraine, Uruguay, Uzbekistan, Vanuatu, Venezuela, Vietnam, Zambia

Fragile states (list of countries as in OECD, 2010)

Low-income countries (26 countries): Afghanistan, Burundi, Central African Republic, Chad, Democratic Republic of Congo, Comoros, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kenya, North Korea, Liberia, Myanmar, Nepal, Niger, Rwanda, Somalia, Sierra Leone, Tajikistan, Togo, Uganda, Republic of Yemen, Zimbabwe

Middle-income countries (16 countries): Angola, Cameroon, Republic of Congo, Côte d'Ivoire, Djibouti, Iraq, Kiribati, Nigeria, São Tomé and Principe, Solomon Islands, Sudan, Timor-Leste, Tonga, Pakistan, Papua New Guinea, West Bank and Gaza

High-income countries (1 country): Equatorial Guinea

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