

# **Dealing with the Consequences of Violent Conflicts in Africa**

Background Paper for the  
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## Abstract

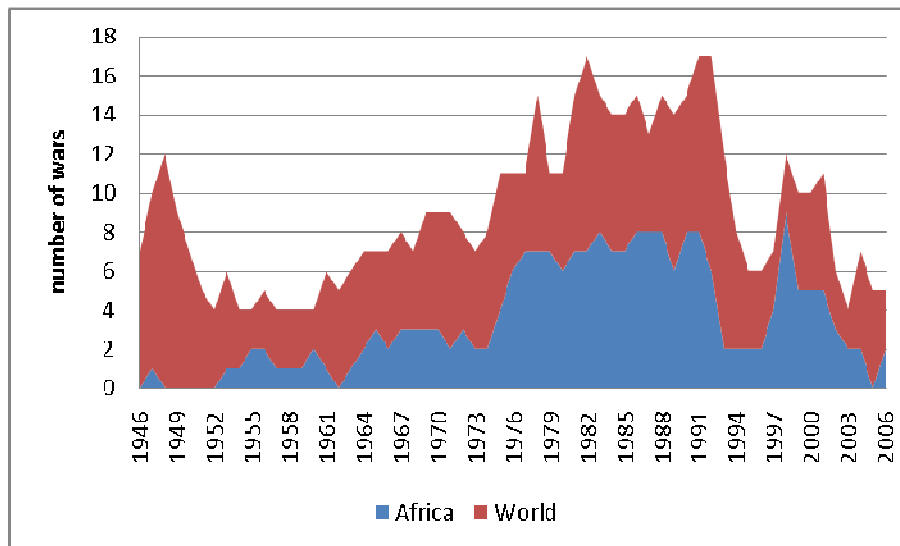
This background paper assesses the consequences of civil war in Africa and provides recommendations on how to deal with these consequences. Historically, Africa has had a high prevalence of conflict but during the last decade the continent has seen the termination of a number of civil wars. Since a high proportion of peace settlements break down it is important to understand the challenges post-conflict societies face. The recommendations suggest that appropriate outside assistance and internal reform can strengthen the peace in post-conflict countries. This is Africa's opportunity to break out of the conflict trap.

## **1. Introduction**

This background paper examines the major economic and social consequences of violent conflict. The most obvious consequence of war is that it kills people. How many is often difficult to estimate and this paper discusses the available data in some detail. Civil wars threaten human security during and after the war and different aspects of the war burden will be analysed. A number of different disciplines have examined the burden of war. Political scientists and economists have analysed the causes and consequences of civil war and this is a very active area of research. But other disciplines, such as public health, also take an interest in the analysis of the burden of war.

How does civil war affect Africa? As a first step an overview of the past sixty years is provided. Using the Uppsala/PRIO Armed Conflict Dataset (ACD) by Gleditsch *et al.* (2002) the number of civil wars that were ongoing throughout the world were counted. Civil wars are defined as causing a minimum of 1,000 battle deaths per year. Figure 1 shows that the global prevalence of civil wars was rising throughout the 1960s, 1970s and 1980s. The highest number of ongoing wars was in the years 1991 and 1992 where there were 17 civil wars globally. Since then the number of wars has been falling to 5 wars in 2006. These five civil wars took place in Afghanistan, Iraq and Sri Lanka and in two African countries, Chad and Sudan.

**Figure 1: Global Prevalence of Civil War**



Source: Gleditsch *et al* (2002), author's calculations.

Within Figure 1 the number of wars in Africa is highlighted. The trend of rising prevalence throughout the Cold War and a decrease thereafter is similar for African countries. There are two peaks in the African series, 1991/1992 with eight and 1989 with nine wars. Since then the number of wars has fallen to two in 2006. If one takes into consideration that only about 12 percent of the global population live in Africa<sup>1</sup>, it seems that Africa has experienced more violent conflict than other continents. African wars have also lasted longer, on average they lasted about eight years while the global average is about six and a half years.<sup>2</sup>

The question why Africa has seen more wars has been examined by a number of scholars. Colonial history and proxy wars throughout the Cold War are often at the core of the argument. Most of this amounts to an African 'exceptionalism', in other words Africa's troubled past is Africa specific and cannot be analysed in the same way as wars in other parts

<sup>1</sup> Based on population data for 2000, data source: WDI 2007, author's calculation.

<sup>2</sup> Data source: Uppsala/PRIO Armed Conflict Data Set, author's calculation.

of the world. However, a global statistical analysis of the onset of civil wars suggests that Africa has experienced more civil wars mainly because the economic circumstances, low income, low growth and high dependence on natural resources, have made war feasible (Collier and Hoeffler, 2002). Taking these factors into consideration Africa has not experienced more wars than the continent's characteristics would predict. In addition the wars in Africa have also resulted in making the continent poorer and preventing development in many countries. This cycle of poverty and war has been described as a 'conflict trap' (see for example Collier, 2007). If colonial and Cold War history are the main causes of this trap there is not much hope for the future since we cannot change history. If on the other hand economic factors are important determinants of conflict risk (Fearon and Laitin, 2003, Collier and Hoeffler, 2004a, Collier, Hoeffler and Rohner, 2007) there is hope that the future will not look like the past. Since the 1990s Africa has seen a reduction in the prevalence of civil war and countries with long and devastating civil wars are now at peace. Angola, Mozambique, Sierra Leone, Liberia and Rwanda are such examples.

Countries suffer from many different consequences of civil war. Wars kill people in many different ways: civilians and soldiers are killed in combat, people die because there is a higher prevalence of preventable communicable diseases and during wars people are killed due to increased violent crime. Wars force mass migration. Post-war economies are in a worse shape than before the war and far from bringing an improvement to the political system, in general post-war societies are less democratic (Collier and Hoeffler, 2007a). Countries with a violent past also face a high risk of renewed conflict, about 40 percent of countries experience a new civil war within a decade (Collier, Hoeffler and Söderbom, 2008). Dealing with the consequences of war is not only a humanitarian imperative but dealing with the economic and political consequences is also important because it decreases the risk of the

civil war breaking out again. Dealing with the consequences of civil wars is our chance of 'breaking the conflict trap'.

The paper is structured in the following way. Section two reviews the evidence of the public health burden of civil war. In Section three the economic consequences of war are assessed. Section four provides recommendations for post-conflict economic recovery and risk reduction and section five concludes.

## **2. The Public Health Burden of Civil War**

This section reviews the recent evidence on the public health burden of civil war. The review focuses on two main aspects, deaths and displacements due to war. Within this review longer term consequences of war as well as spillovers to neighbouring countries are considered

Wars kill but numbers are hard to come by. In the literature there is a wide discrepancy between the number of deaths reported for various wars. One distinction in the number of war deaths is whether people were killed through direct violence or indirectly through the consequences of war such as malnutrition and increased risk of communicable diseases. Typically the literature distinguishes between 'battle deaths' and 'total war deaths', which includes deaths due to direct and indirect causes.

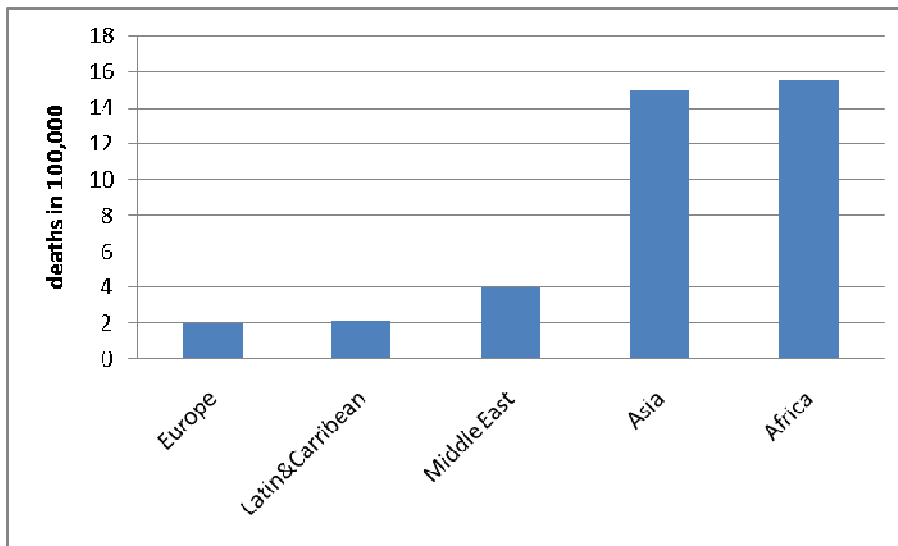
### **2.1 Battle Deaths**

Lacina and Gleditsch (2005) provide a global panel data set of battle deaths. They define battle deaths as deaths due to military operations, this includes military as well as civilian fatalities. However, as they point out battle deaths are only part of the total war deaths. In addition to soldiers and civilians being killed in battle there are non-battle deaths which

comprise of (1) an increase in one sided violence, (2) an increase in crime and unorganised violence and (3) in an increase in non-violent mortality (diseases).

Based on Lacina and Gleditsch (2005) a total of about 3.86 million people were killed in civil war battles globally between 1960 and 2002. Figure 2 breaks this total down by region.

**Figure 2: Total Battle Deaths 1960-2002**



Source: Lacina and Gleditsch (2005), author's calculations.

During 1960-2002 about 1.55 million people were killed in battle in Africa, about 40 percent of the global total. This makes Africa the region with the highest total number of battle deaths. Calculating the average number of battle deaths it seems that wars in Africa were 'deadlier' than in other regions. Per year the average number of battle deaths is 3,350 in Africa while it is between 1,500 and 2,700 for all other regions<sup>3</sup>.

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<sup>3</sup> Based on data from Lacina and Gleditsch (2005), author's calculations for 1960-2002.

Looking beyond these aggregate numbers, who is killed in military operations? Murray *et al* (2002) examine the age and sex distribution of battle deaths. According to their data men aged 15-29 are most likely to be killed but that nearly a quarter of all battle deaths are inflicted on women. Their estimates also suggest that the battle deaths are almost equally split between military and civilian fatalities.

## 2.2 Total War Deaths

Lacina and Gleditsch (2005) also provide some estimates for total war deaths, which includes battle deaths, and deaths due to increased one-sided violence, diseases and crime. Some numbers for four selected African wars are presented in Table 1. The last column in Table 1 shows the percentage of battle deaths in total deaths, the numbers range from three to 29 percent. Although this is a large range these numbers indicate that deaths from military operations are less than one third of all deaths due to war. As Table 1 indicates estimates of the ‘indirect’ deaths of war have large margins of error and no comprehensive dataset exists to date.

**Table 1: Battle and War Deaths in Selected African Countries**

Country	Years	Total Deaths	Battle Deaths	%Battle Deaths
Angola	1975-2002	1.5 million	160,500	11%
Mozambique	1967-1992	0.5-1 mill.	145,400	15-29%
Sudan	1983-2002	2 million	55,000	3%
DRC	1998-2002	2.5 million	145,000	6%

Source: Lacina and Gleditsch (2005, p.159).

A number of epidemiological studies try to estimate excess mortality due to the war and calculate the number of war deaths. Household surveys are difficult or impossible to carry out

in war zones. Typically these micro surveys are carried out towards the end of a war or once the war is over and relies on recalled data. One example is the work by Coghlan *et al* (2006) in which the researchers try to estimate the number of deaths due to the war in the Democratic Republic of the Congo during 1998-2004. Textbox 1 summarizes their findings. This case study illustrates how difficult it is to obtain estimates of the total war deaths. The more detailed household surveys can be carried out, the closer we may come to creating a cross country data set of total war deaths. According to the Coghlan *et al* (2006) estimates the total death toll from the Congolese war is about 3.9 million. They suggest that the Congolese war has been the deadliest since the end of World War II. Their total death toll differs markedly from the Lacina and Gleditsch (2005) who put the total at 2.5 million. Lacina and Gleditsch (2005) only provide data for four years of the war but the corresponding Coghlan *et al* (2006) estimate for this period is 3.3 million. However, since the latter figure is based on a more recent International Rescue Committee household survey it is perhaps the more precise estimate of the two. The comparison of these two numbers shows how widely figures of total deaths for the same war differ.

### **Textbox 1: Total War Deaths in the Democratic Republic of the Congo**

The International Rescue Committee (IRC) carried out four surveys to estimate the death toll of the war in the Democratic Republic of the Congo (DRC). The most recent one was carried out in 2004 and was nationwide survey of 19,500 households in the DRC. The household survey used a stratified three-stage cluster sampling technique. First, the country was divided into two strata along the 2001 line of military control, an east stratum of territory formerly held by rebel groups and a west stratum of territory held by government forces. Each stratum was divided into health zones. Second, clusters were assigned to villages within the health zones. Third, 20-30 households were interviewed in each cluster during April to July 2004. Participants were asked to recall all births and deaths during the 16 month period from 1<sup>st</sup> January, 2003 until 30<sup>th</sup> April 2004. The age, sex, date and cause of death were recorded by local staff of the IRC. No independent confirmation of death was undertaken. Crude mortality rates were calculated in the following way:

$$\text{Crude mortality rate} = \frac{\text{Number of deaths in the sample}}{\text{Number of living in sample} + \frac{1}{2} \text{ deaths in sample} - \frac{1}{2} \text{ livebirths in sample}} \cdot 1000 / \text{Recall Period}$$

The denominator is an estimate of the sample population at midpoint of the recall period. This estimate of the crude mortality rate is expressed as deaths per 1,000 population per month. The average crude mortality rate for Sub-Saharan Africa is 1.5 but for the DRC for this period is was 40 percent higher, 2.1 deaths per 1,000 per month. This suggests that there were 38,000 excess deaths per months or about 60,000 excess deaths during the 16 months. To put it differently, more than 1,200 people died per day, compared with what would usually be expected over this time.

Over the period the crude mortality rate for the eastern DRC, the rebel held territory, was significantly higher (2.4) than in the western DRC (1.8). Most deaths in the east and west strata were due to malnutrition and preventable and easily treatable diseases. More than 50 percent of the deaths were due to fever and malaria, diarrhoea, respiratory infections and maternal deaths in childbirth. Deaths due to violent injury were more concentrated in the east. Men aged 15 years and older were at the greatest risk of being killed, they made up 71 percent of all violent deaths. Women made up 18 percent and children under 15 years ten percent of all violent deaths.

Combining the results from this survey with three previous ICR surveys it is estimated that about 3.9 million people have died as a result of the six year war (1998-2004) in the Democratic Republic of the Congo. This makes it the world's most deadly war since the end of World War II, the death toll far exceeds those of other recent civil wars such as Bosnia, Rwanda and Darfur.

Source: Coghlan *et al* (2006).

### **2.3 Legacy Effects**

Wars affect peoples' lives long after the fighting has stopped. Wars do not only kill but they also cause disability due to injury or increased disease burden. One way to measure the effects is to calculate disability adjusted life expectancy or disability adjusted life years (DALYs). These data are compiled by the World Health Organisation (WHO). These measures take into account both years of life lost because of disease and injury and years of healthy life lost to long term disability. Ghoborah, Huth and Russett (2003) use these measures to estimate the cost of civil war and find that in 1999 about 8.4 million DALYs were lost as a direct effect of all wars that were ongoing. In addition, a further 8 million DALYs were lost as a result of civil wars that had ended during 1991-97. Thus, the legacy effect of civil wars ending during the 1990s on DALYs was approximately as large as the effect of ongoing conflict at the end of the decade. This legacy impact works its way through specific diseases and conditions, and disproportionately affects women and children.

One disease that affects Africa disproportionately is HIV/AIDS. Buvé, Bishikwabo-Nsarhaza and Mutangadura (2002) provide an overview of the spread and effect of HIV infection in sub-Saharan Africa.<sup>4</sup> By the end of 2001 the HIV prevalence rate in adults in the region was estimated at 8.4 percent. Estimated prevalence rates for other regions were much lower, the Caribbean region has the second highest prevalence rate of 2.2 percent and all other regions have prevalence rates of less than 1 percent. The discussion of why Africa is more severely affected than any other region focuses on two explanations: war and poverty. Wars are conducive to the rapid spread of HIV. Soldiers are facing the risk of losing their lives and

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<sup>4</sup> Their study focuses on HIV-1 infections.

weigh up the risk of contracting HIV by stressful situations and dangers related to war. Civilians are often subjected to human rights abuses, including sexual violence. In Rwanda in 1995 the prevalence of HIV in pregnant women from rural areas was 24 percent which was attributed to rape during the genocide. Some women find themselves in abject poverty that may lead them to use commercial sex to survive. In general displacement during war weakens social cohesion and relationships which may lead to promiscuity and commercial sex. Poverty is also cited as a reason for the high prevalence rates. Sexual behaviour patterns are more risky when people are poor. Poverty also seems to increase the gender imbalance. Although women are more at risk of contracting HIV it seems that they cannot demand condom use from their partners. Buvé, Bishikwabo-Nsarhaza and Mutangadura (2002) conclude that populations in many part of Africa are becoming trapped in a vicious HIV-poverty cycle. HIV/AIDS leads to high mortality rates among the young and economically productive, thus leading to further impoverishment. Until the problem of economic development is tackled and socio-economic circumstances for young people change, it is difficult to persuade them to adapt their sexual behaviour to secure their future.

In addition to physical diseases war leaves people traumatised. Most of the victims of civil war are civilians and they are subjected to or witness war-related traumatic events such as shootings, killings, rape, torture and loss of family members. A random household survey of residents and internally displaced persons in Freetown in 1999 showed that almost every respondent was exposed to conflict. Fifty percent of the respondents lost someone to whom they were very close, 41 percent actually witnessed their death. Torture was witnessed by 54 percent, executions by 41 percent, amputations by 32 percent and public rape by 14 percent. The witnessing of such events can lead to serious psychological stress. The health services in post-conflict countries are poorly functioning. Medical staff are facing huge problems of

physical diseases they have no or very little resources to address post-traumatic stress disorder.<sup>5</sup>

War ruins a country's economy, including the health sector. Devastated by the war the post-conflict government has got insufficient revenues to spend on the health sector which faces enormous demand. At the same time donors are often reluctant to fund improvements in the health sector before they can be certain that peace can be sustained. Wakabi (2007) provides an overview of Burundi's health sector post-conflict. Maternal mortality rates are at 1,000 per 100,000 live births and infant mortality at 114 per live births. These rates are among the highest in Africa. Other diseases, such as malaria, diarrhoea, pneumonia and HIV/AIDS have claimed 300,000 lives since 2003. Less than half the population have access to safe drinking water.

#### **2.4 Regional Spillover Effects due to Diseases**

Most of the total war deaths are not due to violence but due to communicable diseases. During civil war nationwide public health programmes for disease control and prevention cannot be carried out. This does not only have implications for the health of the citizens in the country at war but the negative health effects of civil war go beyond borders. For example Uganda has not reported any wild cases of polio since 1996 but has to continue mass immunisation in border regions for fear that the disease will spill over from Sudan and the Democratic Republic of the Congo (Wendo, 2002).

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<sup>5</sup> On post-traumatic stress disorder in Sierra Leone see De Jong *et al* (2000).

A further well documented example of civil war being a major impediment to the eradication of endemic diseases is the case of dracunculiasis or Guinea worm disease.<sup>6</sup> The worldwide campaign to eradicate dracunculiasis began at the US Centers for Disease control and Prevention in 1980. At this time there were an estimated 3.5 million cases in over 20 African countries. Due to the regional eradication programme the incidence has been reduced by 98 percent. Most of the remaining patients are in southern Sudan and the campaign cannot be completed until Sudan's war ends. In 2001 about 78 percent of all cases of drancunculiasis were in southern Sudan.

People contract drancunculiasis by drinking contaminated water from open ponds. One year later 1m long worms emerge through the person's skin. As a result of the pain patients are unable to farm or attend school for two to three months. When infected people enter water the parasite discharges larvae into the water and become infective to others. The parasite must pass through people so when transmission is interrupted, drancunculiasis will be eradicated forever. People do not develop immunity to the disease and there is neither a treatment nor a vaccine.

During the temporary "Guinea Worm Cease-Fire" in 1995 health workers were able to distribute cloth water filters to villagers as part of the regional eradication programme. This distribution of over 200,000 filters was seen as a tremendous success and despite the war distribution of filters continued after the temporary cease-fire. It is estimated that it will take three to five years to completely eradicate dracunculiasis after the end of the war. Until then the cost of the disease to Sudan and her neighbours are substantial. They include the cost of about \$2 million per year to maintain the eradication programme in Sudan and cost of

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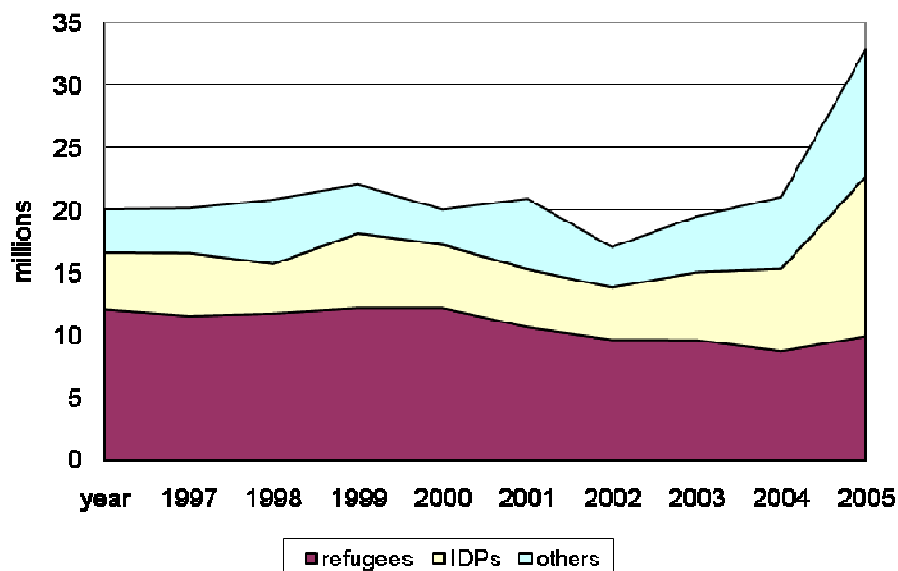
<sup>6</sup> The discussion of drancunculiasis is based on Hopkins and Withers (2002).

maintaining surveillance to detect cases exported from southern Sudan to other regions of Sudan and to the neighbouring countries. All of these costs could have been avoided if the eradication programme had not been hampered by the civil war in Sudan.

## 2.5 Regional Spillover Effects due to Displacement

In contrast to death figures, internationally comparable data for displaced persons are easy to obtain. The United Nations High Commission for Refugees (UNHCR) collects and publishes worldwide data. In 2006 the UNHCR listed about 33 million people of concern globally. These people of concern are defined in three broad categories, about 10 million refugees, 13 million internally displaced persons (IDPs) and about 10 million others (asylum seekers, returned refugees/IDPs and stateless persons). Figure 1 graphs the number of persons of concern for the past 20 years.

**Figure 4: Global Number of Persons of Concern**



Source: UNHCR (2006)

Since 2000 the number of refugees has fallen from 12.1 million to 9.9 million worldwide. However, the total number of IDPs and others of concern has been rising sharply since 2002. This number rose from 10.3 million in 2002 to 23 million in 2006. How does Africa compare to the rest of the world? Africa is only home to about 12 percent of the world's population. However, 31 percent of the world's refugee population originate from Africa. Most African refugees come from the following countries: Sudan, Somalia, DRC, Burundi, Angola, Eritrea, Liberia, Rwanda, Western Sahara and Ethiopia. Table 2 lists refugee numbers for these countries. Refugees from these countries make up about 28 percent of the world's refugees.

**Table 2: African Refugees by Origin, 2006**

<b>Country</b>	<b>Refugees</b>
<b>Sudan</b>	686,311
<b>Somalia</b>	464,253
<b>DRC</b>	401,914
<b>Burundi</b>	396,541
<b>Angola</b>	206,501
<b>Eritrea</b>	193,745
<b>Liberia</b>	160,548
<b>Rwanda</b>	92,966
<b>Western Sahara</b>	90,614
<b>Ethiopia</b>	74,026

Source: UNHCR (2006)

Where do these refugees flee to? Most of these refugees flee across the border to neighbouring states, i.e. they do not leave the continent. The main host countries are Tanzania, Chad, Kenya, Uganda, DRC, Sudan, Zambia, Ethiopia, Algeria and Congo. The refugee numbers by country of asylum are listed in Table 3.

**Table 3: African Refugees by country of Asylum, 2006**

<b>Country</b>	<b>Refugees</b>
<b>Tanzania</b>	485,295
<b>Chad</b>	286,743
<b>Kenya</b>	272,531
<b>Uganda</b>	272,007
<b>DRC</b>	208,371
<b>Sudan</b>	196,200
<b>Zambia</b>	120,253
<b>Ethiopia</b>	96,980
<b>Algeria</b>	94,180
<b>Congo</b>	55,788

Source: UNHCR (2006)

What about the other large group of ‘people of concern’, the IDPs? A staggering 42 percent of the global IDPs were displaced in nine African countries: Uganda, Sudan, DRC, Cote d’Ivoire, Somalia, CAR, Chad, Burundi and Congo. Table 4 provides the figures for IDPs in Africa. Displacement often has terrible consequences. IDPs are at high risk from violence, malnutrition and communicable diseases. A survey carried out in the Republic of Congo found that mortality rates between November 1999 and January 2000 was more than 5 per 10,000 and that malnutrition was the principal cause of death among the displaced. A third of all children in one camp in Brazzaville had global acute malnutrition. Médecins Sans Frontières treated more than 10,000 cases of acute malnutrition.<sup>7</sup>

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<sup>7</sup> Salignon *et al* (2000).

**Table 4: African Internally Displaced Persons, 2006**

<b>Country</b>	<b>IDPs</b>
<b>Uganda</b>	1,586,174
<b>Sudan</b>	1,325,235
<b>Democratic Republic of Congo</b>	1,075,297
<b>Côte d'Ivoire</b>	709,228
<b>Somalia</b>	400,000
<b>Central African Republic</b>	147,000
<b>Chad</b>	112,686
<b>Burundi</b>	13,850
<b>Rep. Of the Congo</b>	3,492

Source: UNHCR (2006)

To summarize, the regional cost of conflict are very high in Africa. Although the continent is only home to about 12 percent of the world's population it has a very high share of global human misery. About 31 percent of the world's refugees originate from and find asylum in Africa and about 42 percent of the world's IDPs live in African countries.

This section provided an overview of the public health burden of war in Africa. Africa's wars last longer and are deadlier than in other regions. Recent surveys suggest that the war in the DRC has claimed a total of 3.9 million lives, making it the world's deadliest war since World War II. While young men make up the highest share of fatalities in combat, the increased disease burden disproportionately affects women and children. Wars continue to kill long after the fighting stops. Health sectors in post-conflict economies are devastated and unable to meet the huge demand for health services. Typically there are no resources to deal with the trauma of war. Civil wars also have health consequences for the neighbouring countries. Regional disease control programmes are interrupted and preventable communicable diseases continue to kill in Africa. Temporary cease fires for vaccinations and other disease control

measures have been successful to lessen the regional consequences of war. Wars also cause displacement on a massive scale. In 2006 about 31 percent of refugees worldwide originated from African countries and 42 percent of all IDPs were displaced in African countries.

### **Textbox 2: Violence, Displacement and Death in West Darfur, Sudan**

The present violent conflict in Darfur began in earnest in February 2003, resulting in an estimated 190,000 refugees who fled to Chad and about 1 million internally displaced persons (IDPs). Between April and June 2004 Médecins sans Frontières (MSF) carried out a survey of IDPs in Darfur in order to provide a basis of appropriate assistance. IDPs were surveyed in a two stage cluster based household survey. First, four sites in West Darfur were chosen and in these four sites and in a second step a number of randomly chosen households were interviewed. IDPs lived either in clearly identifiable camps or had mixed with the resident population. Each head of household was asked to recall the deaths since 2003. The age and sex of the dead person were noted, as were the causes (violence, medical or other) and location (in the village, in flight or in the camp). Crude mortality rates were estimated based on the survey data. Crude mortality rates were extremely high in the “village and flight” period and violence-specific mortality rates accounted for most mortality during this period. The UNHCR rates situations with crude mortality rates above 1 death per 10,000 persons per day as an emergency situation. Mortality rates ranged from 1.5 to 9.5 in the different sites. As a comparison the non-emergency rate in the sub-Saharan population is 0.5. During the “camp period” mortality rates decreased to between 1.2 and 5.6, in other words they were still well above the emergency benchmark. Men were at far higher risk of being killed, separations and disappearances were also common, mostly affecting men. High mortality and family separations amount to a demographic catastrophe. The age and sex pyramids for these four sites are skewed due to the missing or dead men. The case of Darfur seems exceptional because of the high percentage of violent deaths in total deaths. However, like in other violent conflicts the victims are mostly civilian and the displacement results not only in excess mortality and loss of livelihoods and thus also in a long term dependence on aid.

Source: Depoortere *et al* 2004.

### **3. The Economic Consequences of Civil War**

This section analyses the economic consequences of civil war. The discussion is split into two parts. The first part assesses the current situation and the second part describes of how the cost of war can be estimated.

#### **3.1 African Economies Post-War**

In order to gain a general impression of the current situation across African countries some economic statistics were compiled. Table 5 presents the means for key variables such as income per capita, life expectancy and infant mortality for 53 African countries. The countries are divided into two categories, peace and war/post war. The 38 countries in the peace category did not experience any civil war since 1990. These countries may have experienced some violent conflict but this did not reach the intensity of civil war according to the Uppsala/PRIO Armed Conflict Dataset. These conflict countries are indexed with an asterisk in the list of 'peaceful' countries: Benin, Botswana, Burkina Faso, Cameroon, Cape Verde, Central African Republic\*, Comoros\*, Cote d'Ivoire\*, Djibouti\*, Equatorial Guinea, Eritrea\*, Gabon, The Gambia, Ghana, Guinea, Kenya, Lesotho\*, Libya, Madagascar, Malawi, Mali\*, Mauritania, Mauritius, Mayotte, Morocco, Namibia, Niger\*, Nigeria\*, Sao Tome and Principe, Senegal\*, Seychelles, South Africa, Swaziland, Tanzania, Togo, Tunisia, Zambia and Zimbabwe. Countries in the war/post war category experienced a minimum of one year of civil war since 1990. This category contains the following countries: Algeria, Angola, Burundi, Chad, Congo, DRC, Ethiopia, Guinea-Bissau, Liberia, Mozambique, Rwanda, Sierra Leone, Somalia, Sudan, Uganda.

Both categories contain very diverse countries. Of the 38 countries in the 'peace' category ten experienced some violent conflict. In the war/post war category are countries that are currently at war (Chad, Sudan) and countries that have been at peace now for over one decade (Mozambique). However, the previous discussion on the health burden of civil war revealed that wars have long term effects, and in order to gain some general impression it is useful to compare three different categories: first, countries at peace with no previous war experience, countries at war and countries post-war..

Table 5 presents the average values for some economic, health and educational variables. Peaceful countries are much wealthier than war and post-war countries, their per capita income is more than four times as high as that of post-war countries. . Peaceful countries also much less aid dependent. People can expect to live on average for nine more years in peaceful countries and infant mortality is almost half of that in post-war countries. Citizens in peaceful countries are more likely to be literate, this holds true for men as well as women. So far these descriptive statistics confirm the picture sketched in the previous section. Wars leave countries impoverished, aid dependent and people's health is severely affected. However, there are some figures that warrant a little more discussion. Post-war economies have higher per capita growth rates. One explanation could be that there is a peace dividend, countries bounce back once the war is over. For example Sierra Leone's growth rates were estimated at 18 and 27 percent in the years 2001 and 2002, respectively. However, the recent commodity price boom, in particular the high oil price, may be driving some of these high growth rates. Angola and Chad recently experienced growth rates well in excess of 10 percent.

In contrast to the discussion on the health burden of civil war HIV prevalence rates are actually higher in peaceful countries. They have an average prevalence rate of almost 7.5 percent in the population aged 15 to 49 in comparison to about 4 percent in war countries. This high average prevalence rate is driven by the extremely high prevalence rates of almost 20 percent or more in a number of southern African countries: Botswana, Lesotho, South Africa, Swaziland and Zimbabwe. Interestingly, the World Bank's Country Policy and Institutional Assessment (CPIA) rating does not statistically differ significantly between peace and war countries in Africa. This rating is a composite measure and takes values from 1(poor) to 6 (excellent). The average value for non-African countries is 3.5 and differs statistically significantly from the African average. This may indicate that institutional reform is still slow in Africa and/or war countries generate a lot of negative spillover effects which decrease the rating of their peaceful neighbours.

**Table 5: Economic, Health and Education Indicators**

	<b>Peace (38 countries)</b>	<b>War/Post War (15 countries)</b>
<b>GDP per capita (in 2000 const. US\$)</b>	1440	427
<b>GDP per capita growth (% per year)</b>	3.8	5.9
<b>Military expenditure (% of GDP)</b>	2.4	3.1
<b>Aid (% of GNI)</b>	8.7	19.7
<b>CPIA (1-6)</b>	3.2	3.0
<b>Life expectancy (years)</b>	53	47
<b>Infant mortality (per 1,000 births)</b>	75	112
<b>HIV Prevalence (% of population ages 15-49)</b>	7.4	3.9
<b>Literacy (% of total population &gt;15yrs)</b>	63	57
<b>Literacy female (% of females &gt;15yrs)</b>	56	48

Note: Means taken over the years 2000-06. Data Source: WDI 2007, author's calculations.

**Table 5: Economic, Health and Education Indicators**

	Peace	War	Post War
<b>GDP per capita (in 2000 const. US\$)</b>	1502	462	347
<b>GDP per capita growth (% per year)</b>	3.9	1.4	7.4
<b>Military expenditure (% of GDP)</b>	2.1	5.7	2.0
<b>Aid (% of GNI)</b>	8.5	10.9	28.9
<b>CPIA (1-6)</b>	3.2	n.a.	3.0
<b>Life expectancy (years)</b>	53	50	44
<b>Infant mortality (per 1,000 births)</b>	75	93	125
<b>HIV Prevalence (% of population ages 15-49)</b>	7.5	1.6	4.7
<b>Literacy (% of total population &gt;15yrs)</b>	63	64	57
<b>Literacy female (% of females &gt;15yrs)</b>	56	54	50

Note: Means taken over the years 2000-06. Data Source: WDI 2007, author's calculations. No African country was listed as a war country in 2005, the only year for which the CPIA is available.

One of the most obvious problems faced by post-conflict countries is the disarmament, demobilisation and reintegration (DDR) of ex-combatants. So far no systematic empirical analysis of DDR programmes exists, the general overview by Knight and Özerdem (2004) stresses that the success of these programmes depends on the specific economic, socio-political and physical environment. The authors suggest that successful reintegration into society, in particular through gainful employment, is a major element of the transition from war to a stable peaceful society. There seems to be a lot of anecdotal evidence that rates of violent crime increase during the post-war period, due to high unemployment and easy availability of weapons. Ex-combatants are likely to have a lower threshold of using violence and use their war time 'violence skills' as criminals. However, there does not seem to be a systematic study of post-war violent crime so it is not possible to provide data on the phenomenon.

A survey based evaluation of the DDR programme in Sierra Leone by Humphrey and Weinstein (2007) suggests that participation in such programmes may not be critical for reintegration. The authors find no evidence that ex-combatants find reintegration into peaceful society easier if they take part in a DDR programme. The biggest obstacle to reintegration is whether individuals have in the past participated in abusive military factions. This survey of over 1,000 ex-combatants carried out in 2003 did not suggest that women and youths faced bigger challenges with respect to reintegration.

An in depth study of the impact of the civil wars in Angola and Mozambique on children by Homvana (2006) shows that the use of child soldiers was part of the warfare strategy. Children were either recruited by force or they joined because they sought protection or revenge. In Mozambique the rebel forces, RENAMO, used a minimum of 10,000 child soldiers, some as young as six or seven years of age. In 1994, 27 percent of the soldiers presenting themselves for demobilisation were under the age of 18 (Homvana, 2006: 139). In Angola a considerable proportion of the country's children took part in combat, about seven percent of all Angolan children had fired at someone (Homvana, 2006:29). Children were thus victims and perpetrators of violence. With respect of reintegration of child soldiers Homvana describes how local cultural beliefs and practices are being used. Traditional healers, chiefs and the family often take part in cleansing rituals to heal returning child soldiers. These rituals are designed to help the child to heal and reintegrate as well as encourage reconciliation within the community. This communal approach contrasts with Western psychotherapy which places the emphasis on the individual. Boys and girls do face different problems of reintegration. Due to sexual violence or exchange of intercourse for protection girls often have babies of their own. This makes it more difficult for girls to catch up on education and job training. There is also a high prevalence of sexually transmitted diseases which require treatment. Furthermore, due to their wartime sexual experiences, girls are often regarded as 'second hand' and thus vulnerable to further abuse since it is more difficult for them to find husbands and have an ordinary family life. Rather than advocating special programmes, Homvana suggests to place the reintegration of child soldiers in wider programmes of social development and poverty eradication.

### **3.2 The Cost of Civil War**

The discussion of the data so far sketches a picture that countries are much poorer after the war and that their populations suffer enormous health consequences that continue long after the fighting stops. There is also evidence that countries continue to spend precious resources on the military post-conflict. One important question is therefore whether all of these costs can be aggregated into a single number so that we gain some idea how costly civil wars are. This knowledge could then be used to carry out a cost-benefits of conflict prevention and intervention measures. There are very few studies that aim to quantify the overall cost of war. One recent study is a briefing paper by The International Action Network on Small Arms, Oxfam International and Safer World (2007). This study focuses on conflict in Africa since 1990. The study's main finding is that wars cost \$284 billion in lost GDP, which amounts to roughly the amount of foreign aid these countries received over the period. The research method to arrive at this estimate can be summarized in the following way. Based on counterfactual growth rates for war countries the researchers calculate what GDP should have been if there had been no war. The calculations do neither allow for regional spillovers nor for a war overhang effect. The use of counterfactual growth rates is problematic for a number of reasons. Firstly, which group of countries provide a counterfactual? Neighbouring countries are likely to be affected by the war and thus these growth data are not independent of the events in the war countries. Secondly, growth rates in some war countries were well above world average, mainly due to the recent commodity booms. A counterfactual framework does not allow for this. An alternative way of calculating the cost of war is to use regression analysis in order to find out by how much war reduces a country's income on average. Regression analysis can also be used to assess the impact on neighbours as well as calculating the legacy effect of war. In addition, using worldwide panel data sets enables the

researchers to use more observations and thus produce less biased and more efficient estimates. The study by Collier and Hoeffler (2004c) takes this approach. The remainder of this section is a synthesis of their estimation of the cost of civil war.

Collier and Hoeffler (2004c) estimate the cost of conflict in three main steps. First, they estimate the cost to the war country. Second, they estimate the cost to the neighbouring countries and third, they estimate the legacy effect of civil war.

### *National Costs*

Taking the national level first, one clear cost of civil war is a reduction in economic growth. Using a panel data estimate, one year of conflict reduces a country's growth rate by 2.2 percent. Since, on average, each civil conflict lasts for about seven years, the economy will be 15 percent smaller at the end of the war than if the war had not taken place. During the post-war recovery, even though the economy on average grows at an annual rate of more than 1 percent above the norm, it will take roughly ten years to return to its pre-war growth rates (that is, 17 years after the conflict started). 21 years after the start of the original war, the GDP has returned to the level it would have achieved if no war had occurred. The total economic cost, expressed as a present value at the start of the war (using a 5 percent discount rate), is 105 percent of the GDP at that point.

The welfare of a country's population is further reduced because of increased military spending during and after the war. It is estimated that military spending increases by about 1.8 percent during the war, and only falls back by 0.5 percent once the conflict has ended. Assuming that this higher level of spending lasts for only ten years after the conflict, the

additional cost (expressed again as present value when the conflict started) is 18 percent of GDP.

In addition, conflict has a severe effect on human health. One way of summarising this effect is to express the cost in terms of Disability Affected Life Years (DALYs): a measure of the total number of people affected and the period for which their disability lasts. An average war causes an estimated 0.5 million DALYs each year. Assuming they decline smoothly to zero in the 21st year and discounting them at 5 percent as for the direct economic costs gives a figure of 5 million DALYs as the net present value of health costs when hostilities start. If each DALY is valued at \$1,000 (roughly the per capita income in many at-risk countries), the economic cost of harm to human health in a typical war is around \$5 billion.

### *Regional Costs*

What are the effects at the regional level? Regression analysis suggests that the growth rate of neighbouring countries not directly involved in the conflict is reduced by 0.9 percent during the war. If they subsequently recover at the same rate as the conflict country, the additional cost (as a present value at the start of the conflict) is 43 percent of initial GDP. On average, each country has 2.7 neighbours, so the direct effect of a typical civil war on neighbouring countries is 115 percent of the initial GDP of one country: greater than the direct effect in the conflict country itself.

There is also an effect on military spending in adjoining countries: a neighbourhood arms race often ensues. In the average case considered so far, a 1 percent rise in military expenditure in the country at war would increase the average spending of bordering countries by 0.23 percent. In a typical conflict, that means military spending will increase by 0.4

percent of GDP during the war, and by 0.3 percent during the post-conflict period: a total net present value of 4.3 percent of the country's initial GDP. On average, there are 2.7 neighbouring countries; thus the total extra cost of the regional arms race is about 12 percent of one country's GDP.

Other costs which are too difficult to quantify are incurred both in the country at war and in the region as a whole, including forced migration and increased disease. With the proviso that the figures so far are therefore underestimated to some degree, the total benefit of averting a single "typical" civil war can be calculated. The various national and regional costs covered so far amount to 250 percent of initial GDP. The average GDP of conflict-affected low-income countries just prior to war is \$19.7 billion. Therefore, the cost of a single war is around \$49 billion. To this we must add \$5 billion of health costs, giving a total cost of \$54 billion for a single low-income country.

#### *Legacy Effect*

This is already a significant figure, but in addition there is the "conflict trap": countries that have just experienced a civil war are more likely to have further conflict. Looking at the 21 countries in which wars started and ended in the period 1965-99, the risk of conflict over the five years before the war averaged 22.3 percent, but this rose to 38.6 percent post-war. Over the 15 year period needed for the risk to reach the pre-war level again, the additional discounted cost are estimated at \$10.2 billion. Thus the total national and regional cost of a single war is more than \$64 billion.

There are additional, global impacts of civil wars, massive in scale but difficult to assign a cost to. For example three world scourges over the last 30 years have had civil conflicts as

contributory factors: hard drug production, AIDS and international terrorism. Thus, since the global cost are not included in the \$64 billion it should be treated as a conservative estimate.

This cost calculation of about \$64bn is based on global data. Is this estimate relevant for Africa? Africa's economies are smaller and the average GDP figure is lower, hence the loss of GDP would be lower if only African countries were to be considered. On the other hand African wars are longer and caused more loss of life, thus increasing the cost of war. African countries also have on average more neighbours and thus an Africa specific estimate of the regional effects of war would be higher.

Section 3 concentrated on the cost of war. However, it is worthwhile noting that there are probably also specific opportunities that countries face post-conflict. Collier (2008) suggests that there are four main opportunities in post-conflict societies, these are (1) infrastructure reconstruction, (2) private construction, (3) repatriation of capital flight and (4) commodity booms. Outside intervention in order to take advantage of these opportunities is difficult, however. Chauvet and Collier (2008) suggest that aid in the form of technical assistance can help countries to achieve a decisive economic and political turnaround. Miguel and Bellows (2006) examine Sierra Leone post-war and conclude that the war resulted in increased political mobilization and thus may have resulted in positive change in local institutions.

#### **4. Recommendations**

Based on the assessment of the burden of civil war the analysis now turns to recommendations how these challenges can be addressed. These recommendations are organized in four blocks. First, we need better data to assess the health burden of war in order to make the allocation of humanitarian aid more efficient. Second, there is a discussion

whether aid can help in the economic recovery process. This is followed by an examination of how the fragile peace post-conflict can be stabilized. Lastly, there is an assessment of how typical macroeconomic crisis programmes can be adjusted to meet post-conflict challenges.

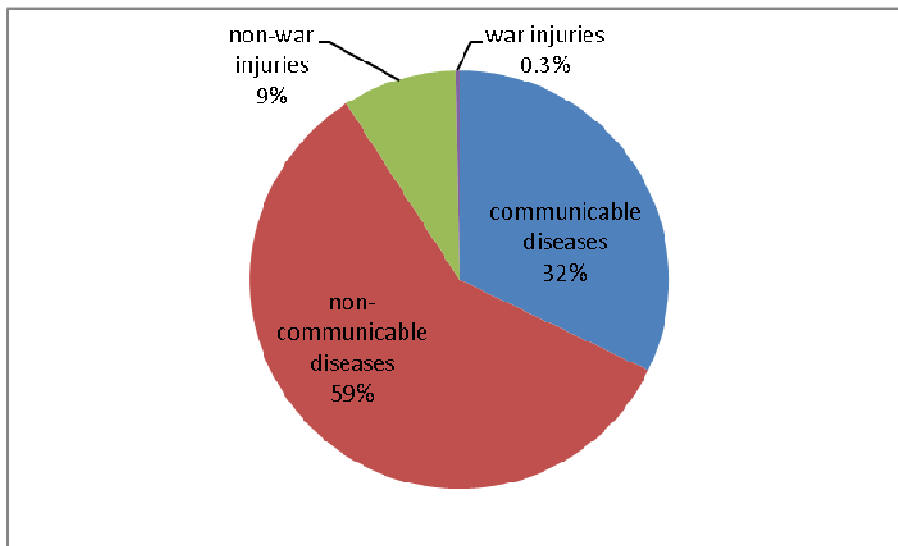
#### **4.1 Data Collection**

One obvious recommendation is that we require more and higher quality data than currently available. Civil wars kill and maim but currently we do not know how many people die as a consequence of war. Although one obvious consequence of civil war is a health burden to affected countries it receives relatively little attention in the public health debate. This may be because only 0.3 percent of all global deaths are due to direct violence in conflict and we do not currently know by how much mortality is raised due to increased prevalence of communicable diseases in the long term. However, preventable communicable diseases are not the main cause of death worldwide. As Figure 5 shows, only one third of all global deaths are due to communicable diseases. This is different for Africa, the overwhelming cause of death is due to communicable diseases, about 72 percent of deaths are caused by communicable diseases. Wars also kill proportionally more people, 0.8 percent are killed by violence during wars.

These figures may explain why war has received relatively little attention by public health experts. It kills relatively few people and the indirect effects of war on communicable diseases, the main killer in Africa, is hard to estimate. We do, however, know that the eradication of communicable diseases such as polio and dracunculiasis (Guinea worm disease) is impossible as long as wars prevent access to regions in which these diseases are still prevalent.

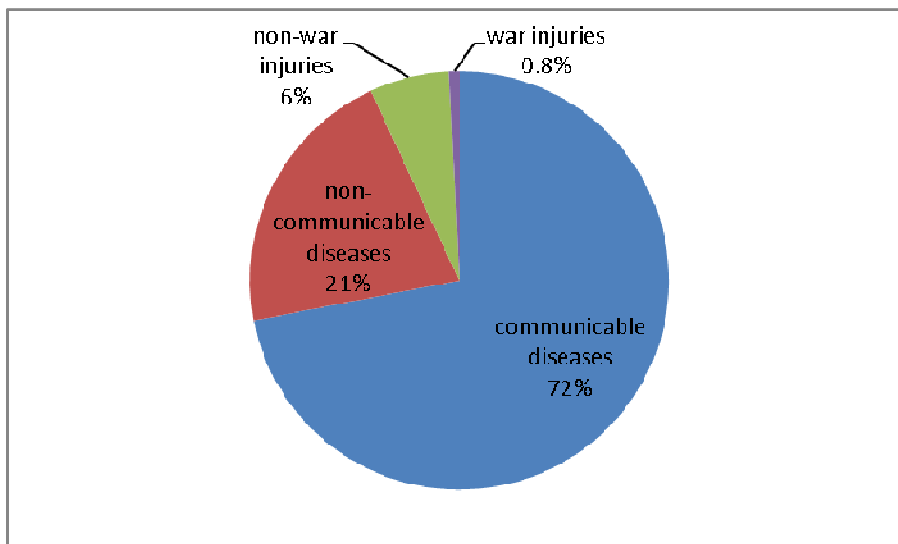
Improved data and coordination between health experts and social scientists would help us to understand the consequences of war and target interventions more specifically.

**Figure 4: Global Deaths by Cause**



Source: WHO, author's calculations

**Figure 5: African Deaths by Cause**



Source: WHO, author's calculations

## 4.2 Post-Conflict Reconstruction

Leaving aside the data issues what other recommendations can be given to post-conflict countries? Peace is typically fragile in these countries and they face the enormous task of economic reconstruction. Security cannot be achieved without development but at the same time development cannot be achieved without security. Are post-conflict economies distinct from other developing countries and do they warrant special treatment by international agencies? The work by Collier and Hoeffler (2004b) and Collier, Hoeffler and Söderbom (2008) suggests that post-conflict countries face distinct challenges and opportunities and should therefore be treated differently from other countries. First, the role of international help in the reconstruction of post-conflict countries is discussed before turning to the challenge of how to improve security in post-conflict countries.

Typically post-conflict societies experience a peace dividend in terms of increased economic growth after the end of the conflict. Can this economic recovery process be supported by aid and policy reform? Collier and Hoeffler (2004b) find aid and policy reforms to be highly effective in the economic recovery process. In particular they investigate whether the absorptive capacity for aid is systematically different in post-conflict countries. The results suggest that during the first 3 post-conflict years absorptive capacity is no greater than normal but that in the rest of first decade it is approximately double its normal level. Thus, the pattern of aid disbursements should probably gradually rise during the first four years, and gradually taper back to normal levels by the end of the first post-conflict decade. Actual aid practice has not, historically, followed this pattern. It has tapered out just when it should have been tapering in. Collier and Hoeffler (2004b) also investigate whether the contribution of

policy to growth is systematically different in post-conflict countries, and in particular, whether particular components of policy are differentially important. Growth seems more sensitive to policy in post-conflict societies. Comparing the efficacy of different policies, they find that social policies, such as policies to promote social inclusion and equity, are differentially important relative to macroeconomic policies. However, historically, this does not appear to have been how policy reform has been prioritized in post-conflict societies.

### **4.3 Reducing Post-Conflict Risks**

The risk of a recurrence of civil war is substantial, 40 percent of all post-conflict societies revert to conflict within the decade. This is far higher than the risk faced by the typical low-income country, and so the international community is correct to focus explicitly on post-conflict situations as warranting distinctive engagement.

Collier, Hoeffler and Söderbom (2008) find that economic growth does substantially reduce risks. If a post-conflict country achieves a growth rate of 10 percent the decade risk falls to 27 percent. This risk reduction is due to higher growth as well as the cumulatively higher income. One implication of this result is that the international community should be concentrating the post-conflict assistance disproportionately in the poorest countries and that there should be a heavy focus on economic recovery.

Previous studies have shown that domestic military expenditure does not deter renewed conflict (Collier and Hoeffler, 2007b) but do UN peace keeping operations do stabilize fragile post-conflict situations? The results presented in Collier, Hoeffler and Söderbom (2008) suggests that UN peacekeeping expenditures significantly reduce the risk of renewed war.

The effect is large: doubling expenditure reduces the risk from the benchmark 40 percent to 31 percent. Interestingly this effect is strongest when peacekeeping expenditure is measured in absolute terms and not relative to the country's population or size of the economy. This suggests that peace keeping operations act as a deterrent. Since all rebel armies have to go through a phase of being small, even if they subsequently grow to a very different size, they can perhaps be effectively deterred in the inception phase by a peace keeping force of a given size.

Does democracy stabilize peace? Collier, Hoeffler and Söderbom (2008) examine whether elections reduce the risk of recurrent conflict. Elections seem to reduce the risk in the year of the election, but increases it in the year following the election. Presumably, in the election year antagonists divert their efforts from violence to political contest, whereas once the election is concluded the losers have a stronger incentive to return to violence. The overall effect of elections on the duration of peace is insignificant. Therefore, post-conflict elections should be promoted as intrinsically desirable rather than as mechanisms for increasing the durability of the post-conflict peace.

Based on these results peace appears to depend upon an external military presence sustaining a gradual economic recovery, with political design playing a somewhat subsidiary role. There is strong evidence that the poorer the country is and the longer economic recovery takes the higher is the risk to revert to civil war. Since there is this simple and statistically strong relationship between the severity of post-conflict risks and the level of income at the end of the conflict this provides a clear and uncontroversial principle for resource allocation: resources per capita should be approximately inversely proportional to the level of income in

the post-conflict country. To date, economic and military resources have not been allocated to this simple principle.

#### **4.4 Macroeconomic Issues**

Economic growth stabilizes peace. But how can this growth be achieved in post-conflict economies? This section reviews the macroeconomic challenges and opportunities that post-conflict governments face.

Post-conflict economies start with a dreadful inheritance. Macroeconomic policy is likely to be in turmoil, generating unsustainable disequilibria, and one priority for policy is to correct these errors. In normal circumstances of macroeconomic crisis management the following strategies are typically advocated:

- Reductions in public spending, both capital and recurrent
- Increases in taxation, both rates and incidence
- Credit contraction, typically through open market operations
- Currency depreciation and reserve accumulation
- Disinflation
- Resumption of orderly relations with creditors, including debt repayments.

Do post-conflict economies require different advice and support to other countries in macroeconomic crises? The answer is likely to be 'yes' since they are distinct from other countries in three aspects:

- (a) The real economy is likely to be severely eroded by a long civil war, and a range of policies will be needed to revive it. Macroeconomic policy must therefore take into consideration whether it is assisting or impeding this revival.

- (b) Donors are likely to provide a sharp but temporary increase in aid, which will ameliorate some of the above problems but generate others of its own.
- (c) The society is likely to be fractured, with a high risk of reversion to conflict. This is particularly the case in negotiated settlements, which are generally very fragile. Hence, macroeconomic policy must also take into account possible repercussions on social cohesion.

These three distinct features generate challenges as well as opportunities for post-conflict societies. Their implications for crisis programmes are discussed in turn.

#### *Revival of the real economy*

Post-conflict situations differ from other situations with equally poor economic policy in both their economic and their political scope for rapid recovery.

First, consider the economic opportunities. Over the long period of the war, private agents move their capital out of the country. The first systematic study of portfolio choices during civil wars is by Davies (2007). Capital flight during the war creates an unusual opportunity during the post-conflict period: there is a lot of flight capital to be attracted back into the country, broadly corresponding to the acute shortage of private capital due to under-investment. Designing policy to induce this repatriation is one important objective.

The economy is likely to have retreated into subsistence as agents try to avoid predation and insecurity. The post-conflict period has the potential for a rapid and substantial return to the market. Encouraging this switch should be a priority for policy, and its consequences for money demand should be taken into account in designing monetary policy.

Second, consider the political opportunities. Most situations of very poor economic policy are unfortunately remarkably stable in the sense of political persistence. Chauvet and Collier (2008) find that outside the context of civil war the chance of substantial improvement is very low. By contrast, post-conflict situations are highly politically fluid and offer the opportunity of policy turnarounds.

How can these opportunities be realized? The typical post-conflict experience is for rapid recovery of the economy: most post-conflict economies grow around one percentage point more rapidly than their normal, peacetime underlying rate (Collier and Hoeffler, 2004b). However, the dispersion in post-conflict growth experiences is very wide – far wider than in normal economies. The econometric results of Collier and Hoeffler (2004b) show that growth is unusually sensitive to policy choices.

This alone does not necessarily imply that macroeconomic policies should be any different from other crisis situations: restoring macroeconomic equilibrium will, other things equal, raise growth more substantially in post-conflict situations. However, other things are not equal.

First, the strategy of reducing public expenditure is likely to collide with priorities for the restoration of the economy through urgent public spending.

Second, the strategy of raising tax revenue may be both difficult and dysfunctional. Compared with a normal crisis situation, the real economy will have eroded far more severely, and private agents will have restructured activities so as to escape predation, and hence taxation. The taxable part of the economy is therefore likely to be very small, and also

to be precisely the sector than needs to be revived. Revenue raising efforts can only target this sector, and they will inevitably retard its recovery.

There is therefore a case for much larger fiscal deficits in the post-conflict period than during the normal crisis. Potentially, the same considerations apply to the credit market. However, credit might not be a particularly severe constraint in post-conflict situations because of the accumulation of flight capital outside the country. Various strategies need to be targeted on getting this money back as rapidly as possible. The normal post-conflict situation experiences continued substantial capital flight, probably because private portfolios were not fully adjusted by the end of the conflict and the news of peace is not in itself sufficient to change this disequilibrium. While continued flight is the norm, some economies are able to attract capital back on a large scale and so this should be a policy objective. The literature on capital flight finds that both the real exchange rate is one powerful influence. A depreciated real exchange rate attracts flight capital back. Hence, a strategy of depreciating the exchange rate, combined with limitations on the expansion of credit might induce firms to repatriate capital. The return from subsistence to market is likely to be assisted by low inflation. Farm households will need to rebuild money balances and high inflation constitutes a tax on this process (Collier and Gunning, 1995). So, the use of the inflation tax looks highly undesirable. Yet the mean inflation rate in post-conflict countries has been high. However, the return to market will raise the demand for money and thereby permit greater scope for non-inflationary deficit financing. Recent research on money demand post-conflict indeed finds that it is highly unstable (Elbadawi and Schmidt-Hebbel, 2005). This clearly has implications for financial programming. Specifically, the inflationary consequences of monetised deficits are far less predictable than normal. This provides a reasonable case for direct inflation targeting rather than money supply targeting, and a consequent need for very rapid and accurate

statistics on changes in the CPI. This should therefore be a priority of the rehabilitation of the statistical service. If there is an inflationary psychology, peace constitutes an opportunity for a new currency, although the consequent currency conversion should probably not be used as an opportunity for revenue.

Research by Davies (2007) suggests that in practice post-conflict governments continue to behave as though they had unusually high discount rates: essentially, they continue to behave as though the fiscal problem of the conflict were continuing, and so continue to ‘snatch’ revenue. This might be because of the continuing high uncertainties, but it is also consistent with the returns on public spending and the costs of tax revenue both being extremely high. All this adds up to a case for temporary aid to delay the time at which the fiscal deficit is closed.

*(b) Temporary aid boom*

A temporary aid boom has obvious consequences for the budget and the exchange rate. It may also spill over onto trade policy. The classic problems of temporary aid booms – Dutch disease<sup>8</sup>, construction booms, public expenditure commitments that are difficult to reverse, temporary trade liberalizations that get gamed by importers, - are all likely to be present. However, these may be fully offset by the core underlying rationale for aid in these contexts: that the economy has an acute but temporary need for additional resources. The study by Demecas, McHugh and Kosma (2002) considers the impact of post-conflict aid in a theoretical framework and suggests improving the sequencing of aid flows. Humanitarian help has the greatest welfare impact directly after the war but should be phased out in order to avoid counterproductive effects on economic growth and development. Reconstruction aid

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<sup>8</sup> For the original discussion of Dutch Disease see Corden (1984).

should be focused on the infrastructure rehabilitation of the tradable goods sector in order to avoid Dutch Disease effects.

What are the implications of a temporary aid boom? The aid is used partly to increase public spending, partly to avoid increases in taxation that would slow the recovery, and partly to reduce inflation, so permitting accelerated monetisation. However, temporary aid causes temporary real appreciation of the exchange rate, and two dysfunctional side-effects: less repatriation of flight capital, and reversed reallocations of resources out of the export sector. One policy instrument available to offset this Dutch disease is trade liberalization. If, as is likely, the economy is producing few importables, its main tradable production will be exports. In this situation, import restrictions tax the tradable sector (that is, the export sector), so that trade liberalization would neutralize Dutch disease. The increase in the supply of imports constituted by aid would be offset by an increase in demand for imports through liberalization, without the need for a price incentive by means of appreciation. Trade liberalization is likely to be revenue-reducing, but unless this is dramatic, which is unlikely, an aid-cum-trade liberalization package promises a means of financing a large fiscal deficit without the damage of Dutch disease. Since conflict economies are indeed likely to have erected trade restrictions as desperate revenue-raising means, there may be considerable scope for this strategy. If it is not done, the country risks inducing socially costly import-substitution which they becomes a lobby against liberalization in the future. It is probably better to liberalize before this lobby builds up. Aid can compensate for the loss of revenue from trade taxes. While the aid itself will appreciate the exchange rate, since the government revenue is much less than the total value of the imports, the net effect of trade liberalization made revenue-neutral by extra aid is unambiguously beneficial for exporters.

Clearly, if aid is to be used explicitly to finance a strategy of delaying the restoration of fiscal balance, it will need to be a credible commitment. Donors cannot be expected to commit unconditionally, and so there is a need for a set of post-conflict standards, covering such matters as governance as well as economic management, which could be used by all donors and which would make explicit to the government the parameters of its range of fiscally viable behaviour.

If at all possible, the aid needs to respond to estimated fiscal needs, rather than macroeconomic policies accommodate whatever aid happens to turn up. If aid agencies take the latter approach – aid unrelated to fiscal need, then aid potentially becomes part of the macroeconomic problem to be managed, rather than part of the solution. One way to reconcile the uncontrollable aspects of aid decisions is to fit actual aid receipts into requirements through a smoothing fund, or by means of reserve accumulation and decumulation. The evidence suggests that aid surges too soon and so needs to be stretched over a longer period by either temporary reserve accumulation, or by encouraging donors to use the lag between commitments and disbursements more strategically.

### *Social frictions*

One legacy of civil war is that some groups have a continuing interest in either conflict or low-level violence. An important distinction among post-conflict states is the nature of the peace. Where the peace has come about through rebel victory, the resulting government tends to have a sense of cohesion and purpose which makes it more effective in implementing its objectives. One adverse aspect of such governments is that they tend to be militaristic, and indeed aggressive to neighbours, implying continuing high military spending. Government military victories may resemble the political stasis of non-conflict fragile states. Peace

settlements in which neither side has achieved military victory face an inherent problem of time inconsistency, as Walter (2001) has shown. After settlement power tends gradually to shift to the government and so creates the potential for renegeing.

The high risk of reversion to conflict is not in itself a reason for inertia. On the contrary, post-conflict situations are particularly suitable times for policy reform. However, the risk does imply that all policies, including macroeconomic policies, should be scrutinized for their likely effects on the risk of reigniting conflict.

In the post-conflict situation policy choices are likely to be used by potential rebel groups as screening devices to assess future risks, and so the government must recognize their signal content. Badly chosen macroeconomic policies may inadvertently signal to rebel groups that a return to conflict would be in their best interests. This may require a different balance between policy priorities than in a fully peaceful context. This is an under researched topic, prioritization and sequencing of policies is at the moment unclear. Collier and Hoeffler (2004b) find that increased public spending on social inclusion is significantly more effective in raising growth in post-conflict situations than in other contexts, and is more important relative to structural and macroeconomic policies than in other contexts.

A result that is probably related is that high military spending post-conflict significantly and substantially increases the risk of further conflict: an adverse effect of military spending that is distinctive to post-conflict situations (Collier and Hoeffler, 2006). Both of these results may be pointing to the importance of the government signalling to the society, and especially to potentially violent opponents, that it is not planning to revert to patronage politics

sustained by repression. Other measures that can provide the same signal are transparency in the budget, and the introduction of checks and balances, such as an independent central bank. It is sometimes alleged that aid itself might increase the risk of reversion to conflict. Statistically, there is no such effect. Aid reduces the risk of conflict to the extent that it raises the growth rate, but has no direct effect on the risk of conflict one way or the other (Collier and Hoeffler, 2002). However, aid does have two effects that might be of concern for social cohesion. On average around 11 per cent of aid 'leaks' into financing military spending, presumably through fungibility (Collier and Hoeffler, 2007b). Although this rate of leakage is modest, in post-conflict conditions of large aid inflows it might easily amount to half of the military budget. Hence, donors have a legitimate basis for attempting to restrain military spending. This is particularly the case given the above evidence that such spending increases the risk of reversion to conflict. Inadvertently, donors are financing a signal that could trigger further war.

#### *The implications of natural resources*

One useful further consideration in this debate is whether the country is rich in natural resources. In the literature on the causes of civil war natural resources have been identified as one of the factors that make countries prone to war. For example recently a special issue of the *Journal of Conflict Resolution* was dedicated to the role of natural resources in civil wars (*Journal of Conflict Resolution*, volume 49, 2005). In the case of countries rich in natural resources a key consideration is the revenue implications of their resource wealth.

One implication is that the opportunity to fund post-conflict fiscal needs from resource revenues reduces the need for aid. While the timing of resource revenues is unlikely to be coincident with post-conflict fiscal needs, the solution to this problem may lie in capital

markets, possibly mediated by the resource extraction companies, rather than aid. If aid is provided, it should be in the form of loans rather than grants, and with repayment tailored to the likely path of resource revenue flows rather than being conventional loan packages.

The presence of natural resource may make it harder to achieve lasting peace. The political context is likely to be characterized by three dysfunctional features. First, all parties have exaggerated expectations as to how much money is really available. Second, each group has suspicions that other powerful groups will capture the rents. Third, since the resources are never located evenly across the country, some ethnic group will lay claim to the revenues as rightfully belonging to itself, probably supported by a discourse of secessionist demands. There are three approaches, not alternatives, which might be useful in addressing this difficult political context. One is to decentralize revenues to regions, with a formula giving those regions in which the resources are located some modest advantage over other regions. The second is to earmark at least some resource revenues for uses from which ordinary people manifestly benefit and which are clearly nation-building. An obvious such use is universal primary education, or bursaries for schoolchildren. The inflexibilities and distortions introduced by earmarking for key social programmes are likely to be modest relative to the benefit: namely that the government can make other claims on resource revenues look greedy in contrast to such uses. The final approach is to introduce as much transparency as possible into revenues and expenditures. In the suspicious atmosphere of post-conflict, part of this will involve creating independent systems of scrutiny which include opponents of the government. One function of the independent scrutiny system would be to mount information campaigns to the public.

To summarize, post-conflict economies face enormous macroeconomic challenges. Standard reform programmes should be adjusted to deal with three key aspects: revival of the real economy, temporary aid booms and social frictions. There is a case for larger fiscal deficits during the post-conflict period since the taxable part of the economy is small and high taxation would impede the recovery of a sector that should be encouraged to grow. Policies to repatriate capital flight are important since this would ease the credit constraint. Monetary policy should target inflation, the typically high inflation rates post-conflict impede the revival of the real economy. Aid flows need to be sequenced and smoothed in order to avoid the problems of Dutch Disease. Post-conflict societies are fractious and all macroeconomic policies should be scrutinized in order to avoid any further divisions in society. Military expenditure tends to be higher in post-conflict societies but rather than act as a deterrent these high military expenditures are connected with a higher risk of conflict recurrence. Thus, donors should closely monitor and curtail military expenditure. In addition to these considerations it is recommended that donors treat countries rich in natural resources differently. These countries require fewer funds and aid to these countries should have a higher grant component. Transparency and checks and balances are of particular importance in these societies. As a practical policy measure (some) income from natural resources could be earmarked for programmes of social cohesion, such as school bursaries. The inefficiencies from earmarking are likely to be outweighed by the benefits since natural income is not spent on patronage goods for the few but distributed to the wider population.

## **5. Summary and Conclusion**

Over the past 40 years Africa has experienced more violent conflict than other continents. African wars have also lasted longer and they have been deadlier. However, following the

global trend, Africa has recently become more peaceful and many countries are now in a phase of post-conflict.

Wars have consequences for at the national and regional level and they affect populations long after the fighting stops. Post-war societies are in a worse shape than before the war and far from bringing an improvement to the political system, in general post-war societies are less democratic. Countries with a violent past also face a high risk of renewed conflict, about 40 percent of countries experience a new civil war within a decade. Dealing with the consequences of war is not only a humanitarian imperative but dealing with the economic and political consequences is also important because it decreases the risk of the civil war breaking out again. Dealing with the consequences of civil wars is our chance of 'breaking the conflict trap'. The aim of this paper is to review the recent evidence on the cost of war and provide some recommendations how we can deal with the consequences of civil war in Africa. While there are national, regional and global consequences of war this paper concentrates on the national and regional consequences. The geographical distance of the centres of violence in Africa to Europe, North America and Japan make spillover effects from the region less likely. With a few exceptions Africa's economies are marginalised in the global economy, thus economic shocks in the region are less likely to be of importance globally. In general, fragile states are responsible for much of global drug production, migration and terrorism. Do African post-conflict societies contribute significantly to these three global problems? Currently there does not seem to be much commercial drug production in Africa, the main producers are located outside the region, Afghanistan and Columbia. There is a lot of migration from Africa, but unlike the statistics on forced migration (refugees and IDPs) there are currently no comprehensive statistics on (African) migration to other regions. So the impact cannot be assessed. Terrorism has been closely linked to fragile states. However,

LaFree, Dugan and Fahey (2008) show that only a very small proportion of global terrorist attacks happened in Africa. This may indicate that only a small proportion of global terrorist activity currently originates from Africa as a whole, however there may be individual countries (possibly Somalia and Sudan) that pose a global threat. No detailed risk assessments were available for this study, though.

The most obvious consequence of war is that it kills people. Wars kill in many different ways: civilians and soldiers are killed in combat, people die because there is a higher prevalence of diseases and people are killed due to increased violent crime. Recent surveys suggest that the war in the DRC has claimed a total of 3.9 million lives, making it the world's deadliest war since World War II. While young men make up the highest share of fatalities in combat, the increased disease burden disproportionately affects women and children. Wars also continue to kill long after the fighting stops. Health sectors in post-conflict economies are unable to meet the huge demand for health services. Typically there are no resources to deal with the trauma of war. Civil wars also have health consequences for the neighbouring countries. Regional disease control programmes are interrupted and preventable communicable diseases continue to kill in Africa. However, temporary cease fires for vaccinations and other disease control measures have been successful to lessen the regional consequences of war. Wars also cause displacement on a massive scale. In 2006 about 31 percent of refugees worldwide originated from African countries and 42 percent of all IDPs were displaced in African countries.

In the literature there is a wide discrepancy between the number of deaths reported for various wars. We need more data for post-conflict situations to be able to generate a better understanding of post-conflict challenges and ultimately to allocate humanitarian aid in the

most efficient manner. Data collection requires more collaboration between social scientist and public health experts.

Estimating the total cost of war is difficult and to my knowledge only two studies have attempted to do so recently. One study focuses on Africa but uses a weak methodology. The other study is based on best practice econometric studies but calculates the cost of conflict for the average war and is not Africa specific. It may be useful to review both studies and use best practice methods to derive an Africa specific estimate of the total cost of war.

After the review of the consequences of war the paper turns to an assessment of how post-conflict reconstruction and peace building can be supported. Typically post-conflict societies experience a peace dividend in terms of increased economic growth after the end of the conflict. According to cross-country evidence this economic recovery process can be supported by aid and policy reform. Since absorptive capacity is low in the immediate post-conflict period the pattern of aid disbursements should gradually rise during the first four years, and gradually taper back to normal levels by the end of the first post-conflict decade. In this way the peace dividend can be maximised. Actual aid practice has not, historically, followed this pattern. It has tapered out just when it should have been tapering in. Growth seems also more sensitive to policy in post-conflict societies. Comparing the efficacy of different policies, social policies are differentially important relative to macroeconomic policies. Historically this does not appear to have been how policy reform has been prioritized in post-conflict societies. However, there is relatively little knowledge of the details of policy reform post-conflict, it is currently an under-researched area.

Post-conflict societies face the twin challenge of security and development. About 40 percent of all peace settlements break down within a decade and the country is back at war. A recent study of UN peace keeping operations suggest that the chance of continued peace appears to depend upon an external military presence sustaining a gradual economic recovery. Political design on the other hand plays a somewhat subsidiary role. For example, post-conflict elections do not stabilize the peace. Even though intrinsically valuable, elections should not be seen as the right time to withdraw peace keepers. There is strong evidence that the poorer the country is and the longer economic recovery takes the higher is the risk to revert to civil war. Since there is this simple and statistically strong relationship between the severity of post-conflict risks and the level of income at the end of the conflict this provides a clear and uncontroversial principle for resource allocation: resources per capita should be approximately inversely proportional to the level of income in the post-conflict country. To date, economic and military resources have not been allocated to this simple principle.

The last set of recommendations centres on macroeconomic reform. Standard reform programmes should be adjusted to deal with three key aspects: revival of the real economy, temporary aid booms and social frictions. There is a case for larger fiscal deficits during the post-conflict period since the taxable part of the economy is small and high taxation would impede the recovery of a sector that should be encouraged to grow. Policies to repatriate capital flight are important since this would ease the credit constraint. Monetary policy should target inflation, the typically high inflation rates post-conflict impede the revival of the real economy. Aid flows need to be sequenced and smoothed in order to avoid the problems of Dutch Disease. Post-conflict societies are fractious and all macroeconomic policies should be scrutinized in order to avoid any further divisions in society. Military expenditure tends to be higher in post-conflict societies but rather than act as a deterrent these high military expenditures are connected with a higher risk of conflict recurrence. Thus,

donors should closely monitor and curtail military expenditure. In addition to these considerations it is recommended that donors treat countries rich in natural resources differently. These countries require fewer funds and aid to these countries should have a higher grant component. Transparency and checks and balances are of particular importance in these societies. As a practical policy measure (some) income from natural resources could be earmarked for programmes of social cohesion, such as school bursaries. The inefficiencies from earmarking are likely to be outweighed by the benefits since natural income is not spent on patronage goods for the few but distributed to the wider population.

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