

perspective paper

# ARMED CONFLICT

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*solving the world's challenges*



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## Perspective paper

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*Copenhagen Consensus 2012*

### *Introduction*

The Challenge Paper, like earlier work produced by Paul Collier and colleagues, and a more recent background study undertaken for the World Bank, establishes that there is a very clear *association* between periods of wars and subsequent sustained economic decline from which, on average, recovery is slow. The daunting task the Challenge Paper sets itself is to determine the extent of the economic costs of war and suggest the most cost-effective policies for reducing them.

But establishing that there is an *association* between war and post-conflict patterns of economic development is not the same as demonstrating that there is a clear causal relationship between the two.

But while the Challenge Paper undertakes a thorough review of recent research on these issues, it assumes, with some minor caveats, what really needs to be demonstrated—namely that the “costs” that are identified are in fact are primarily a function of political violence—and not other factors.

Armed conflicts are both a consequence and cause of what, for want of a better term, we might refer to as “mal-governance”—the syndrome of governance-related factors that increase the risks of conflict and in turn are increased by it. Mal-governance is central to the perverse feedback system that leads to Paul Collier’s famous “conflict trap”—where conflicts exacerbate the very structural conditions, grievances and political tensions that caused them in the first place—leading to more conflict.

The Challenge Paper focuses in considerable and compelling narrative detail on the destruction and disruption wrought by war and its impact on post-conflict economic performance. Little attention, however, is devoted to examining the possibility that in many cases the assumed economic costs of war are in fact determined, not by political violence, by

mal-governance factors that pre-date the conflict and persist both throughout it, and long into the post-conflict period.

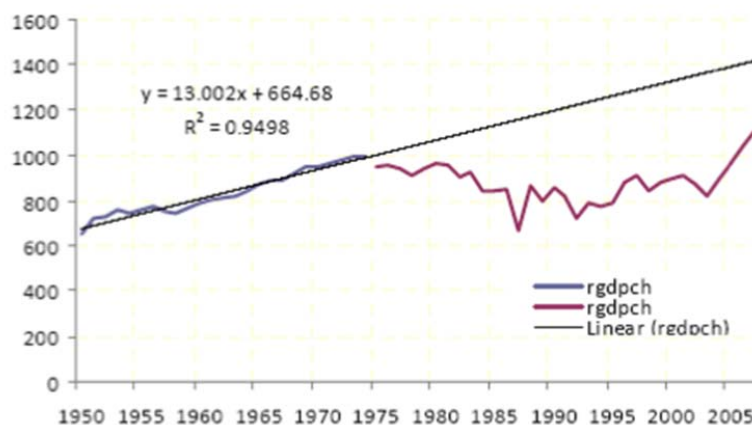
This is one of the issues that this Response addresses.

This question matters for policy because the prescription that follows logically from the assumption that war is responsible for massive amounts of foregone post-conflict income, is to prevent wars—and seek to stop those that can't be prevented. This is the theme of the second half of the Challenge Paper.

But where poor economic performance is determined, not by war, but mal-governance or other factors, preventing conflicts and stopping those that can't be prevented may not have the beneficial effects assumed in the Challenge Paper, and the other literature on the costs of war.

#### *Case Studies*

The Challenge Paper illustrates the thesis that war has a sharp negative impact on GDP with several case studies. We note two here. In the case of Ethiopia we see a sharp absolute decline in GDP for nearly 20 years, followed by a slow increase. Nearly 30 years after the war started Ethiopia's GDP is still well below the counterfactual projection.

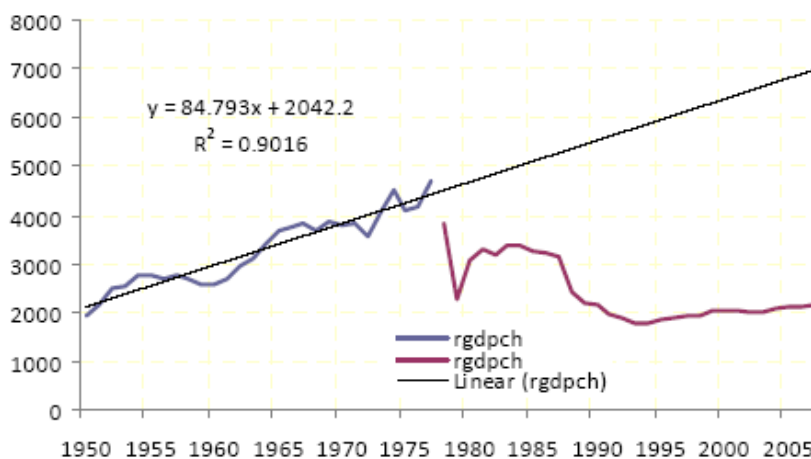


**Figure 1.5:** Population-, inflation-, and purchasing-power adjusted GDP, Ethiopia, 1950-2007 (base-year = 2005).

The same pattern is evident in the case of Nicaragua, though here the decline in GDP after the war begins is even more extreme. In the late

1970s before the war, Nicaragua's GDP was over \$4,000; in 2005 it was barely over \$2,000. What is not clear, however, is how much of this decline should be attributed to the destructive and disruptive impact of the war and how much to failures of policy.

It is instructive here to compare the Nicaraguan case with that of Rwanda. The severity of impact of Rwanda's genocidal civil war was far, far greater than that in Nicaragua. In terms of lives lost as a percentage of the population over a period of less than a year it was the most devastating conflict since World War II. Yet as Figure 4.2 from the Challenge Paper (below) demonstrates, while Nicaragua's GDP continued to fall, Rwanda's economy, despite a far more destructive war, recovered extraordinarily fast. It is difficult to avoid the conclusion that the difference between the two countries was due in large part, not to the impact of the war, but to differences in the effectiveness of governance.



**Figure 1.6: Population-, inflation-, and purchasing-power adjusted GDP, Nicaragua, 1950-2007 (base-year = 2005).**

*Source: Penn World Table, v6.3.*

Both cases provide illustrations the mainstream thesis about the relationship between conflict and economic growth. But it is important to note the trend that they depict is far from universal.

We illustrate this with reference to the case of the Democratic Republic of the Congo, where the war that started in 1998 has been described as the deadliest since World War II. An estimated 5.4 million people is

claimed to have died between 1998 and 2007 who would not have died had there been no war.<sup>1</sup> Here then we might expect to see an even greater impact of war on economic growth than in most other war-affected states.

In fact the pattern of pre-war, wartime and post-war economic growth in the DRC are *very* different from those in Ethiopia and Nicaragua. Whereas in both these countries GDP was increasing steadily prior to the war, in the DRC it had been declining for more than two decades.

By the mid-1990s, the country faced a risk of virtual disintegration due to hyperinflation, financial, economic and growth collapse ... From 1990 to 1995, the contribution of the industry, manufacturing and services sectors to the GDP plummeted, pushing the economy into subsistence agriculture. By the end of 1995, income per capita was only one third its pre-independence levels.<sup>2</sup>

And this was *before the war that started in 1998*.

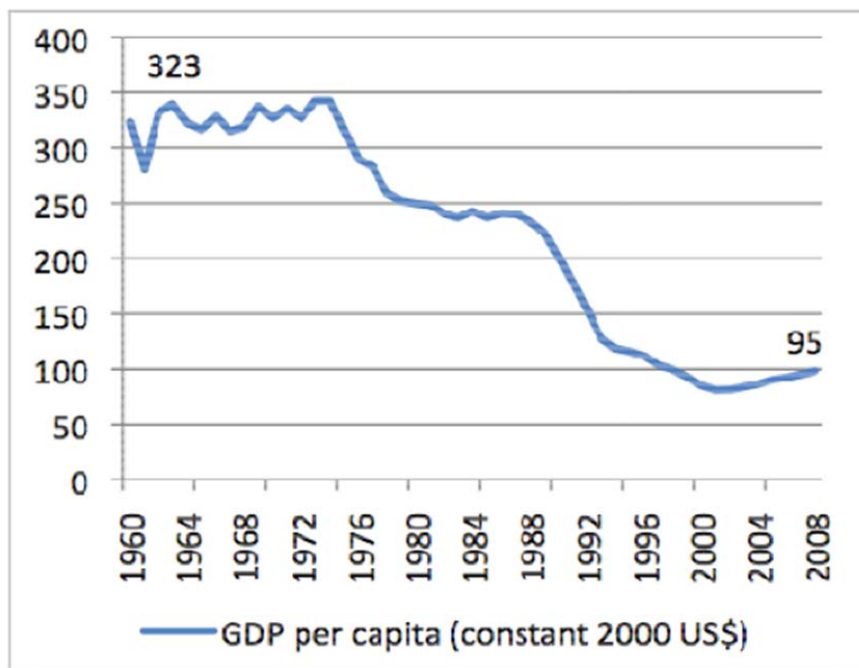
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<sup>1</sup> In fact the war in the DRC is not the deadliest since WWII. That dubious distinction almost certainly goes to the Korean War. Moreover the survey-derived estimate of 5.4 million 'excess' deaths is far too high. The exaggerated figure arose because (a) the International Rescue Committee (IRC), which conducted the surveys that produced the headline-catching finding of 5.4 million excess deaths caused by the war chose a baseline mortality that was too high and (b) because its survey-derived wartime mortality rate was approximately double that of two our major surveys--by UNICEF and the Demographic and Health Survey that covered approximately the same period as the IRC's surveys.

<sup>2</sup>

[http://www.hks.harvard.edu/fs/drodrik/Growth%20diagnostics%20papers/DRC\\_Growth\\_Diagnostic.pdf](http://www.hks.harvard.edu/fs/drodrik/Growth%20diagnostics%20papers/DRC_Growth_Diagnostic.pdf), p.15.

**Figure 1. Trends in per capita GDP**



Source: WDI (2009)

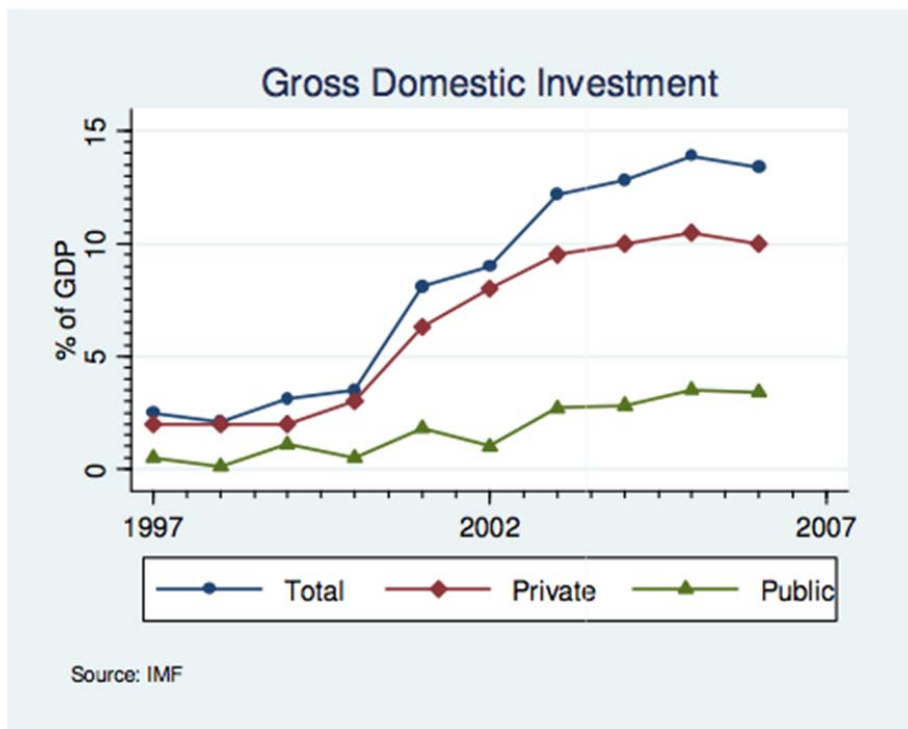
What we see in the case of the DRC is the reverse of what happened in Ethiopia and Nicaragua—two decades of steep peacetime economic decline in the DRC was associated in part with exogenous shocks (the decline in the price of copper and cobalt) and in part by the increasing mismanagement of the economy by the corrupt, repressive and incompetent Mobutu regime.<sup>3</sup>

What is remarkable about the DRC case is that, after more than two decades of freefall the *economy begins to recover shortly after the war starts*. In fact gross domestic investment, which had declined until 1997, actually starts to increase in the year that the war begins, as the graphic below makes clear.<sup>4</sup> Between the beginning and the (official) end to the war in 2003, domestic investment increases fourfold.

<sup>3</sup> There was a short period of warfare in 1996-7.

<sup>4</sup>

[http://www.hks.harvard.edu/fs/drodrik/Growth%20diagnostics%20papers/DR\\_Growth\\_Diagnostic.pdf](http://www.hks.harvard.edu/fs/drodrik/Growth%20diagnostics%20papers/DR_Growth_Diagnostic.pdf). 9.



The point here is not, of course, that war is good for the economy, rather that more powerful forces were driving the DRC's development path throughout this period, than warfare.

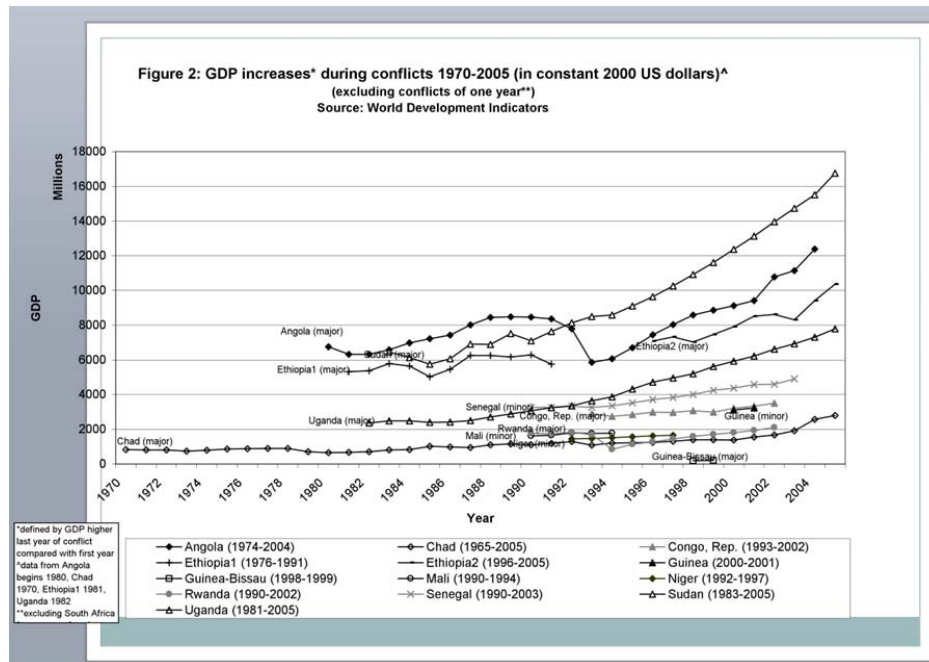
It may well be true that had there been no war the economic recovery would have been stronger than in fact it was. But this is very difficult to demonstrate.<sup>5</sup> In fact the war was not as devastating as it has so often been portrayed. The numbers killed in the fighting were likely of the order of several hundred thousand, mostly between 1998 and 2003. This is very high, but the DRC is an enormous country with a population greater than 60 million, meaning that deaths as a percentage of the population, which is the most appropriate measure of the human costs of war, would not be nearly as high as countries like Rwanda which experienced a much higher war death toll (between 500,000 and 800,000) and had a *much* smaller population (some 7 million). And most of the fighting in the DRC was concentrated in the east of the country.

It might of course be argued that the DRC case—of GDP increasing during the course of a war—is exceptional, but this is not the case. The graphic

<sup>5</sup> See Chapter 7 of the *Human Security Report, 2009-2010*.  
<http://hsrgroup.org/docs/Publications/HSR20092010/20092010HumanSecurityReport-Part2-ShrinkingCostsOfWar.pdf>



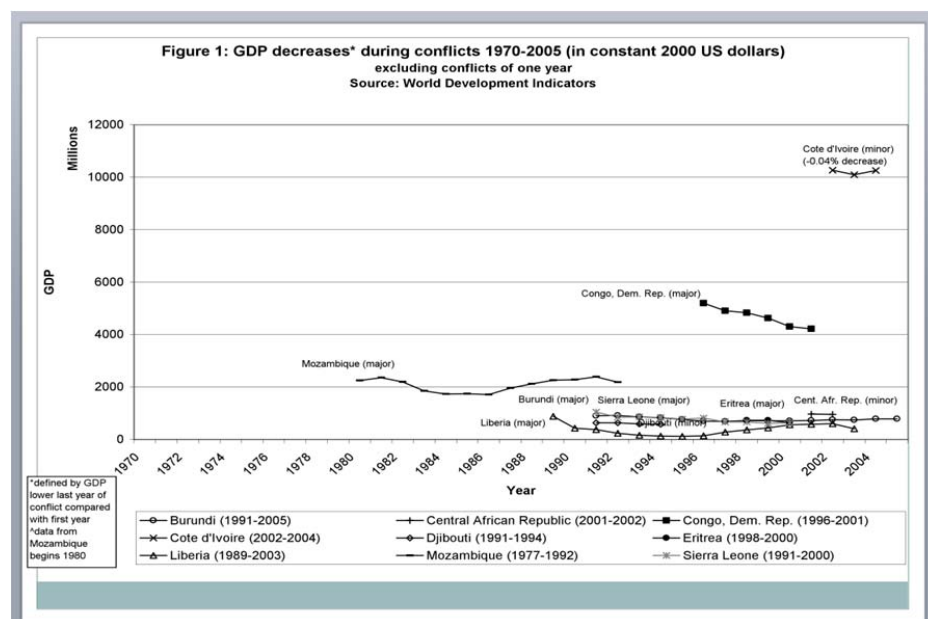
immediately below shows the number of conflicts (excluding those that lasted for less than a year) in sub-Saharan Africa between 1970 and 2005 in which GDP (*not* GDP per capita) increased—i.e., was higher at the end of the war than at the beginning.



This clearly shows that from 1970 to 2005 in the majority of conflicts lasting for more than a year in the world's most conflict-prone region economic growth continued throughout the war.

The next graph shows the pattern that reflects the popular understanding of the impact of war on economic development, namely that it is associated with a decline in economic output. Note that few countries (9 out of 21) experience declining GDP during wartime than experience rising GDP (12 out of 21).





The data in these two graphics came from a presentation by NYU's Sakiko Fukuda Parr, former Director of the UN's *Human Development Report*, at a conference in Wilton Park in 2008. Note that these data are for GDP, not GDP per capita.

There is a major difficulty with attempting to determine counterfactuals in particular cases. It is often assumed that the counterfactual will follow a relatively linear (upward) trend line, as is the Ethiopian and Nicaraguan case studies in the Challenge Paper suggest. But as Figure 4.2 in the Challenge Paper makes clear pre-war GDP per capita trends are very rarely linear, making the task of determining counterfactuals in particular cases often difficult, sometimes impossible.

### *Cross-National Regression Analyses*

It is of course also possible to seek to determine the *average* impact of conflicts on a range of development outcomes using regression analysis with large-N country-year datasets that include most countries in the world over a number of decades. Recent research in this area is reviewed in depth in the Challenge Paper and in the background paper on the impact of conflict on progress towards achieving the MDGs prepared to the World Bank's much-cited *World Development Report 2011* by researchers from the International Peace Research Institute, Oslo (PRIO).<sup>6</sup>

The latter report makes it clear that while conflict *and* "fragility" and poor

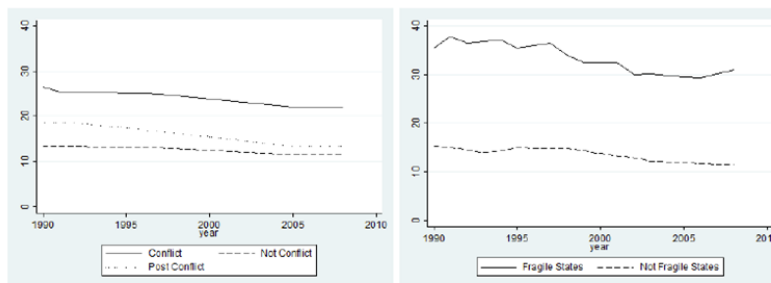
<sup>6</sup> <http://wdr2011.worldbank.org/PRIO>.

MDG outcomes are clearly *associated*, the authors also acknowledge, “... the difficulty of analyzing the effect of conflict on a set of indicators that we know are also causally related to the onset of conflict.”<sup>7</sup> There is, in other words an endogeneity problem.

What is interesting about the PRIO analysis of the impact of war on the attainment of the MDGs is that the regressions do indeed show a clear association between the impact of conflict and development outcomes. But the analysis does *not* show that, in Paul Collier’s memorable term, “war is development in reverse” but *rather that war-affected countries demonstrate a rate of improvement towards achieving the various MDG goals that is essentially the same as for the countries not affected by war.*

Thus we see in the case of undernourishment—a poverty-related measure—that while conflict-affected countries (solid black line in the graph below) clearly suffer from higher levels of malnourishment, the rates of malnourishment actually improve at a slightly faster rate over time than the non-conflict countries. We also note that non-conflict “fragile” states (those that rank low on the Bank’s CPIA index and/or host a peace-keeping operation) are considerably more prone to undernourishment.<sup>8</sup>

Figure 6: Trends in percentage of population that is undernourished, by conflict type and fragility



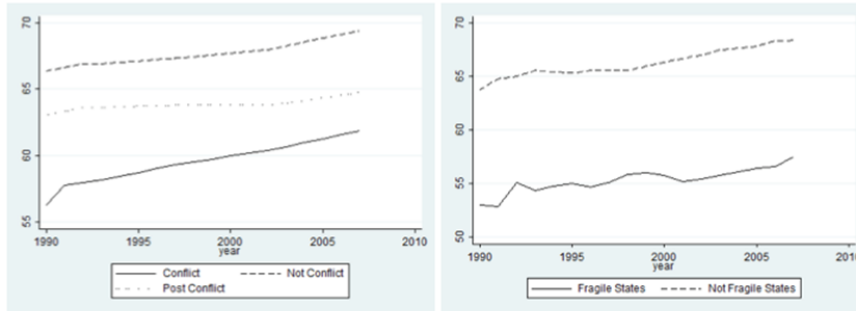
When we turn from undernourishment to life expectancy we see a very similar pattern. Conflict-affected countries improve their life expectancy at a slightly faster rate than non-conflict countries—albeit from a lower base as the next graph demonstrates.<sup>9</sup>

<sup>7</sup> <http://wdr2011.worldbank.org/PRIO>. p.1.

<sup>8</sup> <http://wdr2011.worldbank.org/PRIO>. p.29

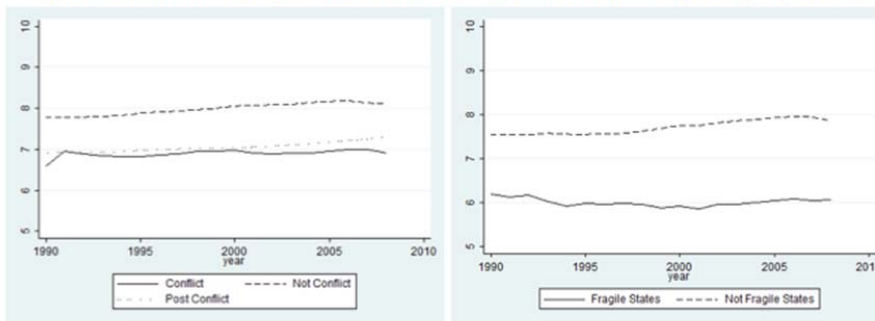
<sup>9</sup> <http://wdr2011.worldbank.org/PRIO>. p.38.

Figure 12: Mean life expectancy over time by conflict and state fragility status



When we turn to the impact of conflict on GDP—the most measured of the impacts on development outcomes. We see in the graph below that countries in conflict have *on average* increased their GDP per capita slightly over time, but here the non-conflict countries improve at a slightly faster rate.<sup>10</sup>

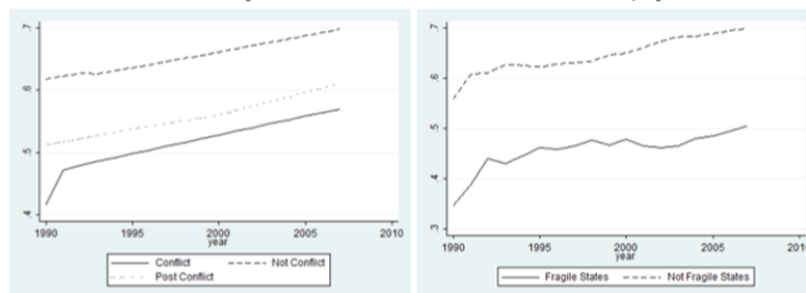
Figure 13: Mean GDP per capita over time by conflict and state fragility status



With respect to secondary education we again find that the same pattern. From 1990 to 2008 secondary education attainment rates for conflict-affected countries improved at approximately the same rate as non-conflict countries—meaning that while they too start from a lower they aren't falling further behind – on average – during periods of warfare.

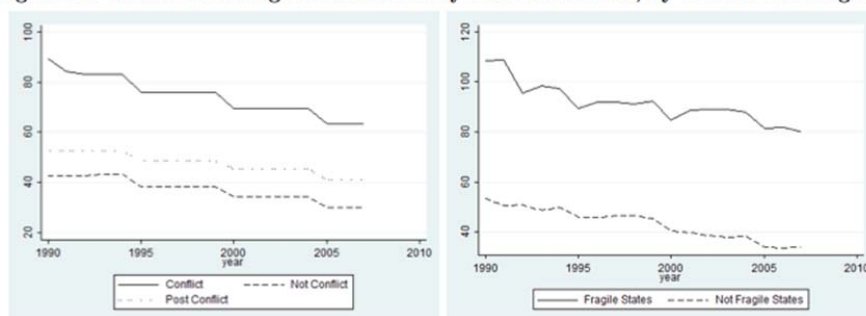
<sup>10</sup> <http://wdr2011.worldbank.org/PRIO>. p.41.

Figure 15: Trends in secondary education attainment rates 1990–2008, by conflict and fragility



Finally we look at infant mortality rates. Again the same pattern is observable between 1990 and 2008 there is a substantial, but again somewhat counterintuitive improvement in infant mortality rates in countries in conflict over time.<sup>11</sup>

Figure 22: Trends in average infant mortality rates 1990–2008, by conflict and fragility



So the image of war being “development in reverse,” while striking, is untrue. *On average* most development outcomes improve during periods of warfare—and they do so at about the same rate as in peacetime—but from a lower base.

This sounds counterintuitive because we *know* that some wars have devastating effects on development outcomes. But these are the wars that get most attention from the media and the international community. Most conflicts today have relatively low battle deaths and tend to be fought over a very small part of the national territory. In these countries conflict tends to have only a modest impact on development outcomes and very little international attention.

In fact there is so much heterogeneity in this area that it is not so clear how valuable focusing on the “average” conflict is for policy makers. The one-size-fits all prescription that prescribes policies to prevent the

<sup>11</sup> <http://wdr2011.worldbank.org/PRIO>, p. 48. The “stepped” nature of the trendlines is because infant and under-five mortality data derive from surveys undertaken at five-year intervals.

“average” conflict—i.e., one that reduces GDP per capita by some 2 percent a year over seven years may be of little utility in preventing really major wars. We simply don’t know.

The World Bank study data raises another interesting question.

Non-conflict “fragile” states perform consistently worse than “conflict states” in making progress towards achieving the MDGs. But almost all the states in conflict are also “fragile.” This suggests, no more, that the “fragility” element—essentially the mal-governance factor—in the conflict states may be more important than the conflict element in determining development outcomes. In other words what we may be seeing in the findings on the “impact of war” is *in addition* an “impact of mal-governance” effect.<sup>12</sup>

As noted above, the policy implications of this puzzle are important. If it is mal-governance, and not conflict per se, that is driving negative development outcomes then preventing and stopping wars will not be enough.

There is one more reason to be skeptical about the effect of the “average” conflict – especially as a guide to the present. There is a broad consensus—including the Challenge Paper, the work of Paul Collier and various collaborations, and the PRIO researchers about the major development impact of the “average conflict”—i.e., it lasts for some 7 years and reduces national GDP per capita by some 2 percent a year. But this average is derived from country-year data that go back three to five decades.

The problem here is that the average conflict in the Cold War era and indeed up until the new millennium was far deadlier and thus far more likely to have a negative impact on development outcomes, than those in the new millennium. In the 1980s, the average conflict involving a state killed more than 5,000 people a year; in the new millennium the average conflict kills fewer than 1,000.

In the last *Human Security Report* we argued that this change was no accident and low fatality conflicts are likely—not certain of course—to become the norm. If this is the case then we can expect that the impact

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<sup>12</sup> The PRIO researchers found that the CPIA index they used as one of the indicators for “fragility” couldn’t explain much of the variance in development outcomes. But a new study by two of the authors of the Bank study using a much broader conception of governance found it helped explain the variance in conflict recurrence.

of these less deadly recent conflicts on development outcomes could well substantially less than the ‘average’ impact suggested by the Challenge Paper and by other researchers.

### *Conflict Prevention*

The Challenge Paper offers a comprehensive menu of policy options for preventing conflicts and stopping those that can’t be prevented. And it costs them all—a heroic exercise on which I do not feel competent to comment.

Here I simply want to draw attention to some remarkable, and as yet unpublished, research being undertaken by Havard Hegre and colleagues at the International Peace Research Institute, Oslo that predicts that by 2050 the percentage of countries around the world experiencing armed conflict will have halved from about 15 percent to 7 percent.<sup>13</sup>

The authors’ prediction model uses two key ‘structural’ variables—infant mortality and educational attainment. Both variables are of predicted, with some confidence, to improve worldwide over the over the coming decades. Improvements in each are associated with reduced risks of conflict onsets.

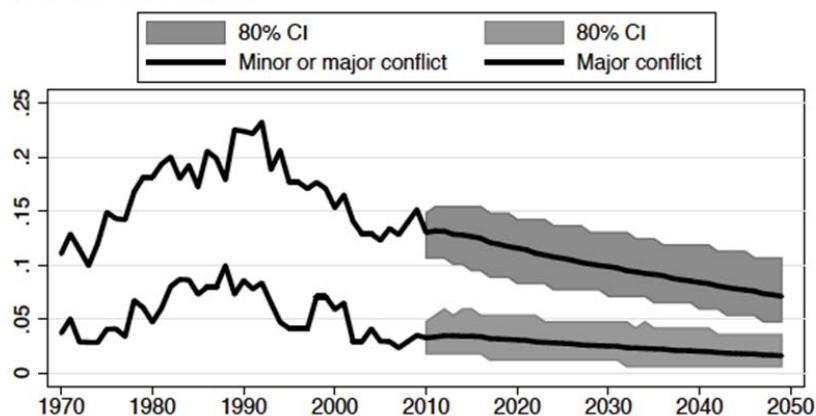
Both infant mortality and educational attainment are also proxy variables for good governance. In addition to these variables, the model also includes variables that relate to conflict history—a past history of conflict increases the risk of conflict recurrence considerably, “neighborhood effects,” population size, “youth bulges” and “ethnic dominance.”

Having developed a large number of candidate models for the period 1970 to 2000, they then ran a series of simulations to obtain predictions for the period 2001 to 2009. They compared the model predictions with the actual observed conflicts in the latter period, and chose the model whose predictions were most closely reflected what actually happened in 2001-2009. The best-fit model predicted conflicts in 16 of the 26 countries that had conflicts in 2009. They then used the refined model to predict the share of countries in conflict out to 2050. This (below) was the result

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<sup>13</sup> Havard Hegre et al, “Predicting Armed Conflict, 2010-2050,” forthcoming *International Studies Quarterly*.

Figure 5: Observed and simulated proportion of countries in conflict, averaged over nine model specifications, both conflict levels, all countries, 1960–2050



The upper line in the graph is for all conflicts; the lower line for major conflicts (1,000 or more battle deaths a month). The grey-shaded areas represent the 80 percent confidence interval.

The model of course assumes that variables that impacted the risk of conflict in the past will continue to do so in future, but this seems reasonable in this case.

What is most interesting about these findings is that they indicate that *a considerable degree of civil war conflict prevention is already built into the way that poor countries are developing*. Yet this prevention mechanism is independent of any consciously articulated prevention policy. No international agencies are arguing for improved child health, nor for better education opportunities on the grounds that they are long-term security policies.

But one consequence of the trend revealed by the Norwegian researchers is that—other things remaining equal— we can predict that the percentage of countries experiencing conflict in the international system will halve over the next 40 years simply as a consequence of a continuation of the status quo.

But this is not the only conflict-reducing trend at work today.

### *The Growth of International Security Activism*

In the two decades since the Cold War ended, there has been an explosion of international security activism focused mostly on civil wars. This has led to the creation of a new, still-evolving, but little-analyzed, global security architecture, one that is radically different from the bipolar security system of the Cold War years.



The new architecture comprises a loose but ever-expanding network of international organizations, donor and other governments, inter-agency committees, informal clusters of like-minded states that help countries emerge from conflict, think-tanks, and large numbers of national and international NGOs.

The central rationale of the system is the reduction of political violence—in particular civil wars—around the world.

The pursuit of this objective is grounded in a growing normative consensus that the international community has a responsibility to prevent war, to help stop wars that cannot be prevented, and to try and prevent those that have stopped from starting again.

This still emerging system of security governance has been, and remains, rife with coordination problems, disagreements over strategy, and unresolved tensions between international agencies, states, and NGOs. It is a system that is inherently inefficient and disputatious and—as Rwanda and Darfur remind us—prone to tragic failures. But the best evidence that we have suggests that its collective efforts have been a primary driver of the major decline in the deadliest forms of armed conflict since the end of the Cold War.

So we have two powerful long-term trends tending to reduce the incidence of conflict and its associated costs around the one world. The one analyzed by the PRIO scholars is “structural” and not conceived as a prevention strategy at all. The other is very consciously focused on the challenges of conflict and its associated costs. They complement one another perfectly...