



PRIO

Conflict
Trends

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Peace on Earth? The Future of Internal Armed Conflict

The last 20 years have seen a gradual decline in the number and severity of internal armed conflicts worldwide. This trend is partly due to widespread improvements in factors such as education levels, economic diversification, and demographic characteristics. These factors are projected to continue to improve for the remainder of this century. As a consequence, the world should continue to grow ever more peaceful.

Brief Points

- The number of civil armed conflicts has declined in the last decades.
- We forecast that this downward trend will *continue* over the next 40–90 years.
- Conflicts will occur mostly in sub-Saharan Africa and South Asia in the coming decades.
- Climate change or geopolitical shifts are unlikely to *dramatically* affect this general positive trend.

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Winning the war on war

In the last 20 years, the world has seen a continual decline in the number and severity of internal armed conflicts around the globe. The left half of Figure 1 shows the recent trends as well as our forecasts up to the year 2050. With conflict, we mean lethal armed conflicts between a government and a non-governmental opposition group. From a high point in 1994, when 23% of the world's countries were in the throes of civil conflict, less than 15% are in conflict today. We forecast that this downward trend will continue. This is shown in the right half of Figure 1. In 2030, we forecast that 12% of the world's countries will be in conflict. In 2050, this will have declined to 10%. Over the same period, the occurrence of major armed conflicts – conflicts causing more than 1,000 direct battle deaths every year – will become rare.

Our forecasts are driven by an expectation of continued improvements in the factors that explain armed conflict. A large body of research at PRIO and elsewhere has identified a cluster of factors that are robustly related to the outbreak and termination of armed conflict. By tracking the likely trajectory of these factors over the coming decades, it is possible to forecast future conflict with some confidence.

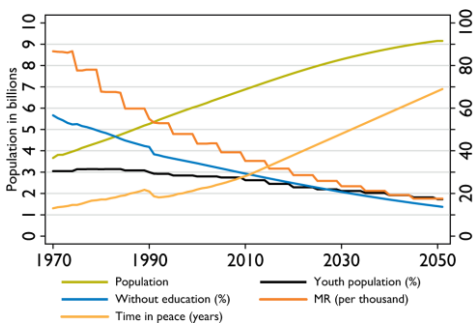


Figure 2: The correlates of conflict

Recent and future trends in factors contributing to this decline are shown in Figure 2. According to the UN and the International Institute for Applied Systems Analysis (IIASA) levels of infant mortality and the percentage of youth without education and the size of 'youth bulges' will continue to decline. The global population will continue to grow, but at a decreasing rate. Our own esti-

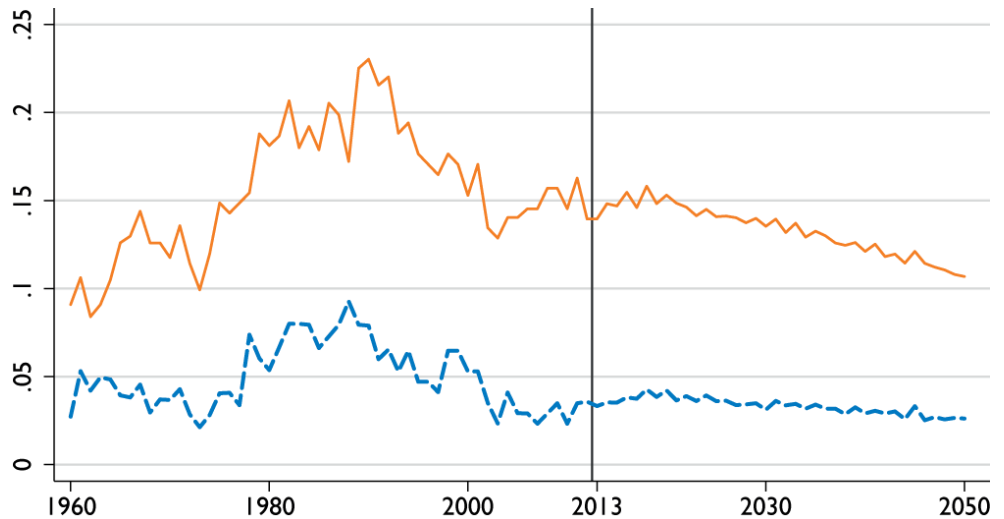


Figure 1: A more peaceful world? The y axis shows the proportion of the world's countries currently in conflict. The vertical line indicates where the observed data end and out forecast begins. The dashed blue line shows the proportion of major armed conflicts – conflicts with more than 1,000 battle-related deaths every year. The solid orange line shows the combined proportion of countries in minor or major armed conflict (at least 25 deaths per year).

mates show that fewer and fewer countries have a recent history of conflict – the average number of years in peace is steadily increasing.

In addition, the impact of these factors is reinforced by a smaller potential for conflict contagion, since neighbouring countries also become safer from conflict as a result of the same processes. Just as an increasing number of countries have had two decades without conflict, fewer countries are neighbors to large-scale violence than in the 1980s. There are regional variations in the improvement the world will see, but overall the picture is clear: trends in the correlates of conflict are all pointing towards a more peaceful world.

Regional variation

This positive trend will manifest itself clearly at the global level, but there will still be important regional variation. In 2050, civil armed conflict will largely be a thing of the past among high-income countries. The map in Figure 3 shows conflict risk around the world in the year 2050. Countries are graded from yellow to red, where red implies a higher risk of conflict.

Starting in the 1980s, the world's middle-income countries have seen a dramatic decrease in the number of conflicts. Today, Latin

America only has one active conflict (Colombia), and Southeast Asia is benefitting from a prolonged period of peace. At the same time, the Soviet Union's breakup did not lead to any armed conflict among its relatively wealthy Eastern European successor states. This is noteworthy, given that newly democratized states in general have an increased likelihood of conflict.

Our forecasts expect Latin America, Eastern Europe and Southeast Asia to remain mostly peaceful.

In contrast, we find that the bulk of the world's civil armed conflict in the next 50 years will be concentrated in Africa and South Asia. Large and relatively poor countries such as India or Nigeria have particularly high risks of future conflict.

The countries in the Middle East and North Africa today have more conflict than countries with similar levels of socio-economic development elsewhere. In our forecasts, this region will continue to see somewhat more conflict than comparable regions, but we also see a strong trend towards this region becoming less exceptional in the long run. The region is not likely to meet its 'peace potential' in the short run due to the recent upheavals and expected future political transitions.

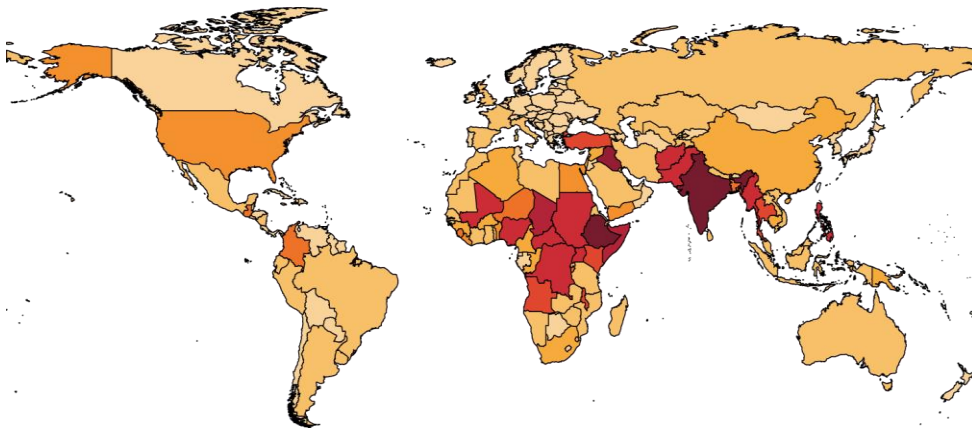


Figure 3: Risk of conflict, 2050

The conflict trap

In the future, as today, the brunt of the world's conflicts will take place in the poorest regions of the world – in the subset of the world's population that Paul Collier labels the 'bottom billion'.

Conflict hotspots in the future are likely to include Nigeria, which is currently teetering on the edge of a major internal armed conflict, and the Democratic Republic of the Congo, which has seen a recent lull in its conflict, brought about by the deployment of a UN peacekeeping force. These future conflict hotspots are countries that are striving to escape the 'conflict trap'.

This trap is a vicious circle, where low levels of development lead to conflict and conflict leads to yet lower levels of development. Whereas most of the world will have escaped such a trap by 2050, many countries in sub-Saharan Africa will remain stuck. Some parts of the continent are likely to get out of it, however, as seen in Figure 3. This is particularly the case for the southern and western parts of the continent.

The negative effects of conflict on economic and social development are strong. One year of an average sized civil war, shaves 2 percentage points off a country's annual GDP growth. This is serious in a poor country where the population is growing rapidly. Over the five years such a war typically last, undernourishment will typically increase by 3.3 percentage points, life expectancy will be reduced by about one year, infant mortality will increase by 10%, and an additional 1.8

percentage points of the population will be deprived of access to potable water. Armed conflicts aggravate the factors that facilitate insurgencies, polarize societies and erode their ability to handle political differences without violence, thereby increasing the risk of future conflict in the country, as well as in neighbouring countries.

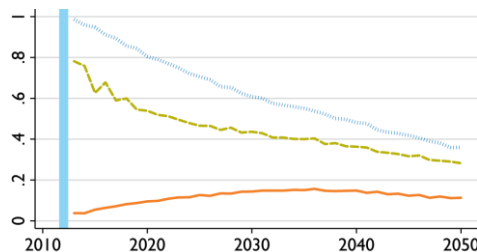


Figure 4: The conflict trap

To take this dynamic process into account, we develop forecasts where we *endogenize* the relationship between conflict and economic development. In these simulations, we take into account that 'development in reverse' increases the risk of conflict, and conflict in turn undermines development.

The result of this forecast is shown in Figures 4 and 5. These forecasts compare three different scenarios for a country with the same size and poverty levels as Tanzania. Tanzania is an interesting example as it is one of the few low-income countries that have completely escaped conflict since the 1960s. How devastating would a conflict be in such a country?

In the two figures, the solid orange line represents a baseline scenario of no conflict between 1960 and 2012. The dashed green line

represents a scenario where the country has five years of minor conflict from 2008 to 2012, and the dotted blue line one with five years of major conflict. Figure 4 reports the simulated risk of conflict in this country from 2013 and onwards. The solid line shows our forecast for this country given the actual, peaceful history. The risk increases from close to zero in 2013 up to about 15% in 2035, and then declines. In the dashed and dotted line, the risk starts at close to 100% in 2013, just after the hypothetical conflicts.

What is clear from the figures is that the effect of the conflict trap on a country such as Tanzania is dramatic. The probability that the conflict continues or re-erupts remains high for a long time, and the forecast risk of conflict remains higher than the baseline throughout the forecast period. In other words, even relatively minor conflicts have repercussions decades down the line for low-income countries.

Figure 5 shows expected economic growth under the same scenarios. Under the baseline scenario (the solid line), our model predicts a slow but steady growth in per capita income. In 2050, GDP per capita will be about US\$1,100. In the case of a five-year minor conflict, our forecasts imply that most of this growth is lost. If the country had the misfortune of having five years of major conflict (dotted line), its GDP per capita in 2050 is 25% lower than in the non-conflict case.

This dramatic effect is due partly to the direct effect of the conflict (seen in the differences between the three lines at the start of the series), but even more to the dramatically changed risk of new conflicts following the first one. The country's neighbouring countries are also likely to suffer from the effects over several decades.

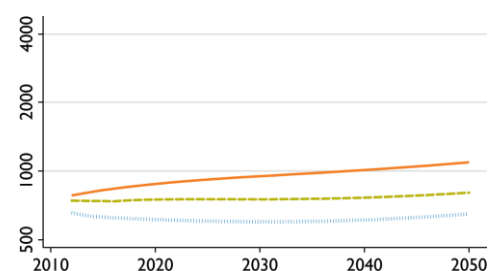


Figure 5: Conflict and economic growth

Can anything reverse the trend?

Despite regional variations and conflict traps, our forecasts clearly point towards a more peaceful world. The question then is: can anything reverse this trend?

Forecasts about the future are inherently uncertain. The forecasts we present here represent sound statistical modelling building on widely accepted knowledge about the relationship between socio-economic development and conflict.

Still, variables not included in these forecasts could very well alter the trends we predict. A key assumption is that the last decades of economic growth in the developing world continue, and that this growth improve welfare, education and peaceful opportunities for the majority of populations.

Another factor that has been proposed as a key challenge to more peace is climate change. Climate change is a severe threat to the livelihood of marginal populations, particularly in sub-Saharan Africa. Its adverse effects are still unlikely to be sufficiently strong to dramatically change the projected global trends in conflict, although it is conceivable that increased poverty and migration pressures may increase risks of conflict in some countries toward the end of our forecast period. At that point, however, the extensive demographic changes (including population reduction in many middle- and high-income countries) might change the world's capacity to absorb these migration flows.

Another possibility that we cannot rule out is that some kind of systemic shock, such as a new Cold War, will substantially affect the global risk of civil war. The Cold War was a major driver of the increase in armed conflict from 1960 to 1990 seen in Figure 1.

A future Cold War, however, is likely to be less serious than the previous one, since a considerable number of countries have escaped the conflict trap since the 1970s. Latin America, for instance, now seems quite safe from the wars ravaging countries in that region in the 1970s and 1980s, although organized crime still poses major problems. Factors such as socio-economic development, in other words, appear to be more important than systemic shocks. A more grave threat to our forecasts is a dramatic change in the global trading system that would sever the poorest countries of the world from the best possibilities for economic growth and poverty reduction. Another challenge turns on how currently poor states will handle the demands for political liberalization that tend to come with economic development. If many countries follow the path of Syria rather than that of Tunisia, our forecasts may turn out to be overly optimistic.

All forecasts must be treated with care. Our forecasts rest on two plausible assumptions: that the factors that have been associated with armed conflict in the past will continue to affect conflict in the future, and that there are good reasons to believe the UN, the OECD and IIASA when they project continued improvements to these factors. Just as Steven Pinker and Azar Gat have noted the strong declining trend in violence over the past millennia this should make us believe that the world is becoming more and more peaceful. The alternative expectation – that conflict will increase – is much less likely. ■

Forecasting conflict – nuts and bolts

Our forecasting model is designed to predict the incidence, onset and termination of civil armed conflict for every country in the world for as long into the future as we have reliable projections for factors like demography and education. The nuts and bolts of the model consist of a widely utilized statistical model (a modified Markov transition model) used to estimate the likelihood of peace, minor conflict and major conflict for every country-year as a function of a set of explanatory variables.

Given the estimated relationships between the variables, a computer program simulates the probability of being in either peace, minor conflict or major conflict given the covariates for a given year, and draws, on the basis of these probabilities, an outcome. We do this for every country in the world for as long into the future as desired. The process is then repeated several thousand times to mediate the effect of individual draws. The model has been extensively tried in out-of-sample tests and performs very well – we forecast about 71% of conflicts (minor or major) 10–12 years after the last year of data, with about 9% false positives.

THE AUTHORS

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THE PROJECT

The Conflict Trends project aims to answer questions related to the causes of, consequences of and trends in conflict. The project will contribute to new conflict analyses within areas of public interest, and works to produce thorough and quality-based analysis for the Norwegian Ministry of Foreign Affairs.

PRIO

The Peace Research Institute Oslo (PRIO) is a non-profit peace research institute (established in 1959) whose overarching purpose is to conduct research on the conditions for peaceful relations between states, groups and people. The institute is independent, international and interdisciplinary, and explores issues related to all facets of peace and conflict.