Projecting economic growth in the shadow of armed conflict

Kristina Petrova[1], Gudlaug Olafsdottir[2], Håvard Hegre[2], Elisabeth A Gilmore[3]

[1]Potsdam Institute for Climate Impact Research (PIK)
[2]Department of Peace and Conflict Research,
Uppsala University
[3]Department of International Development, Community and Environment,
Clark University

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The OECD-ENV model

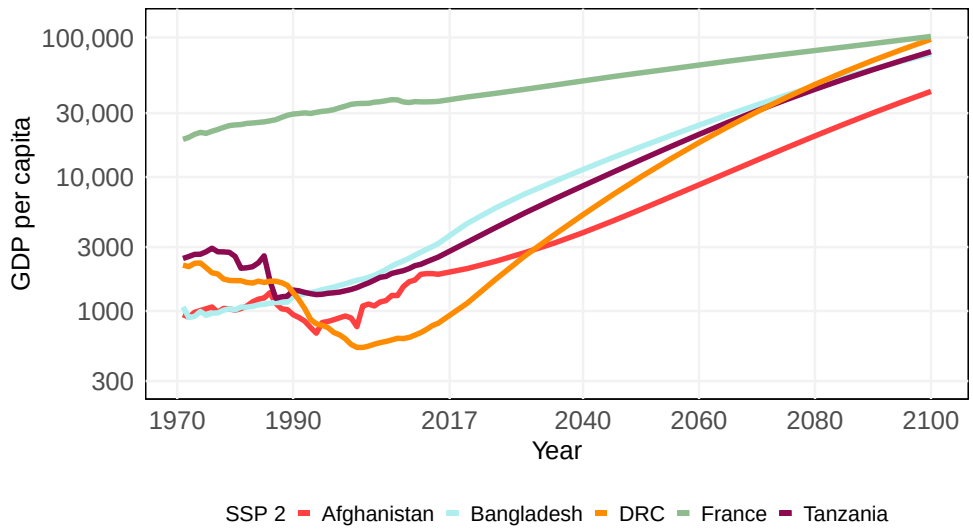
Drivers of growth:

- Investment in human capital/education
- Capital flows to economies rich in labor
- Innovation/technology transfers affecting productivity

Explicitly ignores political shocks

- Corruption
- Kleptocracy
- Armed conflict

In the year 2100, the OECD model projects the Democratic Republic of the Congo to be as rich as France.



Impacts of armed conflict

Internal armed conflicts destroy economies

- Typically 2% per year relative to the counterfactual (Collier, 1999; Gates et al., 2012)
- Internal conflict typically affects 15–20% of all countries every year

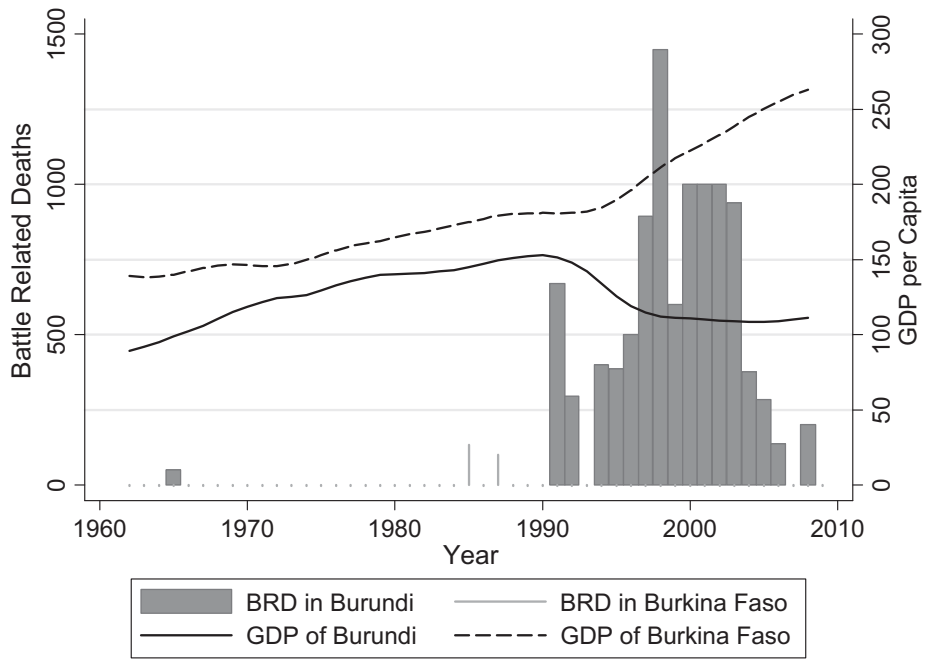


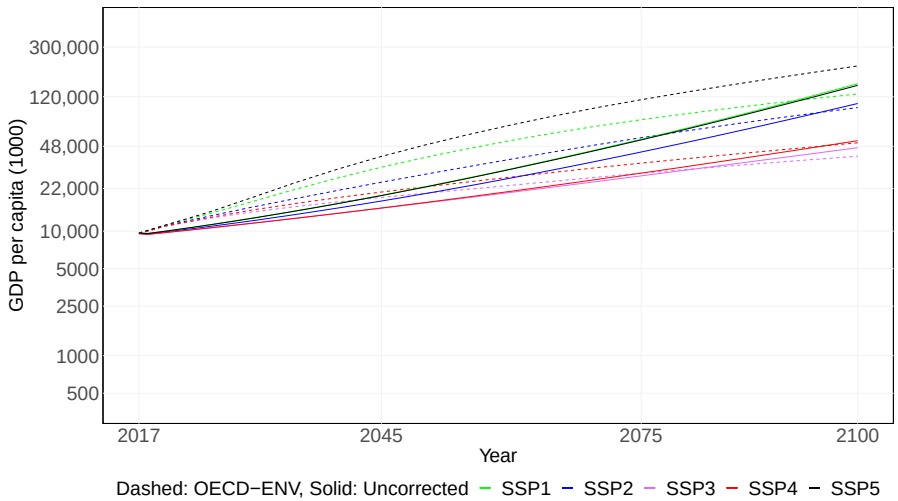
Figure 1. *Conflict and growth in Burundi and Burkina Faso.*

Projecting GDP per capita decades into the future cannot ignore the effect of conflicts (Buhaug and Vestby, 2019)

Our approach

1. Estimate simple models of growth and conflict
2. Simulate their implications
   - a) Assuming no conflict
   - b) Assuming simulated conflict
3. Calculate the difference in accumulated GDP per capita between (a) and (b)
4. Correct the Dellink et al. (2017) projections by subtracting the difference

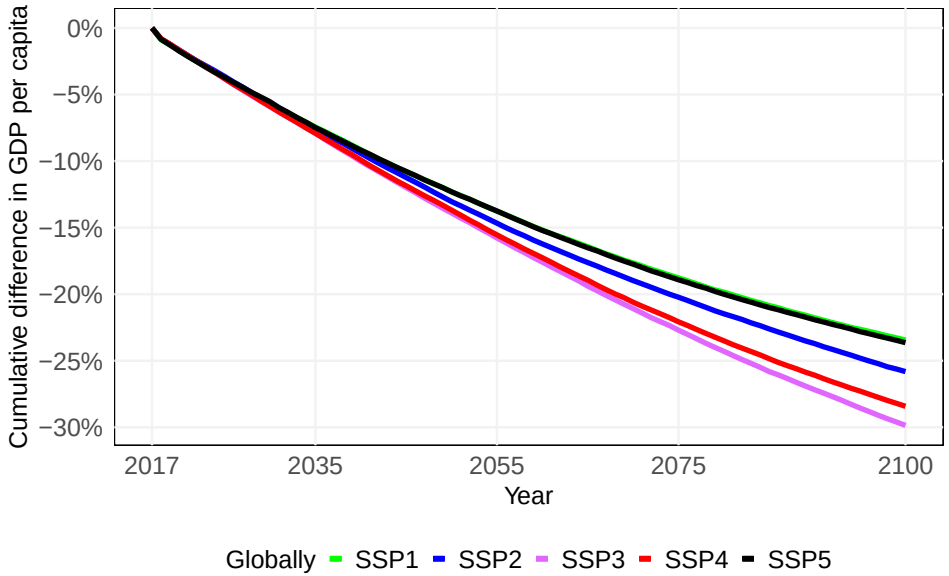
Simulated GDP per capita in our model without conflict roughly similar to Dellink et al. (2017).

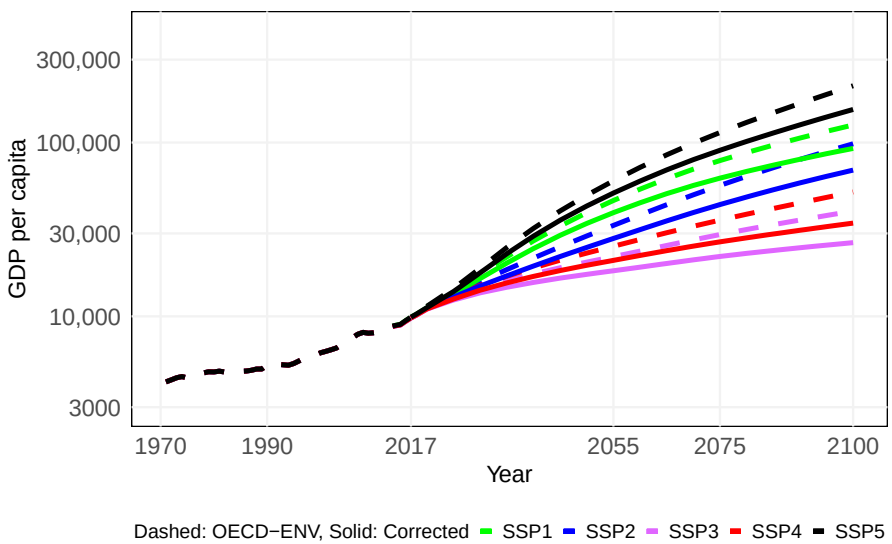


Simulation results: globally

Growth forecasts

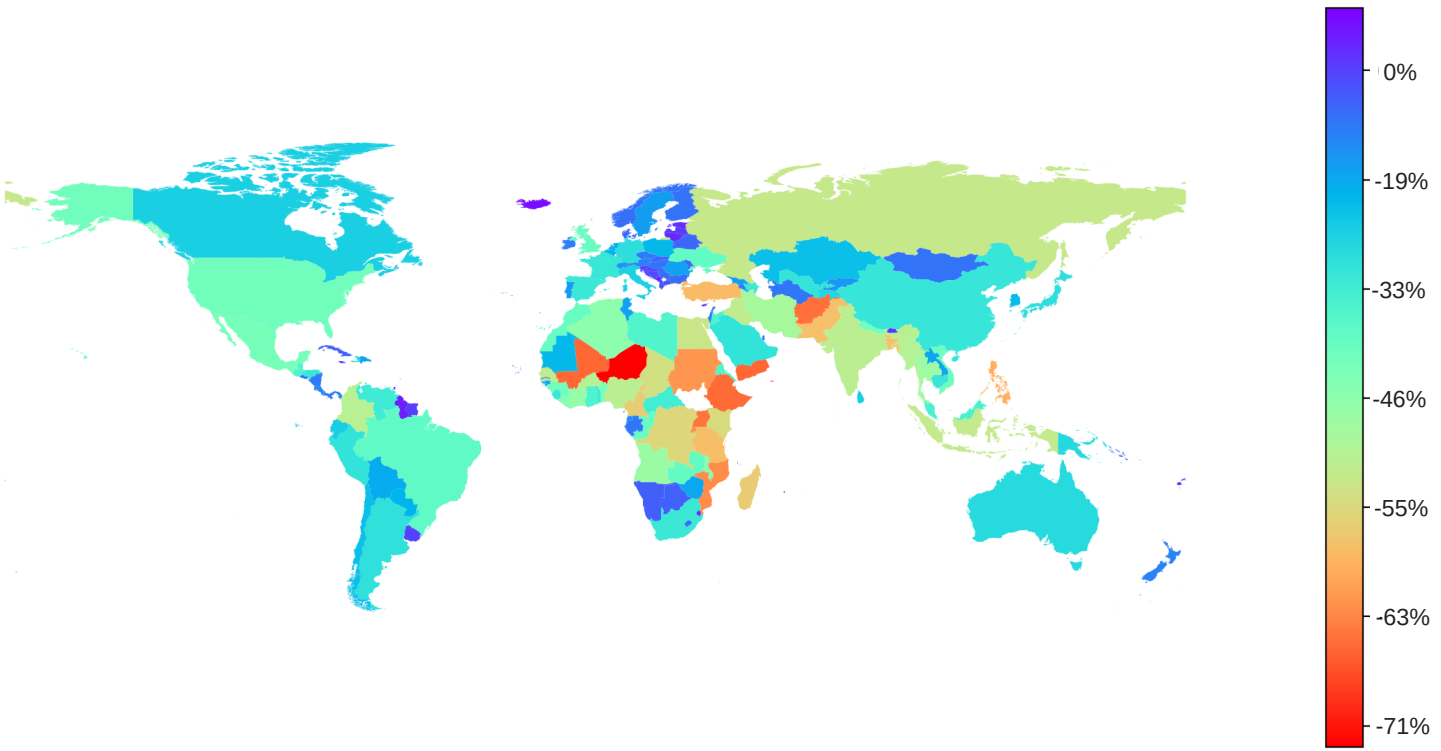
- On average, countries' GDP per capita are 20%–30% lower by the end of the century
- Estimated accumulated impact of armed conflict globally: 29% under SSP1, 5 and 46% under SSP3, 4.





Distribution of corrections

- blue-green: –33% correction
- green: –45% correction
- red: –71% correction

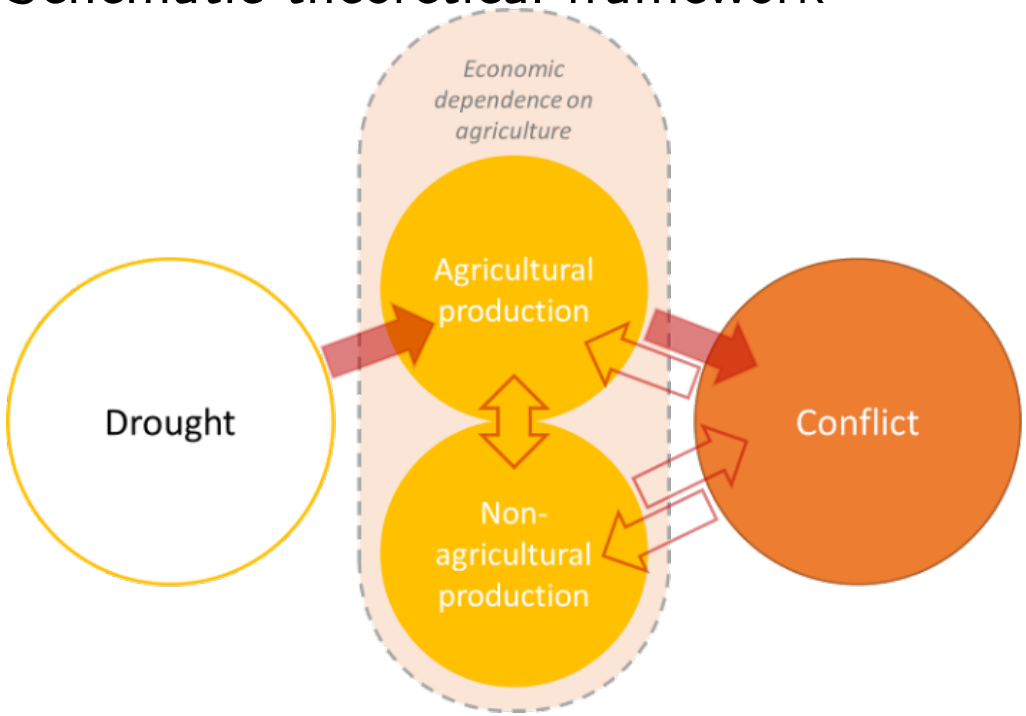


Possible applications of ISIMIP data

Quantify sensitivities of conflict risk to drought-induced agricultural productivity changes

- using ISIMP input data on soil moisture or
- agricultural sector output from the ISIMIP data related to crop growth and yield formation

Schematic theoretical framework



Thank you

kristina.petrova@pik-potsdam.de