Quantitative Methods in Political Science
Fall 2021

Final Data Essay
Evaluating UN Peacekeeping Operations

Thomas Gschwend, Oliver Rittmann, Viktoriia Semenova & David M. Grundmanns

Due: December 15th, 2021 (10h00)

Purpose

The purpose of this data essay is to test a theory which tries to evaluate UN peacekeeping operations. Your task is to empirically test a particular hypothesis we develop below and evaluate how well UN peacekeeping operations are capable of reducing violence in ongoing conflicts.

Include a write-up of no more than 2000 words ($\pm$ 10%), font size 12pt, double-spaced with at least 2.5cm margins on all sides. Focus on a professional presentation of your results (for example, meaningful and neatly formatted tables and publication-quality graphs). Please only include one table or figure per page, appropriately named and referenced in the text. Essays not adhering to these formatting guidelines will be marked down, as will sloppy presentations of tables and figures.

Apply in this essay what you have learned in this class about statistical techniques, the interpretation of your estimates, and the presentation of statistical results. Do not include a theoretical discussion of the hypotheses. Instead, focus on the interpretation of the results and the specification of your models (i.e., the respective systematic components). Keep in mind that there are different ways how to present results; try to choose the one that conveys as much information as possible to the reader in an intuitive way. Think about this data essay as the "methods, data, and results" section of a research paper that you would like to submit to a journal for publication. Please keep in mind that absolutely **no collaboration with others is allowed**.

Evaluating UN Peacekeeping Operations

UN Peacekeeping Missions have originally been intended to support post-conflict peace processes. However, in the last two decades such missions are also commonly deployed to states with ongoing armed conflict. Such interventions into active conflict are intended to reduce the hostility between conflicting parties and by doing so, create fruitful grounds for a sustainable peace process in the conflict area.

Observers noted an increasing demand for UN interventions into active conflict. Whether this increased demand is warranted hinges upon the effectiveness of UN peacekeeping missions in reducing battlefield violence. It is thus essential to evaluate the success of past UN peacekeeping missions.

In this data essay you are supposed to test an argument claiming that the higher the number of UN peacekeeping troops intervening in a conflict the better those operations are in reducing battle-related fatalities. However, the degree of effectiveness critically depends on the state of the ongoing conflict. The argument starts with the assumption that another way by which UN peacekeepers can reduce violence is by helping the conflict parties to overcome commitment problems that come with mutual agreements. A precondition for this mechanism to work out is that there is a general willingness of the involved actors to resolve the conflict and negotiate agreements. In short: a given UN peacekeeping mission should reduce battlefield violence even more if the involved conflict parties are actually willing to stop fighting.

A way to measure actors' general willingness to end violence is to observe whether they are willing to agree to a ceasefire. A given UN peacekeeping mission can be characterized by the number of deployed UN troops in the conflict. A way to measure the effectiveness of UN peacekeeping operations is to observe the number of battle-related fatalities in the area of conflict. Taking these measures at work, the presented argument implies that the number of UN peacekeeping troops in a given conflict are particularly effective if the actors are willing to agree to a ceasefire. This leads us to the following hypothesis:

Hypothesis 1 *The effect of the UN troops size on reducing the battle-related fatalities is stronger once a ceasefire agreement is in place.*

Your Assignment

This section details what we expect you to do in your essay.

- Use descriptive statistics and variable descriptions to familiarize the reader with the data that you use. Think hard about which variables to use and why.
- Use appropriate models to empirically test the hypothesis formulated above. Discuss and compare the effects for your main independent variables in terms of sign, size, and statistical significance.
- Remember to carefully specify your model(s). Present the results of your main models in one nicely formatted output table. Defend your model choice carefully.
- In addition to the estimation results, make sure to present interesting quantities of interest. For instance, examine effects for informative and sensible values of the independent variables. Focus in your interpretation on the direction of the effects, the substantive magnitude of the effects, and the uncertainty surrounding those effects.
- Remember to think before you run models. Do not just dive in without reflection. Keep focused. Have models in mind. Step back when things do not work out. Important hint: Give yourself time to write and re-write.
- You will have to upload both your data essay as PDF and your R code to your Github repository by the deadline, i.e. December 15th, 2021, 10h00. The files should be personalized and called `lastnameDataessay.pdf` and `lastnameRcode.Rmd`. Make sure that your code is well-documented, runs through smoothly, and is entirely reproducible from the material presented in your repository. *Late submissions of either the data essay or the code are not accepted, i.e. the version of text and code on Github by 10h00 will be evaluated. Late submissions will be marked as "failed (5.0)".*
- Remember to include a signed statutory declaration in both German and English for your paper. You can also find the text in the provided template. You can sign it electronically.

Data & Codebook

The codebooks describes all variables from the data set and explains what they measure.

Variable	Description
year_month	The year and month.
conflict_id	ID of a conflict
gov	Government side in the conflict
rebel_group	Rebel group involved in the conflict.
brf_grc	Battle-related fatalities in the government and rebel groups in a month, including civilians as collateral damage.
brf_gr	Battle-related fatalities in the government and rebel groups in a month.
brf_grc_lag	Battle-related fatalities in the government and rebel groups, including civilians as collateral damage, lagged one month.
brf_gr_lag	Battle-related fatalities in the government and rebel groups, lagged one month.
ceasefire	Coded as 1 if a ceasefire agreements exists in a given month; 0 otherwise.
troop_lag1000	Number of UN military troops deployed, in thousands, lagged one month.
police_lag1000	Number of UN police unites deployed, in thousands, lagged one month.
rebel_strength	Ordinal scale varying from 1 if rebels are much weaker than government to 5 if rebels are much stronger than government.
n_rebel_groups	Number of rebel groups involved in the conflict
pop	Population size.
pop_ln	Population size, logged.
biased_intervention	Coded as 1 if one or more states intervened with UN troops in support of either the government or the rebels; 0 otherwise.
active_year	Coded as 1 if conflict was active in this year; 0 otherwise.
peace_24_months	Number of months passed since the conflict end, not available if number of months exceed 24.
peace_36_months	Number of months passed since the conflict end, not available if number of months exceed 36.
peace_48_months	Number of months passed since the conflict end, not available if number of months exceed 48.
regional_pko	Coded as 1 if PKO from regional intergovernmental organization intervened in the conflict state in a given month; 0 otherwise.