

We replicate some of the results in <https://economics.mit.edu/faculty/acemoglu/data/ajr2001> (AJR from now on). We collect some additional data and use their model to test new assumptions.

AJR test the causal effect of institutions on gdp per capita. The authors want to understand whether (and how important) it is possible to explain heterogeneity across countries GDP through their institutions. In order to measure this effect, they *instrument* institutions with the mortality of the first settler in the country. The idea is that, in countries where they found favorable conditions, colonizers settle down and built good institutions. These are at the origin of today's political and economical organizations.

They test (*first stage*) the relation between the rate of settlers mortality and an index of protection against expropriation (the measure they use to compare institution) and after argue that this is the only channel through which settlers mortality could influence today's GDP.

With an OLS an increases of 1 point in the index measuring the quality of institutions produces a 50% increase in the log of GDP (roughly 75% increase in GDP). When they use the instrumental variable approach they observe this effect doubling in size.

We use the same approach using a new dependent variable: the Gini index. We collected the data from the World Bank and we run both an OLS and an IV regression. In both cases we get a non-significant relation between the index measuring the quality of institutions and the the index of inequality. We conclude that weather protection against expropriation has a significant and strong impact on the wealth of a country, it does not influence the way in which resources are shared among his citizens.

The original database of AJR can be found at <https://economics.mit.edu/faculty/acemoglu/data/ajr2001>. The following link contains the same database as a .csv file and a new database with the gini index included:

<https://drive.google.com/open?id=1oJNNKmeEcgxBoLKh0F-QOyaGmmAJiZ1>

The file "project_.Rmd" contains the replication of AJR, "project2_.Rmd" our extension. Both are written in R.