



Weather, Wine, and Public Health

Orley Ashenfelter and Karl Storchmann

There is an abundance of literature, mostly within the medicinal discipline, on the direct influence of weather variables on different diseases. Depending on the respective weather conditions, certain germs can spread more or less rapidly. Even suicide rates are linked to weather phenomena. There have been numerous publications on the seasonality of suicide all pointing at the role of sunlight for psychological health.

However, economists stress on the role of income: Low income will exacerbate public health conditions and, therefore, increases the likelihood of disease outbreaks and suicidal behavior. Income in turn can be dependent on weather conditions if a climate sensitive crop is the main income source.

This paper decomposes the direct and indirect climatic impact on public health variables. Referring to Prussian county data for the Rhine Province we developed a panel model for the years 1870 to 1910. The model data are comprised of counties with mainly climate-insensitive income sources (e.g., mining, industry) as well as of counties with highly climate dependent income sources. As for the latter we referred to viticulture, which is exclusively located in the valleys of Rhine and Mosel, run as a monoculture, and almost the only source of income in these counties.

Relying on this rich set of data we use wine crop yields and prices as instruments for income variables and quantify direct and indirect climate effects on public health measures.