DESCRIPTION OF DOCUMENTATION FOR:

Young (2017): The Effect of Fracking on Agriculture, Forestry, Fishing, and Hunting in Pennsylvania

The data management and analysis for the paper were conducted using R version 3.2.1 "World-Famous Astronaut" using RStudio version 1.0.136 It has been written to run on a Windows or Mac operating system. In addition to the base R package, several packages are used. These can be seen at the top of the Rmd document loaded in the first code chunk.

The paper was knitted to pdf using the elsevier article format contained in the rticles package. Knitting to pdf requires a LaTeX installation on your computer, though you will not need to write any LaTeX code directly.

The documentation is organized into three main directories (listed in order of importance for reproduction of results):

• Source code: Here you will find the Rmd file that reproduces the entire paper, along with all auxiliary files created in process of knitting the pdf.

• Processing and analysis: contains all data called by the Rmd file in analysis. The Supplementary code folder contains script that is called by the Rmd code and do not need to be run directly by the user. This code does the data cleaning necessary to put the data into analysis form. It is excluded from the Rmd file only to keep the document cleaner. The importable data folder contains the original data files modified to the minimal extent necessary to import them into R. All further processing is done in the code.

• Original Data and Metadata: contains the data I collected in the most original form possible. The oil and gas data as well as the county population data has not been modified. The labor force data (laucnty) has been modified to remove the header so that it can be read into R. The agriculture, forestry, fishing and hunting data has had several years throughout the data sets averaged in order to fill gaps of missing data. A more detailed explanation is offered in the data section of my paper. Metadata files here describe the original data files. Nothing in this file should be necessary to reproduce the results in the paper, but these files serve as a record for the data used in analysis.

To reproduce all results reported in paper:

Copy the Documentation folder to your computer. Leave the rest of the folders intact. The Documentation folder can also be moved or renamed as necessary.

Open the Rmd file in the Source Code folder using R Studio. Make sure all required packages are installed. Run all code in the file. If the output format is changed to an R notebooks format, the chunks can be run one at a time to see individual results. Knit the file to elsevier article. You must have a LaTeX installation on your computer to do this.