

April, 2015

This file describes the data and code for "Welfare and Distributional Implications of Shale Gas" by Catherine Hausman and Ryan Kellogg, in the *Brookings Papers on Economic Activity*.

## A. DESCRIPTION:

Raw datasets are in .csv and .xls format, to facilitate use in all statistical packages. Additionally, the weblinks for the original data are listed above or in the raw files themselves. The only exception is for the Bloomberg data, which cannot be posted.

The final cleaned datasets used in the paper are also included, in .dta format. Additionally, the Stata .do files that clean the data and estimate results are included. These .do files are commented. Before running the .do files, change the directory to the desired location on your computer.

Please contact us with questions:

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## B. FILES INCLUDED:

### 1) Raw data

#### a) Census

- i) h08.xls: Median Household Income by State 1984 to 2013, from <https://www.census.gov/hhes/www/income/data/historical/household/2013/h08.xls>
- ii) NST-EST2014-01.csv: Population, from <https://www.census.gov/popest/data/state/totals/2014/tables/NST-EST2014-01.csv>
- iii) ST-EST00INT-01.csv: Population, from <https://www.census.gov/popest/data/intercensal/state/tables/ST-EST00INT-01.csv>
- iv) state\_geocodes\_v2011.xls: Census regions and divisions, from [https://www.census.gov/popest/about/geo/state\\_geocodes\\_v2011.xls](https://www.census.gov/popest/about/geo/state_geocodes_v2011.xls)
- v) state\_fips.dta: State FIPS codes, from <http://www.epa.gov/envirofw/html/codes/state.html>

#### b) EIA – Demand

- i) ng\_cons\_sum\_a\_EPG0\_v\*\*\_mmcf\_m.xls: Eight files with natural gas deliveries by end-use, from [www.eia.gov](http://www.eia.gov) (individual links contained in each spreadsheet)

#### c) EIA – Other

- i) Net\_generation\_for\_all\_sectors.csv: Annual net electricity generation by fuel type, from <http://www.eia.gov/electricity/data/browser/>

- ii) NG\_MOVE\_EXPC\_S1\_M.xls and NG\_MOVE\_IMPC\_S1\_M.xls: Exports and imports, from [www.eia.gov](http://www.eia.gov) (individual links contained in each spreadsheet)
- iii) NG\_STOR\_WKLY\_S1\_W.xls: Storage, from [http://www.eia.gov/dnav/ng/ng\\_stor\\_wkly\\_s1\\_w.htm](http://www.eia.gov/dnav/ng/ng_stor_wkly_s1_w.htm)
- d) EIA – Prices
  - i) ng\_pri\_fut\_s1\_d.xls: Henry Hub prices, from [http://www.eia.gov/dnav/ng/ng\\_pri\\_fut\\_s1\\_d.htm](http://www.eia.gov/dnav/ng/ng_pri_fut_s1_d.htm)
  - ii) ng\_pri\_fut\_s1\_m.xls: Henry Hub prices, from [http://www.eia.gov/dnav/ng/ng\\_pri\\_fut\\_s1\\_m.htm](http://www.eia.gov/dnav/ng/ng_pri_fut_s1_m.htm)
  - iii) ng\_pri\_sum\_a\_EPG0\_\*\*\*\_DMcf\_m.xls: Natural gas price, by end-use, from [www.eia.gov](http://www.eia.gov) (individual links contained in each spreadsheet)
  - iv) RBRTEm.xls and RWTCm.xls: Brent and WTI oil prices, from [www.eia.gov](http://www.eia.gov) (individual links contained in each spreadsheet)
- e) EIA – Supply
  - i) NG\_ENR\_DRILL\_S1\_M.xls and NG\_ENR\_WELLEND\_S1\_M.xls: Rig and well counts, from [www.eia.gov](http://www.eia.gov) (individual links contained in each spreadsheet)
  - ii) ng\_prod\_sum\_a\_EPG0\_F\*\*\_mmcf\_m.xls: Withdrawals by source, [www.eia.gov](http://www.eia.gov) (individual links contained in each spreadsheet)
  - iii) NG\_PROD\_SUM\_A\_EPG0\_VGM\_MMCF\_M.xls: Marketed production, from [www.eia.gov](http://www.eia.gov) (individual links contained in each spreadsheet)
  - iv) NG\_PROD\_SUM\_DCU\_NUS\_M.xls: National summary of withdrawals and production, from [www.eia.gov](http://www.eia.gov) (individual links contained in each spreadsheet)
- f) Fed
  - i) CPILEGNS.xls: Consumer Price Index for All Urban Consumers All Items Less Energy, from <http://research.stlouisfed.org/fred2/series/CPILEGNS>
  - ii) EXUSUK.xls: U.S. / U.K. Foreign Exchange Rate, from <http://research.stlouisfed.org/fred2/series/EXUSUK>
  - iii) GDPC1.csv: Real GDP, from <http://research.stlouisfed.org/fred2/series/GDPC1/downloaddata>
  - iv) GDPDEF.xls: Gross Domestic Product Implicit Price Deflator, from <http://research.stlouisfed.org/fred2/series/GDPDEF/downloaddata>
  - v) INDPRO.xls: Industrial Production Index, from <http://research.stlouisfed.org/fred2/series/INDPRO/downloaddata>
- g) Manufacturing
  - i) BEA\_EconCensus\_Concordance.csv: Concordances between input/output tables and Economic Census, created by authors
  - ii) EcCensus20\*\*\_ToStata.csv: Manufacturing component of Economic Census, extracted by authors from files available at <http://factfinder.census.gov/>

iii) GasDirectReq\_Manuf.csv and GasTotalReq\_Manuf.csv: Direct and total use tables, created by authors from 2007 IO Tables at [http://www.bea.gov/industry/io\\_annual.htm](http://www.bea.gov/industry/io_annual.htm)

h) NOAA

i) Daily\_degree\_days.csv: Compiled by authors from annual heating and cooling degree days files. Original files, titled StatesCONUS.Cooling.txt and StatesCONUS.Heating.txt, available at: [ftp://ftp.cpc.ncep.noaa.gov/htdocs/degree\\_days/weighted/daily\\_data/](ftp://ftp.cpc.ncep.noaa.gov/htdocs/degree_days/weighted/daily_data/)

i) pink\_data\_m.xls: World Bank Commodity Price Data (The Pink Sheet), from [http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1304428586133/pink\\_data\\_m.xlsx](http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1304428586133/pink_data_m.xlsx)

j) Not included: Data extracted from Bloomberg cannot be posted. This includes US Henry Hub and UK NBP spot prices (NGUSHHUB, NBPGDAHD) and various chemical prices series (GCFPAMBS, GCFPAMME, GCFPAMMC, GCFPAMNB, PUSAETHA, PWEUETHA, PUSACHBM, PWEUCHBM). These are used in data.do and manufintensity.do and numbers\_in\_text.do. For replication, if you obtain the necessary Bloomberg files, you can then run the relevant portions of the do-files.

2) Cleaned final Stata dataset

i) statedata.dta: Compiled by authors from above datasets; used in most do-files.

ii) ManufOutputAndGasIntensity.dta: Compiled by authors from above datasets; used in manufintensity.do.

3) Do-files

i) data.do: Cleans most of the raw data. Also creates statedata.dta.

ii) demand\_shifters.do: Calculates numbers in Table A1.

iii) elasticities.do: Estimates supply and demand elasticities and pass-through regressions.

iv) manufintensity.do: Compiles manufacturing data and creates tables and regressions from section 5 of the paper.

v) numbers\_in\_text.do: Calculates the various summary statistics in the text as well as some of the time series plots.

vi) program.do: Calculates equilibrium prices in the counterfactual and LNG scenarios, makes supply and demand plots, and calculates consumer and producer surplus numbers. National and by state.