

## DATA APPENDIX

The following variables are included in the data set (note that the data set has slightly fewer observations than SHF (2006) as we added farmland values for additional Census years and dropped counties whenever at least one variable value had a missing value).

**fips:** fips code of county.

**farmvalue:** The variable `farmvalueYYYY` measures average value of land and building (dollar per acre of farmland) in year `YYYY` in each county as reported in the Census of Agriculture.<sup>1</sup> All numbers are converted to 2002 dollars using the GDP implicit price inflator.<sup>2</sup>

**farmland:** The variable `farmlandYYYY` measures total acres of farmland in year `YYYY` in each county as reported in the Census of Agriculture.

**longitude:** The variable `longitude` measures the area weighted average longitude of all cropland in a county.

**latitude:** The variable `latitude` measures the area weighted average latitude of all cropland in a county.

**prec:** Average precipitation (cms) in the county during the growing season (April-September).

**precB2:** Predicted precipitation by the end of the century (2070-2099) under the Hadley III-B2 scenario.

**dday8\_32:** Average degree days 8-32°C during the growing season (April-September) derived from monthly data using Thom's formula (SHF 2006)

**dday8\_32B2:** Predicted degree days 8-32°C by the end of the century (2070-2099) under the Hadley III-B2 scenario.

**dday34\_root:** Square root of average degree days above 34°C during the growing season (April-September) derived from monthly data using Thom's formula (SHF 2006)

**dday34B2\_root:** Predicted square root of degree days above 34°C by the end of the century (2070-2099) under the Hadley III-B2 scenario.

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<sup>1</sup><http://www.agcensus.usda.gov/>

<sup>2</sup>We use data for July 1st of each year from <http://research.stlouisfed.org/fred2/data/GDPDEF.txt>

**popDens:** The variable popDensYYYY measures the population density (people per square mile) in each county as reported in the City and County Data Book.<sup>3</sup> Values for a particular year are linear interpolations between the closest years for which the City and County Data Book reports data, e.g., the value in 1969 is  $0.1*(\text{value } 1960)+0.9*(\text{value in } 1970)$ .

**incomeCapita:** The variable incomeCapitaYYYY measures the income per capita (thousand dollars per person) in each county as reported in the City and County Data Book. All numbers are converted to 2002 dollars using the GDP implicit price inflator. Values for a particular year are linear interpolations between the closest years for which the City and County Data Book reports data, e.g., the value in 1982 is  $0.67*(\text{value } 1981)+0.33*(\text{value in } 1984)$ .<sup>4</sup>

**pctClay:** Percent of all soil layers that is clay.

**topKfact:** k-factor (soil erodibility) of the top most soil layer.

**minPerm:** Minimum permeability of all soil layers (inches / hour).

**waterCapacity:** Amount of water the soil can hold (inches/inch).

**bestSoil:** Percent of soil that was classified in class 1-3 of an eight-class soil classification system (where class 1 is best soil and class 8 is worst soil).

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<sup>3</sup><http://fisher.lib.virginia.edu/collections/stats/ccdb/>

<sup>4</sup>The earliest year available is 1981, and hence the values in 1969, 1974, and 1978 are set equal to the value in 1981.