# **Online Appendix for “Effect of Nuclear Power Plants on Local Crop Yields”**

## ***Robustness of results***

### A.1. Alternative control counties

A specification with control counties being all the non-treated counties in the states with nuclear power plants (see Table A.1 and Table A.2) indicates an increase in yields similar to those reported in the main specifications.

### A.2. Quadratic nuclear density

One may wonder if the relationship between the density and crop yields is non-linear. Table A.3 and Table A.4 report results for the estimations including quadratic density term. While the quadratic term is negative, it is not statistically significant. The linear term is still positive and statistically significant.

### A.3. Taking into account wind directions

While the specification for soybeans taking into account wind direction yields results significant at the 5% level, the results for corn are only significant at a 10% level (with a p-value of around 6%). The coefficients, however, reported in Table A.5 and Table A.6, are larger in magnitude, thus, providing evidence that the mechanism is linked to the emissions (of water steam) into the atmosphere.

### A.4. Explanatory variables binned at the quartiles

Graphs in Figure 12 to Figure 15 show yearly quartiles of GDD and precipitation. Based on these graphs, the first quartile is approximately 3,000 for GDD and 20 for precipitation. The median is approximately 3,200 for GDD and 23 for precipitation. The third quartile is approximately 3,500 for GDD and 27.5 for precipitation. Each of the explanatory variables is binned into four dummy variables: low (values below the first quartile), “25 to 50” (values between the first quartile and the median), “50 to 75” (values between the median and the third quartile), and high (values above the third quartile).The resulting coefficients (see Table A.7 and Table A.8) are similar to those in the main regression. While coefficients for the dummies representing higher GDD are negative, they are not significant. Coefficients for the dummies representing higher precipitation levels, on the other hand, are positive and significant. Table A.9 and Table A.10 present the results for binning at the first and third quartiles.

### A.5. Sine GDD

Results for the estimates using alternative, “sine”, way to calculate GDD are presented in Table A.11 and Table A.12. The results are similar to the ones in the main specification.

### A.6. Cold weather

Cold weather is another factor that can affect plant growth. Estimations with number of cold days in a given year were performed and the results are presented in Table A.13 and Table A.14. The agricultural literature (for example, Elmore, Owen, Abendroth, 2006) suggests that growth of crops like corn is negatively affected by temperatures below 60 degrees Fahrenheit. Hence, cold days were defined in one of the two ways: days when the minimum temperature is below 60 degrees and days when the average of the minimum and maximum temperatures is below 60 degrees. The results do not show a significant effect of cold days. The coefficient on the density variable, however, is still statistically significant.

### A.7. Dropping counties with high urbanization rates.

The estimations are performed dropping counties with high urbanization rates. Figure 16 and Figure 17 show the distribution of percentages of the urban population in soybeans and corn growing counties according to the 1972 County Book. The models are estimated after dropping counties with urbanization rate above 60%. The coefficient on the density variable, presented in Table A.15 and Table A.16) is significant and is close to the magnitude of the coefficient in the main specification.

### A.8. PDSI as an explanatory variable

Palmer Drought Severity Index (PDSI) is a measure of dryness that takes into account precipitation, temperature, latitude, and available water capacity of soil (Palmer 1965). It ranges from -10 to 10, where negative values correspond to dry weather and positive values correspond to wet weather with larger magnitudes corresponding to more extreme conditions. The average PDSI is calculated for each season. Table A.17 and Table A.18 explore cases of the linear relationship between yields and PDSI in each season (average PDSI in spring, summer, and fall). In Table A.19 and Table A.20, dry and wet weather are defined as weather with PDSI below -2 and above 2. In Table A.21 and Table A.22, dry and wet weather are defined as weather with PDSI below -3 and above 3. All the regressions including the PDSI variable indicate that dry summers negatively influence crop yields. More importantly, they produce the variable coefficients comparable to those in the main model.

### A.9. Alternative clustering levels

Table A.23 presents results for the main specification with alternative levels of standard error clustering. While results for soybeans are robust across all specifications, results for corn were only significant with state-level clustering.

### A.10. Extended timeline

Table A.24 and Table A.25 present the results for specifications with extended timeline, from 1972 until 2011. The results for corn are similar to the ones in the main specification. However, the results for soybeans are not significant at the conventional levels with the p-value of 11%.

### A.11. Unbalanced panels

Specifications considered so far relied on the balanced panel. The results for the unbalanced are presented in Table A.26 and Table A.27. The results are similar to those for the balanced panel.

**Table A.1.** Control are All Non-treated Counties in the States with Nuclear Power Plants. Soybeans

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.256\*\*\* | 0.255\*\*\* | 0.244\*\*\* |
|  | (0.0633) | (0.0684) | (0.0616) |
| gdd/1000 |  | 1.678\*\*\* | 1.254\*\*\* |
|  |  | (0.393) | (0.399) |
| (gdd/1000)2 |  | -0.349\*\*\* | -0.245\*\* |
|  |  | (0.0888) | (0.0989) |
| precip |  |  | 0.859\*\*\* |
|  |  |  | (0.169) |
| precip2 |  |  | -0.0142\*\*\* |
|  |  |  | (0.00318) |
| County FE | Y | Y | Y |
| State-Year FE | Y | Y | Y |
| *N* | 18520 | 18520 | 18520 |
| adj. *R*2 | 0.847 | 0.847 | 0.855 |

Standard errors clustered at the state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.2.** Control are All Non-treated Counties in the States with Nuclear Power Plants. Corn

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.224 | 0.242 | 0.220\* |
|  | (0.151) | (0.148) | (0.120) |
| gdd/1000 |  | 3.524\*\* | 1.986\* |
|  |  | (1.533) | (1.134) |
| (gdd/1000)2 |  | -1.053\*\* | -0.591\*\* |
|  |  | (0.382) | (0.272) |
| precip |  |  | 3.707\*\*\* |
|  |  |  | (0.446) |
| precip2 |  |  | -0.0600\*\*\* |
|  |  |  | (0.00838) |
| County FE | Y | Y | Y |
| State-Year FE | Y | Y | Y |
| *N* | 26140 | 26140 | 26140 |
| adj. *R*2 | 0.843 | 0.844 | 0.854 |

Standard errors clustered at the state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.3**. Quadratic nuclear density. Soybeans

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.422\*\* | 0.419\*\* | 0.380\*\* |
|  | (0.156) | (0.156) | (0.145) |
| densitysq | -0.0350\* | -0.0341\* | -0.0297 |
|  | (0.0198) | (0.0196) | (0.0188) |
| gdd1000 |  | 1.641\*\* | 1.415\*\* |
|  |  | (0.616) | (0.594) |
| gdd1000sq |  | -0.363\*\* | -0.307\* |
|  |  | (0.144) | (0.147) |
| grow |  |  | 0.866\*\*\* |
|  |  |  | (0.130) |
| growsq |  |  | -0.0145\*\*\* |
|  |  |  | (0.00234) |
| *N* | 9720 | 9720 | 9720 |
| adj. *R*2 | 0.866 | 0.866 | 0.872 |

Standard errors clustered at the state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.4**. Quadratic nuclear density. Corn

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.699\*\*\* | 0.728\*\*\* | 0.666\*\* |
|  | (0.251) | (0.254) | (0.278) |
| densitysq | -0.0369 | -0.0384 | -0.0347 |
|  | (0.0324) | (0.0329) | (0.0318) |
| gdd1000 |  | 2.087 | 1.285 |
|  |  | (1.322) | (1.222) |
| gdd1000sq |  | -0.783\*\*\* | -0.506\* |
|  |  | (0.280) | (0.257) |
| grow |  |  | 3.446\*\*\* |
|  |  |  | (0.368) |
| growsq |  |  | -0.0545\*\*\* |
|  |  |  | (0.00666) |
| *N* | 14940 | 14940 | 14940 |
| adj. *R*2 | 0.868 | 0.868 | 0.876 |

Standard errors clustered at the state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.5.** Considering the Wind Directions. Soybeans

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.350\*\* | 0.340\*\* | 0.339\*\* |
|  | (0.111) | (0.122) | (0.130) |
| gdd1000 |  | -1.214 | 1.229 |
|  |  | (5.139) | (4.784) |
| gdd1000sq |  | 0.200 | -0.139 |
|  |  | (0.691) | (0.647) |
| grow |  |  | 0.740\*\*\* |
|  |  |  | (0.0981) |
| growsq |  |  | -0.0107\*\*\* |
|  |  |  | (0.00267) |
| *N* | 1080 | 1080 | 1080 |
| adj. *R*2 | 0.853 | 0.853 | 0.858 |

Standard errors clustered at the state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.6.** Considering the Wind Directions. Corn

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.697 | 0.535\* | 0.469 |
|  | (0.441) | (0.250) | (0.267) |
| gdd1000 |  | -27.14\* | -17.75 |
|  |  | (13.31) | (12.63) |
| gdd1000sq |  | 5.566\*\*\* | 4.125\*\* |
|  |  | (1.654) | (1.697) |
| grow |  |  | 3.419\*\*\* |
|  |  |  | (0.879) |
| growsq |  |  | -0.0567\*\*\* |
|  |  |  | (0.0138) |
| *N* | 1580 | 1580 | 1580 |
| adj. *R*2 | 0.864 | 0.870 | 0.874 |

Standard errors in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.7.** Regressions with GDD and precipitation binned at the quartiles. Soybeans

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.199\*\* | 0.188\*\* | 0.194\*\* |
|  | (0.0770) | (0.0773) | (0.0739) |
| gdd\_25\_50 | -0.200 |  | -0.212 |
|  | (0.272) |  | (0.260) |
| gdd\_50\_75 | -0.587 |  | -0.520 |
|  | (0.408) |  | (0.415) |
| gddmax | -0.911 |  | -0.793 |
|  | (0.537) |  | (0.531) |
| precip\_25\_50 |  | 1.454\*\*\* | 1.442\*\*\* |
|  |  | (0.299) | (0.301) |
| precip\_50\_75 |  | 1.612\*\*\* | 1.593\*\*\* |
|  |  | (0.488) | (0.498) |
| precipmax |  | 1.369\* | 1.348\* |
|  |  | (0.673) | (0.689) |
| \_cons | 28.47\*\*\* | 26.91\*\*\* | 27.34\*\*\* |
|  | (0.289) | (0.336) | (0.539) |
| *N* | 9720 | 9720 | 9720 |
| adj. *R*2 | 0.866 | 0.869 | 0.869 |

gdd\_25\_50 is growing season GDD between 3,000 and 3,200, precip\_50\_75 is growing season GDD between 3,200 and 3,500, and gdd\_max is growing season GDD above 3,500. The omitted category is GDD below 3,000. precip\_medium is growing season precipitation between 20 and 23, precip\_50\_75 is growing season precipitation between 23 and 27.5, and precip\_max is growing season precipitation above 27.5. The omitted category is precipitation below 20.

Standard errors clustered at the state level in parentheses. \* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.8.** Regressions with GDD and precipitation binned at the quartiles. Corn

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.337\*\* | 0.315\*\* | 0.323\*\* |
|  | (0.160) | (0.144) | (0.142) |
| gdd\_25\_50 | -1.217 |  | -1.144 |
|  | (1.032) |  | (1.019) |
| gdd\_50\_75 | -2.717\*\* |  | -2.150\*\* |
|  | (1.036) |  | (1.003) |
| gddmax | -3.240\* |  | -2.476 |
|  | (1.652) |  | (1.631) |
| precip\_25\_50 |  | 6.373\*\*\* | 6.337\*\*\* |
|  |  | (0.580) | (0.591) |
| precip\_50\_75 |  | 8.096\*\*\* | 8.021\*\*\* |
|  |  | (0.868) | (0.878) |
| precipmax |  | 8.181\*\*\* | 8.082\*\*\* |
|  |  | (0.949) | (0.943) |
| \_cons | 85.22\*\*\* | 77.90\*\*\* | 79.32\*\*\* |
|  | (0.799) | (0.559) | (1.141) |
| *N* | 14940 | 14940 | 14940 |
| adj. *R*2 | 0.868 | 0.873 | 0.873 |

gdd\_25\_50 is growing season GDD between 3,000 and 3,200, precip\_50\_75 is growing season GDD between 3,200 and 3,500, and gdd\_max is growing season GDD above 3,500. The omitted category is GDD below 3,000. precip\_medium is growing season precipitation between 20 and 23, precip\_50\_75 is growing season precipitation between 23 and 27.5, and precip\_max is growing season precipitation above 27.5. The omitted category is precipitation below 20.

Standard errors clustered at the state level in parentheses. \* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.9.** Regressions with GDD and precipitation binned at the first and third quartiles. Soybeans

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.197\*\* | 0.188\*\* | 0.193\*\* |
|  | (0.0778) | (0.0765) | (0.0736) |
| gdd\_medium | -0.285 |  | -0.278 |
|  | (0.285) |  | (0.279) |
| gdd\_max | -0.674 |  | -0.602 |
|  | (0.400) |  | (0.398) |
| precip\_medium |  | 1.486\*\*\* | 1.479\*\*\* |
|  |  | (0.333) | (0.333) |
| precip\_max |  | 1.293\*\* | 1.290\*\* |
|  |  | (0.571) | (0.573) |
| County FE | Y | Y | Y |
| State-Year FE | Y | Y | Y |
| *N* | 9720 | 9720 | 9720 |
| adj. *R*2 | 0.866 | 0.869 | 0.869 |

gdd\_medium is growing season GDD between 3,000 and 3,500, and gdd\_max is growing season GDD above 3,500. The omitted category is GDD below 3,000. precip\_medium is growing season precipitation between 20 and 27.5, and precip\_max is growing season precipitation above 27.5. The omitted category is precipitation below 20.

Standard errors clustered at the state level in parentheses. \* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.10.** Regressions with GDD and precipitation binned at the first and third quartiles. Corn

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.332\* | 0.318\*\* | 0.322\*\* |
|  | (0.162) | (0.144) | (0.143) |
| gdd\_medium | -1.543 |  | -1.397 |
|  | (0.959) |  | (0.952) |
| gdd\_max | -2.202 |  | -1.833 |
|  | (1.320) |  | (1.360) |
| precip\_medium |  | 6.746\*\*\* | 6.725\*\*\* |
|  |  | (0.644) | (0.650) |
| precip\_max |  | 7.348\*\*\* | 7.309\*\*\* |
|  |  | (0.774) | (0.770) |
| County FE | Y | Y | Y |
| State-Year FE | Y | Y | Y |
| *N* | 14940 | 14940 | 14940 |
| adj. *R*2 | 0.868 | 0.873 | 0.873 |

gdd\_medium is growing season GDD between 3,000 and 3,500, and gdd\_max is growing season GDD above 3,500. The omitted category is GDD below 3,000. precip\_medium is growing season precipitation between 20 and 27.5, and precip\_max is growing season precipitation above 27.5. The omitted category is precipitation below 20.

Standard errors clustered at the state level in parentheses. \* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.11**. Sine GDD. Soybeans

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.0911\*\* | 0.0907\*\* | 0.0889\*\* |
|  | (0.0416) | (0.0416) | (0.0408) |
| gdd1000 |  | 1.709 | 1.673 |
|  |  | (1.858) | (1.831) |
| gdd1000sq |  | -2.663 | -2.020 |
|  |  | (1.951) | (1.903) |
| grow |  |  | 0.901\*\*\* |
|  |  |  | (0.0579) |
| growsq |  |  | -0.0150\*\*\* |
|  |  |  | (0.00111) |
| County FE | Y | Y | Y |
| State-Year FE | Y | Y | Y |
| *N* | 9720 | 9720 | 9720 |
| adj. *R*2 | 0.866 | 0.866 | 0.872 |

Standard errors in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.12**. Sine GDD. Corn

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.327\* | 0.330\* | 0.310\*\* |
|  | (0.163) | (0.164) | (0.125) |
| gdd1000 |  | -9.821 | -12.04 |
|  |  | (7.988) | (9.700) |
| gdd1000sq |  | 15.92\* | 17.84\* |
|  |  | (8.594) | (9.751) |
| grow |  |  | 3.471\*\*\* |
|  |  |  | (0.363) |
| growsq |  |  | -0.0548\*\*\* |
|  |  |  | (0.00659) |
| County FE | Y | Y | Y |
| State-Year FE | Y | Y | Y |
| *N* | 14940 | 14940 | 14940 |
| adj. *R*2 | 0.868 | 0.868 | 0.876 |

Standard errors in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.13**. Cold days. Soybeans

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Yield | Yield | Yield | Yield |
| density | 0.0891\*\* | 0.0891\*\* | 0.0900\*\* | 0.0906\*\* |
|  | (0.0408) | (0.0408) | (0.0409) | (0.0408) |
| gdd1000 | -0.255 | -0.254 | -0.188 | -0.135 |
|  | (0.357) | (0.356) | (0.358) | (0.358) |
| gdd1000sq | -0.00330 | -0.00329 | -0.0114 | -0.0161 |
|  | (0.0711) | (0.0711) | (0.0717) | (0.0716) |
| grow | 0.901\*\*\* | 0.901\*\*\* | 0.900\*\*\* | 0.903\*\*\* |
|  | (0.0579) | (0.0579) | (0.0580) | (0.0581) |
| growsq | -0.0151\*\*\* | -0.0151\*\*\* | -0.0150\*\*\* | -0.0151\*\*\* |
|  | (0.00111) | (0.00111) | (0.00111) | (0.00111) |
| cd\_min | 0.00366 | 0.00346 |  |  |
|  | (0.00264) | (0.00704) |  |  |
| cd\_min\_sq |  | 0.00000121 |  |  |
|  |  | (0.0000392) |  |  |
| cd\_mean |  |  | 0.00452 | -0.0136 |
|  |  |  | (0.00618) | (0.0150) |
| cd\_mean\_sq |  |  |  | 0.000257 |
|  |  |  |  | (0.000196) |
| *N* | 11900 | 11900 | 11900 | 11900 |
| adj. *R*2 | 0.872 | 0.872 | 0.872 | 0.872 |

Standard errors clustered at state level in parentheses. \* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.14**. Cold days. Corn

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Yield | Yield | Yield | Yield |
| density | 0.311\*\* | 0.317\*\* | 0.310\*\* | 0.311\*\* |
|  | (0.123) | (0.128) | (0.124) | (0.122) |
| gdd1000 | 7.788\* | 8.016\* | 7.708\* | 6.956 |
|  | (4.222) | (4.331) | (4.310) | (4.401) |
| gdd1000sq | -1.015 | -1.091 | -1.012 | -0.926 |
|  | (0.696) | (0.728) | (0.703) | (0.706) |
| grow | 3.468\*\*\* | 3.455\*\*\* | 3.473\*\*\* | 3.451\*\*\* |
|  | (0.367) | (0.363) | (0.366) | (0.370) |
| growsq | -0.0547\*\*\* | -0.0546\*\*\* | -0.0548\*\*\* | -0.0544\*\*\* |
|  | (0.00664) | (0.00660) | (0.00663) | (0.00668) |
| cd\_min | -0.00441 | 0.0572\* |  |  |
|  | (0.0102) | (0.0320) |  |  |
| cd\_min\_sq |  | -0.000386\*\* |  |  |
|  |  | (0.000182) |  |  |
| cd\_mean |  |  | -0.0155 | 0.114 |
|  |  |  | (0.0274) | (0.0758) |
| cd\_mean\_sq |  |  |  | -0.00189\* |
|  |  |  |  | (0.00107) |
| *N* | 14940 | 14940 | 14940 | 14940 |
| adj. *R*2 | 0.876 | 0.876 | 0.876 | 0.876 |

Standard errors clustered at state level in parentheses. \* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.15.** Regressions excluding counties with urbanization rate above 60% in 1970. Soybeans

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.177\* | 0.177\* | 0.169\*\* |
|  | (0.0869) | (0.0911) | (0.0792) |
| gdd/1000 |  | 1.513\*\* | 1.244\* |
|  |  | (0.625) | (0.598) |
| (gdd/1000)2 |  | -0.338\*\* | -0.275\* |
|  |  | (0.144) | (0.146) |
| precip |  |  | 0.867\*\*\* |
|  |  |  | (0.141) |
| precip2 |  |  | -0.0144\*\*\* |
|  |  |  | (0.00239) |
| County FE | Y | Y | Y |
| State-Year FE | Y | Y | Y |
| *N* | 7880 | 7880 | 7880 |
| adj. *R*2 | 0.862 | 0.862 | 0.868 |

Standard errors clustered at the state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.16.** Regressions excluding counties with urbanization rate above 60% in 1970. Corn

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.342\*\*\* | 0.370\*\*\* | 0.340\*\*\* |
|  | (0.117) | (0.104) | (0.100) |
| gdd/1000 |  | 2.340\*\* | 1.677 |
|  |  | (1.027) | (1.035) |
| (gdd/1000)2 |  | -0.781\*\*\* | -0.588\*\* |
|  |  | (0.240) | (0.244) |
| precip |  | 0.558\*\*\* | 3.497\*\*\* |
|  |  | (0.0908) | (0.374) |
| precip2 |  |  | -0.0553\*\*\* |
|  |  |  | (0.00678) |
| County FE | Y | Y | Y |
| State-Year FE | Y | Y | Y |
| *N* | 11900 | 11900 | 11900 |
| adj. *R*2 | 0.861 | 0.865 | 0.870 |

Standard errors clustered at the state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.17.** Regressions using average PDSI for each season. Soybeans

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Yield | Yield | Yield | Yield | Yield |
| density | 0.191\*\* | 0.189\*\* | 0.188\*\* | 0.184\*\* | 0.187\*\* |
|  | (0.0810) | (0.0832) | (0.0844) | (0.0836) | (0.0845) |
| pdsi\_spring |  | 0.102 |  |  | -0.104 |
|  |  | (0.108) |  |  | (0.111) |
| pdsi\_summer |  |  | 0.289\*\*\* |  | 0.244\*\* |
|  |  |  | (0.0921) |  | (0.0943) |
| pdsi\_fall |  |  |  | 0.256\*\*\* | 0.131 |
|  |  |  |  | (0.0773) | (0.104) |
| County FE | Y | Y | Y | Y | Y |
| State-Year FE | Y | Y | Y | Y | Y |
| *N* | 9720 | 9720 | 9720 | 9720 | 9720 |
| adj. *R*2 | 0.866 | 0.866 | 0.867 | 0.867 | 0.867 |

Standard errors clustered at the state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.18.** Regressions using average PDSI for each season. Corn

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Yield | Yield | Yield | Yield | Yield |
| density | 0.327\* | 0.330\* | 0.327\* | 0.314\* | 0.323\* |
|  | (0.163) | (0.164) | (0.166) | (0.160) | (0.158) |
| pdsi\_spring |  | 0.478 |  |  | -1.110\*\*\* |
|  |  | (0.288) |  |  | (0.235) |
| pdsi\_summer |  |  | 1.875\*\*\* |  | 2.602\*\*\* |
|  |  |  | (0.370) |  | (0.872) |
| pdsi\_fall |  |  |  | 1.192\*\*\* | -0.185 |
|  |  |  |  | (0.327) | (0.717) |
| County FE | Y | Y | Y | Y | Y |
| State-Year FE | Y | Y | Y | Y | Y |
| *N* | 14940 | 14940 | 14940 | 14940 | 14940 |
| adj. *R*2 | 0.868 | 0.868 | 0.871 | 0.870 | 0.872 |

Standard errors clustered at the state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.19.** Regressions using binned PDSI. Normal PDSI within -2 and 2. Soybeans

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Yield | Yield | Yield | Yield |
| density | 0.191\*\* | 0.192\*\* | 0.189\*\* | 0.191\*\* |
|  | (0.0822) | (0.0799) | (0.0796) | (0.0793) |
| pdsi\_spring\_dry | -0.405 |  |  | 0.0296 |
|  | (0.301) |  |  | (0.286) |
| pdsi\_spring\_wet | -0.0732 |  |  | -0.144 |
|  | (0.302) |  |  | (0.309) |
| pdsi\_summer\_dry |  | -1.663\*\*\* |  | -1.540\*\*\* |
|  |  | (0.321) |  | (0.395) |
| pdsi\_summer\_wet |  | 0.0512 |  | 0.105 |
|  |  | (0.167) |  | (0.110) |
| pdsi\_fall\_dry |  |  | -0.939\* | -0.482 |
|  |  |  | (0.455) | (0.456) |
| pdsi\_fall\_wet |  |  | -0.0356 | -0.0576 |
|  |  |  | (0.190) | (0.176) |
| County FE | Y | Y | Y | Y |
| State-Year FE | Y | Y | Y | Y |
| *N* | 9720 | 9720 | 9720 | 9720 |
| adj. *R*2 | 0.866 | 0.867 | 0.866 | 0.867 |

Note: omitted variable for each season is “normal PDSI”, defined as PDSI between -2 and 2

Standard errors clustered at the state level in parentheses. \* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.20.** Regressions using binned PDSI. Normal PDSI within -2 and 2. Corn

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Yield | Yield | Yield | Yield |
| density | 0.330\* | 0.344\*\* | 0.321\* | 0.339\*\* |
|  | (0.163) | (0.155) | (0.156) | (0.149) |
| pdsi\_spring\_dry | -1.992\* |  |  | -0.0265 |
|  | (1.026) |  |  | (0.943) |
| pdsi\_spring\_wet | 0.406 |  |  | -0.216 |
|  | (0.882) |  |  | (0.906) |
| pdsi\_summer\_dry |  | -6.027\*\*\* |  | -5.371\*\*\* |
|  |  | (1.157) |  | (1.360) |
| pdsi\_summer\_wet |  | 0.943 |  | 0.414 |
|  |  | (0.686) |  | (0.705) |
| pdsi\_fall\_dry |  |  | -3.812\* | -2.082 |
|  |  |  | (2.157) | (2.265) |
| pdsi\_fall\_wet |  |  | 1.822\*\*\* | 1.667\*\* |
|  |  |  | (0.593) | (0.738) |
| County FE | Y | Y | Y | Y |
| State-Year FE | Y | Y | Y | Y |
| *N* | 14940 | 14940 | 14940 | 14940 |
| adj. *R*2 | 0.868 | 0.870 | 0.869 | 0.870 |

Note: omitted variable for each season is “normal PDSI”, defined as PDSI between -2 and 2

Standard errors clustered at the state level in parentheses. \* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.21.** Regressions using binned PDSI. Normal PDSI within -3 and 3. Soybeans

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Yield | Yield | Yield | Yield |
| density | 0.185\*\* | 0.190\*\* | 0.188\*\* | 0.184\*\* |
|  | (0.0825) | (0.0804) | (0.0813) | (0.0825) |
| pdsi\_spring\_dry | -1.380\*\*\* |  |  | -1.062\*\* |
|  | (0.315) |  |  | (0.425) |
| pdsi\_spring\_wet | -0.331 |  |  | -0.270 |
|  | (0.261) |  |  | (0.318) |
| pdsi\_summer\_dry |  | -1.582\*\*\* |  | -1.029\*\* |
|  |  | (0.412) |  | (0.399) |
| pdsi\_summer\_wet |  | -0.277 |  | -0.121 |
|  |  | (0.270) |  | (0.374) |
| pdsi\_fall\_dry |  |  | -1.593\*\*\* | -1.298\*\*\* |
|  |  |  | (0.418) | (0.336) |
| pdsi\_fall\_wet |  |  | -0.228 | -0.186 |
|  |  |  | (0.182) | (0.223) |
| County FE | Y | Y | Y | Y |
| State-Year FE | Y | Y | Y | Y |
| *N* | 9720 | 9720 | 9720 | 9720 |
| adj. *R*2 | 0.866 | 0.867 | 0.866 | 0.867 |

Note: omitted variable for each season is “normal PDSI”, defined as PDSI between -3 and 3

Standard errors clustered at the state level in parentheses. \* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.22.** Regressions using binned PDSI. Normal PDSI within -3 and 3. Corn

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Yield | Yield | Yield | Yield |
| density | 0.328\* | 0.329\*\* | 0.320\* | 0.320\*\* |
|  | (0.164) | (0.155) | (0.156) | (0.154) |
| pdsi\_spring\_dry | -1.197\* |  |  | 0.960 |
|  | (0.618) |  |  | (1.114) |
| pdsi\_spring\_wet | -0.391 |  |  | -0.578 |
|  | (1.762) |  |  | (1.762) |
| pdsi\_summer\_dry |  | -6.772\*\*\* |  | -5.935\*\*\* |
|  |  | (1.239) |  | (1.786) |
| pdsi\_summer\_wet |  | 0.169 |  | 0.642 |
|  |  | (1.190) |  | (1.278) |
| pdsi\_fall\_dry |  |  | -6.029\*\* | -4.092 |
|  |  |  | (2.359) | (2.432) |
| pdsi\_fall\_wet |  |  | -0.832 | -0.969 |
|  |  |  | (0.592) | (0.714) |
| County FE | Y | Y | Y | Y |
| State-Year FE | Y | Y | Y | Y |
| *N* | 14940 | 14940 | 14940 | 14940 |
| adj. *R*2 | 0.868 | 0.869 | 0.869 | 0.870 |

Note: omitted variable for each season is “normal PDSI”, defined as PDSI between -3 and 3

Standard errors clustered at the state level in parentheses. \* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.23.** Alternative Clustering Levels for Standard Errors

|  |  |  |
| --- | --- | --- |
|  | Soybeans | Corn |
| State-level clustering | 0.184\*\*\* | 0.317\*\* |
| (0.074) | (0.121) |
| Agricultural district-level clustering | 0.184\*\*\* | 0.317 |
| (0.070) | (0.274) |
| County-level clustering | 0.184\*\*\* | 0.317 |
| (0.065) | (0.225) |

Standard errors in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.24**. Extended timeline, 1972 - 2011. Soybeans

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.0881\* | 0.0863\* | 0.0701 |
|  | (0.0454) | (0.0454) | (0.0443) |
| gdd1000 |  | 0.562\*\* | 0.428 |
|  |  | (0.284) | (0.278) |
| gdd1000sq |  | -0.0743 | -0.0258 |
|  |  | (0.0682) | (0.0667) |
| grow |  |  | 1.170\*\*\* |
|  |  |  | (0.0466) |
| growsq |  |  | -0.0203\*\*\* |
|  |  |  | (0.000879) |
| County FE | Y | Y | Y |
| State-Year FE | Y | Y | Y |
| *N* | 15000 | 15000 | 15000 |
| adj. *R*2 | 0.890 | 0.890 | 0.895 |

Standard errors clustered at the state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.25**. Extended timeline, 1972 – 2011. Corn

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.294\*\* | 0.286\*\* | 0.259\*\* |
|  | (0.124) | (0.125) | (0.120) |
| gdd1000 |  | 3.228\*\*\* | 2.521\*\*\* |
|  |  | (0.969) | (0.953) |
| gdd1000sq |  | -0.659\*\* | -0.459\* |
|  |  | (0.270) | (0.269) |
| grow |  |  | 4.365\*\*\* |
|  |  |  | (0.185) |
| growsq |  |  | -0.0715\*\*\* |
|  |  |  | (0.00354) |
| County FE | Y | Y | Y |
| State-Year FE | Y | Y | Y |
| *N* | 17640 | 17640 | 17640 |
| adj. *R*2 | 0.884 | 0.884 | 0.891 |

Standard errors clustered at the state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.26**. Unbalanced panel. Soybeans

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.103\*\* | 0.103\*\* | 0.101\*\* |
|  | (0.0506) | (0.0506) | (0.0477) |
| gdd1000 |  | -0.180 | -0.176 |
|  |  | (0.345) | (0.349) |
| gdd1000sq |  | 0.00241 | -0.00785 |
|  |  | (0.0704) | (0.0705) |
| grow |  |  | 0.803\*\*\* |
|  |  |  | (0.0484) |
| growsq |  |  | -0.0130\*\*\* |
|  |  |  | (0.000891) |
| County FE | Y | Y | Y |
| State-Year FE | Y | Y | Y |
| *N* | 14456 | 14456 | 14456 |
| adj. *R*2 | 0.844 | 0.844 | 0.849 |

Standard errors clustered at the state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.27**. Unbalanced panel. Corn

|  |  |  |  |
| --- | --- | --- | --- |
|  | Yield | Yield | Yield |
| density | 0.300\* | 0.302\* | 0.282\*\* |
|  | (0.148) | (0.148) | (0.128) |
| gdd1000 |  | -0.415 | -0.496 |
|  |  | (1.256) | (0.886) |
| gdd1000sq |  | 0.248 | 0.230 |
|  |  | (0.310) | (0.203) |
| grow |  |  | 3.057\*\*\* |
|  |  |  | (0.372) |
| growsq |  |  | -0.0471\*\*\* |
|  |  |  | (0.00662) |
| County FE | Y | Y | Y |
| State-Year FE | Y | Y | Y |
| *N* | 17183 | 17183 | 17183 |
| adj. *R*2 | 0.870 | 0.870 | 0.876 |

Standard errors clustered at the state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

**Table A.28.** Placebo test results. Density is measured using nameplate capacities of nuclear power plants without cooling towers

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Soybeans | | Corn | |
|  | Yield | Yield | Yield | Yield |
| density | 0.0281 | 0.0134 | -0.0452 | -0.0175 |
|  | (0.0737) | (0.0615) | (0.253) | (0.234) |
| gdd/1000 |  | -2.240 |  | -2.870 |
|  |  | (2.828) |  | (16.01) |
| (gdd/1000)2 |  | 0.183 |  | 0.144 |
|  |  | (0.416) |  | (2.425) |
| precip |  | 1.372\*\*\* |  | 3.507\*\*\* |
|  |  | (0.145) |  | (0.482) |
| precip2 |  | -0.0244\*\*\* |  | -0.0579\*\*\* |
|  |  | (0.00294) |  | (0.00868) |
| County FE | Y | Y | Y | Y |
| State-Year FE | Y | Y | Y | Y |
| *N* | 4956 | 4956 | 8862 | 8862 |
| adj. *R*2 | 0.887 | 0.896 | 0.867 | 0.875 |

Standard errors clustered at state level in parentheses

\* *p* < 0.10, \*\* *p* < 0.05, \*\*\* *p* < 0.01

## ***Fixed effects estimates***

**Table A.29.** State-year dummy estimates from the main specification. Soybeans

|  |  |  |
| --- | --- | --- |
| State | Year | Coefficient |
| ALABAMA | 1972 | 0 |
|  |  | (.) |
| ALABAMA | 1973 | 2.503\*\*\* |
|  |  | (0.508) |
| ALABAMA | 1974 | 3.464\*\*\* |
|  |  | (0.356) |
| ALABAMA | 1975 | 6.735\*\*\* |
|  |  | (1.184) |
| ALABAMA | 1976 | 3.018\*\*\* |
|  |  | (0.441) |
| ALABAMA | 1977 | 5.489\*\*\* |
|  |  | (0.188) |
| ALABAMA | 1978 | 3.496\*\*\* |
|  |  | (0.326) |
| ALABAMA | 1979 | 8.515\*\*\* |
|  |  | (0.664) |
| ALABAMA | 1980 | -4.551\*\*\* |
|  |  | (0.208) |
| ALABAMA | 1981 | 6.995\*\*\* |
|  |  | (0.0592) |
| ALABAMA | 1982 | 7.100\*\*\* |
|  |  | (0.308) |
| ALABAMA | 1983 | 2.028\*\*\* |
|  |  | (0.459) |
| ALABAMA | 1984 | 1.588\*\*\* |
|  |  | (0.257) |
| ALABAMA | 1985 | 8.630\*\*\* |
|  |  | (0.216) |
| ALABAMA | 1986 | 5.644\*\*\* |
|  |  | (0.180) |
| ALABAMA | 1987 | -0.982\*\*\* |
|  |  | (0.0428) |
| ALABAMA | 1988 | 7.763\*\*\* |
|  |  | (0.251) |
| ALABAMA | 1989 | 2.736\*\*\* |
|  |  | (0.778) |
| ALABAMA | 1990 | -1.200\*\*\* |
|  |  | (0.146) |
| ALABAMA | 1991 | 3.737\*\*\* |
|  |  | (0.385) |
| ARKANSAS | 1972 | -7.271\*\*\* |
|  |  | (0.399) |
| ARKANSAS | 1973 | -3.939\*\*\* |
|  |  | (0.380) |
| ARKANSAS | 1974 | -6.432\*\*\* |
|  |  | (0.372) |
| ARKANSAS | 1975 | -3.863\*\*\* |
|  |  | (0.125) |
| ARKANSAS | 1976 | -7.319\*\*\* |
|  |  | (0.371) |
| ARKANSAS | 1977 | -4.907\*\*\* |
|  |  | (0.336) |
| ARKANSAS | 1978 | -4.907\*\*\* |
|  |  | (0.321) |
| ARKANSAS | 1979 | 0.369 |
|  |  | (0.507) |
| ARKANSAS | 1980 | -13.21\*\*\* |
|  |  | (0.434) |
| ARKANSAS | 1981 | -5.853\*\*\* |
|  |  | (0.150) |
| ARKANSAS | 1982 | -6.024\*\*\* |
|  |  | (0.265) |
| ARKANSAS | 1983 | -10.83\*\*\* |
|  |  | (0.282) |
| ARKANSAS | 1984 | -3.908\*\*\* |
|  |  | (0.219) |
| ARKANSAS | 1985 | -1.566\*\*\* |
|  |  | (0.444) |
| ARKANSAS | 1986 | -5.711\*\*\* |
|  |  | (0.107) |
| ARKANSAS | 1987 | -2.803\*\*\* |
|  |  | (0.466) |
| ARKANSAS | 1988 | -2.500\*\*\* |
|  |  | (0.504) |
| ARKANSAS | 1989 | -5.318\*\*\* |
|  |  | (0.214) |
| ARKANSAS | 1990 | -2.236\*\*\* |
|  |  | (0.109) |
| ARKANSAS | 1991 | 0 |
|  |  | (.) |
| DELAWARE | 1972 | -9.472\*\*\* |
|  |  | (0.458) |
| DELAWARE | 1973 | -5.948\*\*\* |
|  |  | (0.423) |
| DELAWARE | 1974 | -7.454\*\*\* |
|  |  | (0.363) |
| DELAWARE | 1975 | -9.376\*\*\* |
|  |  | (0.688) |
| DELAWARE | 1976 | -8.949\*\*\* |
|  |  | (0.390) |
| DELAWARE | 1977 | -8.245\*\*\* |
|  |  | (0.389) |
| DELAWARE | 1978 | -5.470\*\*\* |
|  |  | (0.312) |
| DELAWARE | 1979 | -5.007\*\*\* |
|  |  | (0.472) |
| DELAWARE | 1980 | -12.31\*\*\* |
|  |  | (0.267) |
| DELAWARE | 1981 | -6.114\*\*\* |
|  |  | (0.257) |
| DELAWARE | 1982 | -9.704\*\*\* |
|  |  | (0.174) |
| DELAWARE | 1983 | -6.909\*\*\* |
|  |  | (0.308) |
| DELAWARE | 1984 | -8.840\*\*\* |
|  |  | (0.210) |
| DELAWARE | 1985 | -3.812\*\*\* |
|  |  | (0.194) |
| DELAWARE | 1986 | -7.512\*\*\* |
|  |  | (0.457) |
| DELAWARE | 1987 | -13.29\*\*\* |
|  |  | (0.264) |
| DELAWARE | 1988 | -6.937\*\*\* |
|  |  | (0.0988) |
| DELAWARE | 1989 | -6.565\*\*\* |
|  |  | (0.783) |
| DELAWARE | 1990 | -0.561\* |
|  |  | (0.294) |
| DELAWARE | 1991 | 0 |
|  |  | (.) |
| FLORIDA | 1972 | -6.944\*\*\* |
|  |  | (0.747) |
| FLORIDA | 1973 | -1.233\* |
|  |  | (0.709) |
| FLORIDA | 1974 | 0.466 |
|  |  | (0.578) |
| FLORIDA | 1975 | 0.155 |
|  |  | (1.206) |
| FLORIDA | 1976 | -1.140\*\* |
|  |  | (0.499) |
| FLORIDA | 1977 | -1.626\*\*\* |
|  |  | (0.298) |
| FLORIDA | 1978 | -2.682\*\*\* |
|  |  | (0.218) |
| FLORIDA | 1979 | 4.828\*\*\* |
|  |  | (0.705) |
| FLORIDA | 1980 | -3.582\*\*\* |
|  |  | (0.284) |
| FLORIDA | 1981 | -3.094\*\*\* |
|  |  | (0.630) |
| FLORIDA | 1982 | -1.976\*\*\* |
|  |  | (0.275) |
| FLORIDA | 1983 | -3.653\*\*\* |
|  |  | (0.391) |
| FLORIDA | 1984 | -2.315\*\*\* |
|  |  | (0.347) |
| FLORIDA | 1985 | 0.324 |
|  |  | (0.330) |
| FLORIDA | 1986 | -3.940\*\*\* |
|  |  | (0.687) |
| FLORIDA | 1987 | -2.386\*\*\* |
|  |  | (0.382) |
| FLORIDA | 1988 | 3.081\*\*\* |
|  |  | (0.224) |
| FLORIDA | 1989 | -3.220\*\*\* |
|  |  | (0.344) |
| FLORIDA | 1990 | -4.818\*\*\* |
|  |  | (0.681) |
| FLORIDA | 1991 | 0 |
|  |  | (.) |
| GEORGIA | 1972 | -9.711\*\*\* |
|  |  | (0.483) |
| GEORGIA | 1973 | -5.238\*\*\* |
|  |  | (0.169) |
| GEORGIA | 1974 | -2.125\*\*\* |
|  |  | (0.250) |
| GEORGIA | 1975 | -0.932\*\*\* |
|  |  | (0.224) |
| GEORGIA | 1976 | -2.681\*\*\* |
|  |  | (0.232) |
| GEORGIA | 1977 | -4.788\*\*\* |
|  |  | (0.494) |
| GEORGIA | 1978 | -7.792\*\*\* |
|  |  | (0.435) |
| GEORGIA | 1979 | 1.536\*\*\* |
|  |  | (0.179) |
| GEORGIA | 1980 | -12.25\*\*\* |
|  |  | (0.530) |
| GEORGIA | 1981 | -4.604\*\*\* |
|  |  | (0.543) |
| GEORGIA | 1982 | 1.086\*\*\* |
|  |  | (0.232) |
| GEORGIA | 1983 | -4.394\*\*\* |
|  |  | (0.408) |
| GEORGIA | 1984 | -5.369\*\*\* |
|  |  | (0.313) |
| GEORGIA | 1985 | -1.286\*\*\* |
|  |  | (0.374) |
| GEORGIA | 1986 | -5.079\*\*\* |
|  |  | (0.747) |
| GEORGIA | 1987 | -4.975\*\*\* |
|  |  | (0.545) |
| GEORGIA | 1988 | -0.687\* |
|  |  | (0.370) |
| GEORGIA | 1989 | -0.672\*\*\* |
|  |  | (0.174) |
| GEORGIA | 1990 | -9.669\*\*\* |
|  |  | (0.748) |
| GEORGIA | 1991 | 0 |
|  |  | (.) |
| ILLINOIS | 1972 | -5.900\*\*\* |
|  |  | (0.753) |
| ILLINOIS | 1973 | -7.585\*\*\* |
|  |  | (0.612) |
| ILLINOIS | 1974 | -15.68\*\*\* |
|  |  | (0.516) |
| ILLINOIS | 1975 | -2.715\*\*\* |
|  |  | (0.420) |
| ILLINOIS | 1976 | -5.641\*\*\* |
|  |  | (0.170) |
| ILLINOIS | 1977 | -1.046\*\* |
|  |  | (0.460) |
| ILLINOIS | 1978 | -5.076\*\*\* |
|  |  | (0.450) |
| ILLINOIS | 1979 | 0.101 |
|  |  | (0.383) |
| ILLINOIS | 1980 | -3.431\*\*\* |
|  |  | (0.501) |
| ILLINOIS | 1981 | 0.0691 |
|  |  | (0.823) |
| ILLINOIS | 1982 | -0.563 |
|  |  | (0.453) |
| ILLINOIS | 1983 | -4.200\*\*\* |
|  |  | (0.427) |
| ILLINOIS | 1984 | -5.909\*\*\* |
|  |  | (0.307) |
| ILLINOIS | 1985 | 5.149\*\*\* |
|  |  | (0.173) |
| ILLINOIS | 1986 | -0.665 |
|  |  | (0.496) |
| ILLINOIS | 1987 | 2.191\*\*\* |
|  |  | (0.341) |
| ILLINOIS | 1988 | -8.057\*\*\* |
|  |  | (0.424) |
| ILLINOIS | 1989 | 2.438\*\*\* |
|  |  | (0.399) |
| ILLINOIS | 1990 | 2.044\*\*\* |
|  |  | (0.625) |
| ILLINOIS | 1991 | 0 |
|  |  | (.) |
| INDIANA | 1972 | -10.44\*\*\* |
|  |  | (0.610) |
| INDIANA | 1973 | -8.034\*\*\* |
|  |  | (0.316) |
| INDIANA | 1974 | -15.08\*\*\* |
|  |  | (0.266) |
| INDIANA | 1975 | -6.354\*\*\* |
|  |  | (0.525) |
| INDIANA | 1976 | -5.733\*\*\* |
|  |  | (0.246) |
| INDIANA | 1977 | -2.033\*\*\* |
|  |  | (0.349) |
| INDIANA | 1978 | -6.387\*\*\* |
|  |  | (0.188) |
| INDIANA | 1979 | -1.544\*\*\* |
|  |  | (0.251) |
| INDIANA | 1980 | -2.329\*\*\* |
|  |  | (0.384) |
| INDIANA | 1981 | -5.818\*\*\* |
|  |  | (0.901) |
| INDIANA | 1982 | -0.163 |
|  |  | (0.223) |
| INDIANA | 1983 | -7.401\*\*\* |
|  |  | (0.261) |
| INDIANA | 1984 | -7.162\*\*\* |
|  |  | (0.254) |
| INDIANA | 1985 | 2.013\*\*\* |
|  |  | (0.0832) |
| INDIANA | 1986 | -4.566\*\*\* |
|  |  | (0.443) |
| INDIANA | 1987 | 2.810\*\*\* |
|  |  | (0.355) |
| INDIANA | 1988 | -7.378\*\*\* |
|  |  | (0.183) |
| INDIANA | 1989 | -0.155 |
|  |  | (0.438) |
| INDIANA | 1990 | 2.804\*\*\* |
|  |  | (0.555) |
| INDIANA | 1991 | 0 |
|  |  | (.) |
| IOWA | 1972 | -9.760\*\*\* |
|  |  | (0.373) |
| IOWA | 1973 | -11.45\*\*\* |
|  |  | (0.458) |
| IOWA | 1974 | -17.52\*\*\* |
|  |  | (0.309) |
| IOWA | 1975 | -9.607\*\*\* |
|  |  | (0.170) |
| IOWA | 1976 | -10.61\*\*\* |
|  |  | (0.228) |
| IOWA | 1977 | -7.480\*\*\* |
|  |  | (0.169) |
| IOWA | 1978 | -7.749\*\*\* |
|  |  | (0.269) |
| IOWA | 1979 | -5.596\*\*\* |
|  |  | (0.145) |
| IOWA | 1980 | -3.899\*\*\* |
|  |  | (0.144) |
| IOWA | 1981 | -3.967\*\*\* |
|  |  | (0.265) |
| IOWA | 1982 | -7.602\*\*\* |
|  |  | (0.280) |
| IOWA | 1983 | -8.081\*\*\* |
|  |  | (0.100) |
| IOWA | 1984 | -10.93\*\*\* |
|  |  | (0.155) |
| IOWA | 1985 | -4.949\*\*\* |
|  |  | (0.192) |
| IOWA | 1986 | -3.260\*\*\* |
|  |  | (0.423) |
| IOWA | 1987 | 1.001\*\*\* |
|  |  | (0.0753) |
| IOWA | 1988 | -12.67\*\*\* |
|  |  | (0.564) |
| IOWA | 1989 | -4.493\*\*\* |
|  |  | (0.130) |
| IOWA | 1990 | -1.004\*\* |
|  |  | (0.474) |
| IOWA | 1991 | 0 |
|  |  | (.) |
| LOUISIANA | 1972 | -4.460\*\*\* |
|  |  | (1.308) |
| LOUISIANA | 1973 | -5.442\*\*\* |
|  |  | (0.587) |
| LOUISIANA | 1974 | -2.992\*\*\* |
|  |  | (0.931) |
| LOUISIANA | 1975 | -2.483\*\*\* |
|  |  | (0.238) |
| LOUISIANA | 1976 | -0.640 |
|  |  | (1.283) |
| LOUISIANA | 1977 | -4.109\*\*\* |
|  |  | (0.913) |
| LOUISIANA | 1978 | -4.061\*\*\* |
|  |  | (1.129) |
| LOUISIANA | 1979 | -0.510 |
|  |  | (0.585) |
| LOUISIANA | 1980 | -8.149\*\*\* |
|  |  | (1.058) |
| LOUISIANA | 1981 | -6.457\*\*\* |
|  |  | (1.263) |
| LOUISIANA | 1982 | -3.201\*\* |
|  |  | (1.121) |
| LOUISIANA | 1983 | -3.182\*\*\* |
|  |  | (0.579) |
| LOUISIANA | 1984 | -2.405\*\* |
|  |  | (1.135) |
| LOUISIANA | 1985 | -7.075\*\*\* |
|  |  | (1.203) |
| LOUISIANA | 1986 | -7.866\*\*\* |
|  |  | (1.320) |
| LOUISIANA | 1987 | -4.258\*\*\* |
|  |  | (1.189) |
| LOUISIANA | 1988 | 0.809 |
|  |  | (1.218) |
| LOUISIANA | 1989 | -6.647\*\*\* |
|  |  | (0.510) |
| LOUISIANA | 1990 | -2.593\* |
|  |  | (1.371) |
| LOUISIANA | 1991 | 0 |
|  |  | (.) |
| MARYLAND | 1972 | -9.925\*\*\* |
|  |  | (0.632) |
| MARYLAND | 1973 | -5.708\*\*\* |
|  |  | (0.344) |
| MARYLAND | 1974 | -7.718\*\*\* |
|  |  | (0.339) |
| MARYLAND | 1975 | -8.587\*\*\* |
|  |  | (0.815) |
| MARYLAND | 1976 | -9.519\*\*\* |
|  |  | (0.181) |
| MARYLAND | 1977 | -7.010\*\*\* |
|  |  | (0.121) |
| MARYLAND | 1978 | -4.209\*\*\* |
|  |  | (0.340) |
| MARYLAND | 1979 | -5.916\*\*\* |
|  |  | (0.740) |
| MARYLAND | 1980 | -11.00\*\*\* |
|  |  | (0.0980) |
| MARYLAND | 1981 | -6.459\*\*\* |
|  |  | (0.362) |
| MARYLAND | 1982 | -6.391\*\*\* |
|  |  | (0.317) |
| MARYLAND | 1983 | -11.22\*\*\* |
|  |  | (0.500) |
| MARYLAND | 1984 | -6.939\*\*\* |
|  |  | (0.422) |
| MARYLAND | 1985 | -2.996\*\*\* |
|  |  | (0.327) |
| MARYLAND | 1986 | -5.460\*\*\* |
|  |  | (0.246) |
| MARYLAND | 1987 | -11.22\*\*\* |
|  |  | (0.0525) |
| MARYLAND | 1988 | -3.803\*\*\* |
|  |  | (0.180) |
| MARYLAND | 1989 | -6.104\*\*\* |
|  |  | (0.834) |
| MARYLAND | 1990 | 0.00838 |
|  |  | (0.508) |
| MARYLAND | 1991 | 0 |
|  |  | (.) |
| MICHIGAN | 1972 | -17.22\*\*\* |
|  |  | (0.216) |
| MICHIGAN | 1973 | -16.15\*\*\* |
|  |  | (0.0887) |
| MICHIGAN | 1974 | -18.90\*\*\* |
|  |  | (0.121) |
| MICHIGAN | 1975 | -14.71\*\*\* |
|  |  | (0.379) |
| MICHIGAN | 1976 | -18.02\*\*\* |
|  |  | (0.0835) |
| MICHIGAN | 1977 | -8.013\*\*\* |
|  |  | (0.0766) |
| MICHIGAN | 1978 | -15.20\*\*\* |
|  |  | (0.0913) |
| MICHIGAN | 1979 | -8.161\*\*\* |
|  |  | (0.110) |
| MICHIGAN | 1980 | -7.146\*\*\* |
|  |  | (0.364) |
| MICHIGAN | 1981 | -9.997\*\*\* |
|  |  | (0.453) |
| MICHIGAN | 1982 | -7.329\*\*\* |
|  |  | (0.108) |
| MICHIGAN | 1983 | -8.426\*\*\* |
|  |  | (0.191) |
| MICHIGAN | 1984 | -13.36\*\*\* |
|  |  | (0.103) |
| MICHIGAN | 1985 | -6.029\*\*\* |
|  |  | (0.0576) |
| MICHIGAN | 1986 | -9.325\*\*\* |
|  |  | (0.456) |
| MICHIGAN | 1987 | -3.361\*\*\* |
|  |  | (0.121) |
| MICHIGAN | 1988 | -10.40\*\*\* |
|  |  | (0.140) |
| MICHIGAN | 1989 | -3.581\*\*\* |
|  |  | (0.245) |
| MICHIGAN | 1990 | -1.583\*\*\* |
|  |  | (0.159) |
| MICHIGAN | 1991 | 0 |
|  |  | (.) |
| MINNESOTA | 1972 | -11.01\*\*\* |
|  |  | (0.327) |
| MINNESOTA | 1973 | -8.442\*\*\* |
|  |  | (0.374) |
| MINNESOTA | 1974 | -16.14\*\*\* |
|  |  | (0.597) |
| MINNESOTA | 1975 | -11.54\*\*\* |
|  |  | (0.406) |
| MINNESOTA | 1976 | -11.68\*\*\* |
|  |  | (1.003) |
| MINNESOTA | 1977 | -3.697\*\*\* |
|  |  | (0.272) |
| MINNESOTA | 1978 | -4.282\*\*\* |
|  |  | (0.132) |
| MINNESOTA | 1979 | -3.914\*\*\* |
|  |  | (0.367) |
| MINNESOTA | 1980 | -5.737\*\*\* |
|  |  | (0.415) |
| MINNESOTA | 1981 | -4.806\*\*\* |
|  |  | (0.273) |
| MINNESOTA | 1982 | -2.909\*\*\* |
|  |  | (0.428) |
| MINNESOTA | 1983 | -4.153\*\*\* |
|  |  | (0.280) |
| MINNESOTA | 1984 | -4.278\*\*\* |
|  |  | (0.297) |
| MINNESOTA | 1985 | -5.670\*\*\* |
|  |  | (0.273) |
| MINNESOTA | 1986 | -2.158\*\*\* |
|  |  | (0.152) |
| MINNESOTA | 1987 | 3.862\*\*\* |
|  |  | (0.606) |
| MINNESOTA | 1988 | -8.543\*\*\* |
|  |  | (0.799) |
| MINNESOTA | 1989 | 0.0532 |
|  |  | (0.559) |
| MINNESOTA | 1990 | 1.118\*\*\* |
|  |  | (0.0939) |
| MINNESOTA | 1991 | 0 |
|  |  | (.) |
| MISSISSIPPI | 1972 | -8.380\*\*\* |
|  |  | (1.044) |
| MISSISSIPPI | 1973 | -5.483\*\*\* |
|  |  | (0.567) |
| MISSISSIPPI | 1974 | -5.973\*\*\* |
|  |  | (0.542) |
| MISSISSIPPI | 1975 | -6.174\*\*\* |
|  |  | (0.244) |
| MISSISSIPPI | 1976 | -4.755\*\*\* |
|  |  | (1.025) |
| MISSISSIPPI | 1977 | -6.490\*\*\* |
|  |  | (0.896) |
| MISSISSIPPI | 1978 | -4.368\*\*\* |
|  |  | (0.808) |
| MISSISSIPPI | 1979 | 2.170\*\*\* |
|  |  | (0.310) |
| MISSISSIPPI | 1980 | -12.24\*\*\* |
|  |  | (0.751) |
| MISSISSIPPI | 1981 | -8.385\*\*\* |
|  |  | (1.052) |
| MISSISSIPPI | 1982 | -3.837\*\*\* |
|  |  | (0.855) |
| MISSISSIPPI | 1983 | -7.452\*\*\* |
|  |  | (0.346) |
| MISSISSIPPI | 1984 | -4.434\*\*\* |
|  |  | (0.950) |
| MISSISSIPPI | 1985 | -3.057\*\*\* |
|  |  | (0.942) |
| MISSISSIPPI | 1986 | -10.70\*\*\* |
|  |  | (1.038) |
| MISSISSIPPI | 1987 | -7.242\*\*\* |
|  |  | (0.979) |
| MISSISSIPPI | 1988 | -4.636\*\*\* |
|  |  | (1.027) |
| MISSISSIPPI | 1989 | -10.30\*\*\* |
|  |  | (0.478) |
| MISSISSIPPI | 1990 | -9.282\*\*\* |
|  |  | (0.985) |
| MISSISSIPPI | 1991 | 0 |
|  |  | (.) |
| MISSOURI | 1972 | -6.105\*\*\* |
|  |  | (0.239) |
| MISSOURI | 1973 | -6.277\*\*\* |
|  |  | (0.417) |
| MISSOURI | 1974 | -10.05\*\*\* |
|  |  | (0.284) |
| MISSOURI | 1975 | -7.629\*\*\* |
|  |  | (0.162) |
| MISSOURI | 1976 | -11.39\*\*\* |
|  |  | (0.557) |
| MISSOURI | 1977 | -0.903\*\*\* |
|  |  | (0.0333) |
| MISSOURI | 1978 | -5.409\*\*\* |
|  |  | (0.175) |
| MISSOURI | 1979 | -0.471\* |
|  |  | (0.242) |
| MISSOURI | 1980 | -7.054\*\*\* |
|  |  | (0.363) |
| MISSOURI | 1981 | -4.526\*\*\* |
|  |  | (0.743) |
| MISSOURI | 1982 | -2.198\*\*\* |
|  |  | (0.470) |
| MISSOURI | 1983 | -13.38\*\*\* |
|  |  | (0.190) |
| MISSOURI | 1984 | -14.21\*\*\* |
|  |  | (0.192) |
| MISSOURI | 1985 | 0.809\*\*\* |
|  |  | (0.253) |
| MISSOURI | 1986 | -1.739\*\*\* |
|  |  | (0.209) |
| MISSOURI | 1987 | -0.848\*\*\* |
|  |  | (0.151) |
| MISSOURI | 1988 | -3.408\*\*\* |
|  |  | (0.487) |
| MISSOURI | 1989 | -1.035\*\*\* |
|  |  | (0.199) |
| MISSOURI | 1990 | -3.898\*\*\* |
|  |  | (0.342) |
| MISSOURI | 1991 | 0 |
|  |  | (.) |
| OHIO | 1972 | -12.03\*\*\* |
|  |  | (0.723) |
| OHIO | 1973 | -12.51\*\*\* |
|  |  | (0.472) |
| OHIO | 1974 | -11.38\*\*\* |
|  |  | (0.354) |
| OHIO | 1975 | -5.704\*\*\* |
|  |  | (0.521) |
| OHIO | 1976 | -4.784\*\*\* |
|  |  | (0.357) |
| OHIO | 1977 | -2.303\*\*\* |
|  |  | (0.552) |
| OHIO | 1978 | -5.589\*\*\* |
|  |  | (0.274) |
| OHIO | 1979 | -2.578\*\*\* |
|  |  | (0.646) |
| OHIO | 1980 | -0.668 |
|  |  | (0.579) |
| OHIO | 1981 | -9.002\*\*\* |
|  |  | (0.719) |
| OHIO | 1982 | -0.698\*\*\* |
|  |  | (0.204) |
| OHIO | 1983 | -1.693\*\*\* |
|  |  | (0.419) |
| OHIO | 1984 | -0.434 |
|  |  | (0.418) |
| OHIO | 1985 | 4.023\*\*\* |
|  |  | (0.262) |
| OHIO | 1986 | 2.076\*\*\* |
|  |  | (0.525) |
| OHIO | 1987 | 0.990\*\* |
|  |  | (0.412) |
| OHIO | 1988 | -6.912\*\*\* |
|  |  | (0.0766) |
| OHIO | 1989 | -7.866\*\*\* |
|  |  | (0.576) |
| OHIO | 1990 | 0.474 |
|  |  | (0.700) |
| OHIO | 1991 | 0 |
|  |  | (.) |
| OKLAHOMA | 1972 | -2.244\*\*\* |
|  |  | (0.526) |
| OKLAHOMA | 1973 | -2.036\*\*\* |
|  |  | (0.598) |
| OKLAHOMA | 1974 | -3.364\*\*\* |
|  |  | (0.398) |
| OKLAHOMA | 1975 | -2.917\*\*\* |
|  |  | (0.242) |
| OKLAHOMA | 1976 | 3.217\*\*\* |
|  |  | (0.301) |
| OKLAHOMA | 1977 | 1.515\*\*\* |
|  |  | (0.360) |
| OKLAHOMA | 1978 | -11.99\*\*\* |
|  |  | (0.568) |
| OKLAHOMA | 1979 | -1.235\*\*\* |
|  |  | (0.273) |
| OKLAHOMA | 1980 | -16.57\*\*\* |
|  |  | (0.496) |
| OKLAHOMA | 1981 | 0.971\*\*\* |
|  |  | (0.226) |
| OKLAHOMA | 1982 | -7.795\*\*\* |
|  |  | (0.328) |
| OKLAHOMA | 1983 | -8.834\*\*\* |
|  |  | (0.406) |
| OKLAHOMA | 1984 | -7.307\*\*\* |
|  |  | (0.271) |
| OKLAHOMA | 1985 | -1.842\*\*\* |
|  |  | (0.339) |
| OKLAHOMA | 1986 | -2.111\*\*\* |
|  |  | (0.179) |
| OKLAHOMA | 1987 | -2.288\*\*\* |
|  |  | (0.184) |
| OKLAHOMA | 1988 | -6.130\*\*\* |
|  |  | (0.467) |
| OKLAHOMA | 1989 | -3.599\*\*\* |
|  |  | (0.185) |
| OKLAHOMA | 1990 | -0.850 |
|  |  | (0.758) |
| OKLAHOMA | 1991 | 0 |
|  |  | (.) |
| TENNESSEE | 1972 | -7.249\*\*\* |
|  |  | (0.272) |
| TENNESSEE | 1973 | -7.577\*\*\* |
|  |  | (0.418) |
| TENNESSEE | 1974 | -6.692\*\*\* |
|  |  | (0.276) |
| TENNESSEE | 1975 | -6.099\*\*\* |
|  |  | (0.184) |
| TENNESSEE | 1976 | -5.962\*\*\* |
|  |  | (0.246) |
| TENNESSEE | 1977 | -5.816\*\*\* |
|  |  | (0.431) |
| TENNESSEE | 1978 | -4.599\*\*\* |
|  |  | (0.0640) |
| TENNESSEE | 1979 | -3.006\*\*\* |
|  |  | (0.701) |
| TENNESSEE | 1980 | -11.17\*\*\* |
|  |  | (0.180) |
| TENNESSEE | 1981 | -4.291\*\*\* |
|  |  | (0.0928) |
| TENNESSEE | 1982 | -1.658\*\*\* |
|  |  | (0.141) |
| TENNESSEE | 1983 | -10.76\*\*\* |
|  |  | (0.266) |
| TENNESSEE | 1984 | -6.066\*\*\* |
|  |  | (0.378) |
| TENNESSEE | 1985 | 0.457\*\*\* |
|  |  | (0.127) |
| TENNESSEE | 1986 | -3.503\*\*\* |
|  |  | (0.181) |
| TENNESSEE | 1987 | -8.991\*\*\* |
|  |  | (0.276) |
| TENNESSEE | 1988 | -7.312\*\*\* |
|  |  | (0.186) |
| TENNESSEE | 1989 | -3.821\*\*\* |
|  |  | (0.925) |
| TENNESSEE | 1990 | -3.054\*\*\* |
|  |  | (0.153) |
| TENNESSEE | 1991 | 0 |
|  |  | (.) |
| VIRGINIA | 1972 | -8.522\*\*\* |
|  |  | (0.735) |
| VIRGINIA | 1973 | -3.341\*\*\* |
|  |  | (0.358) |
| VIRGINIA | 1974 | -6.425\*\*\* |
|  |  | (0.459) |
| VIRGINIA | 1975 | -4.729\*\*\* |
|  |  | (0.812) |
| VIRGINIA | 1976 | -8.421\*\*\* |
|  |  | (0.194) |
| VIRGINIA | 1977 | -9.300\*\*\* |
|  |  | (0.0672) |
| VIRGINIA | 1978 | -2.252\*\*\* |
|  |  | (0.461) |
| VIRGINIA | 1979 | -1.906\*\* |
|  |  | (0.781) |
| VIRGINIA | 1980 | -12.11\*\*\* |
|  |  | (0.111) |
| VIRGINIA | 1981 | -2.443\*\*\* |
|  |  | (0.272) |
| VIRGINIA | 1982 | -0.369 |
|  |  | (0.423) |
| VIRGINIA | 1983 | -13.46\*\*\* |
|  |  | (0.269) |
| VIRGINIA | 1984 | 0.391 |
|  |  | (0.452) |
| VIRGINIA | 1985 | -2.763\*\*\* |
|  |  | (0.347) |
| VIRGINIA | 1986 | -4.169\*\*\* |
|  |  | (0.0415) |
| VIRGINIA | 1987 | -8.042\*\*\* |
|  |  | (0.401) |
| VIRGINIA | 1988 | -3.504\*\*\* |
|  |  | (0.287) |
| VIRGINIA | 1989 | 1.632\*\* |
|  |  | (0.751) |
| VIRGINIA | 1990 | 2.198\*\*\* |
|  |  | (0.391) |
| VIRGINIA | 1991 | 0 |
|  |  | (.) |
| WISCONSIN | 1972 | -15.26\*\*\* |
|  |  | (0.234) |
| WISCONSIN | 1973 | -17.93\*\*\* |
|  |  | (0.118) |
| WISCONSIN | 1974 | -21.21\*\*\* |
|  |  | (0.176) |
| WISCONSIN | 1975 | -17.10\*\*\* |
|  |  | (0.0706) |
| WISCONSIN | 1976 | -19.18\*\*\* |
|  |  | (0.596) |
| WISCONSIN | 1977 | -9.168\*\*\* |
|  |  | (0.0231) |
| WISCONSIN | 1978 | -12.86\*\*\* |
|  |  | (0.295) |
| WISCONSIN | 1979 | -9.051\*\*\* |
|  |  | (0.157) |
| WISCONSIN | 1980 | -9.721\*\*\* |
|  |  | (0.229) |
| WISCONSIN | 1981 | -10.67\*\*\* |
|  |  | (0.0952) |
| WISCONSIN | 1982 | -11.99\*\*\* |
|  |  | (0.115) |
| WISCONSIN | 1983 | -8.238\*\*\* |
|  |  | (0.0937) |
| WISCONSIN | 1984 | -11.65\*\*\* |
|  |  | (0.0801) |
| WISCONSIN | 1985 | -10.72\*\*\* |
|  |  | (0.186) |
| WISCONSIN | 1986 | -6.995\*\*\* |
|  |  | (0.288) |
| WISCONSIN | 1987 | -4.290\*\*\* |
|  |  | (0.0459) |
| WISCONSIN | 1988 | -18.13\*\*\* |
|  |  | (0.488) |
| WISCONSIN | 1989 | -4.826\*\*\* |
|  |  | (0.216) |
| WISCONSIN | 1990 | -1.313\*\*\* |
|  |  | (0.129) |
| WISCONSIN | 1991 | 0 |
|  |  | (.) |
| Standard errors clustered at state level in parentheses  \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01 | | |

**Table A.30.** State-year dummy estimates from the main specification. Corn

|  |  |  |
| --- | --- | --- |
| State | Year | Coefficient |
| ALABAMA | 1972 | 0 |
|  |  | (.) |
| ALABAMA | 1973 | -9.997\*\*\* |
|  |  | (0.640) |
| ALABAMA | 1974 | -14.02\*\*\* |
|  |  | (0.547) |
| ALABAMA | 1975 | 0.250 |
|  |  | (1.897) |
| ALABAMA | 1976 | 0.510 |
|  |  | (0.592) |
| ALABAMA | 1977 | -27.14\*\*\* |
|  |  | (0.390) |
| ALABAMA | 1978 | -8.044\*\*\* |
|  |  | (0.535) |
| ALABAMA | 1979 | 1.948\*\* |
|  |  | (0.813) |
| ALABAMA | 1980 | -22.64\*\*\* |
|  |  | (0.384) |
| ALABAMA | 1981 | -5.170\*\*\* |
|  |  | (0.128) |
| ALABAMA | 1982 | 5.288\*\*\* |
|  |  | (0.507) |
| ALABAMA | 1983 | 3.414\*\*\* |
|  |  | (0.618) |
| ALABAMA | 1984 | 8.044\*\*\* |
|  |  | (0.409) |
| ALABAMA | 1985 | 21.49\*\*\* |
|  |  | (0.351) |
| ALABAMA | 1986 | -0.572\*\* |
|  |  | (0.250) |
| ALABAMA | 1987 | 19.63\*\*\* |
|  |  | (0.0885) |
| ALABAMA | 1988 | -13.39\*\*\* |
|  |  | (0.385) |
| ALABAMA | 1989 | 20.15\*\*\* |
|  |  | (0.974) |
| ALABAMA | 1990 | 8.951\*\*\* |
|  |  | (0.302) |
| ALABAMA | 1991 | 23.59\*\*\* |
|  |  | (0.636) |
| CALIFORNIA | 1972 | -59.13\*\*\* |
|  |  | (0.313) |
| CALIFORNIA | 1973 | -45.41\*\*\* |
|  |  | (0.317) |
| CALIFORNIA | 1974 | -52.38\*\*\* |
|  |  | (0.209) |
| CALIFORNIA | 1975 | -44.89\*\*\* |
|  |  | (0.104) |
| CALIFORNIA | 1976 | -45.99\*\*\* |
|  |  | (0.280) |
| CALIFORNIA | 1977 | -43.14\*\*\* |
|  |  | (0.254) |
| CALIFORNIA | 1978 | -37.00\*\*\* |
|  |  | (0.774) |
| CALIFORNIA | 1979 | -41.88\*\*\* |
|  |  | (0.0583) |
| CALIFORNIA | 1980 | -21.58\*\*\* |
|  |  | (0.179) |
| CALIFORNIA | 1981 | -22.41\*\*\* |
|  |  | (0.176) |
| CALIFORNIA | 1982 | -35.29\*\*\* |
|  |  | (1.185) |
| CALIFORNIA | 1983 | -39.09\*\*\* |
|  |  | (1.167) |
| CALIFORNIA | 1984 | -19.15\*\*\* |
|  |  | (0.263) |
| CALIFORNIA | 1985 | -10.19\*\*\* |
|  |  | (0.194) |
| CALIFORNIA | 1986 | -1.262\*\*\* |
|  |  | (0.249) |
| CALIFORNIA | 1987 | 5.651\*\*\* |
|  |  | (0.400) |
| CALIFORNIA | 1988 | -20.65\*\*\* |
|  |  | (0.633) |
| CALIFORNIA | 1989 | -0.874\*\* |
|  |  | (0.341) |
| CALIFORNIA | 1990 | -11.51\*\*\* |
|  |  | (0.621) |
| CALIFORNIA | 1991 | 0 |
|  |  | (.) |
| DELAWARE | 1972 | -21.72\*\*\* |
|  |  | (0.674) |
| DELAWARE | 1973 | -18.53\*\*\* |
|  |  | (0.615) |
| DELAWARE | 1974 | -24.45\*\*\* |
|  |  | (0.655) |
| DELAWARE | 1975 | -16.33\*\*\* |
|  |  | (0.788) |
| DELAWARE | 1976 | -5.557\*\*\* |
|  |  | (0.838) |
| DELAWARE | 1977 | -34.20\*\*\* |
|  |  | (0.809) |
| DELAWARE | 1978 | -9.365\*\*\* |
|  |  | (0.595) |
| DELAWARE | 1979 | -6.475\*\*\* |
|  |  | (0.597) |
| DELAWARE | 1980 | -27.82\*\*\* |
|  |  | (0.531) |
| DELAWARE | 1981 | -19.26\*\*\* |
|  |  | (0.425) |
| DELAWARE | 1982 | -2.083\*\*\* |
|  |  | (0.422) |
| DELAWARE | 1983 | -34.81\*\*\* |
|  |  | (0.430) |
| DELAWARE | 1984 | 6.344\*\*\* |
|  |  | (0.339) |
| DELAWARE | 1985 | 2.467\*\*\* |
|  |  | (0.276) |
| DELAWARE | 1986 | -9.886\*\*\* |
|  |  | (1.098) |
| DELAWARE | 1987 | -23.73\*\*\* |
|  |  | (0.581) |
| DELAWARE | 1988 | -35.15\*\*\* |
|  |  | (0.247) |
| DELAWARE | 1989 | -10.42\*\*\* |
|  |  | (0.965) |
| DELAWARE | 1990 | 5.448\*\*\* |
|  |  | (0.392) |
| DELAWARE | 1991 | 0 |
|  |  | (.) |
| FLORIDA | 1972 | -17.61\*\*\* |
|  |  | (0.991) |
| FLORIDA | 1973 | -23.33\*\*\* |
|  |  | (0.654) |
| FLORIDA | 1974 | -23.26\*\*\* |
|  |  | (0.561) |
| FLORIDA | 1975 | -19.51\*\*\* |
|  |  | (1.395) |
| FLORIDA | 1976 | -9.463\*\*\* |
|  |  | (0.772) |
| FLORIDA | 1977 | -32.36\*\*\* |
|  |  | (0.866) |
| FLORIDA | 1978 | -16.88\*\*\* |
|  |  | (0.630) |
| FLORIDA | 1979 | -9.993\*\*\* |
|  |  | (0.908) |
| FLORIDA | 1980 | -12.47\*\*\* |
|  |  | (0.574) |
| FLORIDA | 1981 | -3.941\*\*\* |
|  |  | (1.085) |
| FLORIDA | 1982 | -2.113\*\*\* |
|  |  | (0.541) |
| FLORIDA | 1983 | -3.712\*\*\* |
|  |  | (0.796) |
| FLORIDA | 1984 | -6.360\*\*\* |
|  |  | (0.804) |
| FLORIDA | 1985 | -5.278\*\*\* |
|  |  | (0.431) |
| FLORIDA | 1986 | -9.529\*\*\* |
|  |  | (0.880) |
| FLORIDA | 1987 | -4.342\*\*\* |
|  |  | (0.904) |
| FLORIDA | 1988 | -15.12\*\*\* |
|  |  | (0.743) |
| FLORIDA | 1989 | 2.076\*\*\* |
|  |  | (0.404) |
| FLORIDA | 1990 | 5.851\*\*\* |
|  |  | (0.974) |
| FLORIDA | 1991 | 0 |
|  |  | (.) |
| GEORGIA | 1972 | -36.45\*\*\* |
|  |  | (0.759) |
| GEORGIA | 1973 | -42.48\*\*\* |
|  |  | (0.298) |
| GEORGIA | 1974 | -37.33\*\*\* |
|  |  | (0.516) |
| GEORGIA | 1975 | -35.85\*\*\* |
|  |  | (0.315) |
| GEORGIA | 1976 | -31.76\*\*\* |
|  |  | (0.502) |
| GEORGIA | 1977 | -62.95\*\*\* |
|  |  | (0.657) |
| GEORGIA | 1978 | -41.33\*\*\* |
|  |  | (0.596) |
| GEORGIA | 1979 | -29.73\*\*\* |
|  |  | (0.373) |
| GEORGIA | 1980 | -48.28\*\*\* |
|  |  | (0.675) |
| GEORGIA | 1981 | -36.89\*\*\* |
|  |  | (0.779) |
| GEORGIA | 1982 | -10.48\*\*\* |
|  |  | (0.449) |
| GEORGIA | 1983 | -23.52\*\*\* |
|  |  | (0.678) |
| GEORGIA | 1984 | -11.37\*\*\* |
|  |  | (0.554) |
| GEORGIA | 1985 | -7.406\*\*\* |
|  |  | (0.539) |
| GEORGIA | 1986 | -27.27\*\*\* |
|  |  | (0.989) |
| GEORGIA | 1987 | -9.161\*\*\* |
|  |  | (0.736) |
| GEORGIA | 1988 | -30.84\*\*\* |
|  |  | (0.592) |
| GEORGIA | 1989 | -6.441\*\*\* |
|  |  | (0.353) |
| GEORGIA | 1990 | -18.89\*\*\* |
|  |  | (1.042) |
| GEORGIA | 1991 | 0 |
|  |  | (.) |
| ILLINOIS | 1972 | -1.264 |
|  |  | (0.986) |
| ILLINOIS | 1973 | -8.982\*\*\* |
|  |  | (0.906) |
| ILLINOIS | 1974 | -31.17\*\*\* |
|  |  | (0.829) |
| ILLINOIS | 1975 | 6.414\*\*\* |
|  |  | (0.681) |
| ILLINOIS | 1976 | 5.225\*\*\* |
|  |  | (0.333) |
| ILLINOIS | 1977 | -2.202\*\*\* |
|  |  | (0.784) |
| ILLINOIS | 1978 | 4.223\*\*\* |
|  |  | (0.720) |
| ILLINOIS | 1979 | 18.87\*\*\* |
|  |  | (0.632) |
| ILLINOIS | 1980 | -8.278\*\*\* |
|  |  | (0.792) |
| ILLINOIS | 1981 | 16.04\*\*\* |
|  |  | (1.063) |
| ILLINOIS | 1982 | 23.68\*\*\* |
|  |  | (0.744) |
| ILLINOIS | 1983 | -22.64\*\*\* |
|  |  | (0.698) |
| ILLINOIS | 1984 | 9.371\*\*\* |
|  |  | (0.515) |
| ILLINOIS | 1985 | 33.86\*\*\* |
|  |  | (0.291) |
| ILLINOIS | 1986 | 22.38\*\*\* |
|  |  | (0.812) |
| ILLINOIS | 1987 | 21.83\*\*\* |
|  |  | (0.568) |
| ILLINOIS | 1988 | -20.09\*\*\* |
|  |  | (1.096) |
| ILLINOIS | 1989 | 19.03\*\*\* |
|  |  | (0.694) |
| ILLINOIS | 1990 | 17.64\*\*\* |
|  |  | (0.974) |
| ILLINOIS | 1991 | 0 |
|  |  | (.) |
| INDIANA | 1972 | 5.830\*\*\* |
|  |  | (0.924) |
| INDIANA | 1973 | 7.931\*\*\* |
|  |  | (0.549) |
| INDIANA | 1974 | -23.85\*\*\* |
|  |  | (0.469) |
| INDIANA | 1975 | 1.820\*\* |
|  |  | (0.853) |
| INDIANA | 1976 | 19.76\*\*\* |
|  |  | (0.427) |
| INDIANA | 1977 | 10.28\*\*\* |
|  |  | (0.657) |
| INDIANA | 1978 | 9.740\*\*\* |
|  |  | (0.340) |
| INDIANA | 1979 | 19.82\*\*\* |
|  |  | (0.449) |
| INDIANA | 1980 | -9.170\*\*\* |
|  |  | (0.668) |
| INDIANA | 1981 | 10.43\*\*\* |
|  |  | (1.123) |
| INDIANA | 1982 | 36.02\*\*\* |
|  |  | (0.425) |
| INDIANA | 1983 | -12.47\*\*\* |
|  |  | (0.465) |
| INDIANA | 1984 | 18.97\*\*\* |
|  |  | (0.456) |
| INDIANA | 1985 | 27.65\*\*\* |
|  |  | (0.186) |
| INDIANA | 1986 | 21.93\*\*\* |
|  |  | (0.755) |
| INDIANA | 1987 | 36.58\*\*\* |
|  |  | (0.656) |
| INDIANA | 1988 | -4.680\*\*\* |
|  |  | (0.466) |
| INDIANA | 1989 | 38.05\*\*\* |
|  |  | (0.746) |
| INDIANA | 1990 | 34.43\*\*\* |
|  |  | (0.877) |
| INDIANA | 1991 | 0 |
|  |  | (.) |
| IOWA | 1972 | -3.673\*\*\* |
|  |  | (0.550) |
| IOWA | 1973 | -13.33\*\*\* |
|  |  | (0.591) |
| IOWA | 1974 | -30.08\*\*\* |
|  |  | (0.506) |
| IOWA | 1975 | -15.24\*\*\* |
|  |  | (0.327) |
| IOWA | 1976 | -9.381\*\*\* |
|  |  | (0.428) |
| IOWA | 1977 | -23.71\*\*\* |
|  |  | (0.400) |
| IOWA | 1978 | -3.398\*\*\* |
|  |  | (0.449) |
| IOWA | 1979 | 15.73\*\*\* |
|  |  | (0.291) |
| IOWA | 1980 | 1.855\*\*\* |
|  |  | (0.287) |
| IOWA | 1981 | 11.41\*\*\* |
|  |  | (0.427) |
| IOWA | 1982 | 6.794\*\*\* |
|  |  | (0.472) |
| IOWA | 1983 | -27.84\*\*\* |
|  |  | (0.204) |
| IOWA | 1984 | 3.075\*\*\* |
|  |  | (0.322) |
| IOWA | 1985 | 14.02\*\*\* |
|  |  | (0.338) |
| IOWA | 1986 | 18.05\*\*\* |
|  |  | (0.572) |
| IOWA | 1987 | 14.13\*\*\* |
|  |  | (0.184) |
| IOWA | 1988 | -34.55\*\*\* |
|  |  | (1.120) |
| IOWA | 1989 | -2.668\*\*\* |
|  |  | (0.269) |
| IOWA | 1990 | 9.533\*\*\* |
|  |  | (0.620) |
| IOWA | 1991 | 0 |
|  |  | (.) |
| LOUISIANA | 1972 | -26.59\*\*\* |
|  |  | (2.169) |
| LOUISIANA | 1973 | -43.39\*\*\* |
|  |  | (1.243) |
| LOUISIANA | 1974 | -39.04\*\*\* |
|  |  | (1.922) |
| LOUISIANA | 1975 | -28.31\*\*\* |
|  |  | (0.375) |
| LOUISIANA | 1976 | -20.23\*\*\* |
|  |  | (2.232) |
| LOUISIANA | 1977 | -33.14\*\*\* |
|  |  | (1.408) |
| LOUISIANA | 1978 | -25.23\*\*\* |
|  |  | (2.057) |
| LOUISIANA | 1979 | -31.34\*\*\* |
|  |  | (1.275) |
| LOUISIANA | 1980 | -42.94\*\*\* |
|  |  | (1.760) |
| LOUISIANA | 1981 | -8.705\*\*\* |
|  |  | (2.169) |
| LOUISIANA | 1982 | -10.90\*\*\* |
|  |  | (2.170) |
| LOUISIANA | 1983 | -5.438\*\*\* |
|  |  | (0.954) |
| LOUISIANA | 1984 | 16.81\*\*\* |
|  |  | (2.186) |
| LOUISIANA | 1985 | 13.02\*\*\* |
|  |  | (2.177) |
| LOUISIANA | 1986 | 22.90\*\*\* |
|  |  | (2.260) |
| LOUISIANA | 1987 | 11.51\*\*\* |
|  |  | (2.116) |
| LOUISIANA | 1988 | 6.450\*\*\* |
|  |  | (1.979) |
| LOUISIANA | 1989 | 5.757\*\*\* |
|  |  | (1.110) |
| LOUISIANA | 1990 | 23.33\*\*\* |
|  |  | (2.207) |
| LOUISIANA | 1991 | 0 |
|  |  | (.) |
| MARYLAND | 1972 | -21.67\*\*\* |
|  |  | (1.012) |
| MARYLAND | 1973 | -16.89\*\*\* |
|  |  | (0.776) |
| MARYLAND | 1974 | -14.27\*\*\* |
|  |  | (0.722) |
| MARYLAND | 1975 | -11.82\*\*\* |
|  |  | (1.104) |
| MARYLAND | 1976 | -3.837\*\*\* |
|  |  | (0.421) |
| MARYLAND | 1977 | -19.78\*\*\* |
|  |  | (0.186) |
| MARYLAND | 1978 | -2.279\*\*\* |
|  |  | (0.654) |
| MARYLAND | 1979 | -4.134\*\*\* |
|  |  | (1.024) |
| MARYLAND | 1980 | -24.96\*\*\* |
|  |  | (0.244) |
| MARYLAND | 1981 | 1.299\* |
|  |  | (0.653) |
| MARYLAND | 1982 | 2.005\*\*\* |
|  |  | (0.557) |
| MARYLAND | 1983 | -32.57\*\*\* |
|  |  | (0.806) |
| MARYLAND | 1984 | 16.43\*\*\* |
|  |  | (0.779) |
| MARYLAND | 1985 | 7.796\*\*\* |
|  |  | (0.564) |
| MARYLAND | 1986 | -14.44\*\*\* |
|  |  | (0.468) |
| MARYLAND | 1987 | -16.73\*\*\* |
|  |  | (0.297) |
| MARYLAND | 1988 | -29.99\*\*\* |
|  |  | (0.436) |
| MARYLAND | 1989 | 5.823\*\*\* |
|  |  | (0.985) |
| MARYLAND | 1990 | 15.38\*\*\* |
|  |  | (0.855) |
| MARYLAND | 1991 | 0 |
|  |  | (.) |
| MICHIGAN | 1972 | -27.70\*\*\* |
|  |  | (0.368) |
| MICHIGAN | 1973 | -29.26\*\*\* |
|  |  | (0.124) |
| MICHIGAN | 1974 | -49.34\*\*\* |
|  |  | (0.325) |
| MICHIGAN | 1975 | -35.35\*\*\* |
|  |  | (0.615) |
| MICHIGAN | 1976 | -36.83\*\*\* |
|  |  | (0.255) |
| MICHIGAN | 1977 | -19.24\*\*\* |
|  |  | (0.0856) |
| MICHIGAN | 1978 | -27.22\*\*\* |
|  |  | (0.207) |
| MICHIGAN | 1979 | -10.45\*\*\* |
|  |  | (0.341) |
| MICHIGAN | 1980 | -18.83\*\*\* |
|  |  | (0.584) |
| MICHIGAN | 1981 | -20.40\*\*\* |
|  |  | (0.637) |
| MICHIGAN | 1982 | -1.339\*\*\* |
|  |  | (0.301) |
| MICHIGAN | 1983 | -19.82\*\*\* |
|  |  | (0.317) |
| MICHIGAN | 1984 | -26.15\*\*\* |
|  |  | (0.292) |
| MICHIGAN | 1985 | -2.686\*\*\* |
|  |  | (0.119) |
| MICHIGAN | 1986 | -10.08\*\*\* |
|  |  | (0.669) |
| MICHIGAN | 1987 | -11.51\*\*\* |
|  |  | (0.207) |
| MICHIGAN | 1988 | -38.44\*\*\* |
|  |  | (0.376) |
| MICHIGAN | 1989 | 1.541\*\*\* |
|  |  | (0.406) |
| MICHIGAN | 1990 | 0.356 |
|  |  | (0.288) |
| MICHIGAN | 1991 | 0 |
|  |  | (.) |
| MINNESOTA | 1972 | -26.27\*\*\* |
|  |  | (0.406) |
| MINNESOTA | 1973 | -19.45\*\*\* |
|  |  | (0.489) |
| MINNESOTA | 1974 | -48.64\*\*\* |
|  |  | (0.860) |
| MINNESOTA | 1975 | -41.92\*\*\* |
|  |  | (0.532) |
| MINNESOTA | 1976 | -37.03\*\*\* |
|  |  | (1.977) |
| MINNESOTA | 1977 | -15.18\*\*\* |
|  |  | (0.327) |
| MINNESOTA | 1978 | -14.71\*\*\* |
|  |  | (0.161) |
| MINNESOTA | 1979 | -14.51\*\*\* |
|  |  | (0.531) |
| MINNESOTA | 1980 | -18.01\*\*\* |
|  |  | (0.594) |
| MINNESOTA | 1981 | -5.848\*\*\* |
|  |  | (0.368) |
| MINNESOTA | 1982 | -3.378\*\*\* |
|  |  | (0.611) |
| MINNESOTA | 1983 | -26.91\*\*\* |
|  |  | (0.375) |
| MINNESOTA | 1984 | -8.247\*\*\* |
|  |  | (0.397) |
| MINNESOTA | 1985 | -3.973\*\*\* |
|  |  | (0.348) |
| MINNESOTA | 1986 | 1.373\*\*\* |
|  |  | (0.265) |
| MINNESOTA | 1987 | 17.49\*\*\* |
|  |  | (0.958) |
| MINNESOTA | 1988 | -36.40\*\*\* |
|  |  | (1.330) |
| MINNESOTA | 1989 | 8.508\*\*\* |
|  |  | (0.850) |
| MINNESOTA | 1990 | 5.469\*\*\* |
|  |  | (0.144) |
| MINNESOTA | 1991 | 0 |
|  |  | (.) |
| MISSISSIPPI | 1972 | -19.28\*\*\* |
|  |  | (1.674) |
| MISSISSIPPI | 1973 | -32.01\*\*\* |
|  |  | (1.094) |
| MISSISSIPPI | 1974 | -28.68\*\*\* |
|  |  | (1.194) |
| MISSISSIPPI | 1975 | -25.28\*\*\* |
|  |  | (0.435) |
| MISSISSIPPI | 1976 | -16.92\*\*\* |
|  |  | (1.711) |
| MISSISSIPPI | 1977 | -40.13\*\*\* |
|  |  | (1.607) |
| MISSISSIPPI | 1978 | -13.64\*\*\* |
|  |  | (1.459) |
| MISSISSIPPI | 1979 | -15.12\*\*\* |
|  |  | (0.838) |
| MISSISSIPPI | 1980 | -42.04\*\*\* |
|  |  | (1.449) |
| MISSISSIPPI | 1981 | -8.558\*\*\* |
|  |  | (1.693) |
| MISSISSIPPI | 1982 | -8.595\*\*\* |
|  |  | (1.688) |
| MISSISSIPPI | 1983 | 4.352\*\*\* |
|  |  | (0.558) |
| MISSISSIPPI | 1984 | 5.744\*\*\* |
|  |  | (1.721) |
| MISSISSIPPI | 1985 | -4.105\*\* |
|  |  | (1.626) |
| MISSISSIPPI | 1986 | 10.58\*\*\* |
|  |  | (1.684) |
| MISSISSIPPI | 1987 | 11.48\*\*\* |
|  |  | (1.657) |
| MISSISSIPPI | 1988 | -8.648\*\*\* |
|  |  | (1.644) |
| MISSISSIPPI | 1989 | 0.613 |
|  |  | (1.145) |
| MISSISSIPPI | 1990 | 13.48\*\*\* |
|  |  | (1.620) |
| MISSISSIPPI | 1991 | 0 |
|  |  | (.) |
| MISSOURI | 1972 | -7.389\*\*\* |
|  |  | (0.535) |
| MISSOURI | 1973 | -10.09\*\*\* |
|  |  | (0.545) |
| MISSOURI | 1974 | -38.57\*\*\* |
|  |  | (0.540) |
| MISSOURI | 1975 | -31.20\*\*\* |
|  |  | (0.338) |
| MISSOURI | 1976 | -28.07\*\*\* |
|  |  | (1.350) |
| MISSOURI | 1977 | -11.78\*\*\* |
|  |  | (0.135) |
| MISSOURI | 1978 | -5.615\*\*\* |
|  |  | (0.376) |
| MISSOURI | 1979 | 7.653\*\*\* |
|  |  | (0.579) |
| MISSOURI | 1980 | -43.43\*\*\* |
|  |  | (0.823) |
| MISSOURI | 1981 | 3.578\*\*\* |
|  |  | (0.879) |
| MISSOURI | 1982 | -0.574 |
|  |  | (0.551) |
| MISSOURI | 1983 | -41.67\*\*\* |
|  |  | (0.427) |
| MISSOURI | 1984 | -18.05\*\*\* |
|  |  | (0.403) |
| MISSOURI | 1985 | 4.653\*\*\* |
|  |  | (0.382) |
| MISSOURI | 1986 | 10.80\*\*\* |
|  |  | (0.256) |
| MISSOURI | 1987 | 19.15\*\*\* |
|  |  | (0.354) |
| MISSOURI | 1988 | -8.790\*\*\* |
|  |  | (1.010) |
| MISSOURI | 1989 | 7.824\*\*\* |
|  |  | (0.499) |
| MISSOURI | 1990 | 3.084\*\*\* |
|  |  | (0.442) |
| MISSOURI | 1991 | 0 |
|  |  | (.) |
| NEW JERSEY | 1972 | -37.16\*\*\* |
|  |  | (0.434) |
| NEW JERSEY | 1973 | -30.70\*\*\* |
|  |  | (0.410) |
| NEW JERSEY | 1974 | -26.70\*\*\* |
|  |  | (0.374) |
| NEW JERSEY | 1975 | -29.10\*\*\* |
|  |  | (0.927) |
| NEW JERSEY | 1976 | -14.21\*\*\* |
|  |  | (0.526) |
| NEW JERSEY | 1977 | -36.33\*\*\* |
|  |  | (0.339) |
| NEW JERSEY | 1978 | -19.68\*\*\* |
|  |  | (0.484) |
| NEW JERSEY | 1979 | -22.11\*\*\* |
|  |  | (0.526) |
| NEW JERSEY | 1980 | -26.10\*\*\* |
|  |  | (0.413) |
| NEW JERSEY | 1981 | -10.65\*\*\* |
|  |  | (0.261) |
| NEW JERSEY | 1982 | -6.426\*\*\* |
|  |  | (0.348) |
| NEW JERSEY | 1983 | -42.81\*\*\* |
|  |  | (0.299) |
| NEW JERSEY | 1984 | -0.989\*\* |
|  |  | (0.440) |
| NEW JERSEY | 1985 | 1.688\*\*\* |
|  |  | (0.181) |
| NEW JERSEY | 1986 | -0.961\*\*\* |
|  |  | (0.300) |
| NEW JERSEY | 1987 | -10.30\*\*\* |
|  |  | (0.221) |
| NEW JERSEY | 1988 | -35.02\*\*\* |
|  |  | (0.303) |
| NEW JERSEY | 1989 | -7.867\*\*\* |
|  |  | (1.030) |
| NEW JERSEY | 1990 | 8.560\*\*\* |
|  |  | (0.421) |
| NEW JERSEY | 1991 | 0 |
|  |  | (.) |
| NEW YORK | 1972 | -38.01\*\*\* |
|  |  | (0.822) |
| NEW YORK | 1973 | -26.87\*\*\* |
|  |  | (0.404) |
| NEW YORK | 1974 | -28.26\*\*\* |
|  |  | (0.561) |
| NEW YORK | 1975 | -21.04\*\*\* |
|  |  | (0.727) |
| NEW YORK | 1976 | -26.48\*\*\* |
|  |  | (0.771) |
| NEW YORK | 1977 | -21.24\*\*\* |
|  |  | (0.640) |
| NEW YORK | 1978 | -12.31\*\*\* |
|  |  | (0.213) |
| NEW YORK | 1979 | -13.09\*\*\* |
|  |  | (0.393) |
| NEW YORK | 1980 | -5.856\*\*\* |
|  |  | (0.121) |
| NEW YORK | 1981 | -10.00\*\*\* |
|  |  | (0.444) |
| NEW YORK | 1982 | -8.329\*\*\* |
|  |  | (0.284) |
| NEW YORK | 1983 | -14.48\*\*\* |
|  |  | (0.394) |
| NEW YORK | 1984 | -15.83\*\*\* |
|  |  | (0.731) |
| NEW YORK | 1985 | -3.195\*\*\* |
|  |  | (0.180) |
| NEW YORK | 1986 | -6.748\*\*\* |
|  |  | (0.647) |
| NEW YORK | 1987 | 0.330 |
|  |  | (0.524) |
| NEW YORK | 1988 | -13.40\*\*\* |
|  |  | (0.158) |
| NEW YORK | 1989 | -10.56\*\*\* |
|  |  | (0.670) |
| NEW YORK | 1990 | -8.046\*\*\* |
|  |  | (0.585) |
| NEW YORK | 1991 | 0 |
|  |  | (.) |
| N CAROLINA | 1972 | -20.04\*\*\* |
|  |  | (0.417) |
| N CAROLINA | 1973 | -14.95\*\*\* |
|  |  | (0.209) |
| N CAROLINA | 1974 | -21.19\*\*\* |
|  |  | (0.428) |
| N CAROLINA | 1975 | -25.82\*\*\* |
|  |  | (0.343) |
| N CAROLINA | 1976 | -17.27\*\*\* |
|  |  | (0.524) |
| N CAROLINA | 1977 | -43.10\*\*\* |
|  |  | (0.352) |
| N CAROLINA | 1978 | -17.49\*\*\* |
|  |  | (0.280) |
| N CAROLINA | 1979 | -15.69\*\*\* |
|  |  | (0.557) |
| N CAROLINA | 1980 | -27.66\*\*\* |
|  |  | (0.343) |
| N CAROLINA | 1981 | -10.21\*\*\* |
|  |  | (0.301) |
| N CAROLINA | 1982 | 5.880\*\*\* |
|  |  | (0.260) |
| N CAROLINA | 1983 | -32.19\*\*\* |
|  |  | (0.553) |
| N CAROLINA | 1984 | 1.373\*\*\* |
|  |  | (0.452) |
| N CAROLINA | 1985 | -4.114\*\*\* |
|  |  | (0.280) |
| N CAROLINA | 1986 | -24.39\*\*\* |
|  |  | (0.580) |
| N CAROLINA | 1987 | -24.84\*\*\* |
|  |  | (0.170) |
| N CAROLINA | 1988 | -15.64\*\*\* |
|  |  | (0.369) |
| N CAROLINA | 1989 | 0.965 |
|  |  | (0.708) |
| N CAROLINA | 1990 | -20.20\*\*\* |
|  |  | (0.463) |
| N CAROLINA | 1991 | 0 |
|  |  | (.) |
| OHIO | 1972 | -9.059\*\*\* |
|  |  | (1.135) |
| OHIO | 1973 | -14.56\*\*\* |
|  |  | (0.875) |
| OHIO | 1974 | -20.57\*\*\* |
|  |  | (0.738) |
| OHIO | 1975 | -6.586\*\*\* |
|  |  | (0.975) |
| OHIO | 1976 | 6.586\*\*\* |
|  |  | (0.682) |
| OHIO | 1977 | 11.57\*\*\* |
|  |  | (1.000) |
| OHIO | 1978 | 6.812\*\*\* |
|  |  | (0.580) |
| OHIO | 1979 | 12.64\*\*\* |
|  |  | (1.148) |
| OHIO | 1980 | 11.86\*\*\* |
|  |  | (1.066) |
| OHIO | 1981 | -0.628 |
|  |  | (1.202) |
| OHIO | 1982 | 21.18\*\*\* |
|  |  | (0.368) |
| OHIO | 1983 | -3.793\*\*\* |
|  |  | (0.847) |
| OHIO | 1984 | 20.47\*\*\* |
|  |  | (0.778) |
| OHIO | 1985 | 30.58\*\*\* |
|  |  | (0.456) |
| OHIO | 1986 | 30.25\*\*\* |
|  |  | (0.859) |
| OHIO | 1987 | 21.72\*\*\* |
|  |  | (0.819) |
| OHIO | 1988 | -7.703\*\*\* |
|  |  | (0.191) |
| OHIO | 1989 | 9.206\*\*\* |
|  |  | (1.084) |
| OHIO | 1990 | 19.53\*\*\* |
|  |  | (1.204) |
| OHIO | 1991 | 0 |
|  |  | (.) |
| OREGON | 1972 | -73.24\*\*\* |
|  |  | (0.360) |
| OREGON | 1973 | -56.80\*\*\* |
|  |  | (1.032) |
| OREGON | 1974 | -39.45\*\*\* |
|  |  | (0.761) |
| OREGON | 1975 | -64.92\*\*\* |
|  |  | (0.724) |
| OREGON | 1976 | -56.78\*\*\* |
|  |  | (0.314) |
| OREGON | 1977 | -57.91\*\*\* |
|  |  | (0.235) |
| OREGON | 1978 | -61.15\*\*\* |
|  |  | (0.465) |
| OREGON | 1979 | -41.95\*\*\* |
|  |  | (0.228) |
| OREGON | 1980 | -38.82\*\*\* |
|  |  | (0.104) |
| OREGON | 1981 | -20.28\*\*\* |
|  |  | (0.173) |
| OREGON | 1982 | 6.597\*\*\* |
|  |  | (0.177) |
| OREGON | 1983 | 3.511\*\*\* |
|  |  | (0.195) |
| OREGON | 1984 | -4.363\*\*\* |
|  |  | (0.341) |
| OREGON | 1985 | 16.72\*\*\* |
|  |  | (0.617) |
| OREGON | 1986 | 9.351\*\*\* |
|  |  | (0.468) |
| OREGON | 1987 | 23.25\*\*\* |
|  |  | (1.138) |
| OREGON | 1988 | 25.12\*\*\* |
|  |  | (0.187) |
| OREGON | 1989 | 17.71\*\*\* |
|  |  | (0.194) |
| OREGON | 1990 | 18.50\*\*\* |
|  |  | (0.281) |
| OREGON | 1991 | 0 |
|  |  | (.) |
| PENNSYLV | 1972 | -17.31\*\*\* |
|  |  | (1.116) |
| PENNSYLV | 1973 | -5.666\*\*\* |
|  |  | (1.026) |
| PENNSYLV | 1974 | -3.640\*\*\* |
|  |  | (0.946) |
| PENNSYLV | 1975 | -3.553\*\*\* |
|  |  | (1.087) |
| PENNSYLV | 1976 | 8.076\*\*\* |
|  |  | (0.763) |
| PENNSYLV | 1977 | 10.07\*\*\* |
|  |  | (0.820) |
| PENNSYLV | 1978 | 12.15\*\*\* |
|  |  | (0.854) |
| PENNSYLV | 1979 | 9.161\*\*\* |
|  |  | (1.004) |
| PENNSYLV | 1980 | -0.576 |
|  |  | (0.525) |
| PENNSYLV | 1981 | 12.47\*\*\* |
|  |  | (0.807) |
| PENNSYLV | 1982 | 13.63\*\*\* |
|  |  | (0.719) |
| PENNSYLV | 1983 | -8.581\*\*\* |
|  |  | (0.877) |
| PENNSYLV | 1984 | 21.78\*\*\* |
|  |  | (1.001) |
| PENNSYLV | 1985 | 27.66\*\*\* |
|  |  | (0.652) |
| PENNSYLV | 1986 | 24.82\*\*\* |
|  |  | (0.658) |
| PENNSYLV | 1987 | 11.55\*\*\* |
|  |  | (0.947) |
| PENNSYLV | 1988 | -12.47\*\*\* |
|  |  | (0.584) |
| PENNSYLV | 1989 | 14.42\*\*\* |
|  |  | (1.033) |
| PENNSYLV | 1990 | 24.31\*\*\* |
|  |  | (1.003) |
| PENNSYLV | 1991 | 0 |
|  |  | (.) |
| S CAROLINA | 1972 | -25.45\*\*\* |
|  |  | (0.662) |
| S CAROLINA | 1973 | -28.29\*\*\* |
|  |  | (0.360) |
| S CAROLINA | 1974 | -27.29\*\*\* |
|  |  | (0.458) |
| S CAROLINA | 1975 | -23.10\*\*\* |
|  |  | (0.244) |
| S CAROLINA | 1976 | -10.75\*\*\* |
|  |  | (0.523) |
| S CAROLINA | 1977 | -43.48\*\*\* |
|  |  | (0.689) |
| S CAROLINA | 1978 | -31.82\*\*\* |
|  |  | (0.572) |
| S CAROLINA | 1979 | -7.463\*\*\* |
|  |  | (0.431) |
| S CAROLINA | 1980 | -31.63\*\*\* |
|  |  | (0.709) |
| S CAROLINA | 1981 | -22.24\*\*\* |
|  |  | (0.687) |
| S CAROLINA | 1982 | 1.186\*\*\* |
|  |  | (0.411) |
| S CAROLINA | 1983 | -23.35\*\*\* |
|  |  | (0.869) |
| S CAROLINA | 1984 | -7.373\*\*\* |
|  |  | (0.592) |
| S CAROLINA | 1985 | 1.005\* |
|  |  | (0.567) |
| S CAROLINA | 1986 | -38.07\*\*\* |
|  |  | (0.822) |
| S CAROLINA | 1987 | -8.314\*\*\* |
|  |  | (0.539) |
| S CAROLINA | 1988 | -22.76\*\*\* |
|  |  | (0.528) |
| S CAROLINA | 1989 | 3.415\*\*\* |
|  |  | (0.263) |
| S CAROLINA | 1990 | -25.13\*\*\* |
|  |  | (0.980) |
| S CAROLINA | 1991 | 0 |
|  |  | (.) |
| TENNESSEE | 1972 | -26.55\*\*\* |
|  |  | (0.379) |
| TENNESSEE | 1973 | -26.56\*\*\* |
|  |  | (0.511) |
| TENNESSEE | 1974 | -32.00\*\*\* |
|  |  | (0.420) |
| TENNESSEE | 1975 | -31.64\*\*\* |
|  |  | (0.305) |
| TENNESSEE | 1976 | -12.54\*\*\* |
|  |  | (0.474) |
| TENNESSEE | 1977 | -31.84\*\*\* |
|  |  | (0.546) |
| TENNESSEE | 1978 | -18.27\*\*\* |
|  |  | (0.198) |
| TENNESSEE | 1979 | -9.650\*\*\* |
|  |  | (0.967) |
| TENNESSEE | 1980 | -50.23\*\*\* |
|  |  | (0.454) |
| TENNESSEE | 1981 | -14.43\*\*\* |
|  |  | (0.238) |
| TENNESSEE | 1982 | -4.683\*\*\* |
|  |  | (0.282) |
| TENNESSEE | 1983 | -40.62\*\*\* |
|  |  | (0.335) |
| TENNESSEE | 1984 | -2.902\*\*\* |
|  |  | (0.473) |
| TENNESSEE | 1985 | -0.814\*\*\* |
|  |  | (0.273) |
| TENNESSEE | 1986 | -26.51\*\*\* |
|  |  | (0.263) |
| TENNESSEE | 1987 | -20.52\*\*\* |
|  |  | (0.385) |
| TENNESSEE | 1988 | -34.65\*\*\* |
|  |  | (0.328) |
| TENNESSEE | 1989 | -4.948\*\*\* |
|  |  | (1.286) |
| TENNESSEE | 1990 | -7.527\*\*\* |
|  |  | (0.378) |
| TENNESSEE | 1991 | 0 |
|  |  | (.) |
| VIRGINIA | 1972 | -12.33\*\*\* |
|  |  | (0.975) |
| VIRGINIA | 1973 | -5.746\*\*\* |
|  |  | (0.591) |
| VIRGINIA | 1974 | -12.19\*\*\* |
|  |  | (0.701) |
| VIRGINIA | 1975 | -0.792 |
|  |  | (0.991) |
| VIRGINIA | 1976 | -11.37\*\*\* |
|  |  | (0.325) |
| VIRGINIA | 1977 | -33.20\*\*\* |
|  |  | (0.181) |
| VIRGINIA | 1978 | -6.049\*\*\* |
|  |  | (0.691) |
| VIRGINIA | 1979 | -7.024\*\*\* |
|  |  | (0.976) |
| VIRGINIA | 1980 | -26.27\*\*\* |
|  |  | (0.114) |
| VIRGINIA | 1981 | 4.566\*\*\* |
|  |  | (0.504) |
| VIRGINIA | 1982 | 12.62\*\*\* |
|  |  | (0.665) |
| VIRGINIA | 1983 | -39.50\*\*\* |
|  |  | (0.484) |
| VIRGINIA | 1984 | 16.04\*\*\* |
|  |  | (0.717) |
| VIRGINIA | 1985 | 7.987\*\*\* |
|  |  | (0.497) |
| VIRGINIA | 1986 | -29.48\*\*\* |
|  |  | (0.126) |
| VIRGINIA | 1987 | -28.56\*\*\* |
|  |  | (0.740) |
| VIRGINIA | 1988 | -11.66\*\*\* |
|  |  | (0.467) |
| VIRGINIA | 1989 | 17.43\*\*\* |
|  |  | (0.984) |
| VIRGINIA | 1990 | 7.083\*\*\* |
|  |  | (0.638) |
| VIRGINIA | 1991 | 0 |
|  |  | (.) |
| WASHINGT | 1972 | -69.57\*\*\* |
|  |  | (0.141) |
| WASHINGT | 1973 | -60.36\*\*\* |
|  |  | (0.866) |
| WASHINGT | 1974 | -70.31\*\*\* |
|  |  | (0.557) |
| WASHINGT | 1975 | -68.69\*\*\* |
|  |  | (0.377) |
| WASHINGT | 1976 | -65.70\*\*\* |
|  |  | (0.443) |
| WASHINGT | 1977 | -53.57\*\*\* |
|  |  | (0.211) |
| WASHINGT | 1978 | -56.88\*\*\* |
|  |  | (0.303) |
| WASHINGT | 1979 | -41.29\*\*\* |
|  |  | (0.528) |
| WASHINGT | 1980 | -47.42\*\*\* |
|  |  | (0.256) |
| WASHINGT | 1981 | -40.56\*\*\* |
|  |  | (0.116) |
| WASHINGT | 1982 | -22.24\*\*\* |
|  |  | (0.116) |
| WASHINGT | 1983 | -7.493\*\*\* |
|  |  | (0.196) |
| WASHINGT | 1984 | -19.46\*\*\* |
|  |  | (0.142) |
| WASHINGT | 1985 | -7.473\*\*\* |
|  |  | (0.527) |
| WASHINGT | 1986 | -1.445\*\*\* |
|  |  | (0.423) |
| WASHINGT | 1987 | -1.771\*\* |
|  |  | (0.642) |
| WASHINGT | 1988 | -8.986\*\*\* |
|  |  | (0.234) |
| WASHINGT | 1989 | -5.717\*\*\* |
|  |  | (0.380) |
| WASHINGT | 1990 | -4.042\*\*\* |
|  |  | (0.226) |
| WASHINGT | 1991 | 0 |
|  |  | (.) |
| W VIRGINIA | 1972 | -10.89\*\*\* |
|  |  | (1.378) |
| W VIRGINIA | 1973 | -1.722 |
|  |  | (1.226) |
| W VIRGINIA | 1974 | -7.061\*\*\* |
|  |  | (1.136) |
| W VIRGINIA | 1975 | -1.885 |
|  |  | (1.468) |
| W VIRGINIA | 1976 | 7.783\*\*\* |
|  |  | (0.945) |
| W VIRGINIA | 1977 | -5.166\*\*\* |
|  |  | (0.864) |
| W VIRGINIA | 1978 | -6.676\*\*\* |
|  |  | (1.235) |
| W VIRGINIA | 1979 | 3.431\*\* |
|  |  | (1.391) |
| W VIRGINIA | 1980 | 5.378\*\*\* |
|  |  | (1.027) |
| W VIRGINIA | 1981 | 6.758\*\*\* |
|  |  | (1.099) |
| W VIRGINIA | 1982 | 15.17\*\*\* |
|  |  | (0.771) |
| W VIRGINIA | 1983 | -2.460\*\* |
|  |  | (0.989) |
| W VIRGINIA | 1984 | 16.02\*\*\* |
|  |  | (0.986) |
| W VIRGINIA | 1985 | 29.06\*\*\* |
|  |  | (0.620) |
| W VIRGINIA | 1986 | 19.69\*\*\* |
|  |  | (0.393) |
| W VIRGINIA | 1987 | -7.177\*\*\* |
|  |  | (1.075) |
| W VIRGINIA | 1988 | -23.99\*\*\* |
|  |  | (0.805) |
| W VIRGINIA | 1989 | 9.188\*\*\* |
|  |  | (1.187) |
| W VIRGINIA | 1990 | 18.30\*\*\* |
|  |  | (1.157) |
| W VIRGINIA | 1991 | 0 |
|  |  | (.) |
| WISCONSIN | 1972 | -25.48\*\*\* |
|  |  | (0.333) |
| WISCONSIN | 1973 | -35.22\*\*\* |
|  |  | (0.204) |
| WISCONSIN | 1974 | -46.35\*\*\* |
|  |  | (0.360) |
| WISCONSIN | 1975 | -32.90\*\*\* |
|  |  | (0.193) |
| WISCONSIN | 1976 | -38.18\*\*\* |
|  |  | (1.265) |
| WISCONSIN | 1977 | -12.70\*\*\* |
|  |  | (0.0665) |
| WISCONSIN | 1978 | -22.95\*\*\* |
|  |  | (0.389) |
| WISCONSIN | 1979 | -11.49\*\*\* |
|  |  | (0.291) |
| WISCONSIN | 1980 | -17.08\*\*\* |
|  |  | (0.331) |
| WISCONSIN | 1981 | -7.388\*\*\* |
|  |  | (0.225) |
| WISCONSIN | 1982 | -10.09\*\*\* |
|  |  | (0.258) |
| WISCONSIN | 1983 | -18.47\*\*\* |
|  |  | (0.174) |
| WISCONSIN | 1984 | -10.39\*\*\* |
|  |  | (0.192) |
| WISCONSIN | 1985 | -8.900\*\*\* |
|  |  | (0.342) |
| WISCONSIN | 1986 | -1.614\*\*\* |
|  |  | (0.389) |
| WISCONSIN | 1987 | 2.177\*\*\* |
|  |  | (0.0803) |
| WISCONSIN | 1988 | -44.57\*\*\* |
|  |  | (0.916) |
| WISCONSIN | 1989 | 1.576\*\*\* |
|  |  | (0.392) |
| WISCONSIN | 1990 | 0.279 |
|  |  | (0.230) |
| WISCONSIN | 1991 | 0 |
|  |  | (.) |
| Standard errors clustered at state level in parentheses  \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01 | | |