

Online Appendix for:
Wealth, Officeholding, and Elite Ideology
in Antebellum Georgia

November 8, 2015

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1 Chronology

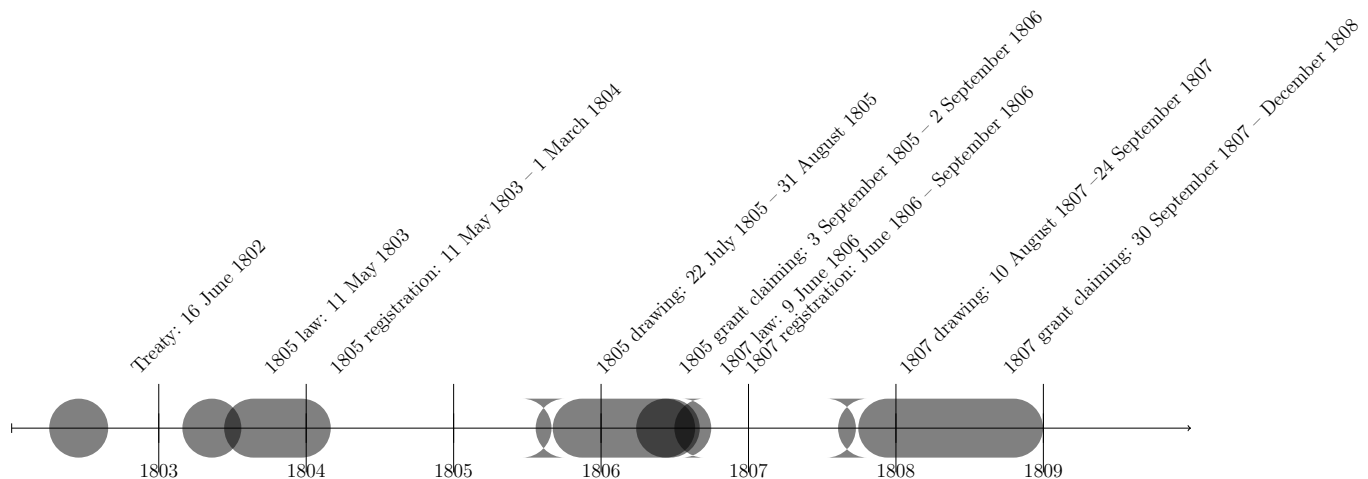


Figure 1: Timeline of 1805 and 1807 lottery events. (Graham, 2010, 2011).

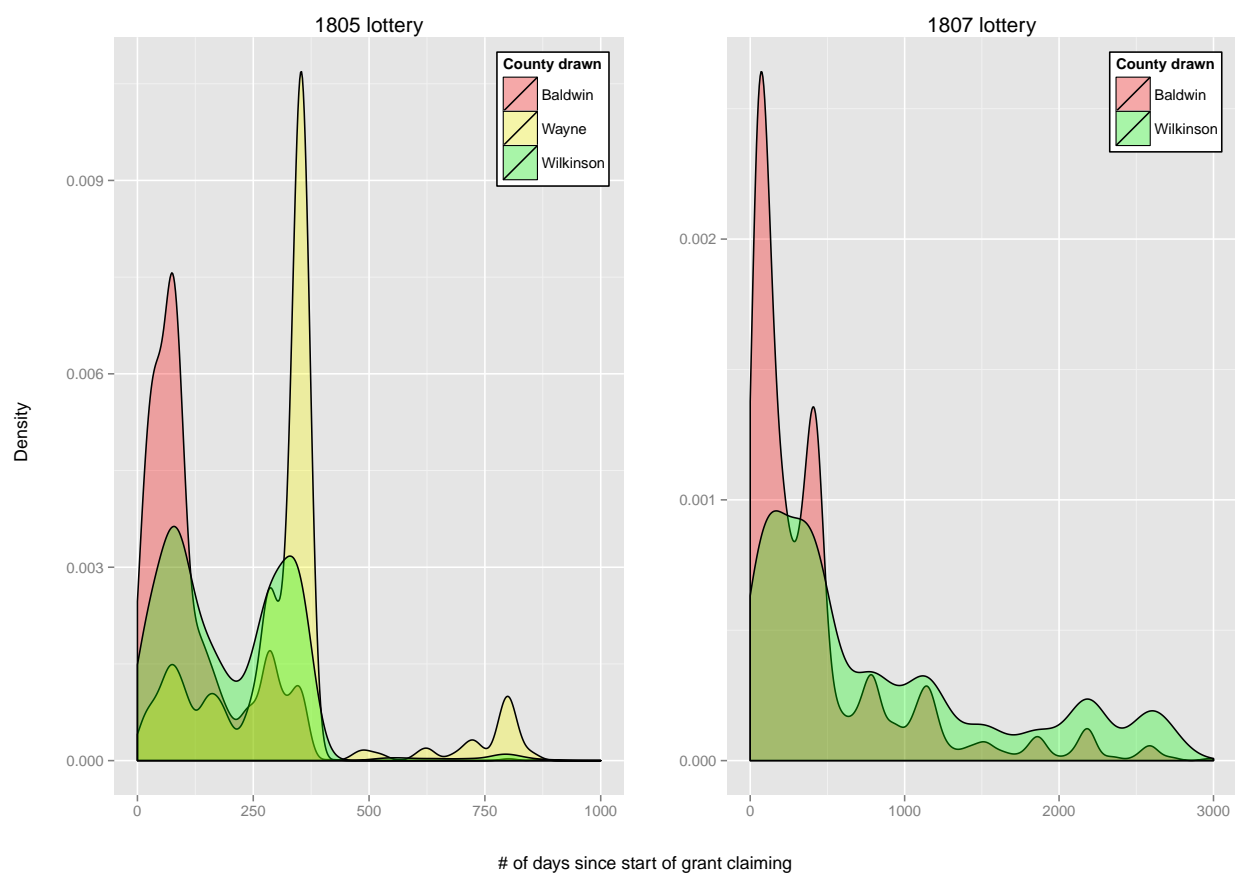
2 Counties

Table 1: Counties created by 1805 and 1807 lotteries.

| Panel A: 1805 | | | | | | |
|---------------|---------------|-------------------|----------------------------|---------------------------|----------------|------------------------|
| Counties | No. Districts | Lot sizes (acres) | Lot length (chains square) | Lot orientation (degrees) | Grant fee (\$) | Est. value of lot (\$) |
| Baldwin | 5 | 202.5 | 45 | 45 / 60 | 8.10 | 839.17 |
| Wayne | 3 | 490 | 70 | 13 / 77 | 19.60 | 842.64 |
| Wilkinson | 5 | 202.5 | 45 | 45 / 60 | 8.10 | 811.25 |
| Panel B: 1807 | | | | | | |
| Counties | No. Districts | Lot sizes (acres) | Lot length (chains square) | Lot orientation (degrees) | Grant fee (\$) | Est. value of lot (\$) |
| Baldwin | 15 | 202.5 | 45 | 45 / 60 | 12.15 | 827.35 |
| Wilkinson | 23 | 202.5 | 45 | 45 / 60 | 12.15 | 799.82 |

Notes: counties and land lots specified by Acts of 11 May 1803 and 9 June 1806. Lot orientation is degrees from the meridian. Lot values are estimated by averaging the cash value of farms minus the value of farming implements and machinery by the number of (improved and unimproved) acres of land in farms (Haines, 2004; Bleakley and Ferrie, 2013). The 1850 values are deflated to 1805 dollars (Panel A) and 1807 dollars (Panel B) using a historical consumer price index (Officer and Williamson, 2012).

Figure 2: Time lag in filing grants for 1805 and 1807 fortunate drawers.



Notes: grants filed for land reverted to state are excluded. See OA Figure 1 for the dates of grant claiming specified by the Acts of 11 May 1803 and 9 June 1806. The legislature extended the grant deadline for each lottery on an annual basis for about a decade.

3 Qualifications

| Requirements | No. Draws (1805) | No. Draws (1807) |
|---|---------------------|---------------------|
| “Every free male white person, twenty-one years of age and upwards, being a citizen of the United States, and an inhabitant of this State, twelve months immediately preceding the passage of this act, or paid a tax towards the support of government (including such as may be absent on lawful business)” [1] | 1 | 1 |
| “Every free white male person of like description, having a wife, legitimate child or children, under twenty-one years of age” | 2 | 2 |
| “All widows having a legitimate child or children, under the age of twenty-one years, who have resided twelve months in this State, immediately preceding the passage of this act” [2] | 2 | 1 |
| “All families of orphans, under twenty-one years of age, having no parents living” [3] | 1 | 1–2 [4] |
| “All families of orphans [with three years’ residence], under twenty-one years of age, whose father is dead, ” | N/A | 1 |
| “All free female white persons, who have arrived to the age of twenty-one years or upwards, who have resided in this State [for three years]” | 1 | N/A |

Figure 3: Lottery qualifications specified by Acts of 11 May 1803 and 9 June 1806 (Clayton and Adams, 1812). [1] The residency requirement is three years under 1807 lottery rules. An amendment to the 1807 rules also makes provision for persons laboring under accidents or misfortunes. [2] The 1807 lottery rules apply to all widows with three years residence in Georgia. [3] An amendment to the 1805 lottery rules entitles children whose father is dead and mother remarries to draw in the same manner. The 1807 lottery rules apply the three years residency requirement. [4] The 1807 lottery rules specify “families of orphans consisting of more than one” receive two draws and orphan families of “only one” receive one draw.

4 Descriptive statistics: 1800 Census

| County | White males 16–25 | White males 26–44 | White males 45+ | White male total pop. | White female total pop. | Slave pop. (%) |
|------------|----------------------|----------------------|--------------------|--------------------------|----------------------------|-------------------|
| Bryan | 57 | 64 | 26 | 286 | 242 | 0.813 |
| Bulloch | 158 | 151 | 97 | 871 | 758 | 0.141 |
| Burke | 726 | 743 | 242 | 3,356 | 3,167 | 0.312 |
| Camden | 104 | 131 | 60 | 496 | 440 | 0.437 |
| Chatham | 547 | 591 | 175 | 2,077 | 1,596 | 0.699 |
| Columbia | 478 | 516 | 256 | 2,848 | 2,473 | 0.360 |
| Effingham | 94 | 163 | 132 | 716 | 594 | 0.368 |
| Elbert | 637 | 689 | 348 | 3,709 | 3,546 | 0.279 |
| Franklin | 463 | 572 | 276 | 3,078 | 2,814 | 0.140 |
| Glynn | 68 | 116 | 60 | 445 | 334 | 0.583 |
| Greene | 593 | 857 | 295 | 3,716 | 3,381 | 0.340 |
| Hancock | 964 | 952 | 423 | 5,205 | 4,400 | 0.334 |
| Jackson | 563 | 654 | 243 | 3,266 | 3,062 | 0.181 |
| Jefferson | 311 | 421 | 219 | 2,066 | 1,942 | 0.289 |
| Liberty | 171 | 187 | 71 | 762 | 584 | 0.742 |
| Lincoln | 230 | 317 | 193 | 1,745 | 1,581 | 0.301 |
| Mcintosh | 79 | 117 | 60 | 460 | 371 | 0.684 |
| Montgomery | 286 | 270 | 147 | 1,445 | 1,297 | 0.137 |
| Oglethorpe | 643 | 653 | 341 | 3,479 | 3,207 | 0.316 |
| Richmond | 360 | 370 | 132 | 1,503 | 1,225 | 0.492 |
| Screven | 274 | 310 | 82 | 1,253 | 1,000 | 0.254 |
| Warren | 605 | 562 | 313 | 3,263 | 2,989 | 0.247 |
| Washington | 660 | 678 | 322 | 3,739 | 3,442 | 0.259 |
| Wilkes | 716 | 830 | 444 | 4,184 | 3,848 | 0.382 |
| Georgia | 9,787 | 10,910 | 4,957 | 53,965 | 48,298 | 0.365 |

Table 2: Summary statistics on selected county–level characteristics in the 1800 Census. ‘Slave pop.’ is the slave population over the total population.

5 Descriptive statistics: 1850 Census

5.1 Individual-level summary statistics

| Variable | N | Min. | Mean | Max. | S.d. |
|---------------------------------|--------|------|-----------|---------|-----------|
| <i>Personal characteristics</i> | | | | | |
| Age | 25,506 | 21 | 38.042 | 101 | 11.195 |
| Literate | 25,520 | 0 | 0.891 | 1 | 0.311 |
| In school | 25,520 | 0 | 0.001 | 1 | 0.038 |
| Real estate value (1850\$) | 25,520 | 0 | 2,324.389 | 250,000 | 5,538.743 |
| <i>Surname characteristics</i> | | | | | |
| Surname length | 25,520 | 3 | 6.224 | 14 | 1.560 |
| Surname frequency | 25,520 | 1 | 36.965 | 449 | 74.114 |
| <i>Occupations</i> | | | | | |
| Blacksmith | 25,520 | 0 | 0.006 | 1 | 0.080 |
| Carpenter | 25,520 | 0 | 0.009 | 1 | 0.092 |
| Farmer | 25,520 | 0 | 0.852 | 1 | 0.355 |
| Laborer | 25,520 | 0 | 0.004 | 1 | 0.065 |
| Lawyer | 25,520 | 0 | 0.009 | 1 | 0.093 |
| Mechanic | 25,520 | 0 | 0.008 | 1 | 0.087 |
| Merchant | 25,520 | 0 | 0.021 | 1 | 0.143 |
| Overseer | 25,520 | 0 | 0.006 | 1 | 0.075 |
| Physician | 25,520 | 0 | 0.014 | 1 | 0.117 |
| Reverend | 25,520 | 0 | 0.009 | 1 | 0.093 |
| Teacher | 25,520 | 0 | 0.005 | 1 | 0.067 |

Table 3: Individual-level summary statistics using sample drawn from the 1850 full-count Census Center (2008); Sarah Flood and Warren (2015). ‘Surname length’ is the character length of surnames. ‘Surname frequency’ is the number of times surnames appear in the sample. ‘Literate’ is a binary variable indicating literacy (can read and write). ‘In school’ is an indicator variable for individuals currently in school. The occupations dummies indicate contemporary occupational categories. Sample is restricted to male heads of households aged 21 and over who living in Georgia at the time of the census, were born in Georgia, and have non-missing surnames and property value.

5.2 County-level characteristics

| County | Log value of farms (\$) | Log value of farm equip. (\$) | Log total # of farms | Log mean farm value (\$) | Log total farm acres | Per acre farm value (\$) | White total pop. (%) | Slave pop. (%) |
|------------|----------------------------|----------------------------------|-------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------|-------------------|
| Baldwin | 13.407 | 10.341 | 5.481 | 7.879 | 12.343 | 2.761 | 3519 | 0.565 |
| Bryan | 12.636 | 9.857 | 5.342 | 7.230 | 12.046 | 1.692 | 1164 | 0.656 |
| Bulloch | 12.761 | 9.724 | 6.021 | 6.691 | 13.122 | 0.663 | 2840 | 0.340 |
| Burke | 14.642 | 11.794 | 6.568 | 8.014 | 13.171 | 4.100 | 5118 | 0.673 |
| Camden | 13.715 | 10.242 | 5.460 | 8.223 | 12.240 | 4.234 | 2069 | 0.672 |
| Chatham | 14.513 | 12.251 | 4.883 | 9.520 | 11.866 | 12.643 | 9152 | 0.587 |
| Clarke | 13.876 | 11.028 | 5.991 | 7.825 | 12.197 | 5.051 | 5513 | 0.503 |
| Columbia | 14.213 | 11.682 | 6.192 | 7.938 | 12.613 | 4.559 | 3617 | 0.692 |
| Effingham | 12.646 | 9.721 | 5.730 | 6.861 | 12.358 | 1.263 | 2007 | 0.478 |
| Elbert | 14.262 | 11.443 | 6.690 | 7.511 | 12.655 | 4.691 | 6676 | 0.484 |
| Franklin | 13.882 | 11.335 | 7.174 | 6.626 | 12.900 | 2.461 | 9076 | 0.207 |
| Glynn | 13.544 | 10.353 | 4.522 | 8.980 | 11.574 | 6.877 | 696 | 0.858 |
| Greene | 14.385 | 11.266 | 6.238 | 8.101 | 12.444 | 6.659 | 4744 | 0.633 |
| Hancock | 14.096 | 11.314 | 6.096 | 7.936 | 12.572 | 4.307 | 4210 | 0.631 |
| Jackson | 13.505 | 10.856 | 6.304 | 7.127 | 12.203 | 3.418 | 6808 | 0.301 |
| Jefferson | 14.118 | 11.483 | 6.288 | 7.756 | 12.603 | 4.227 | 3717 | 0.588 |
| Liberty | 13.563 | 10.400 | 5.497 | 8.022 | 12.743 | 2.174 | 2002 | 0.745 |
| Lincoln | 13.363 | 10.604 | 5.609 | 7.688 | 11.918 | 3.970 | 2187 | 0.630 |
| Montgomery | 11.678 | 9.094 | 5.124 | 6.475 | 12.140 | 0.582 | 1541 | 0.285 |
| Oglethorpe | 14.437 | 11.561 | 6.319 | 8.060 | 12.606 | 5.888 | 4382 | 0.642 |
| Richmond | 13.969 | 10.838 | 5.606 | 8.318 | 11.913 | 7.468 | 8153 | 0.481 |
| Screven | 13.320 | 10.672 | 6.211 | 7.036 | 13.144 | 1.109 | 3173 | 0.536 |
| Tattnall | 12.345 | 9.503 | 5.790 | 6.495 | 12.883 | 0.550 | 2378 | 0.258 |
| Warren | 14.335 | 11.434 | 6.405 | 7.873 | 12.825 | 4.277 | 6158 | 0.492 |
| Washington | 14.102 | 11.444 | 6.449 | 7.580 | 12.962 | 2.908 | 5991 | 0.488 |
| Wayne | 11.419 | 8.525 | 5.147 | 6.215 | 11.226 | 1.146 | 1088 | 0.271 |
| Wilkes | 14.112 | 11.332 | 6.148 | 7.899 | 12.571 | 4.378 | 3805 | 0.684 |
| Wilkinson | 13.723 | 11.147 | 6.469 | 7.175 | 12.662 | 2.670 | 5551 | 0.331 |
| Georgia | 18.377 | 15.589 | 10.854 | 7.459 | 16.943 | 3.938 | 521572 | 0.421 |

Table 4: Summary statistics on selected county-level characteristics for counties existing in 1807 from the 1850 Census. ‘Log total farm acres’ is the log of the sum of improved and unimproved acres of land in farms. ‘Log average farm value’ is the log of the difference between farm value and equipment value, over the total number of farms. ‘Per acre farm value’ is the difference between farm value and equipment value, over the sum of improved and unimproved acres of farm land. All dollar values are current (1850\$). ‘Slave pop.’ is the slave population over the total population.

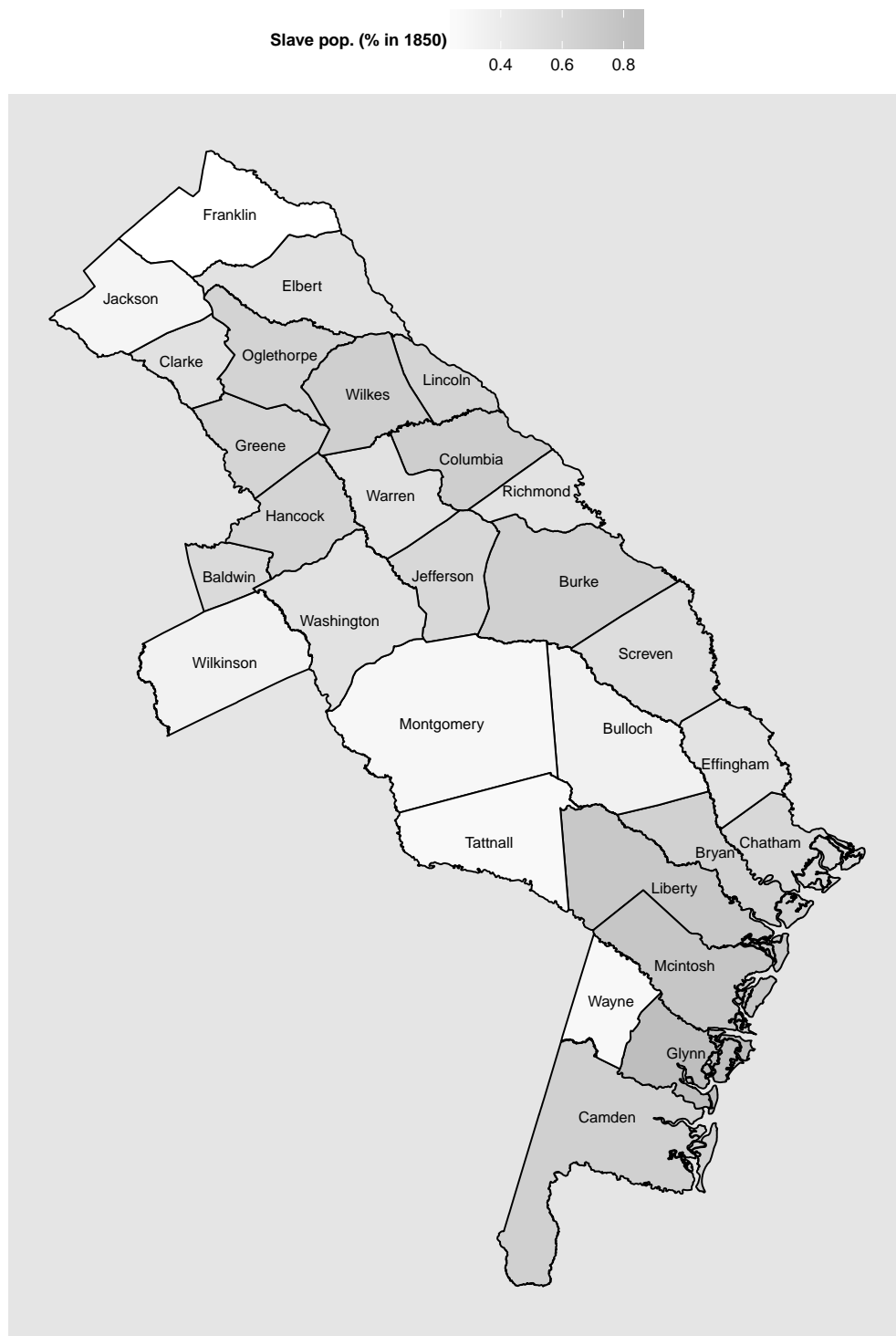


Figure 4: 1850 Slave population as a percentage of total population for counties existing in 1807.

6 Record classification ensemble

Table 5: Record classification ensemble.

| Algorithm | Parameters | Risk | Weight |
|--|-----------------|-------|--------|
| Super Learner (SuperLearner) | default | 0.023 | - |
| Lasso regression (glmnet) | $\alpha = 1$ | 0.023 | 0.243 |
| GLM with elasticnet regularization (glmnet) | $\alpha = 0.25$ | 0.023 | 0 |
| GLM with elasticnet regularization (glmnet) | $\alpha = 0.5$ | 0.023 | 0 |
| GLM with elasticnet regularization (glmnet) | $\alpha = 0.75$ | 0.023 | 0 |
| Neural network (nnet) | default | 0.066 | 0 |
| Random forests (randomForest) | default | 0.026 | 0 |
| Random forests (randomForest) | mtry = 1 | 0.03 | 0.45 |
| Random forests (randomForest) | mtry = 5 | 0.025 | 0.305 |
| Random forests (randomForest) | mtry = 10 | 0.025 | 0 |
| Ridge regression (glmnet) | $\alpha = 0$ | 0.025 | 0 |

Notes: cross-validated risk and weights used for each algorithm in super learner prediction ensemble for record classification model. ‘Risk’ is the 10-fold cross-validated risk estimate based on mean squared error for each algorithm. ‘Weight’ is the coefficient for the super learner, which is estimated using non-negative least squares based on the Lawson-Hanson algorithm.

7 Georgia Assembly roll call votes

| Year | Title | Chamber | Direction | Vote total | Issue |
|------|---|---------|-----------|----------------------|---------|
| 1810 | “To manumit a certain negro girl named Clarissa” | Senate | (-) | Yeas 24 – nays 10 | Slavery |
| 1810 | “To incorporate the Bank of Augusta” | Senate | (+) | Yeas 23 – nays 7 | Banking |
| 1813 | “To establish a bank in the town of Milledgeville” | House | (+) | Yeas 20 – nays 51 | Banking |
| 1813 | “To consolidate the funds of this state and establish a bank thereon” | Senate | (+) | Yeas 17 – nays 15 | Banking |
| 1814 | “To consolidate the funds of this state and establish a bank thereon” | Senate | (+) | Yeas 18 – nays 14 | Banking |
| 1814 | “An act to establish an [sic] uniform mode of calculating interest in this state, and to prevent the collection of compound interest” | Senate | (+) | Yeas 19 – nays 11 | Banking |
| 1815 | “To incorporate a bank, to be called, <i>The Bank of the State of Georgia</i> ” | House | (+) | Yeas 60 – nays 7 | Banking |
| 1815 | “To incorporate a Bank to be called the Bank of the State of Georgia” | Senate | (+) | Yeas 18 – nays 13 | Banking |
| 1815 | “To incorporate the Bank of Milledgeville” | Senate | (+) | Yeas 27 – nays 9 | Banking |
| 1815 | “To emancipate and set free Abraham Mauzo, jun. a person of color” | Senate | (-) | Yeas 12 – nays 25 | Slavery |
| 1816 | “To emancipate a negro slave, named Caesar, | Senate | (-) | Yeas 12 – | Slavery |

| | | | | | |
|------|---|--------|-----|----------------------|---------|
| | commonly called Caesar Kennedy, and to carry into effect the last will and testament of Wn. Kennedy, late of Richmond county, dec'd” | | | nays 19 | |
| 1816 | “An act to restore William Wall and Andrew Guarde, two persons of color, to the privilege of piloting vessels in the several ports of this state” | Senate | (-) | Yeas 19 – nays 11 | Slavery |
| 1816 | “To prevent the circulation of notes emitted by unchartered Banks” | Senate | (+) | Yeas 23 – nays 6 | Banking |
| 1817 | “To prevent the issuing... or circulating [of] bills... other than those of chartered Banks, and for establishing the interest thereon” | Senate | (+) | Yeas 23 – nays 12 | Banking |
| 1818 | “To incorporate the Bank of Darien” | House | (+) | Yeas 50 – nays 36 | Banking |
| 1818 | “To pardon a negro boy named Peter, the property of the late Mather Jones of Tatnall county, deceased” | Senate | (-) | Yeas 16 – nays 21 | Slavery |
| 1818 | “To manumit and make free a certain negro slave, named therein, (the property of Henry Parks)” | House | (-) | Yeas 39 – nays 51 | Slavery |
| 1818 | “To manumit and make free a certain person of color, named therein” | House | (-) | Yeas 43 nays 44 | Slavery |
| 1818 | “To repeal that part of an act, passed the 20th of December, 1817, relative to the introduction of slaves into this state” | House | (+) | Yeas 48 – nays 41 | Slavery |
| 1821 | “To alter and amend the several laws for the trial of Slaves and Free Persons of Color in this State” | Senate | (+) | Yeas 34 – nays 7 | Slavery |
| 1824 | “To emancipate a certain colored man by the name of Henry, commonly called Henry Adams” | Senate | (-) | Yeas 28 – nays 26 | Slavery |

| | | | | | |
|------|---|--------|-----|----------------------|---------|
| 1824 | “To manumit and set free three negroes by the names of old Ben, Lizzy, and old Milley” | Senate | (-) | Yeas 23 – nays 24 | Slavery |
| 1824 | “To repeal a law passed in the year 1817, prohibiting the introduction of slaves only on certain conditions” | Senate | (+) | Yeas 33 – nays 13 | Slavery |
| 1824 | “[To repeal] an act to regulate the intercourse between the Banks incorporated by the General Assembly of the State of Georgia, ” and the Bank of the United States” | Senate | (-) | Yeas 21 – nays 24 | Banking |
| 1824 | “[To repeal] an act to regulate the intercourse between the Banks incorporated by the General Assembly of the State of Georgia, ” and the Bank of the United States” | Senate | (-) | Yeas 23 – nays 22 | Banking |
| 1826 | “To regulate the intercourse between the banks of this State, and other institutions and brokers” | Senate | (+) | Yeas 28 – nays 26 | Banking |
| 1826 | “To amend an act to incorporate the bank of Darien, passed 15th Dec. 1818” | Senate | (+) | Yeas 30 – nays 26 | Banking |
| 1827 | “To incorporate a bank in the city of Augusta” | Senate | (+) | Yeas 38 – nays 22 | Banking |
| 1827 | “To amend an act to incorporate the bank of Darien, passed 15th Dec. 1818” | Senate | (+) | Yeas 39 – nays 27 | Banking |
| 1827 | “To manumit a male slave and a female slave by the names of Davy and Hannah” | Senate | (-) | Yeas 35 – nays 20 | Slavery |
| 1828 | “To establish a bank at Milledgeville, to be called... the Central Bank of Georgia” | Senate | (+) | Yeas 39 – nays 32 | Banking |

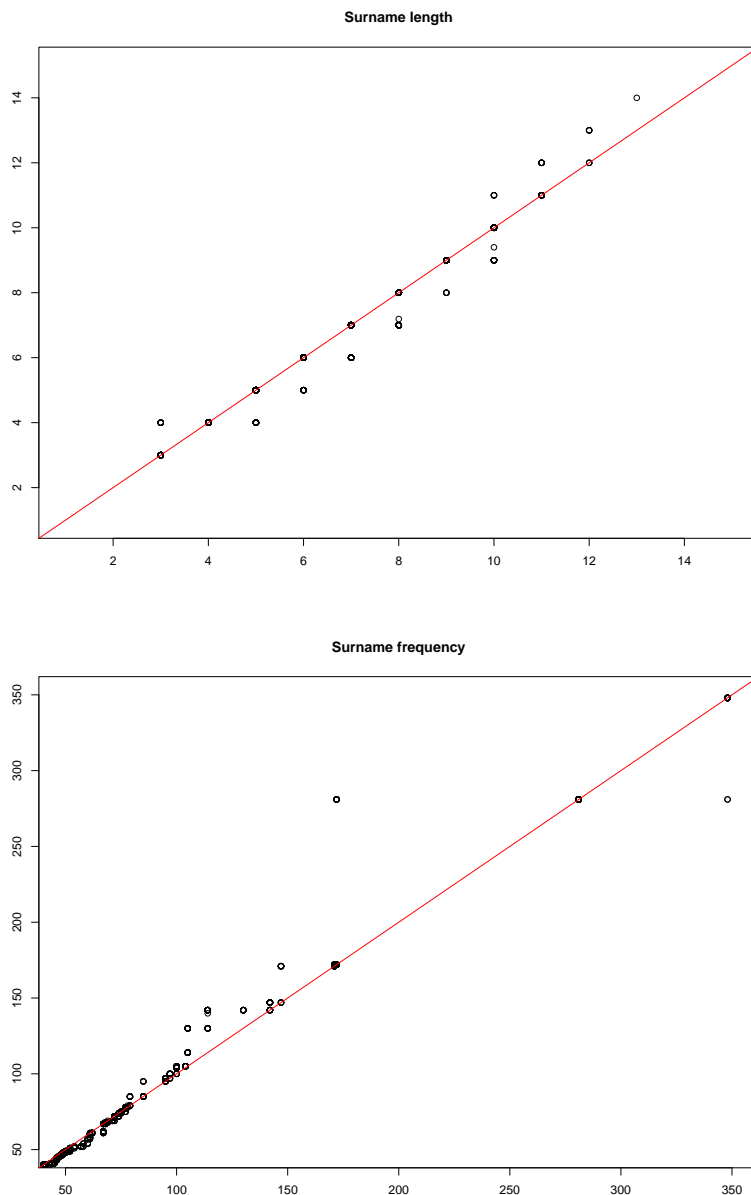
| | | | | | |
|------|---|--------|-----|-----------------------|---------|
| 1831 | “To alter and amend an act to impose an additional tax on Pedlers and other Itinerant Traders, passed the 9th December 1824; and to punish such traders for illegal trading with slaves ” | Senate | (+) | Yeas 39 – nays 27 | Slavery |
| 1831 | “To incorporate a Banking Company in the town of Hawkinsville” | Senate | (+) | Yeas 31 – nays 28 | Banking |
| 1831 | “To incorporate the Insurance Bank of Columbus” | Senate | (+) | Yeas 36 – nays 21 | Banking |
| 1831 | “To incorporate a Banking Company under the name of the Commercial Bank of Macon” | Senate | (+) | Yeas 43 – nays 29 | Banking |
| 1834 | “To extend the charter of the Darien Bank” | House | (+) | Yeas 75 – nays 65 | Banking |
| 1838 | “To authorize the Business of Banking, and to regulate the same” | Senate | (+) | Yeas 42 – nays 28 | Banking |
| 1839 | “To repeal an act to authorize the Business of Banking” | Senate | (-) | Yeas 38 – nays 48 | Banking |
| 1841 | “To protect the slave population of the people of the State of Georgia, by compelling vessels owned or commanded by citizens of, or coming from the ports of the State of Maine, and the officers, seamen and passengers thereof, to perform quarantine; and provide for a search thereof on their departure” | House | (+) | Yeas 78 – nays 92 | Slavery |
| 1842 | “To amend the charter of the Central Bank of Georgia” | House | (+) | Yeas 116 – nays 71 | Banking |

| | | | | | |
|------|---|--------|-----|----------------------|---------|
| 1842 | “To amend the charter of the Central Bank of Georgia” | Senate | (+) | Yeas 65 – nays 15 | Banking |
| 1845 | “To reduce the rate of interest on money, to 7 percent” | Senate | (+) | Yeas 24 – nays 21 | Banking |

Table 6: Summary of roll call votes on motions to pass final bills related to slavery or state banking policy. ‘Year’ is the year the bill was voted on. ‘Chamber’ indicates whether the vote occurred in the House or Senate. ‘Direction’ indicates whether an affirmative vote is coded positively (+) or negatively (-). ‘Vote total’ is the result of the roll call.

8 Balance of pretreatment characteristics

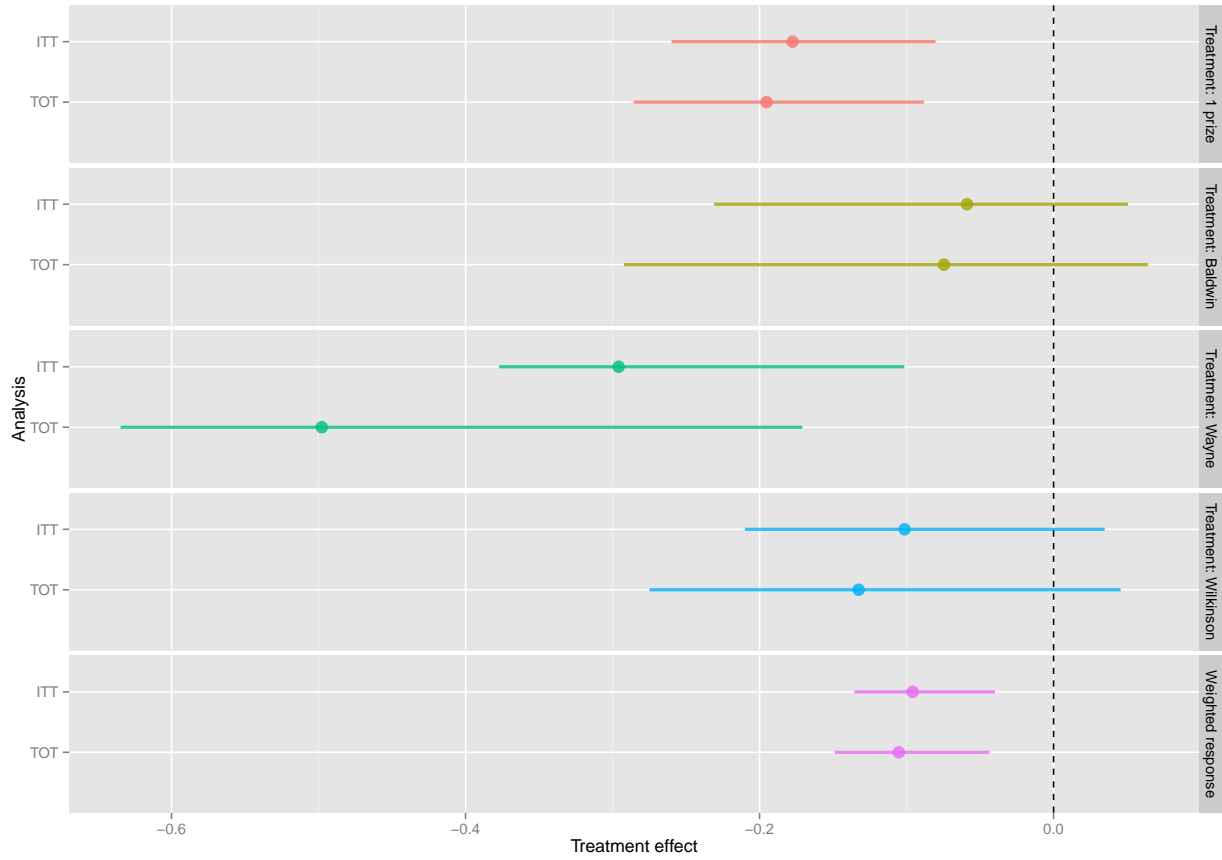
Figure 5: Normal QQ plots of surname characteristics by treatment assignment among 1805 participants.



Notes: ‘Surname frequency’ is the number of times surnames appear in the lottery records. ‘Surname length’ is the character length of surnames.

9 Sensitivity analyses

Figure 6: Sensitivity of treatment effect on slavery legislation.



Note: horizontal lines represent nonparametric 95% confidence intervals generated using 10,000 bootstrap samples.

10 Ensemble for heterogeneous treatment effects

| # slaves held (1820) | | | |
|--|-----------------|---------|--------|
| Algorithm | Parameters | Risk | Weight |
| Generalized additive models (<code>gam</code>) | degree = 2 | 119.522 | 0 |
| Generalized additive models (<code>gam</code>) | degree = 3 | 119.522 | 0 |
| Generalized additive models (<code>gam</code>) | degree = 4 | 119.522 | 0 |
| Generalized boosted models (<code>gbm</code>) | default | 118.209 | 0 |
| Generalized linear models (<code>glm</code>) | default | 119.522 | 0 |
| Lasso regression (<code>glmnet</code>) | $\alpha = 1$ | 118.156 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.25$ | 118.147 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.5$ | 118.151 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.75$ | 118.158 | 0 |
| Random forests (<code>randomForest</code>) | default | 121.764 | 0 |
| Random forests (<code>randomForest</code>) | mtry = 1 | 118.143 | 0 |
| Random forests (<code>randomForest</code>) | mtry = 5 | 119.924 | 0.035 |
| Random forests (<code>randomForest</code>) | mtry = 10 | 124.695 | 0 |
| Ridge regression (<code>glmnet</code>) | $\alpha = 0$ | 118.196 | 0 |
| Support vector machines (<code>svm</code>) | default | 121.513 | 0.964 |
| # terms after lottery | | | |
| Algorithm | Parameters | Risk | Weight |
| Generalized additive models (<code>gam</code>) | degree = 2 | 3.192 | 0 |
| Generalized additive models (<code>gam</code>) | degree = 3 | 3.192 | 0 |
| Generalized additive models (<code>gam</code>) | degree = 4 | 3.192 | 0 |
| Generalized boosted models (<code>gbm</code>) | default | 2.968 | 0 |
| Generalized linear models (<code>glm</code>) | default | 3.192 | 0 |
| Lasso regression (<code>glmnet</code>) | $\alpha = 1$ | 2.989 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.25$ | 2.993 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.5$ | 3.008 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.75$ | 2.963 | 0 |
| Random forests (<code>randomForest</code>) | default | 2.965 | 0 |
| Random forests (<code>randomForest</code>) | mtry = 1 | 2.931 | 0.449 |
| Random forests (<code>randomForest</code>) | mtry = 5 | 2.16 | 0.55 |
| Random forests (<code>randomForest</code>) | mtry = 10 | 3.07 | 0 |
| Ridge regression (<code>glmnet</code>) | $\alpha = 0$ | 2.959 | 0 |
| Support vector machines (<code>svm</code>) | default | 3.328 | 0 |

| Officeholding | | | |
|--|-----------------|-------|--------|
| Algorithm | Parameters | Risk | Weight |
| Generalized boosted models (<code>gbm</code>) | default | 0.044 | 0.958 |
| Lasso regression (<code>glmnet</code>) | $\alpha = 1$ | 0.044 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.25$ | 0.044 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.5$ | 0.044 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.75$ | 0.044 | 0. |
| Neural network (<code>nnet</code>) | default | 0.047 | 0 |
| Random forests (<code>randomForest</code>) | default | 0.047 | 0 |
| Random forests (<code>randomForest</code>) | mtry = 1 | 0.047 | 0 |
| Random forests (<code>randomForest</code>) | mtry = 5 | 0.046 | 0 |
| Random forests (<code>randomForest</code>) | mtry = 10 | 0.047 | 0.041 |
| Ridge regression (<code>glmnet</code>) | $\alpha = 0$ | 0.044 | 0 |

| Slavery legislation [†] | | | |
|--|-----------------|-------|--------|
| Algorithm | Parameters | Risk | Weight |
| Generalized additive models (<code>gam</code>) | degree = 2 | 0.15 | 0.136 |
| Generalized additive models (<code>gam</code>) | degree = 3 | 0.15 | 0 |
| Generalized additive models (<code>gam</code>) | degree = 4 | 0.15 | 0 |
| Generalized boosted models (<code>gbm</code>) | default | 0.134 | 0 |
| Generalized linear models (<code>glm</code>) | default | 0.15 | 0 |
| Lasso regression (<code>glmnet</code>) | $\alpha = 1$ | 0.126 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.25$ | 0.124 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.5$ | 0.124 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.75$ | 0.123 | 0 |
| Random forests (<code>randomForest</code>) | default | 0.113 | 0.863 |
| Random forests (<code>randomForest</code>) | mtry = 1 | 0.131 | 0 |
| Random forests (<code>randomForest</code>) | mtry = 5 | 0.115 | 0 |
| Random forests (<code>randomForest</code>) | mtry = 10 | 0.114 | 0 |
| Ridge regression (<code>glmnet</code>) | $\alpha = 0$ | 0.129 | 0 |
| Support vector machines (<code>svm</code>) | default | 0.127 | 0 |
| State banking policy [†] | | | |
| Algorithm | Parameters | Risk | Weight |
| Generalized additive models (<code>gam</code>) | degree = 2 | 0.046 | 0 |
| Generalized additive models (<code>gam</code>) | degree = 3 | 0.046 | 0 |
| Generalized additive models (<code>gam</code>) | degree = 4 | 0.046 | 0 |
| Generalized boosted models (<code>gbm</code>) | default | 0.040 | 0 |
| Generalized linear models (<code>glm</code>) | default | 0.046 | 0 |
| Lasso regression (<code>glmnet</code>) | $\alpha = 1$ | 0.045 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.25$ | 0.043 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.5$ | 0.045 | 0 |
| GLM with elasticnet regularization (<code>glmnet</code>) | $\alpha = 0.75$ | 0.045 | 0 |
| Random forests (<code>randomForest</code>) | default | 0.034 | 0 |
| Random forests (<code>randomForest</code>) | mtry = 1 | 0.044 | 0 |
| Random forests (<code>randomForest</code>) | mtry = 5 | 0.035 | 0 |
| Random forests (<code>randomForest</code>) | mtry = 10 | 0.033 | 1 |
| Ridge regression (<code>glmnet</code>) | $\alpha = 0$ | 0.043 | 0 |
| Support vector machines (<code>svm</code>) | default | 0.048 | 0 |

Notes: cross-validated risk and weights for each algorithm in response model ensembles. Ensemble method used to estimate response surfaces for participants, given their treatment assignment, number of draws, and pretreatment covariates. †: response models use pretreatment measures of wealth as features in addition to the pretreatment covariates included in the balance of treatment assignment plot.

11 Distribution of wealth for legislator–participants

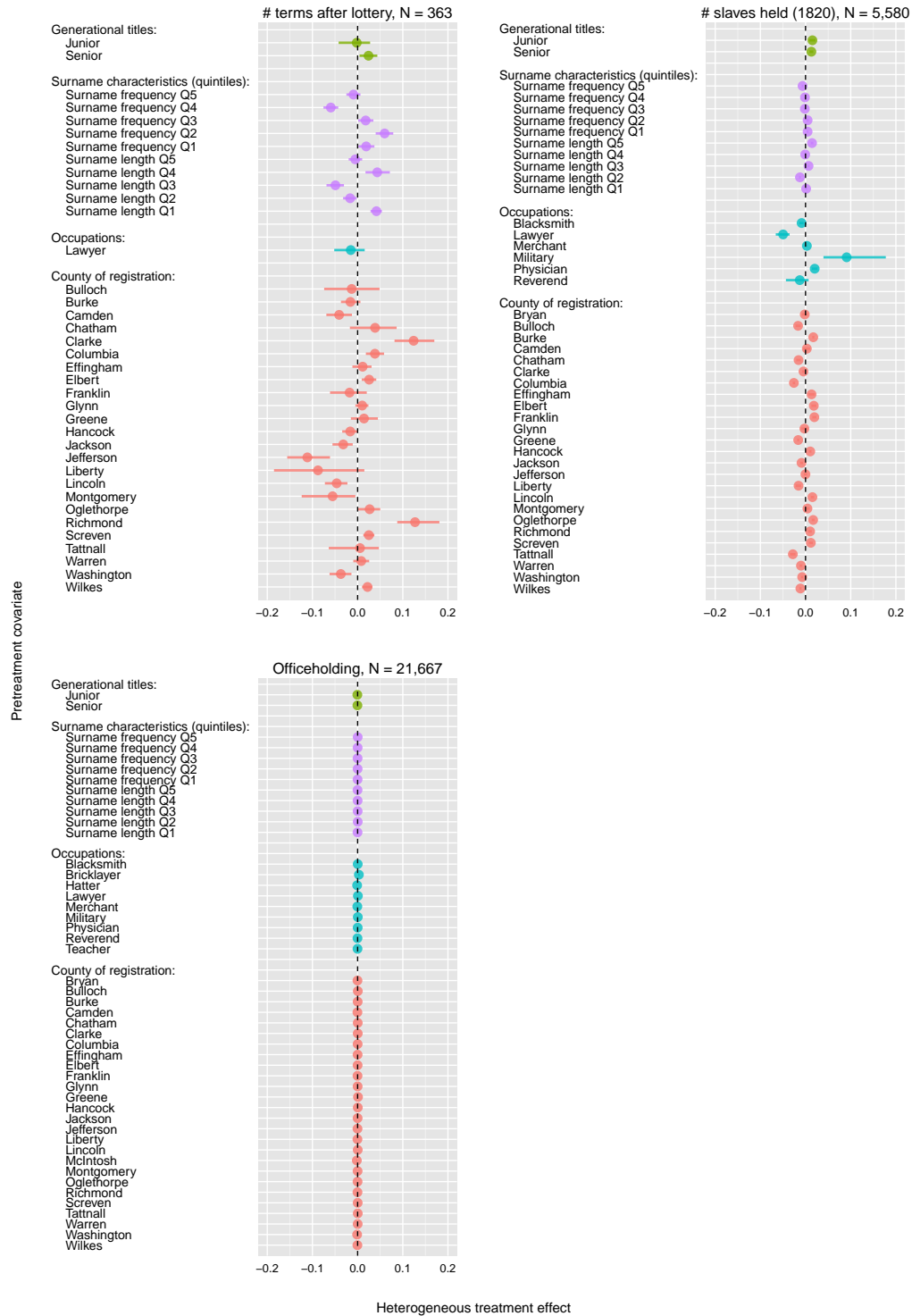
Table 7: Pre– and posttreatment wealth distribution for legislator–participants who voted on roll calls

| Panel A: Pretreatment wealth | | | | | |
|--------------------------------------|----------|-------------|-------------|-------------|-------------|
| Variable | N | Min. | Mean | Max. | S.d. |
| Slaves held | 376 | 0 | 2.335 | 24 | 4.581 |
| Land (acres) | 376 | 0 | 230.582 | 2851 | 353.329 |
| Person tax (\$) | 376 | 0.318 | 1.655 | 21.9 | 2.548 |
| Panel B: Posttreatment wealth | | | | | |
| Slaves held | 323 | 0 | 4.059 | 33 | 6.788 |
| Land (acres) | 323 | 0 | 212.466 | 2167.5 | 303.364 |
| Person tax (\$) | 323 | 0.4 | 3.416 | 20.303 | 3.963 |

Notes: distribution of pretreatment (Panel A) and posttreatment (Panel B) wealth measures derived from tax records for legislator–participants. Refer to the paper (Figure 5) for variable definitions.

12 Heterogeneous treatment effects

Figure 7: Heterogeneous treatment effects according to pretreatment covariates



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