

Wealth, Officeholding, and Elite Ideology in Antebellum Georgia

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Motivation

- ▶ Does personal wealth cause individuals to select into office, and does it influence ideology of officeholders?
- ▶ Difficult to test using purely observational data because of confounders
 - ▶ ?: US House members with white-collar backgrounds vote more conservatively on economic policy than members with blue-collar backgrounds
 - ▶ ?: natural experiment in land redistribution in 16th century Argentina. Families receiving land closer to Buenos Aires have higher probability of ex-post officeholding.

Overview of experiment

- ▶ In 1805 and 1807, state of Georgia conducted first two public land lotteries in US history (> 3.2 million acres of former Creek Nation land)
- ▶ Approximately 86% of adult white males participated
- ▶ About 15% of participants won a land lot prize valued over \$800, which represented over half of median annual income

Overview of experiment (cont.)

- ▶ Link lottery records to roster of officeholders and roll call votes
- ▶ Estimate effect of winning a lottery prize on ex-post officeholding among sample of lottery participants ($N = 21,261$)
- ▶ Estimate treatment effect on elite ideology by comparing mean of votes in support of slavery of participants who were members of Georgia's General assembly ($N = 474$)
- ▶ Results: winning lottery prize has no significant effect on ex-post officeholding, $p = 0.962$, 95% CI: $[-0.0099, 0.0088]$, nor legislators' support for slavery legislation, $p = 0.78$, 95% CI: $[-0.1456, 0.153]$

Lottery process

- ▶ 1805 lottery created three new counties from Creek lands: Baldwin, Wayne, and Wilkinson; 1807 lottery extended boundaries of Baldwin and Wilkinson counties
- ▶ Land divided into districts and square lots of 202.5 acres each (490 acres for Wayne county)
- ▶ Prize tickets representing each lot placed in “lottery wheel”
 - ▶ Blank tickets equal in number to # draws - # prizes also placed in wheel
- ▶ Eligibility extended to free white men 21+ (1 draw); orphaned children (1 draw); married men with children (2 draws) and widows with children (2 draws)
 - ▶ 1807 rules: orphan families with both parents deceased (2 draws); widows (1 draw); free white unmarried females 21+ (1 draw); 1805 fortunate drawers excluded
 - ▶ Entry fee: 12.5 cents per draw

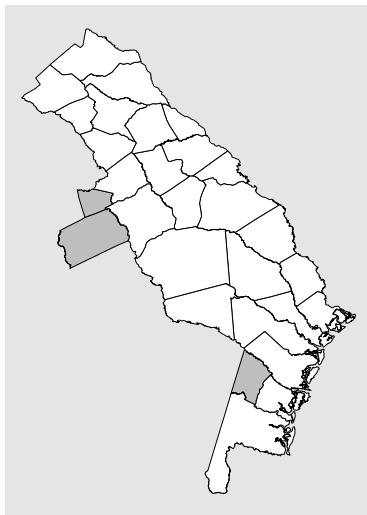


Figure: Map of Georgia with 1807 county boundaries [?]. The northernmost shaded counties are Baldwin and Wilkinson, respectively, and Wayne is the southernmost shaded county.

Data

- ▶ List of 1805 lottery participants compiled by ?
- ▶ Fortunate drawer records for 1805 and 1807 lotteries [??]
- ▶ Roster of officeholders published by Georgia Archives (Trustee period – 1847)
- ▶ Roll call votes extracted from Journals of the House and Senate of the State of Georgia
 - ▶ 15 votes: emancipate certain slaves; facilitate introduction of slaves into state and prevent slaves being carried out of the state; and punish slaves and free blacks
- ▶ Individual property tax records (1790 – 1865) [??]

Linking participants with officeholders

1. Manually deduplicate 1807 records matched with officeholders based on exact match of surname and Soundex codes of first name
2. Randomly split matched records into training (60%) and test (40%) sets
3. Fit an algorithmic model using random forests [?] on training set with features common to both datasets (test set error rate of 35%)
4. Use model to deduplicate 1805 lottery records matched with officeholders

Estimating treatment effects

- ▶ ? framework: each $i = \{1, \dots, N\}$ participants have two potential outcomes, Y_{1i} and Y_{0i}
- ▶ $Z_i \in \{0, 1\}$ denotes treatment assignment for i
- ▶ Calculate weighted difference-in-means estimator for sample average treatment effect:

$$\delta^* = \frac{\sum_{i=1}^N (Y_i | Z_i = 1)}{nP(Z_i = 1)} - \frac{\sum_{i=1}^N (Y_i | Z_i = 0)}{m(1 - P(Z_i = 1))}, \quad (1)$$

where $n = \sum_{i=1}^N Z_i$, $m = N - n$, and

$$P(Z_i = 1) = \begin{cases} \frac{\#Prizes}{\#Tickets} & \text{if } i \text{ has one draw} \\ 2 \left(\frac{\#Prizes}{\#Tickets} \right) & \text{if } i \text{ has two draws.} \end{cases} \quad (2)$$

Estimating treatment effects (cont.)

Assumption 1

No interference between units: $Y_{i\mathbf{Z}}$ varies with Z_i , but does not vary with other elements of \mathbf{Z} .

Assumption 2

Random treatment assignment: $P(Z_i | Y_{i\mathbf{Z}}) = P(Z_i)$ for all i .

- Estimate exact two-sided p value:

$$\hat{p} = \frac{\sum_{\mathcal{L}=1}^{\mathcal{L}} \mathbf{1}(|\delta_{\mathcal{L}}| \geq |\delta^*|)}{\mathcal{L}}, \quad (3)$$

where $\delta_{\mathcal{L}}$ is value of test statistic for \mathcal{L}^{th} random sample from randomization distribution

- CIs obtained by inverting randomization test

Estimating treatment effects (cont.)

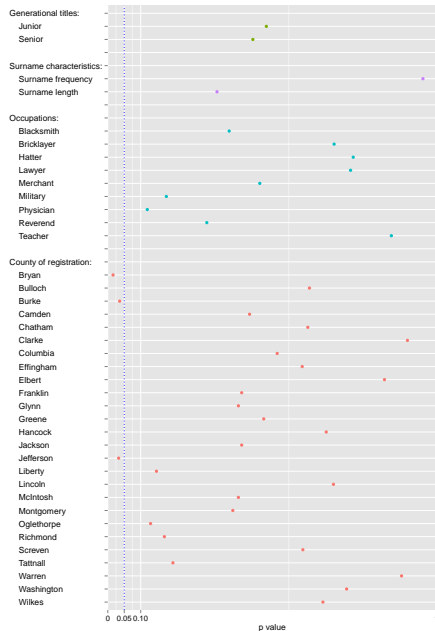
- ▶ Noncompliance is an issue: 9% in 1805 sample and 22% in combined sample
- ▶ Implement ? IV procedure: Z_i instruments for $D_i(\mathbf{Z}) \in \{0, 1\}$ indicating if treatment actually received

Assumption 3

No defiers: $D_i(1) \geq D_i(0) = 0 \quad \forall i.$

- ▶ Average causal effect on compliers:

$$\begin{aligned} & \frac{E[Y_i|Z_i = 1] - E[Y_i|Z_i = 0]}{E[D_i(1)]} \\ &= E[Y_{1i} - Y_{0i}|D_i(1) = 1] \end{aligned} \tag{4}$$



Results

Table: Officeholding by treatment assignment.

| Panel A: 1805 sample | | | | | | | |
|---------------------------------|-----|----------------|----------------------|----------------|----------------------|------------|----------------------|
| Response | | Control | %_m | Treated | %_n | All | %_N |
| Officeholder | 0 | 16747 | 93.1 | 3058 | 93.2 | 19805 | 93.2 |
| | 1 | 1234 | 6.9 | 222 | 6.8 | 1456 | 6.8 |
| | all | 17981 | 100.0 | 3280 | 100.0 | 21261 | 100.0 |
| Panel B: Combined sample | | | | | | | |
| Officeholder | 0 | 16747 | 93.1 | 10813 | 93.9 | 27560 | 93.4 |
| | 1 | 1234 | 6.9 | 705 | 6.1 | 1939 | 6.6 |
| | all | 17981 | 100.0 | 11518 | 100.0 | 29499 | 100.0 |

Notes: Distribution of officeholders by treatment assignment for sample of 1805 lottery participants (Panel A) and combined sample of 1805 participants and 1807 fortunate drawers (Panel B). Both samples exclude women orphans, and pretreatment officeholders.

Results (cont.)

Table: Support for slavery by treatment assignment.

| Panel A: 1805 sample | | | | | | | |
|---------------------------------|------------------|----------|-------------|-------------|-------------|-------------|------------|
| Variable | Treatment | N | Min. | Mean | Max. | S.d. | #NA |
| Support for slavery | 0 | 255 | 0 | 0.737 | 1 | 0.366 | 963 |
| | 1 | 219 | 0 | 0.722 | 1 | 0.382 | 632 |
| | all | 474 | 0 | 0.730 | 1 | 0.373 | 1595 |
| Panel B: Combined sample | | | | | | | |
| Support for slavery | 0 | 401 | 0 | 0.735 | 1 | 0.371 | 1353 |
| | 1 | 216 | 0 | 0.757 | 1 | 0.369 | 763 |
| | all | 617 | 0 | 0.743 | 1 | 0.370 | 2116 |

Distribution of the outcome variable, by treatment assignment, for 1805 participants (Panel A) or combined sample of 1805 participants and 1807 fortunate drawers (Panel B) who held office in the General Assembly before 1848 . 'Support for slavery' is the mean of votes in favor of slavery.

Results (cont.)

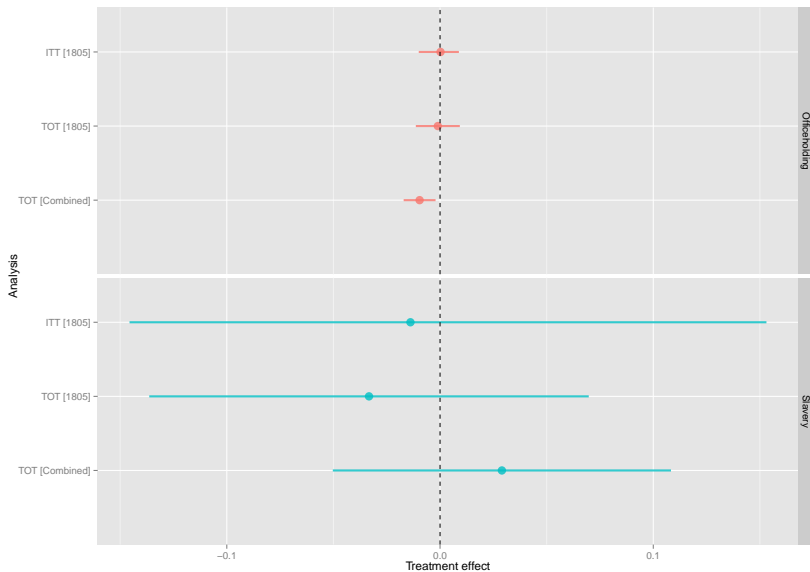


Figure: Heterogeneous treatment effects for 1805 lottery participants.

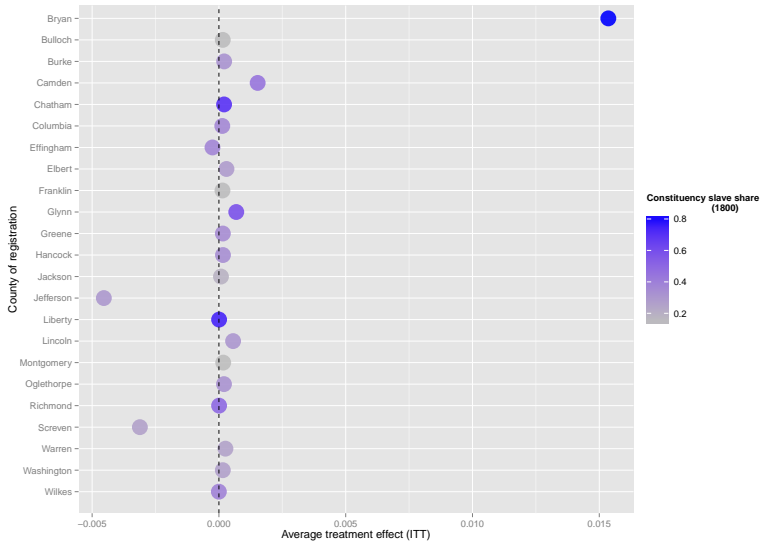


Figure: Pre- and posttreatment wealth densities for legislator-participants who voted on roll calls.

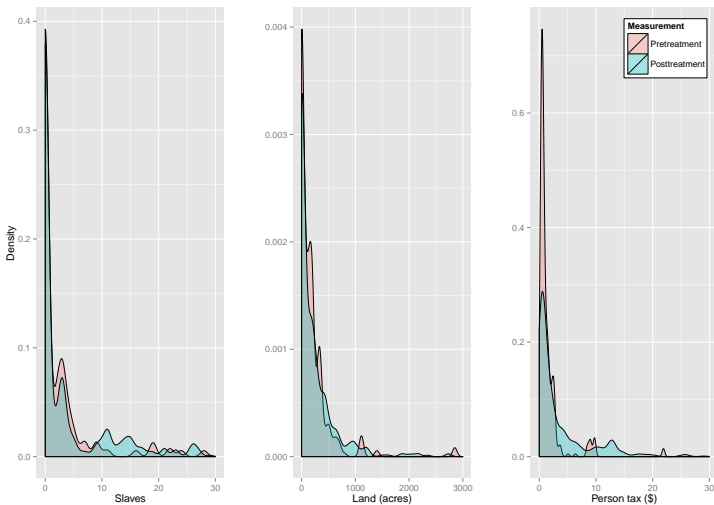
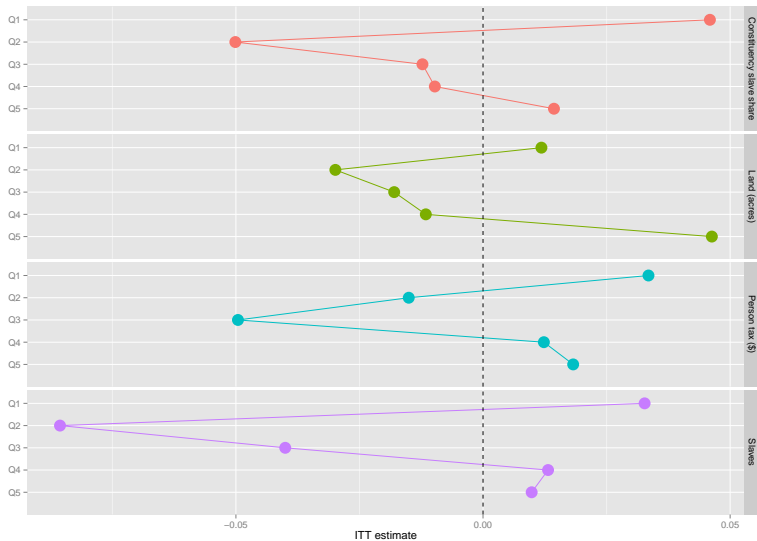


Figure: Heterogenous treatment effects for legislators who voted on roll calls.



Discussion

- ▶ If property wealth influences political power, we should be able to find evidence in antebellum South
- ▶ Officeholding: tight CIs on zero effect implies evidence “in favor of” null
- ▶ Elite ideology: too much uncertainty to detect significant treatment effect
 - ▶ Substantial heterogeneity in treatment effect according to pretreatment wealth

