PARTISAN LEAN OF STATES: ELECTORAL COLLEGE AND POPULAR VOTE

Benjamin Osafo Agyare Connor Dayton Jaucelyn Canfield

March 2, 2020



Table of Content

Introduction

- Research Questions and Data Collection
 - Research Question
 - Data Collection



Introduction

We compare federal election results for each state versus the USA in every second year from 1992 to 2018, to model partisan lean of each state and its dependence on the nationwide popular vote. For each state, we model both its current partisan lean and its rate of change, as well as sensitivity of state results with respect to the nationwide popular vote, using Bayesian linear regression. We apply this to simulate the Electoral College outcome in 2020, given even (equal) nationwide popular vote, as well as 2016, 2008, and 2004 nationwide popular vote. We backtest 2012 and 2016 elections given actual popular vote. Taking equal popular vote for two major parties, we investigate whether the Electoral College is biased towards Republicans.

Research Question

 Investigate whether the Electoral College is biased towards Republicans.



Data Collection

Our data is taken from the Federal Election Commission and the House Clerk web page for the year intervals 2000 - 2016 and 1992 - 1998 respectively.

Structure of our model:

$$y_{st} = \alpha_s + \beta_s x_t + \gamma_s t + \sigma_s \epsilon_{st}; \quad \epsilon_{st} \sim \mathcal{N}(0, 1)$$
 i.i.d

and we compute
$$x_t = ln \frac{d(e)}{r(e)}$$
 and $y_{st} = average(ln \frac{d_s(e)}{r_s(e)})$

for election events, e, and election year, $t \in \{1, 2, 3, ..., 14\}$



Data Collection

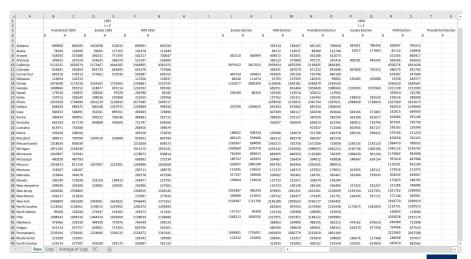


Figure 1:

