

# **Ideological Messaging Throughout the Electoral Process**

Benjamin Wittenbrink

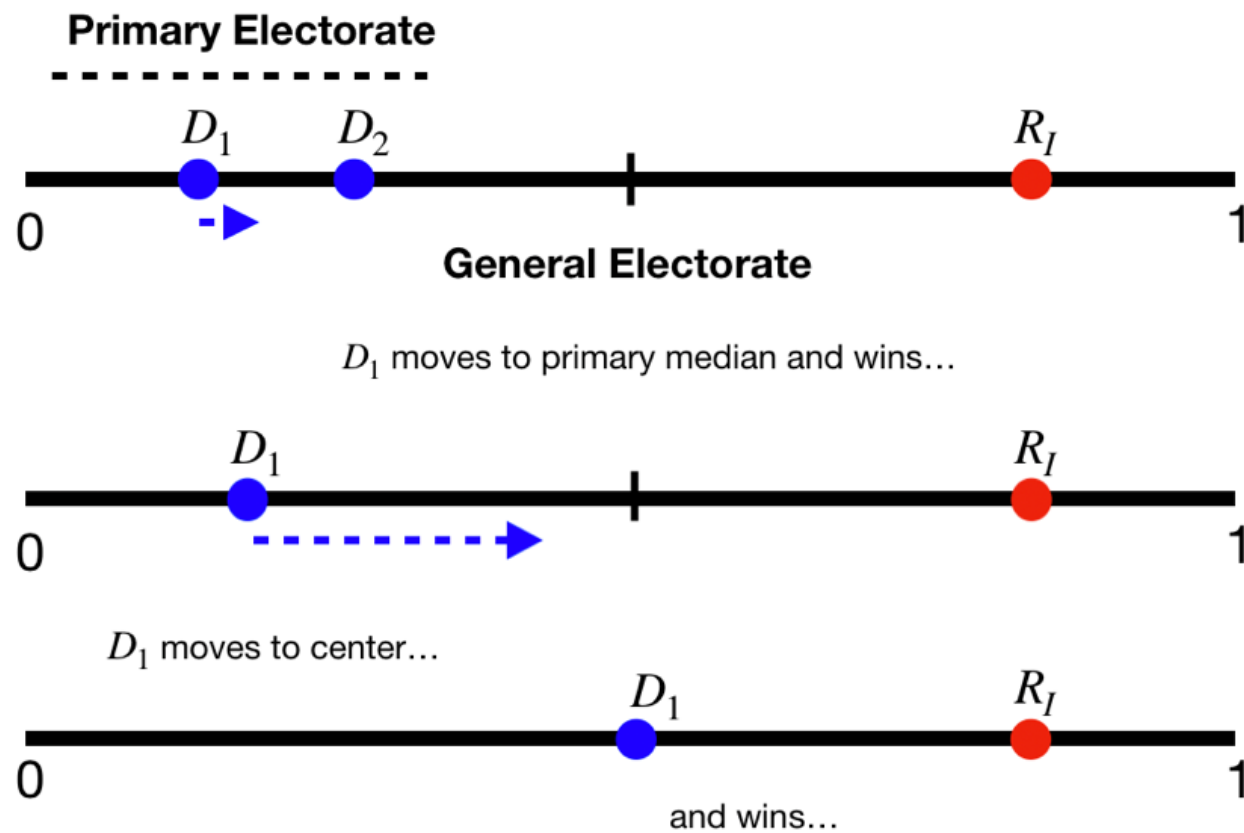
# **Question:**

**How do candidates strategically manipulate their ideological rhetoric and messaging throughout the course of an election?**

**“Run to the right in the primaries,  
then run to the center in the  
general election.”**

**-Richard Nixon**

# Intuition:

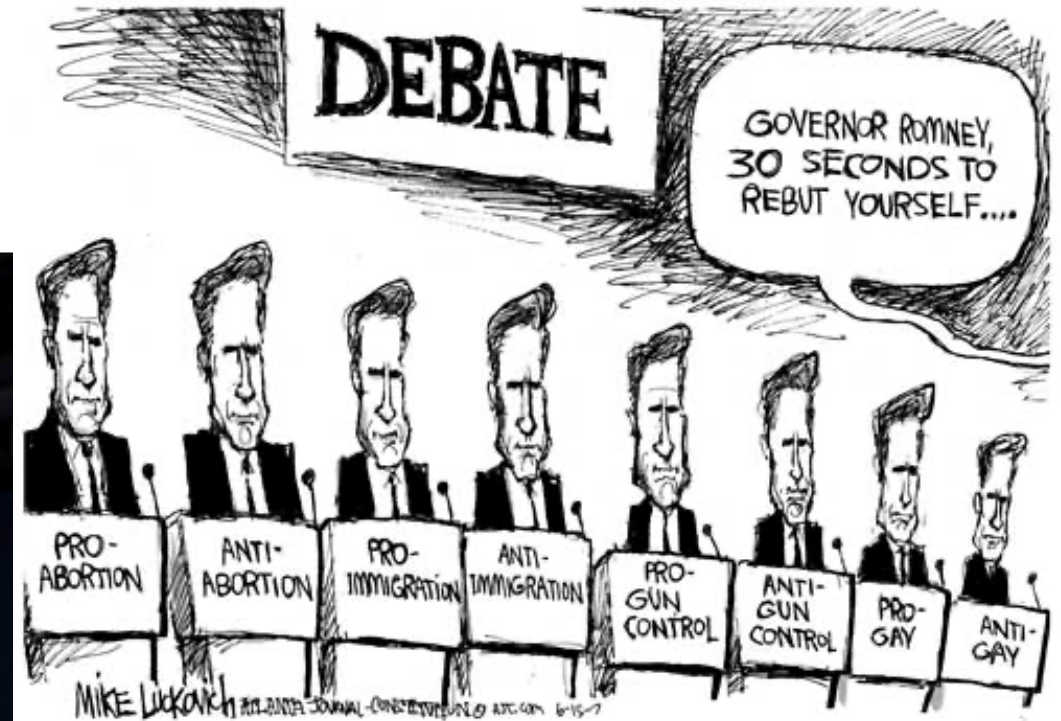


Hotelling 1929, Downs 1957

## *Hillary Clinton Embraces Ideas From Bernie Sanders's College Tuition Plan*



President Obama campaigned with Hillary Clinton at a rally in Charlotte, N.C., on Tuesday. Doug Mills/The New York Times



≡ NATIONAL REVIEW

May. 25, 2020

THE CORNER

## Mitt Flips Again

By DEROTY MURDOCK | February 11, 2011 2:15 PM

# Hypotheses

- Candidates may adopt more extreme rhetoric in the primary to rally partisan support and win the party nomination before tacking to the center to win over more moderate/independent voters in the general election
- Candidates in competitive elections face more stringent constraints on ideological rhetoric than candidates in an uncompetitive elections
- Long-time incumbent candidates face harsher flip-flopping costs than new challengers
- Candidates who survived a particularly divisive primary campaign may be forced to move toward their primary opponent to cement partisan support, rather than to the center

# Contributions

- The political science literature contains little empirical information on the evolution of candidate positions, largely due to poor data on the ideology of primary candidates
  - The few studies that do analyze ideology throughout the entire electoral process focus on incumbents, particularly due to the historical difficulty in measuring the ideological positions of losing primary candidates (Hall & Snyder, 2015)
- Important theoretical and policy implications, particularly in times of growing polarization among the electorate and Congress
- Empirical methodology captures rhetoric, “cheap talk” better than existing measures (e.g. donation data)

# Methodology

Data & Model



**Data**



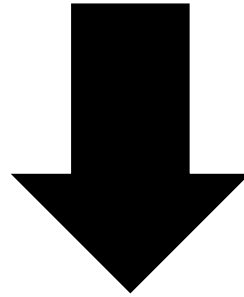
# Data

- Twitter API to obtain candidate's official campaign Tweets
- Candidate metadata from various sources
- DW-Nominate/alternative "true" ideological measures scores for sitting Congress

# Text-as-Data

- Remove stopwords and punctuation
- Stem words
- Take an n-gram approach, likely bi- or tri-grams

**“I do not approve of death taxes”**

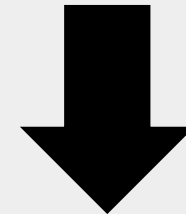


**(‘approve’, ‘death’)**

**(‘death’, ‘tax’)**

# Model

$$\begin{array}{c} \text{cand}_1 \\ \vdots \\ \text{cand}_i \\ \vdots \\ \text{cand}_m \end{array} \begin{bmatrix} \text{phrase}_1 & \cdots & \text{phrase}_j & \cdots & \text{phrase}_n \\ c_{11} & c_{12} & \cdots & \cdots & c_{1n} \\ c_{21} & \ddots & \cdots & \cdots & \vdots \\ \vdots & \ddots & c_{ij} & \ddots & \vdots \\ \vdots & \ddots & \ddots & \ddots & \vdots \\ c_{m1} & \cdots & \cdots & \cdots & c_{mn} \end{bmatrix}$$



**DW-NOM: 0.25**

# Empirical Strategy

Intuition:

- Fit baseline model of word counts of sitting Congresspeople ~ DW Nominate scores
- Use inverted model to predict DW Nominate from observed word counts of candidates

# Empirical Strategy

Formally:

- For each candidate, we observe a vector of the frequencies of each phrase
- Assume phrase counts come from multinomial logistic distribution  $c_{it} \sim \text{MN}(m_{it}, q_{it}(x_{it}))$

where  $q$  is the probability of speaking each phrase

and  $j$  indexes bigrams,  $i$  candidates, and  $t$  time

$$q_{ijt}(x_{it}) = \frac{\exp(\eta_{ijt})}{\sum_{j \in \mathcal{J}} \exp(\eta_{sj})}$$

$$\eta_{ijt} = \alpha_{jt} + \gamma_{jt}x_{it} + \varphi_{jt}\mathbf{1}_D$$

# Empirical Strategy

Formally:

- Then calculate sufficient reduction score (SR) projection to get a lower dimension

$$z_{it} = \frac{(\gamma + \varphi)c_{it}}{m_{it}}$$

- Fit simple forward linear regression model of DW Nominate ~ SR value

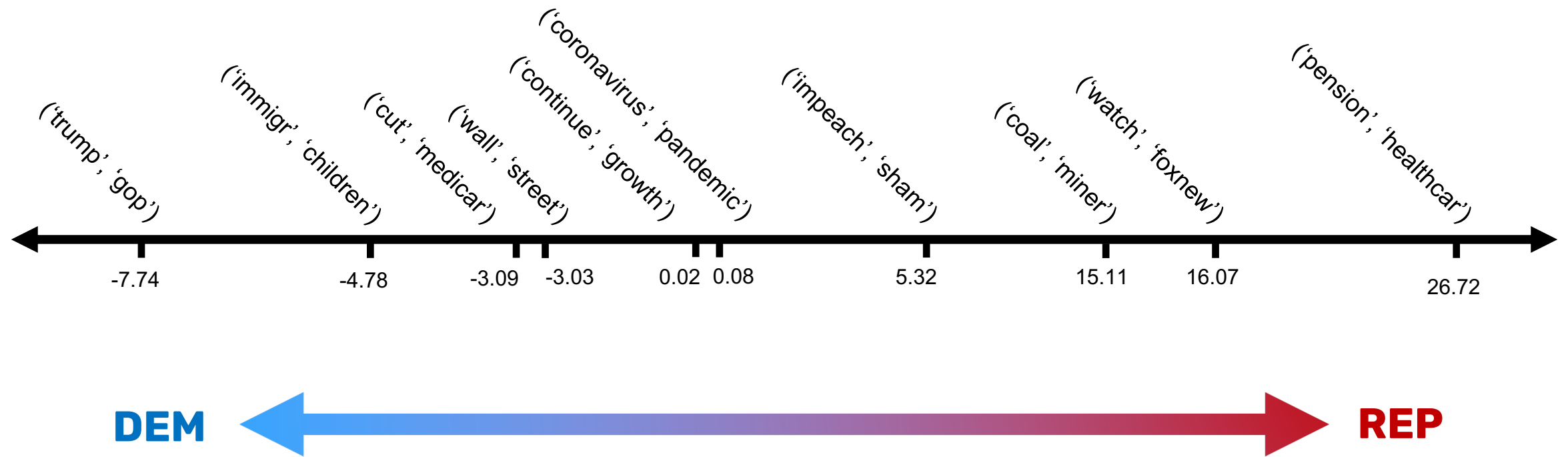
$$y_{it} \sim z_{it}$$



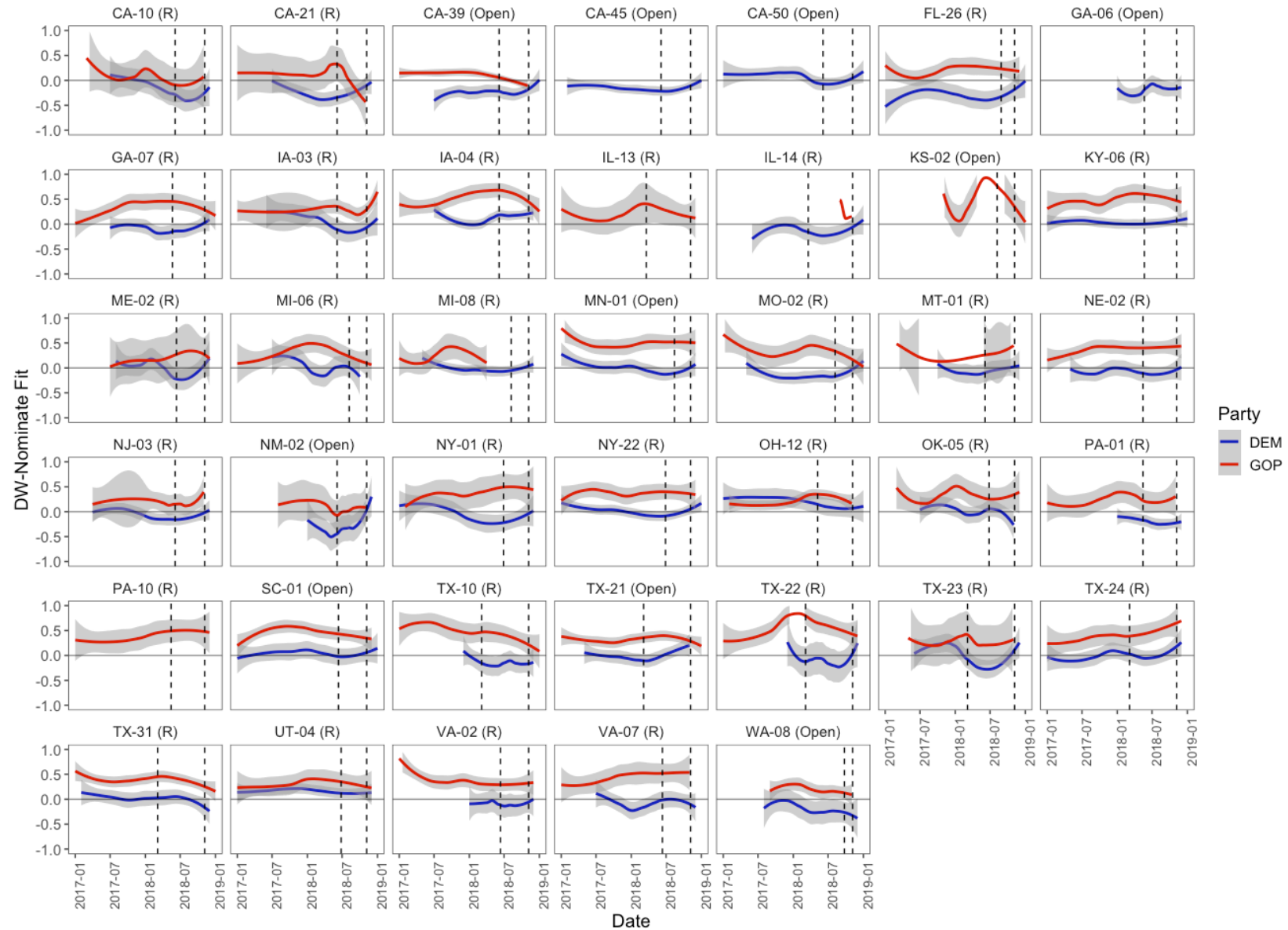
# Preliminary Results

- Train on 116th Congress (2018-2020)
- Predict ideological rhetoric of candidates in competitive house races during the 2017-2018 election cycle
- Treat each month independently to observe deviation over time, particularly from primary to general

# Sample Bigram Loadings

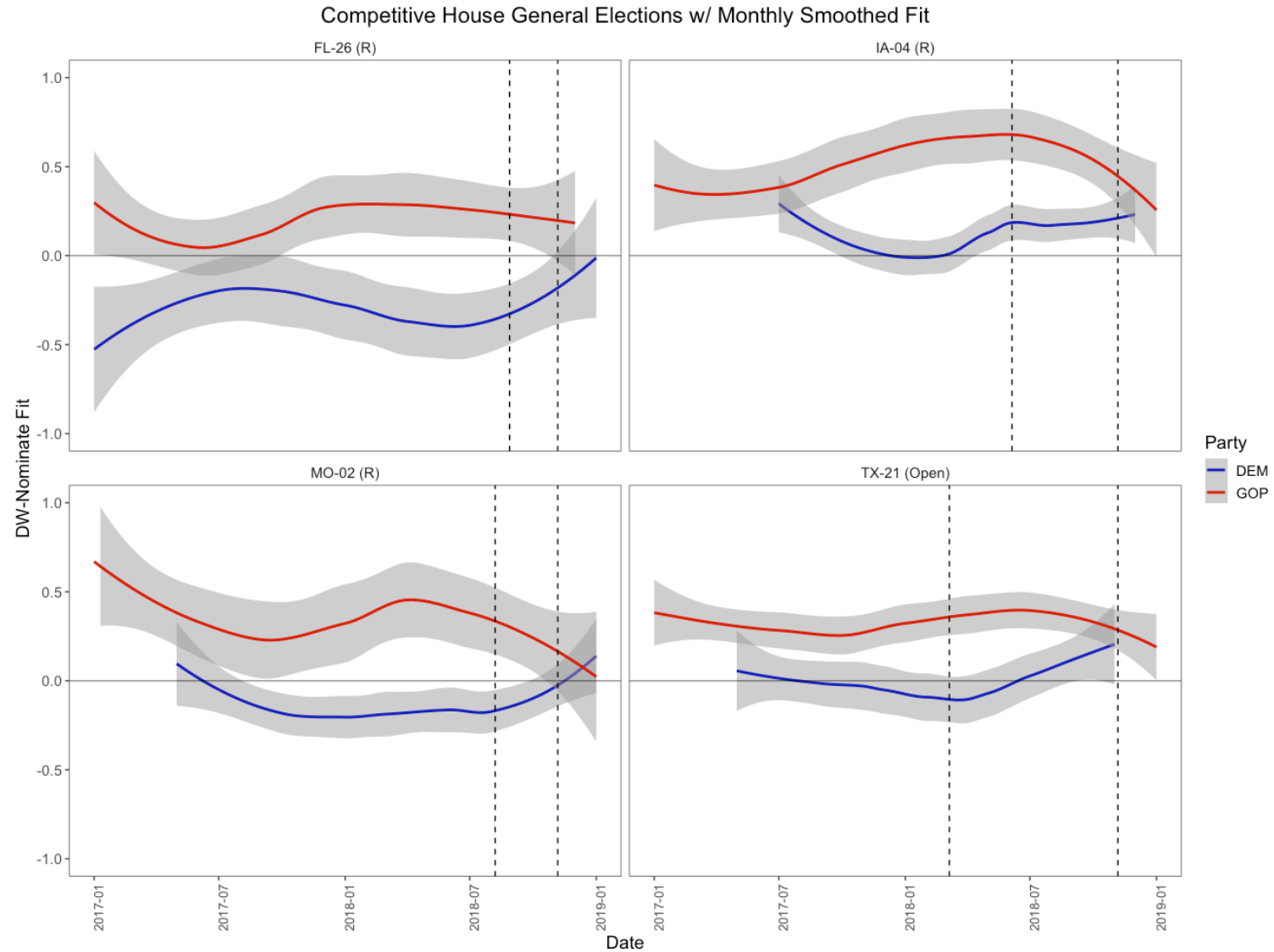


# Competitive House General Elections w/ Monthly Smoothed Fit



The first dotted line represents the primary election date, and the second the general election date.

# Zooming in...



The first dotted line represents the primary election date, and the second the general election date.

**Questions?**