How American Politics Ensures Electoral Accountability in Congress[1]

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The Plan

Model Validation: Out-of-sample tests

Prob(Incumbent Defeat): High Mean, No Trend

Intermediate Variables: Massive Change

How No Change Leads to Massive Change

Evaluating the Health of American Legislative Democracy

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  - Different combos of {Polarization, Partisanship, IncAd, Marginals, Gerrymandering bias} $\rightsquigarrow$ the same Prob(Defeat)

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  - Interpret: to understand the big picture

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$$v_{it} \sim \mathcal{N}(\mu_{it}, \sigma^2) \qquad \text{Regression}$$
$$\mu_{it} = X_{it}\beta_t$$

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$$v_{it} \sim \mathcal{N}(\mu_{it}, \sigma^2) \qquad \text{Gelman-King's JudgeIt}$$
$$\mu_{it} = X_{it}\beta_t + \gamma_i$$

- District Uniqueness: $\gamma_i \sim \mathcal{N}(0, \sigma_\gamma^2)$

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- Ablation studies: every component essential

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- v_{it}: Dem vote proportion
- X_{it}: lag(vote), Inc party, Inc status, uncontestedness, South

$$v_{it} \sim \text{ALT}(\mu_{it}, \sigma^2, \nu_t) \qquad \text{LogisTiCC}$$
$$\mu_{it} = X_{it}\beta_t + \gamma_i + \eta_t$$

- District Uniqueness: $\gamma_i \sim \mathcal{N}(0, \sigma_\gamma^2)$
- National Swing: $\eta_t \sim \mathcal{N}(0, \sigma_\eta^2)$
- Coeff. Stability: $\beta_t \sim \mathcal{N}(\bar{\beta}, \sigma_\beta^2) \rightsquigarrow$ Midterm penalty, Early exits
- Surprises (nonlinear, nonnormal): $\ln[v_{it}/(1 - v_{it})] \sim t(\mu_{it}, \sigma, \nu_t)$
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- Extensions: uncontested outcomes; > 2 parties

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- Extensions: uncontested outcomes; > 2 parties
- Computation: extensive but easy; ElectIt Software

“Moral Certitude”: Elections outside 99.99% CI

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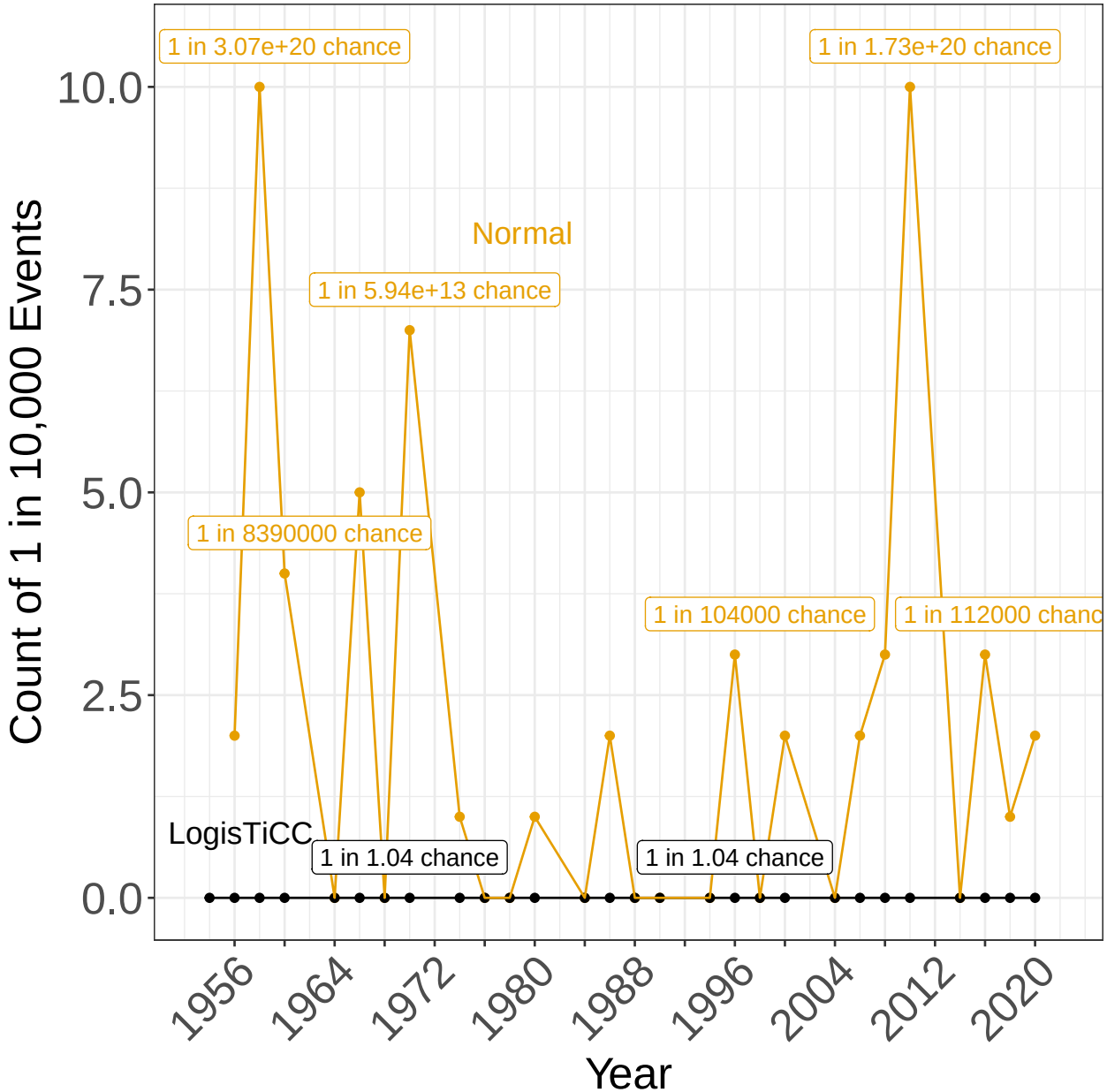

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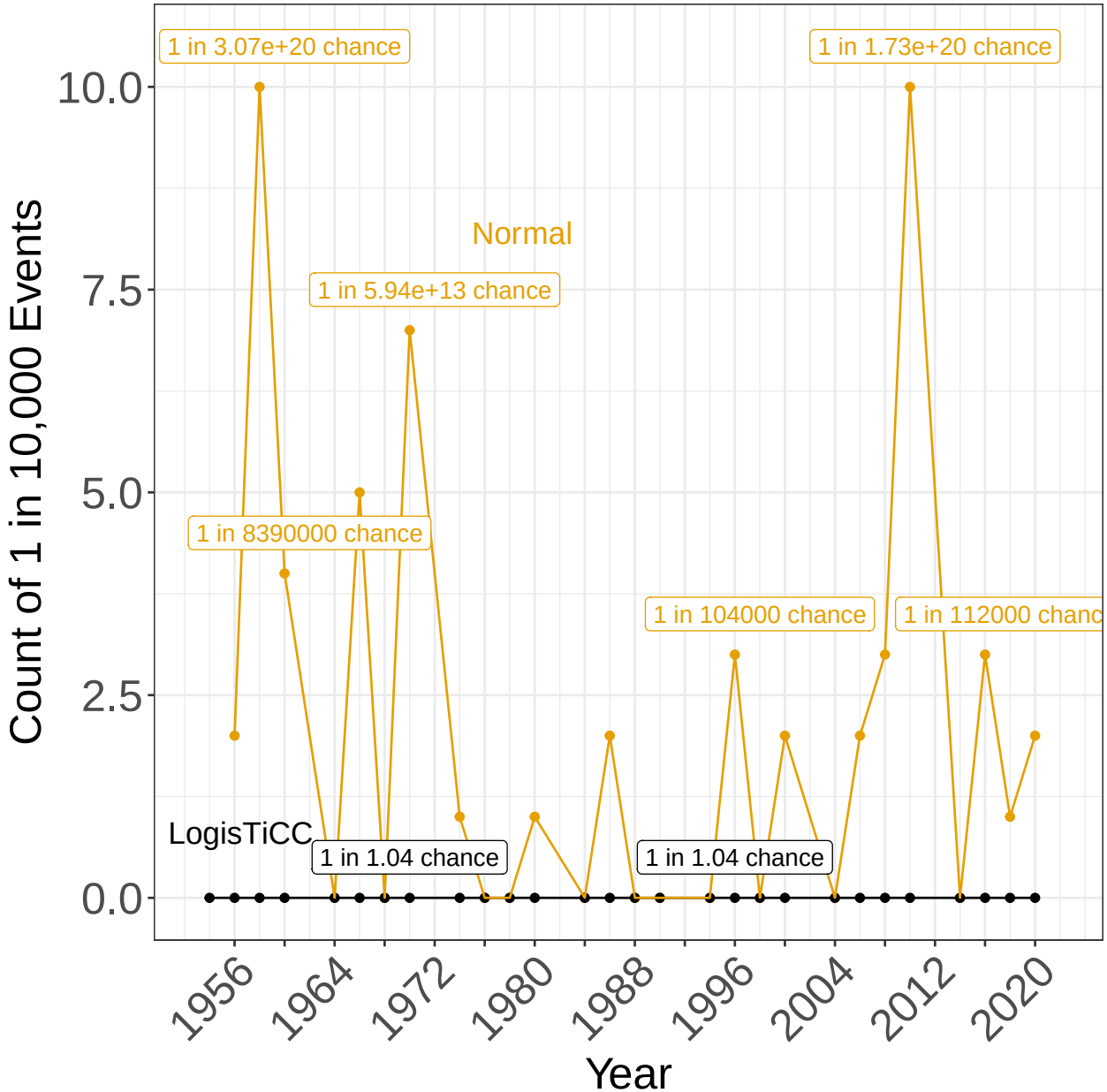

1-in-10K Events:

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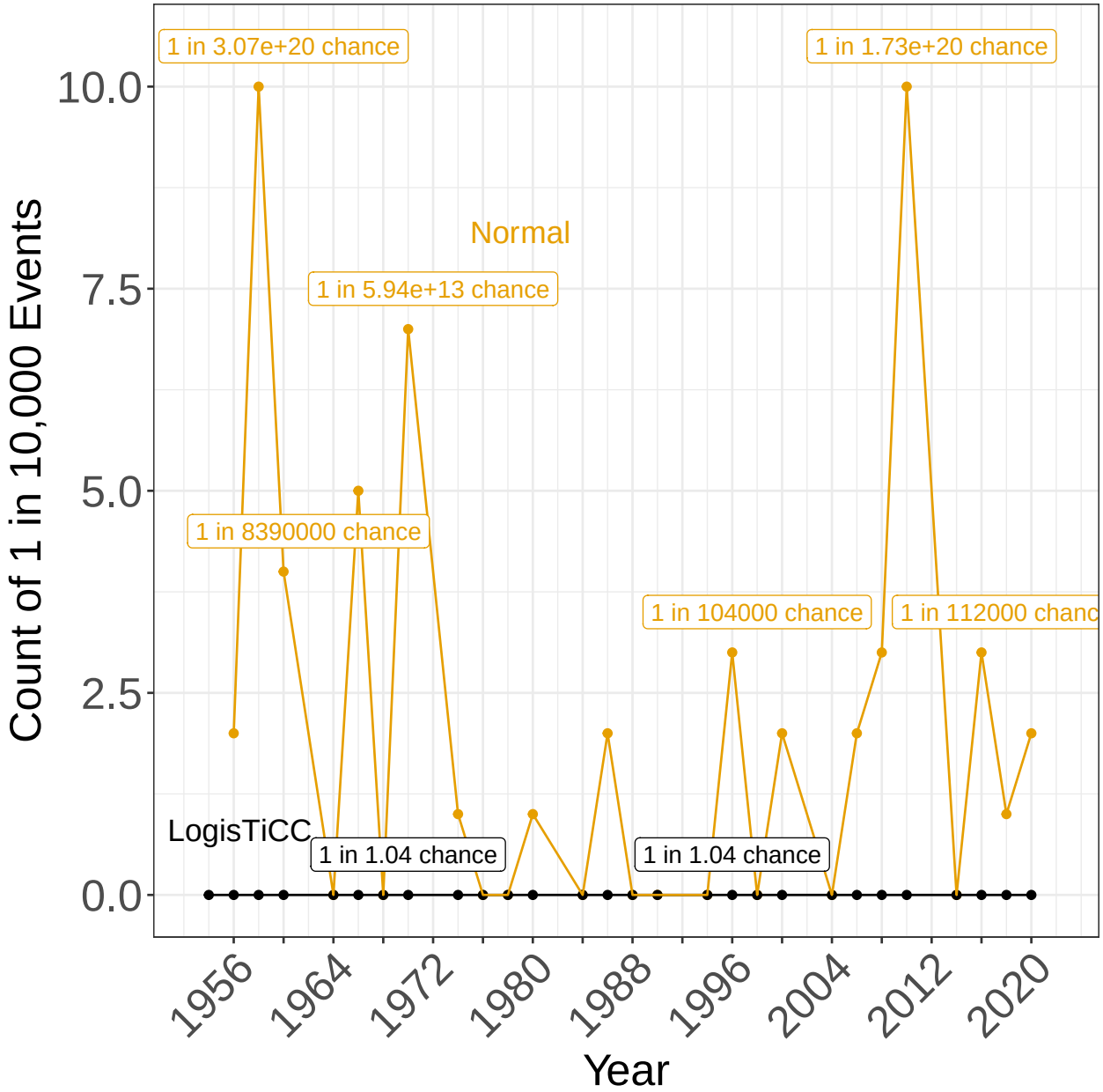

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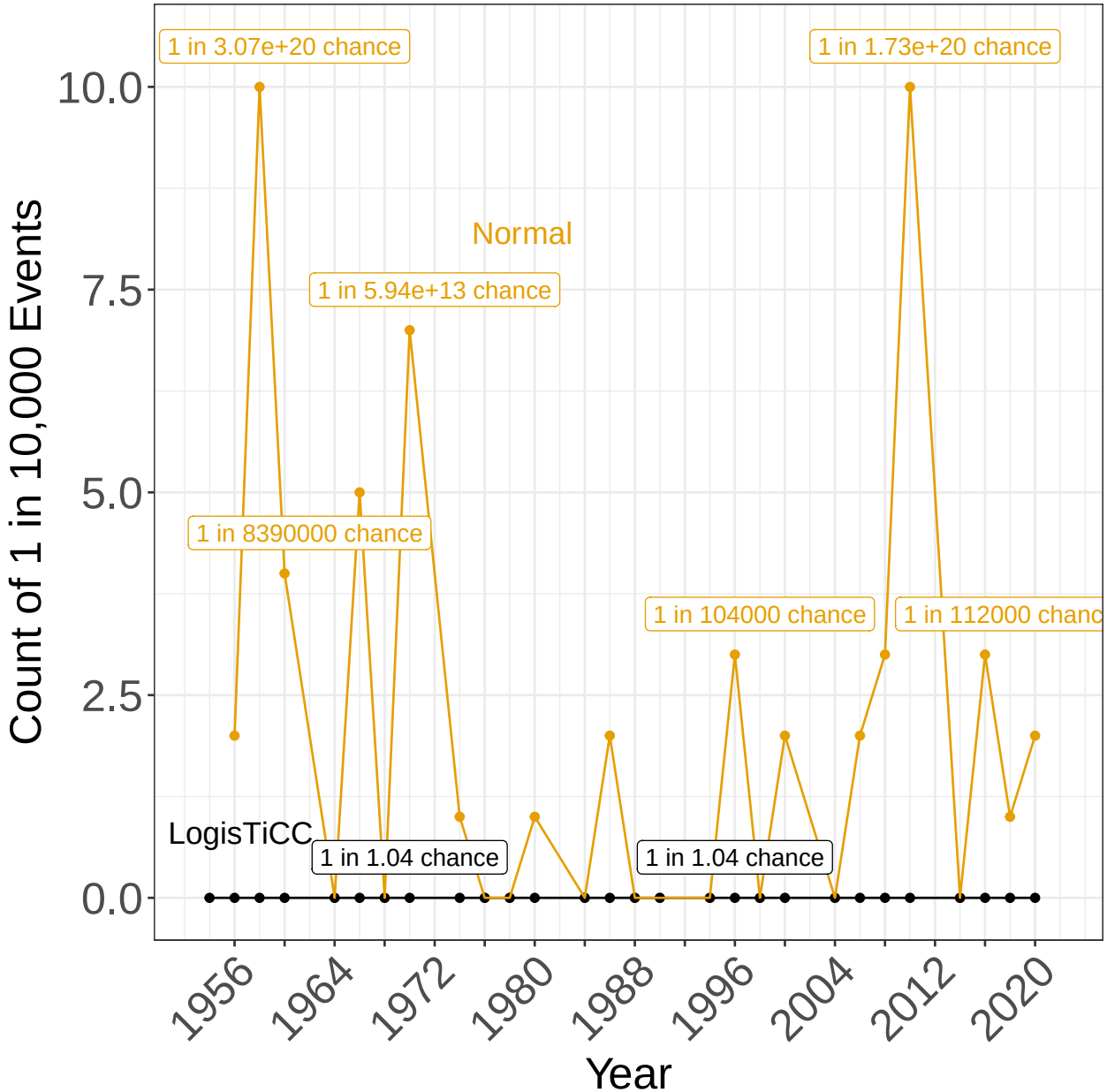

1-in-10K Events:

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Normal:
All the time!

Competitiveness Calibration

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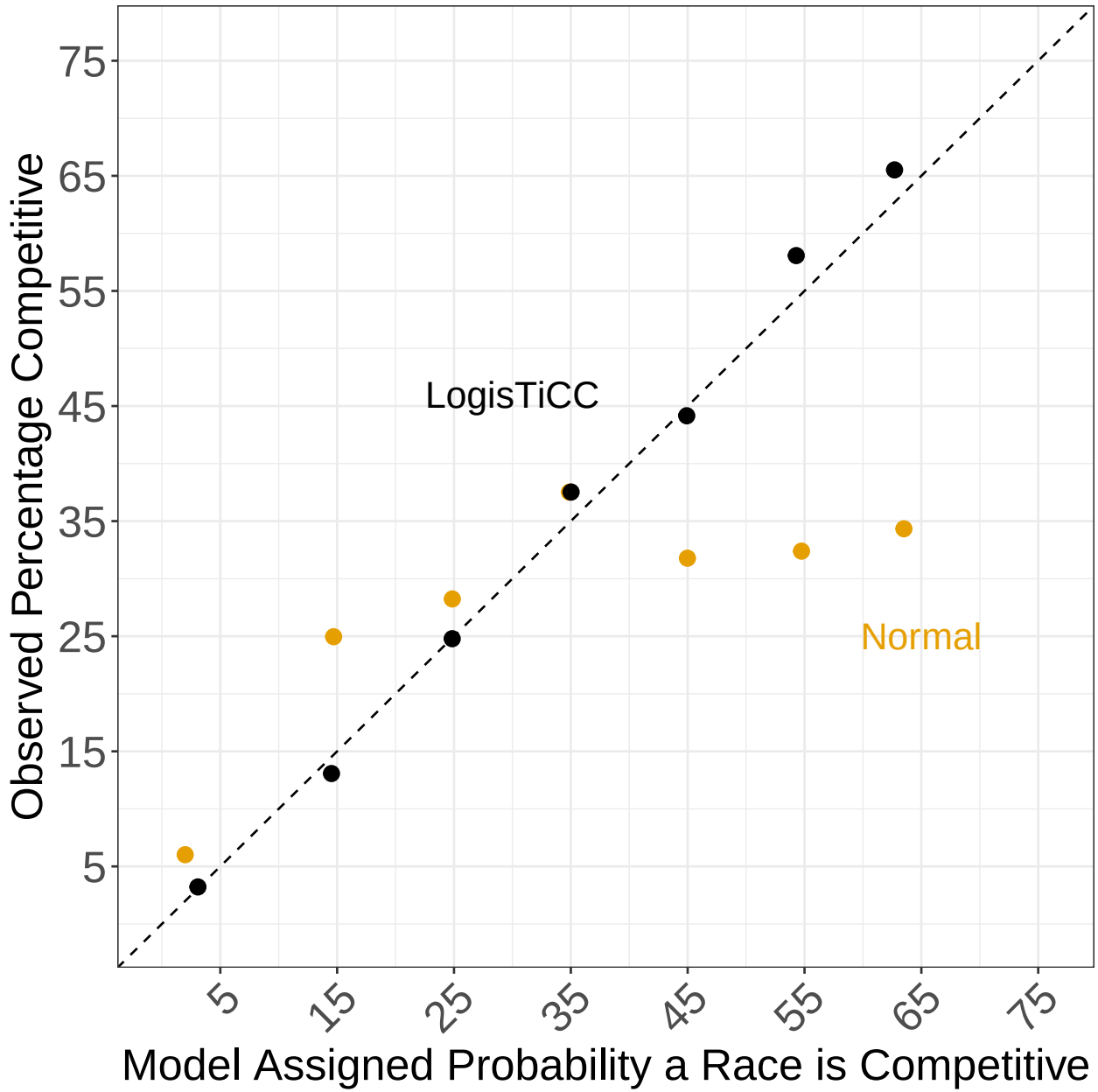

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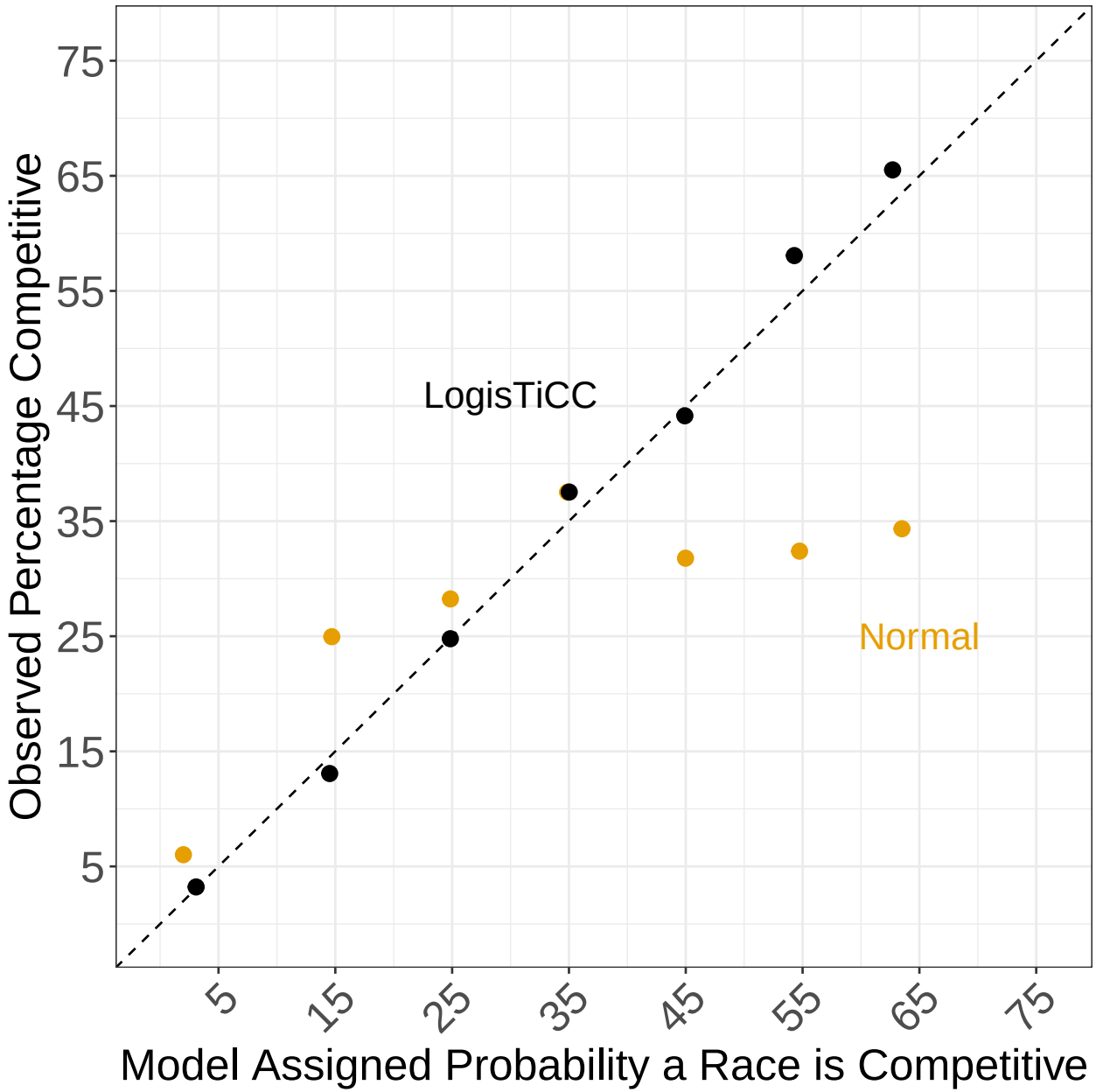

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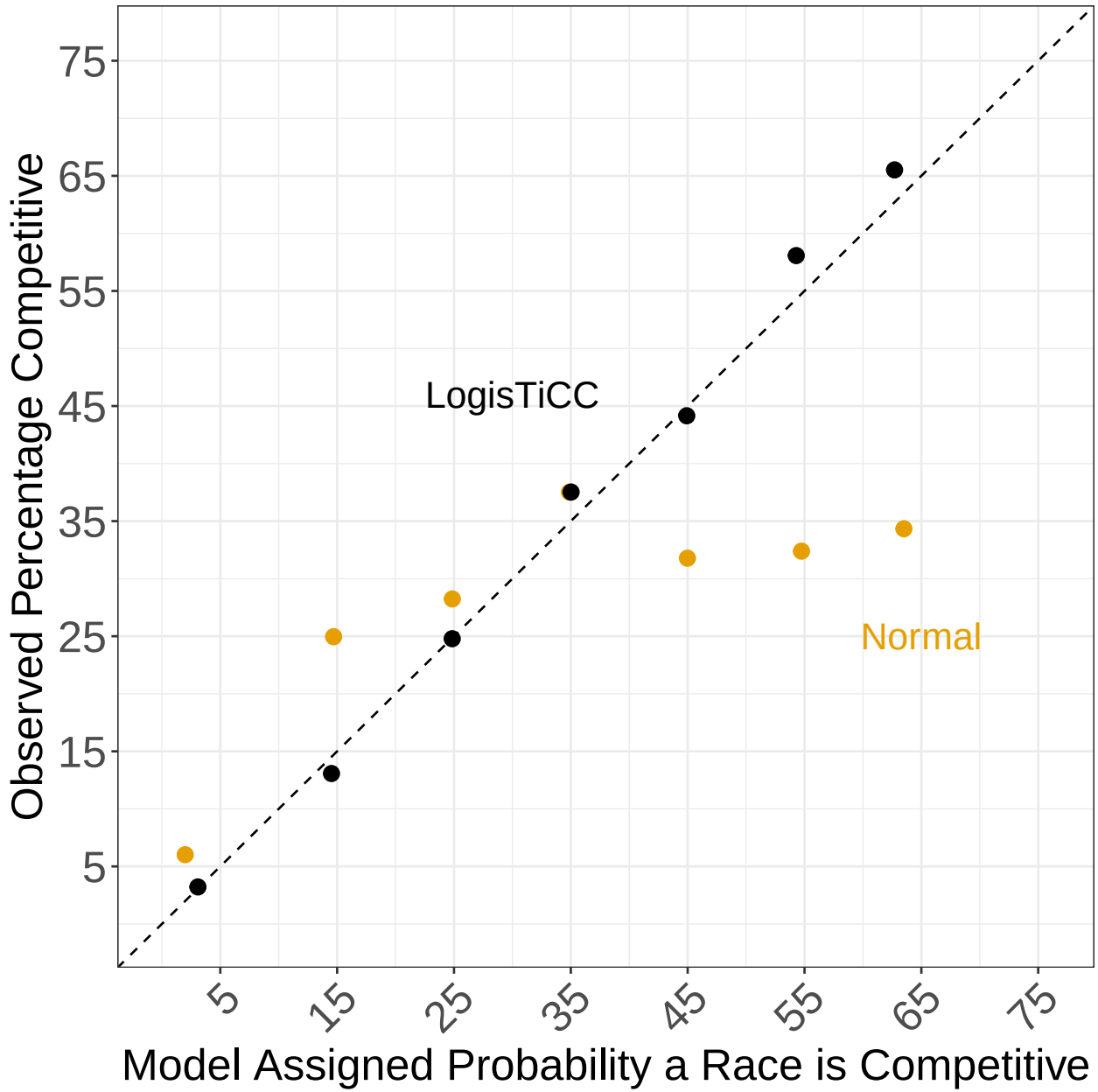

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Normal: Fails for the most important elections

95% CI Coverage:

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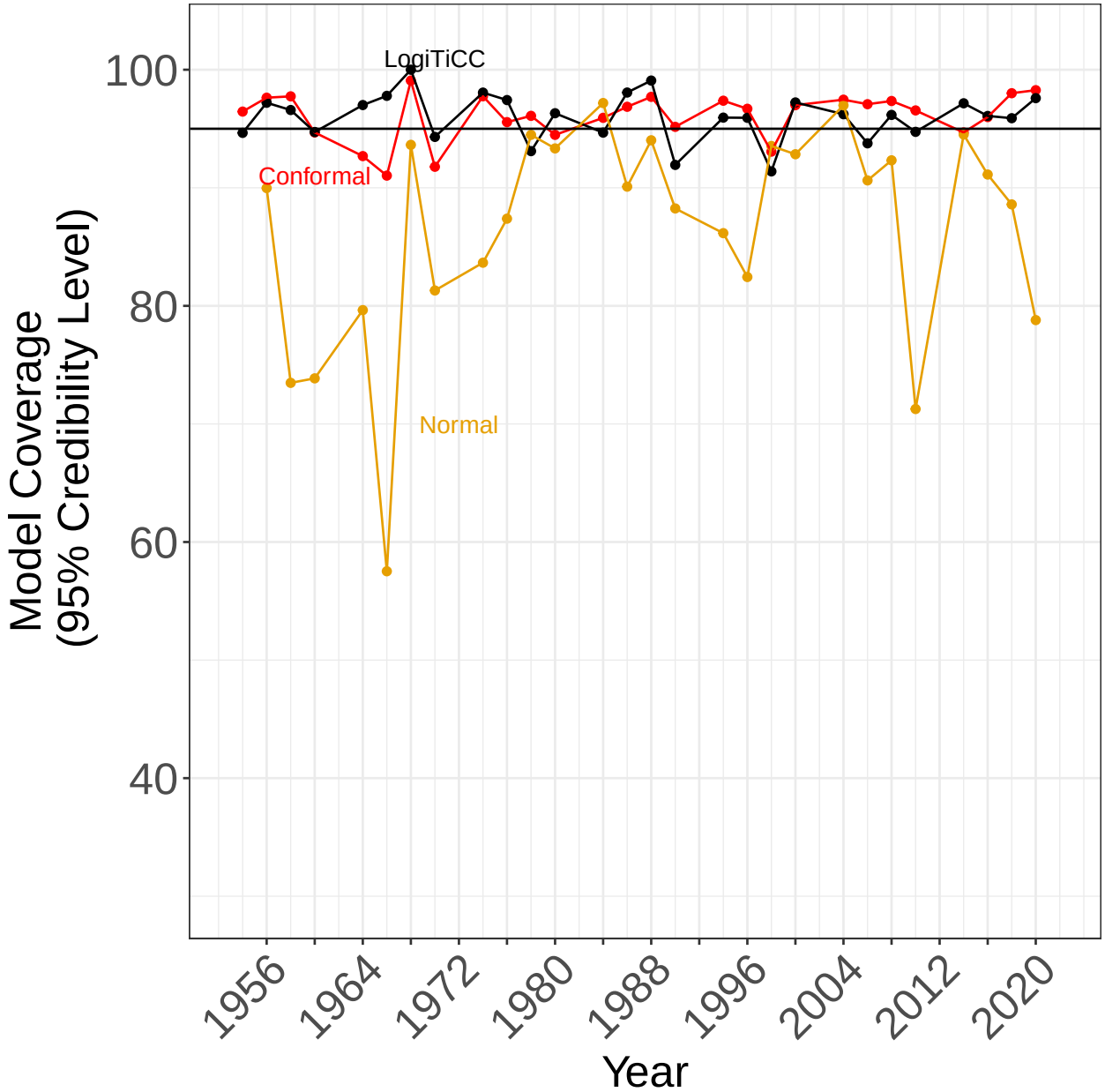

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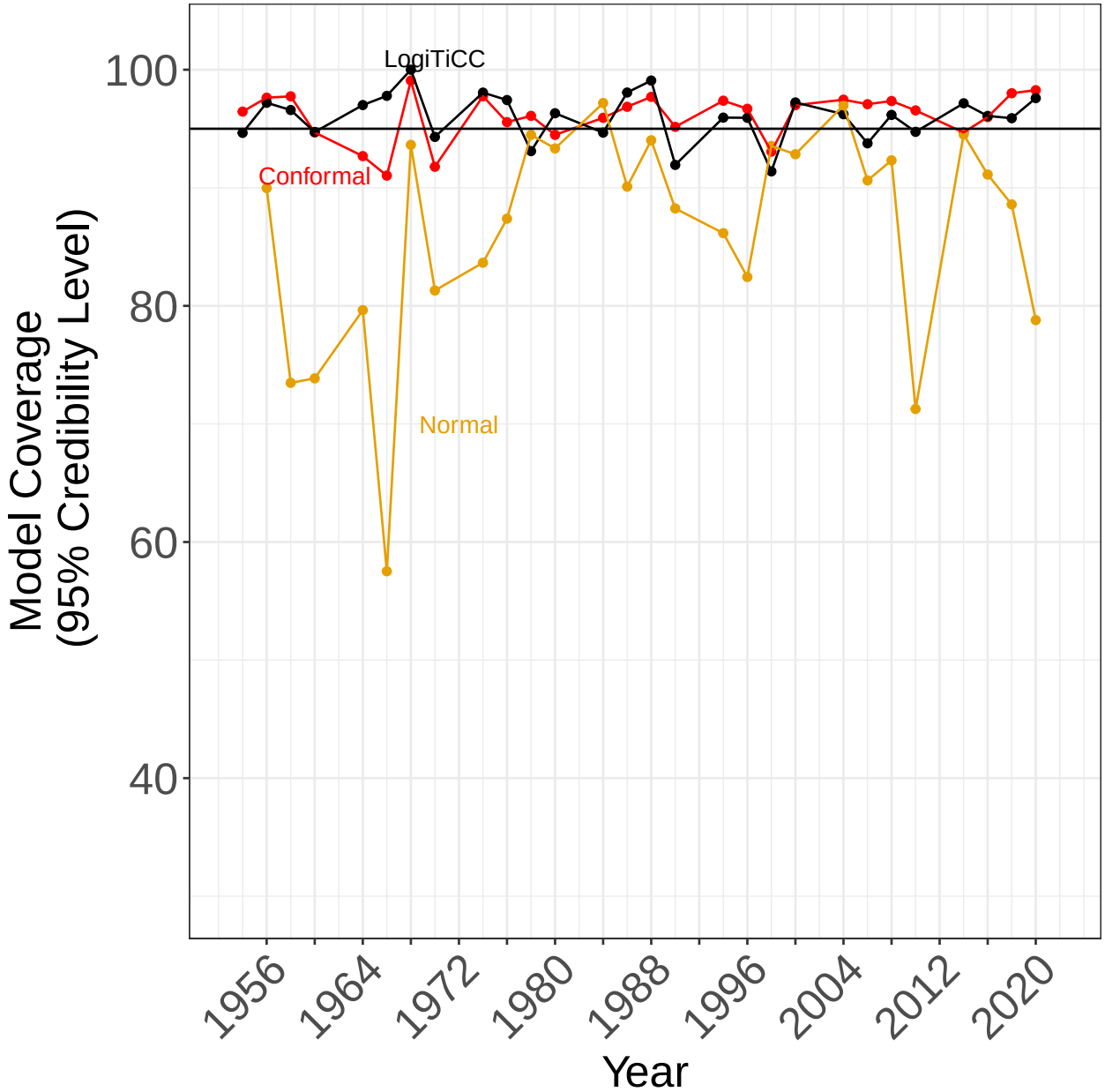

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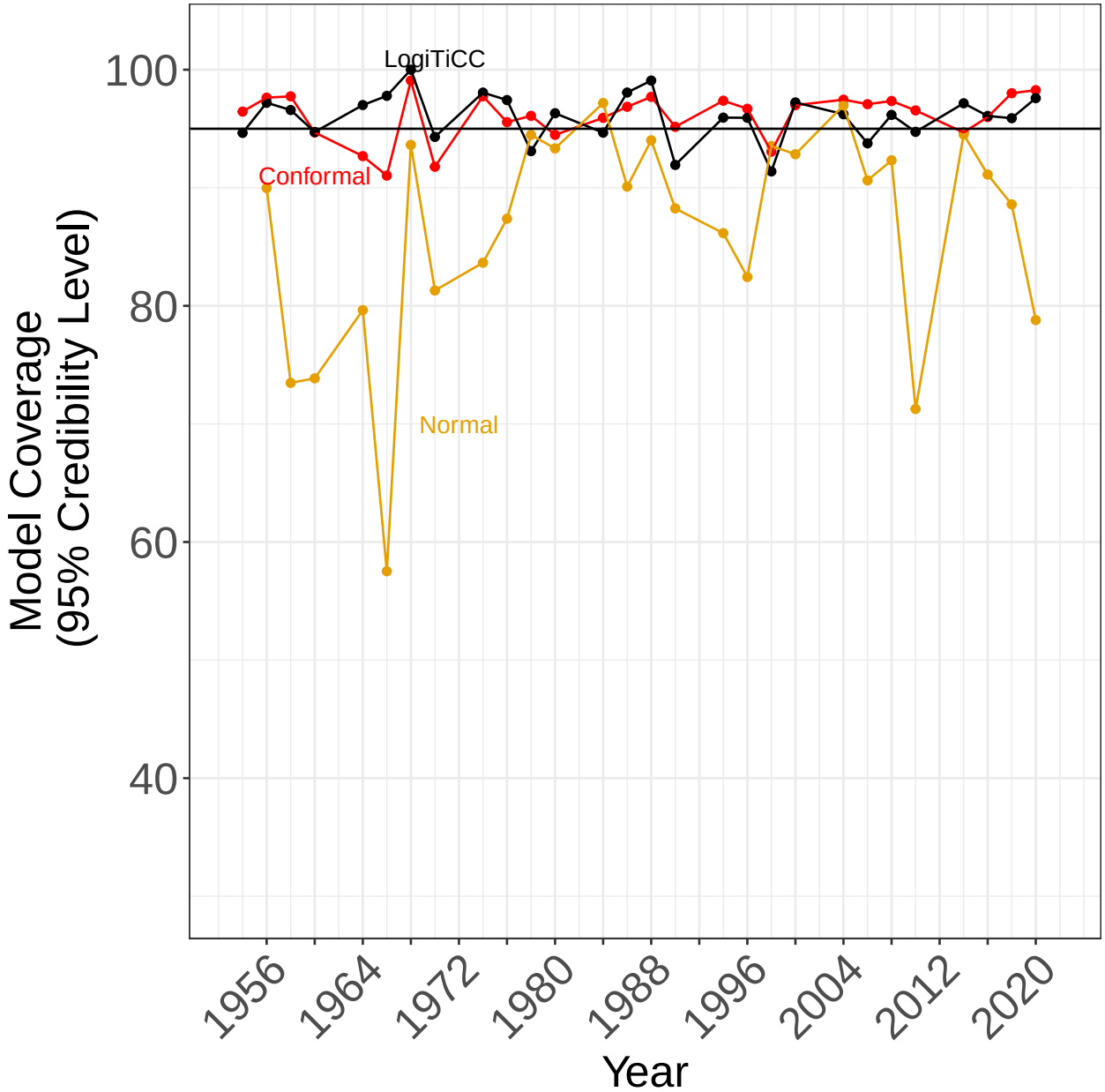

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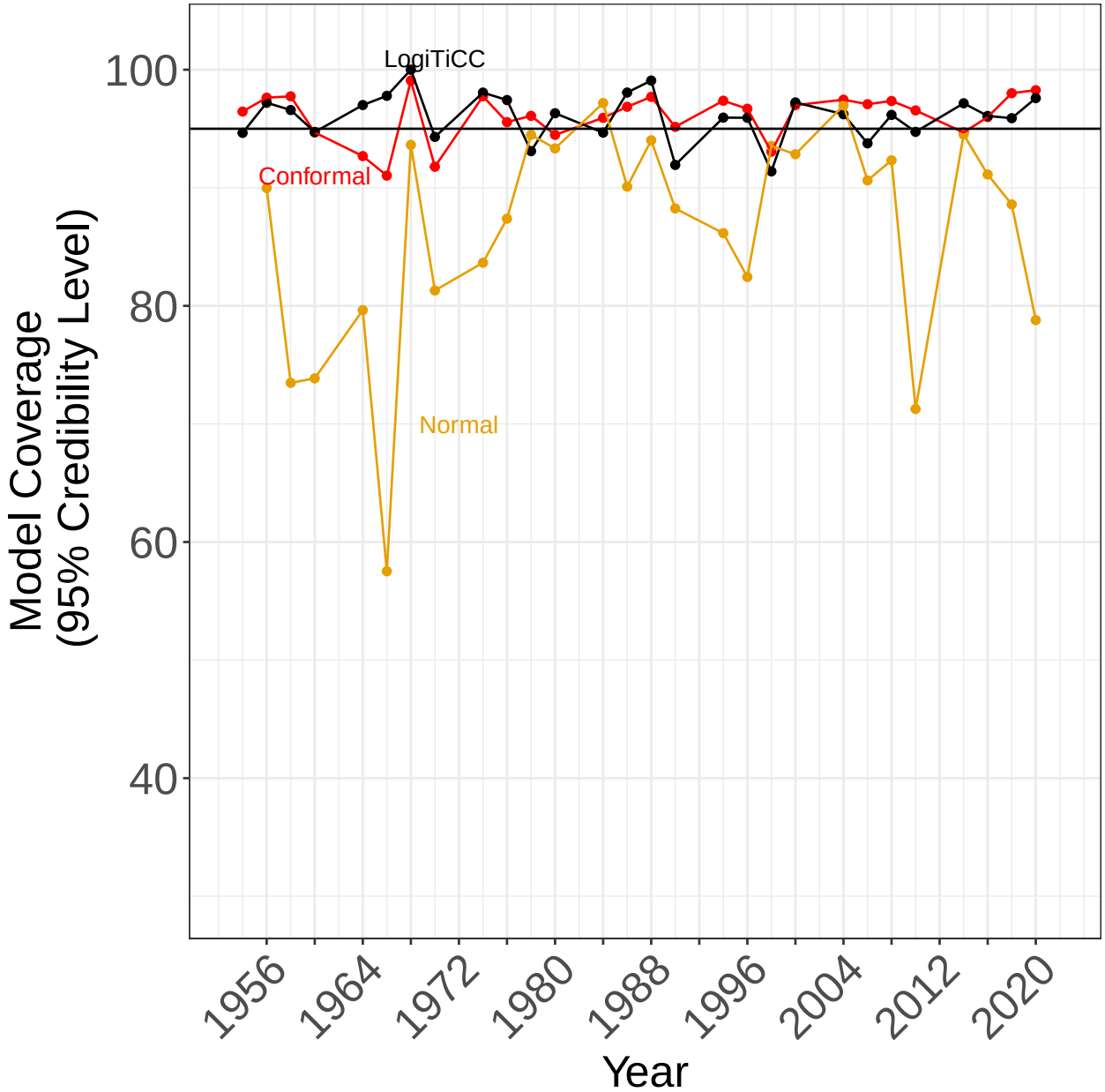

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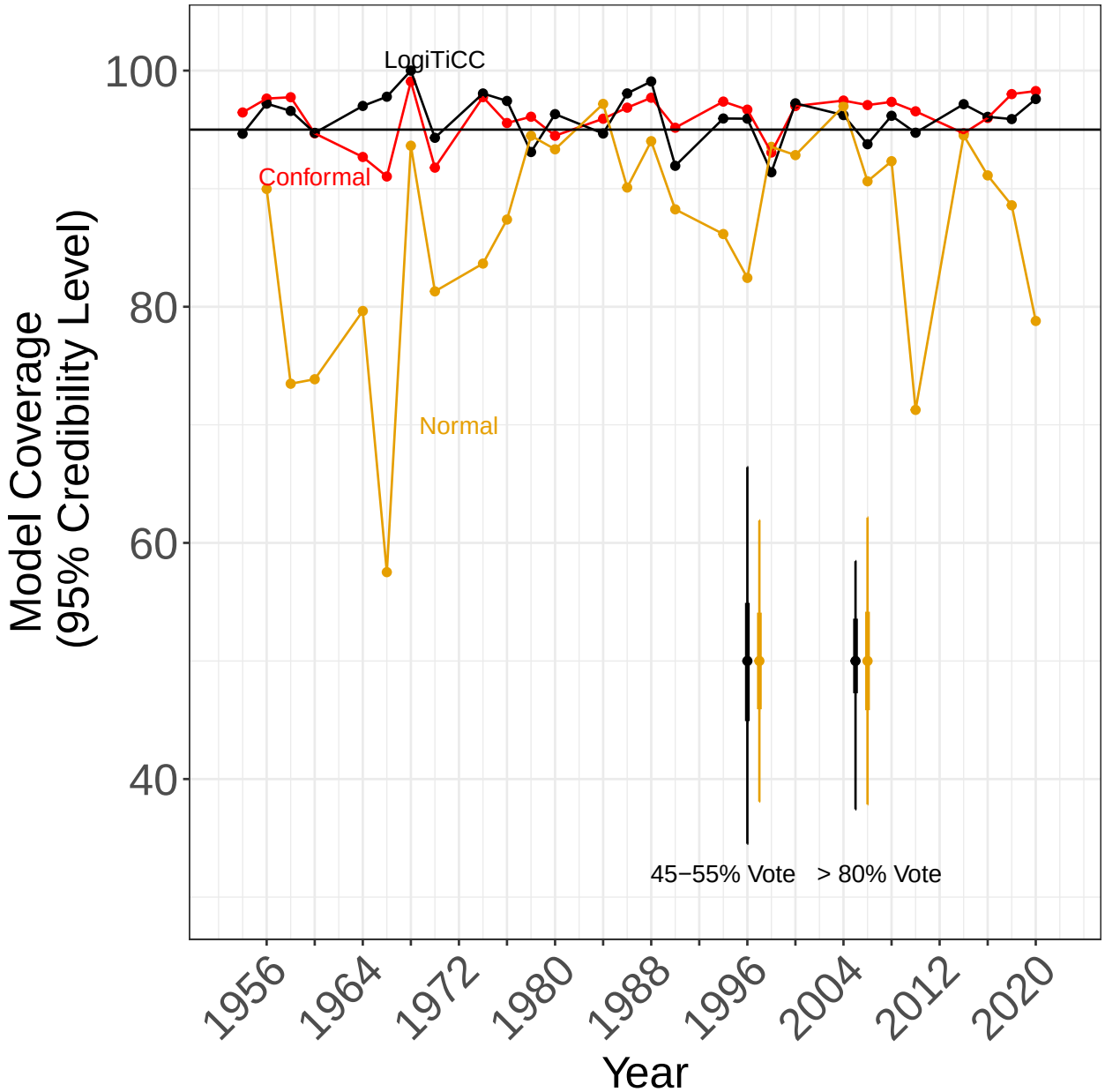

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Average CI Width

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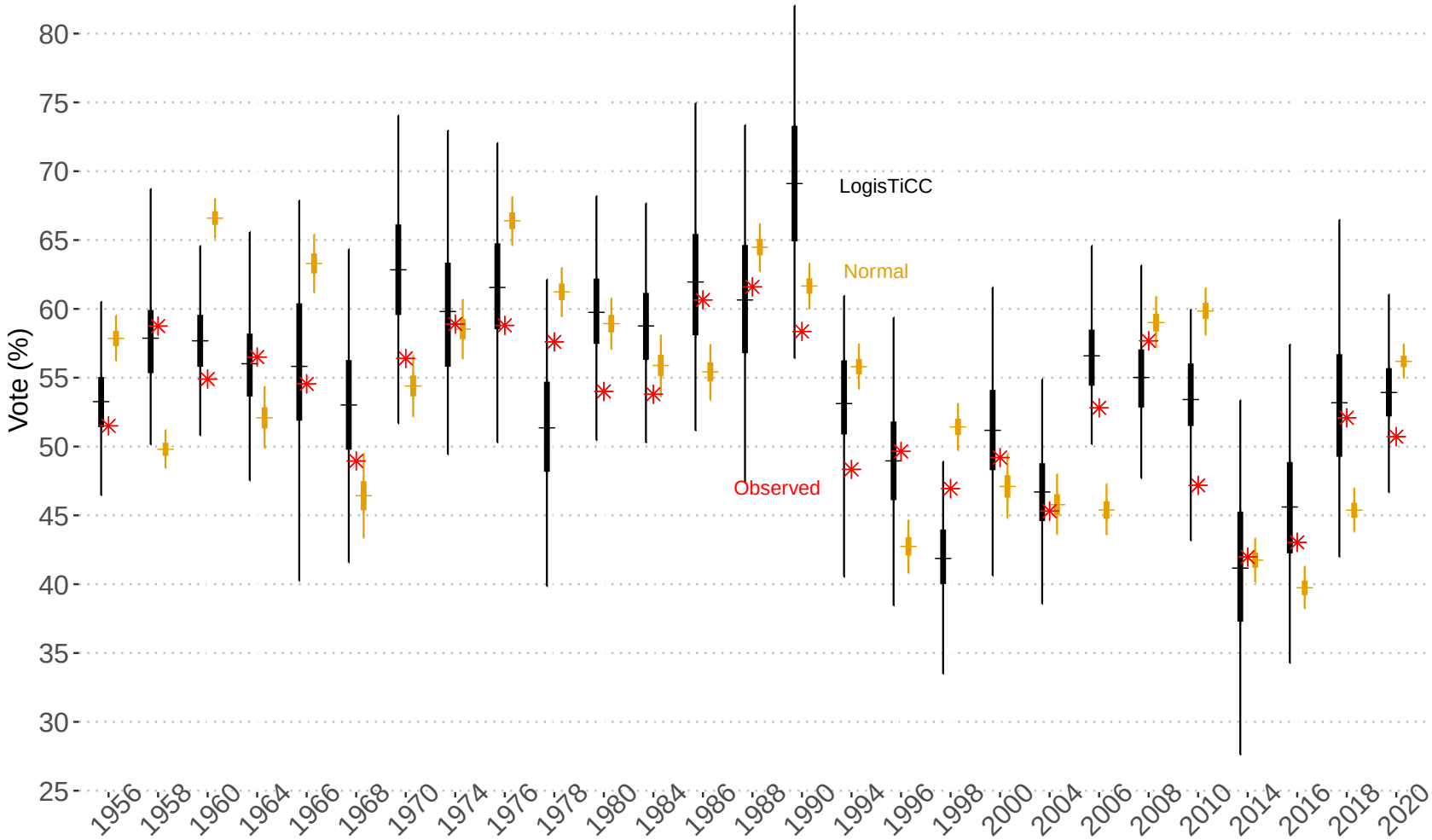

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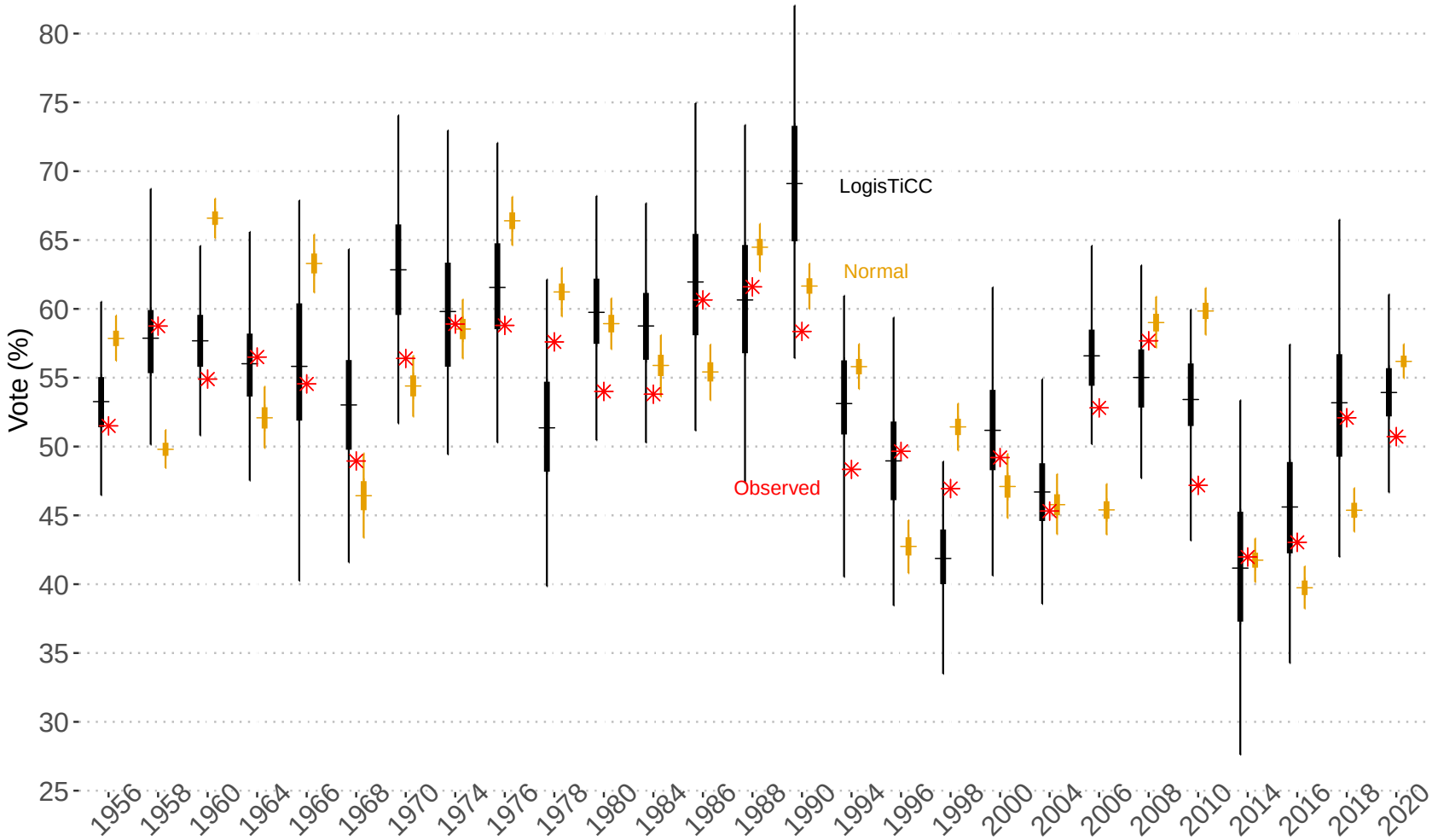

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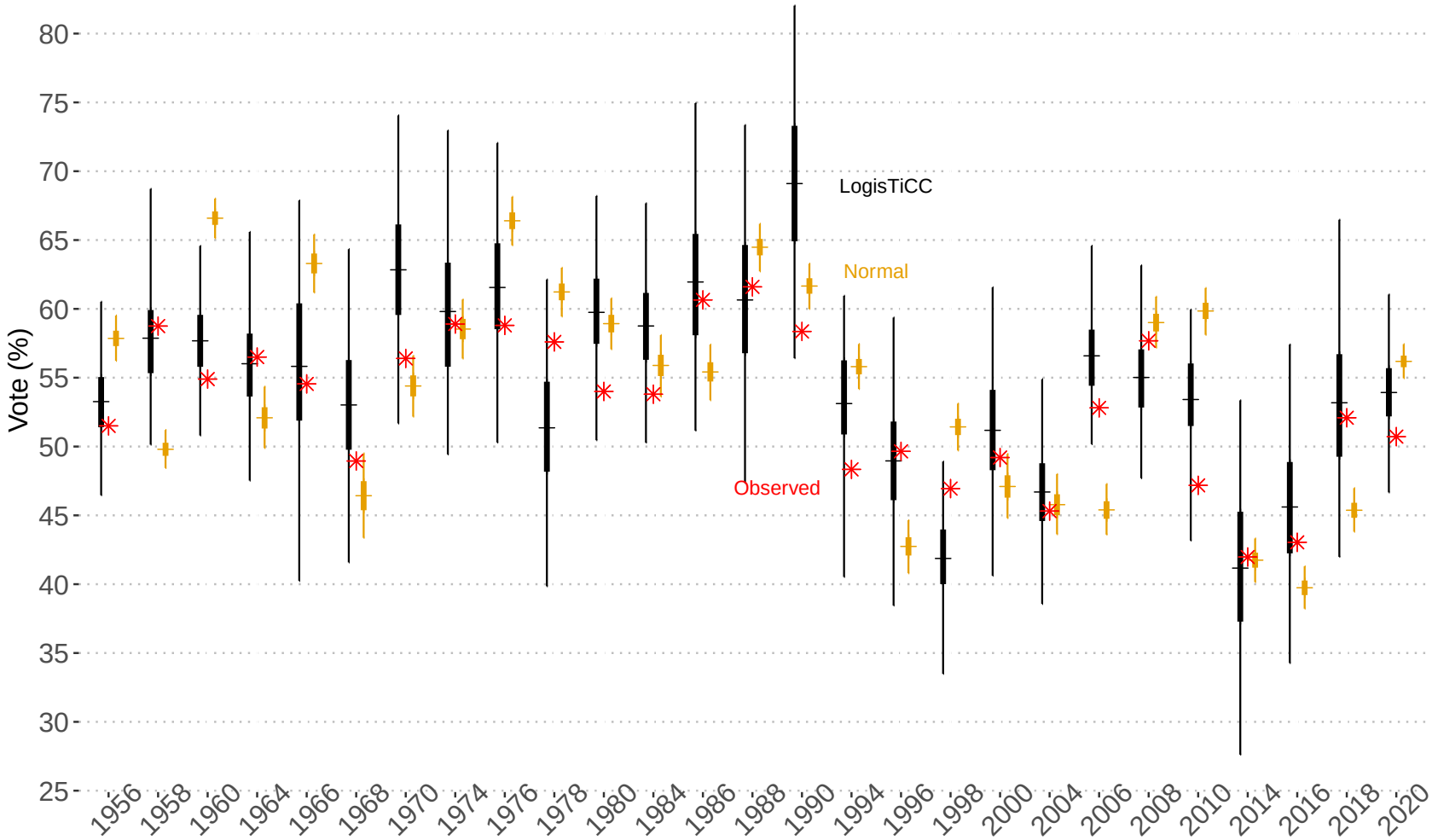

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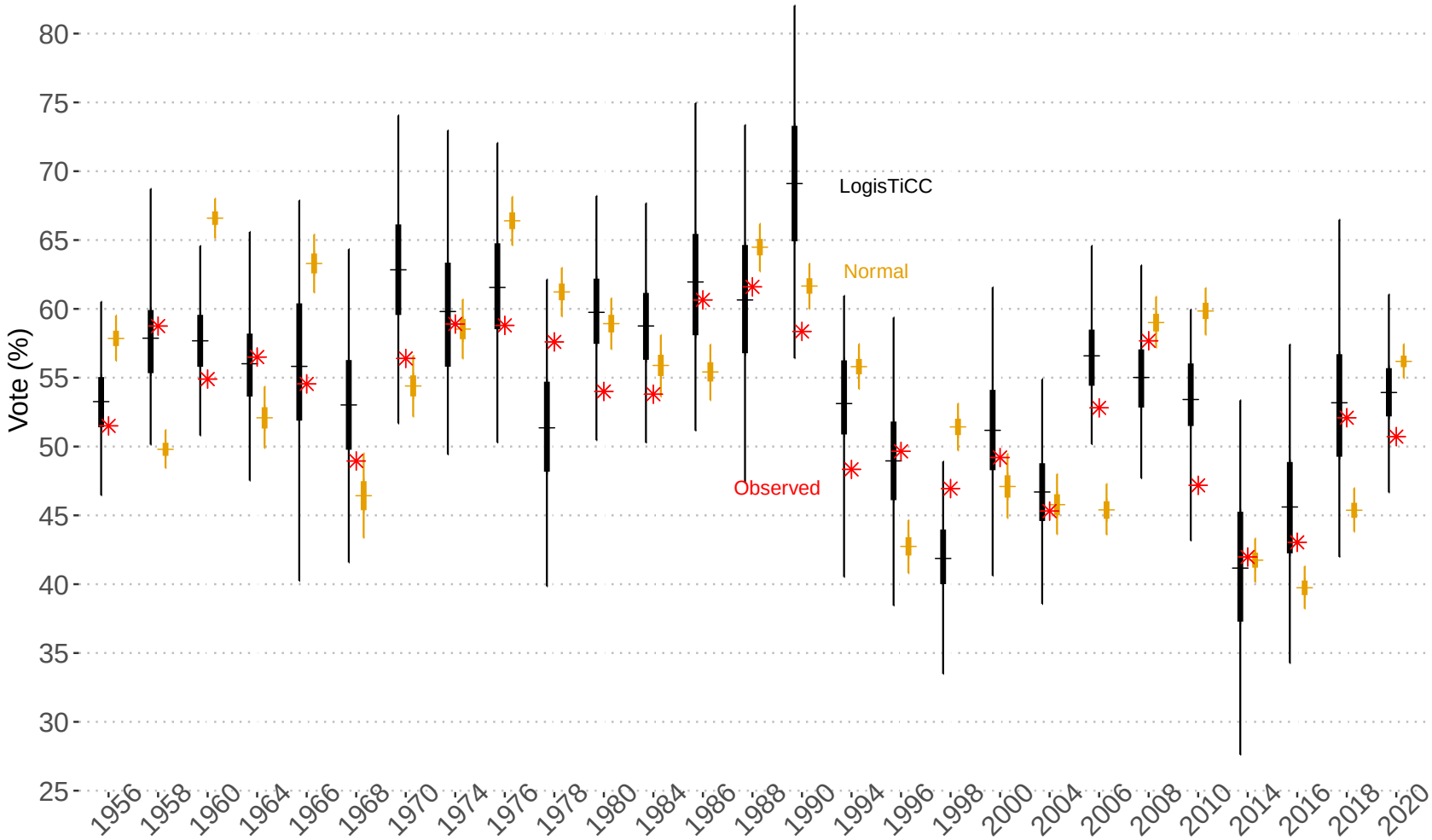

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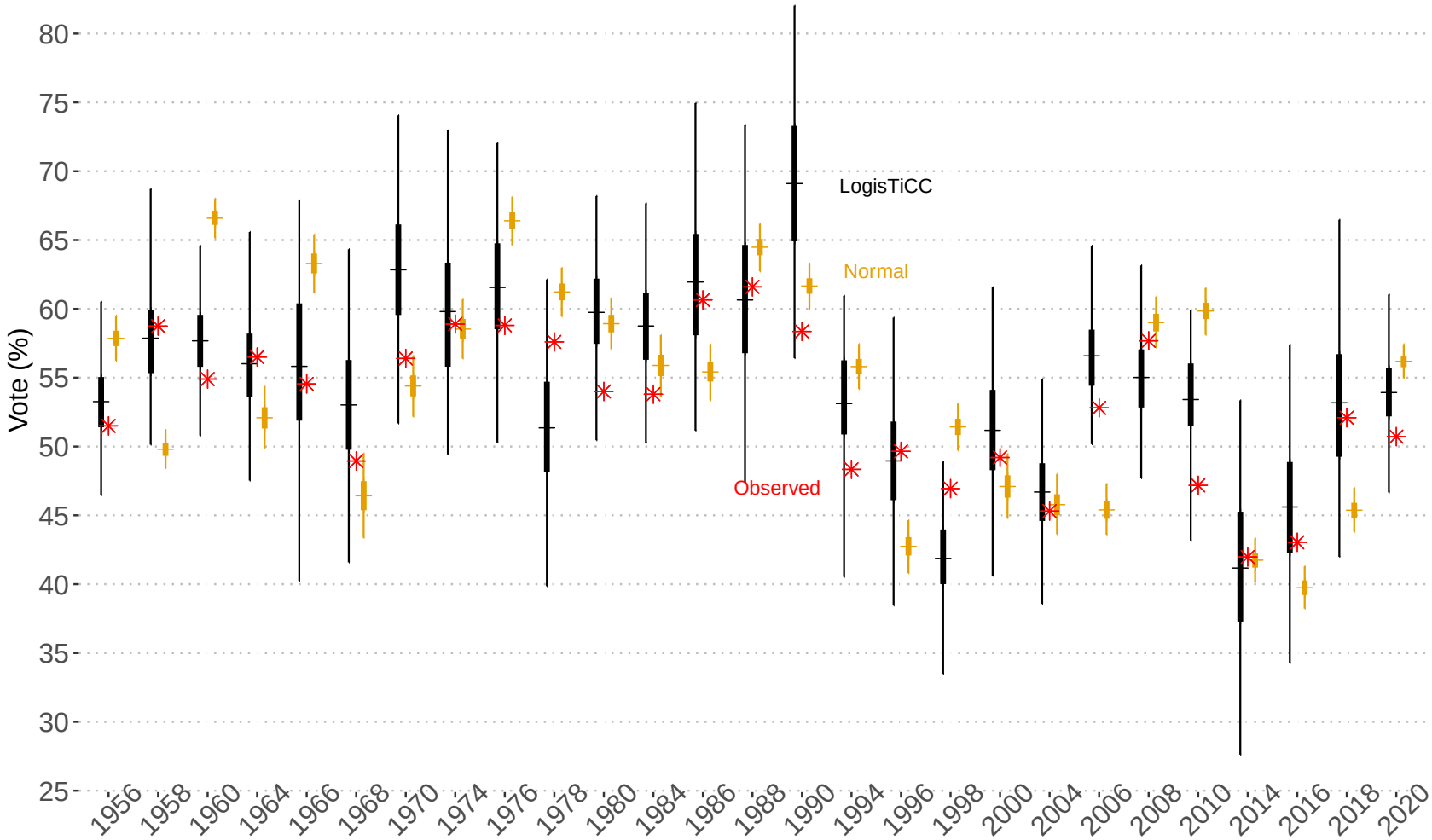

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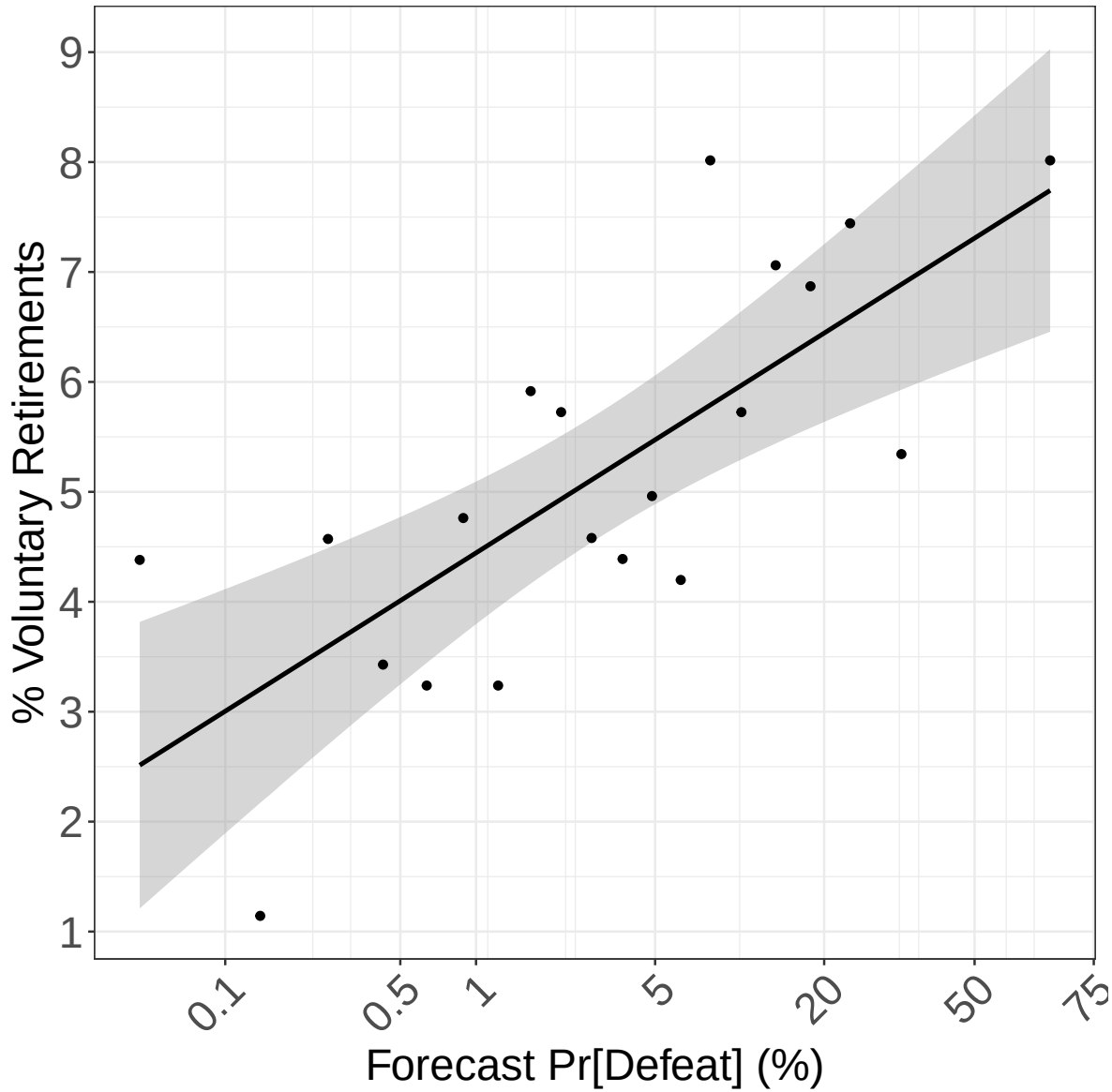

$\Pr(\text{Defeat}_t | \text{winner}_{t-1} \text{ runs at } t)$: High Mean, No Trend

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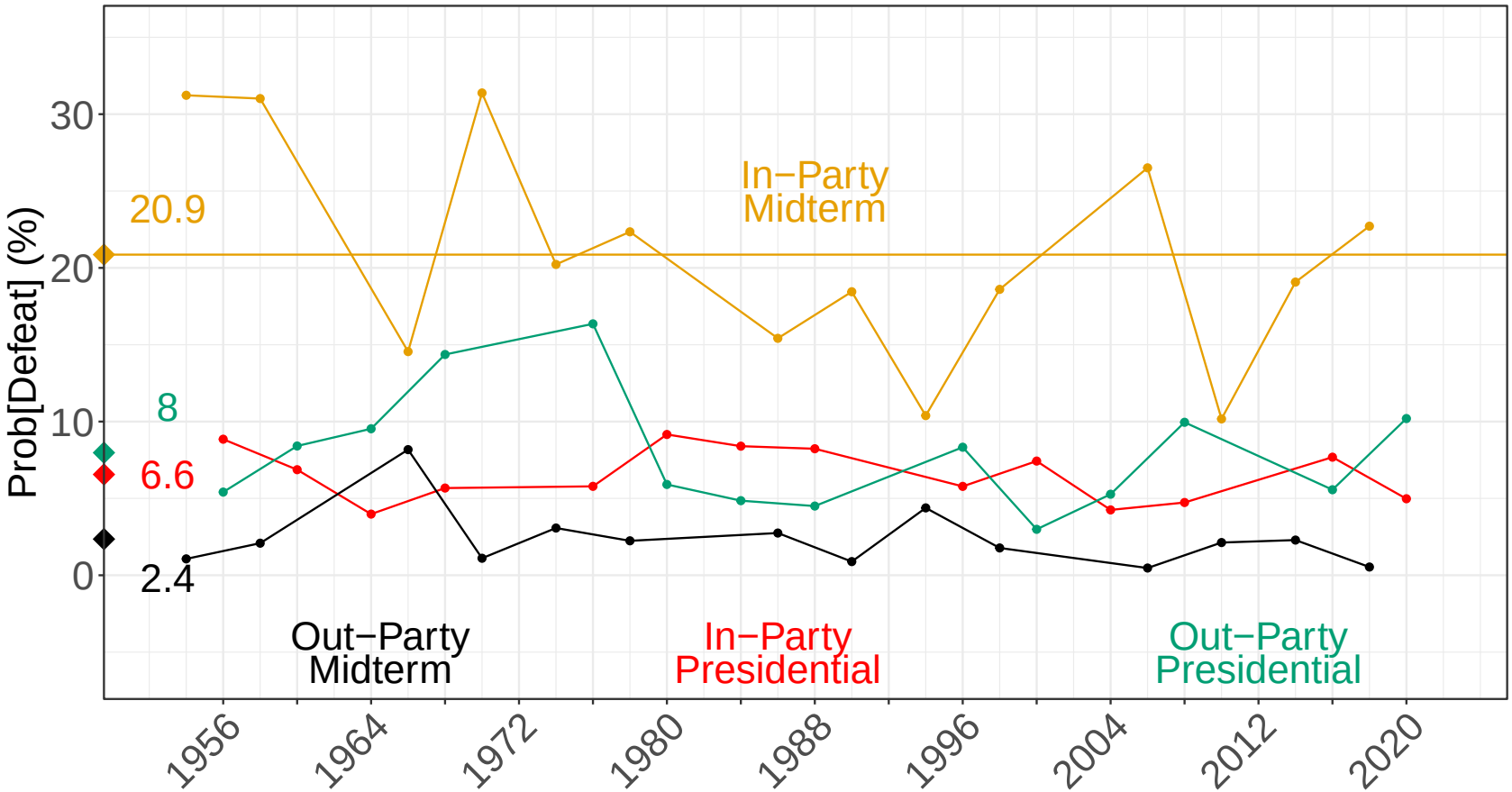

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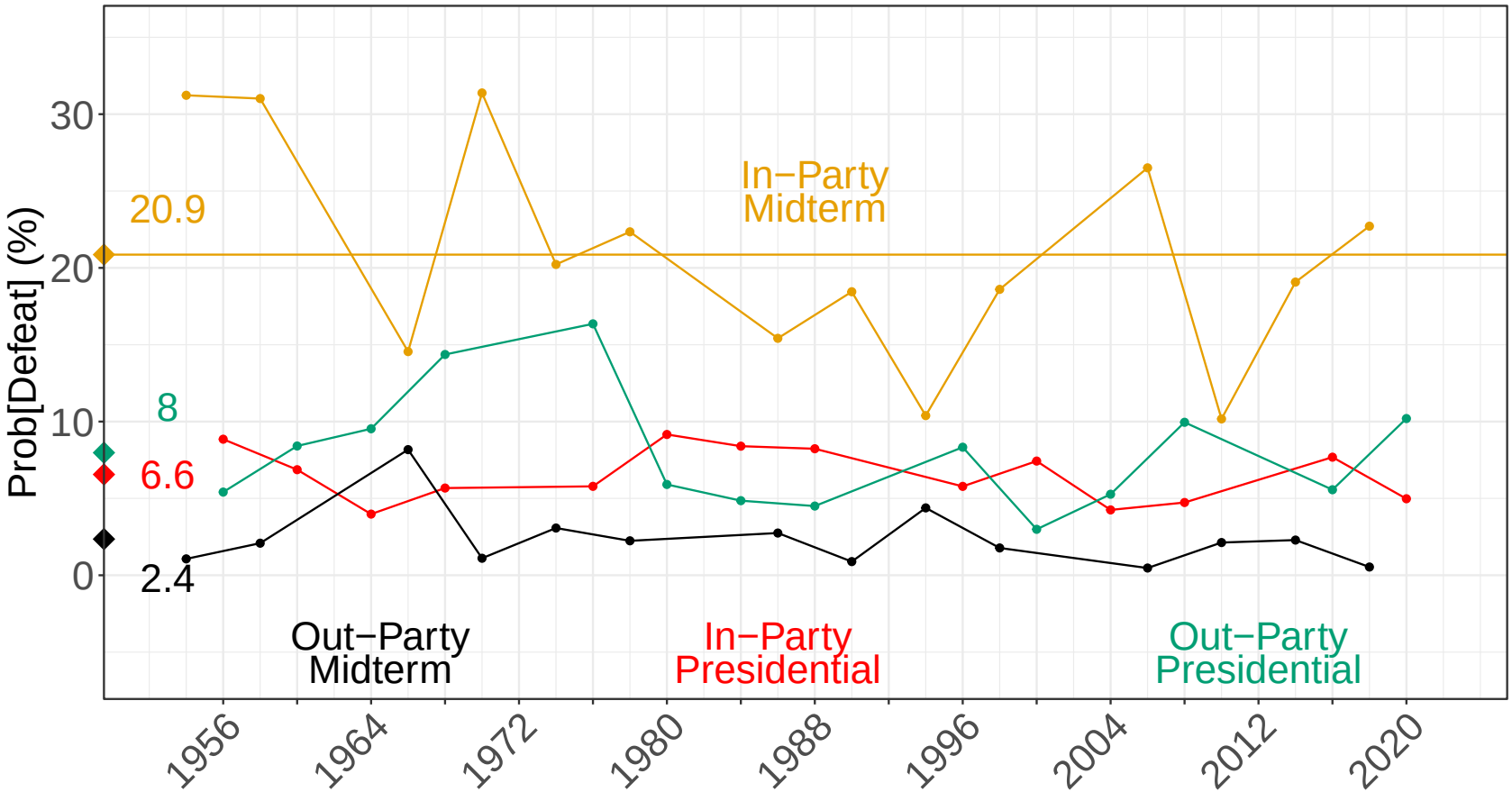

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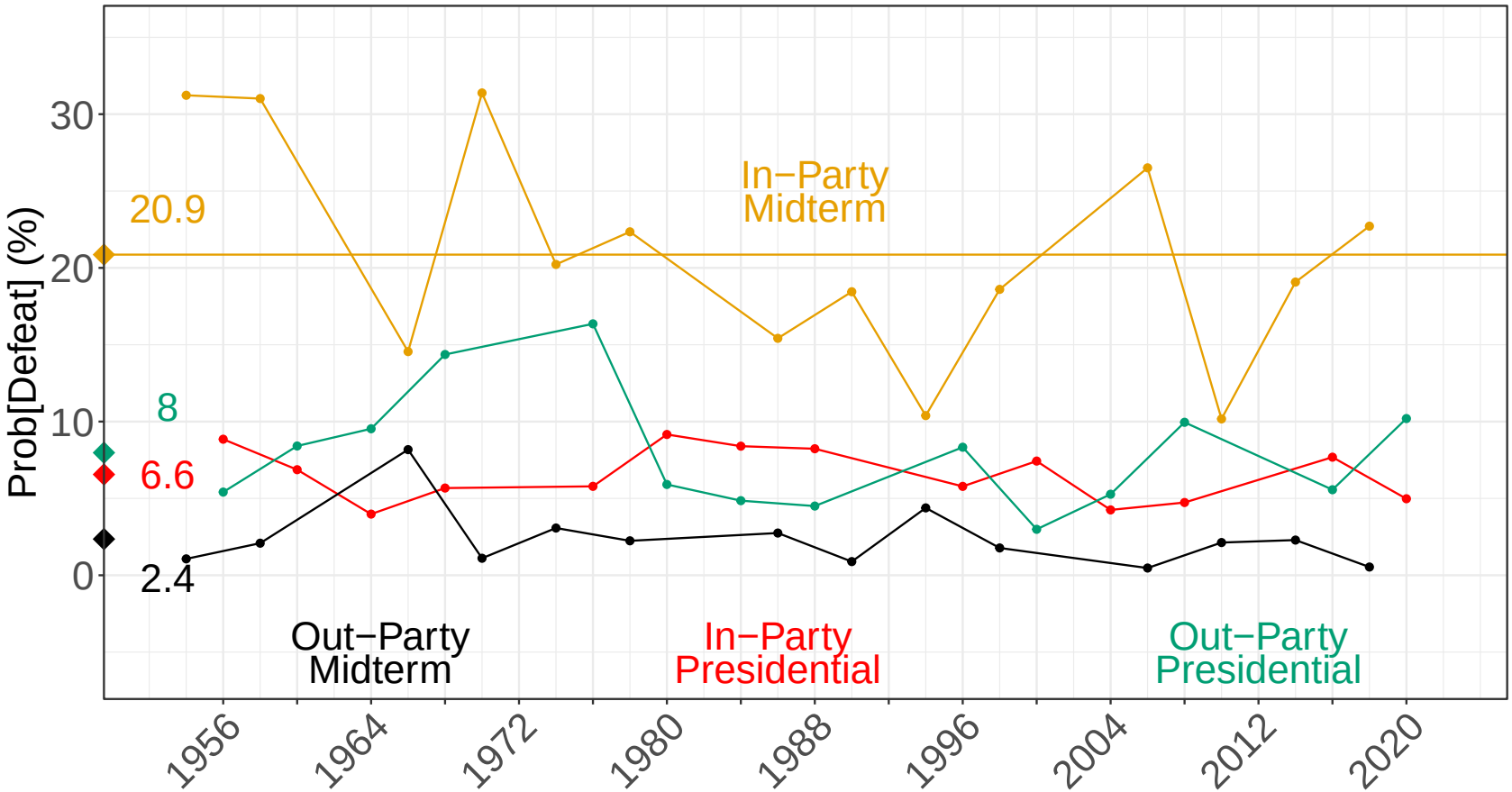

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Prob(Defeat) for Individual Incumbents

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In Party, Midterm

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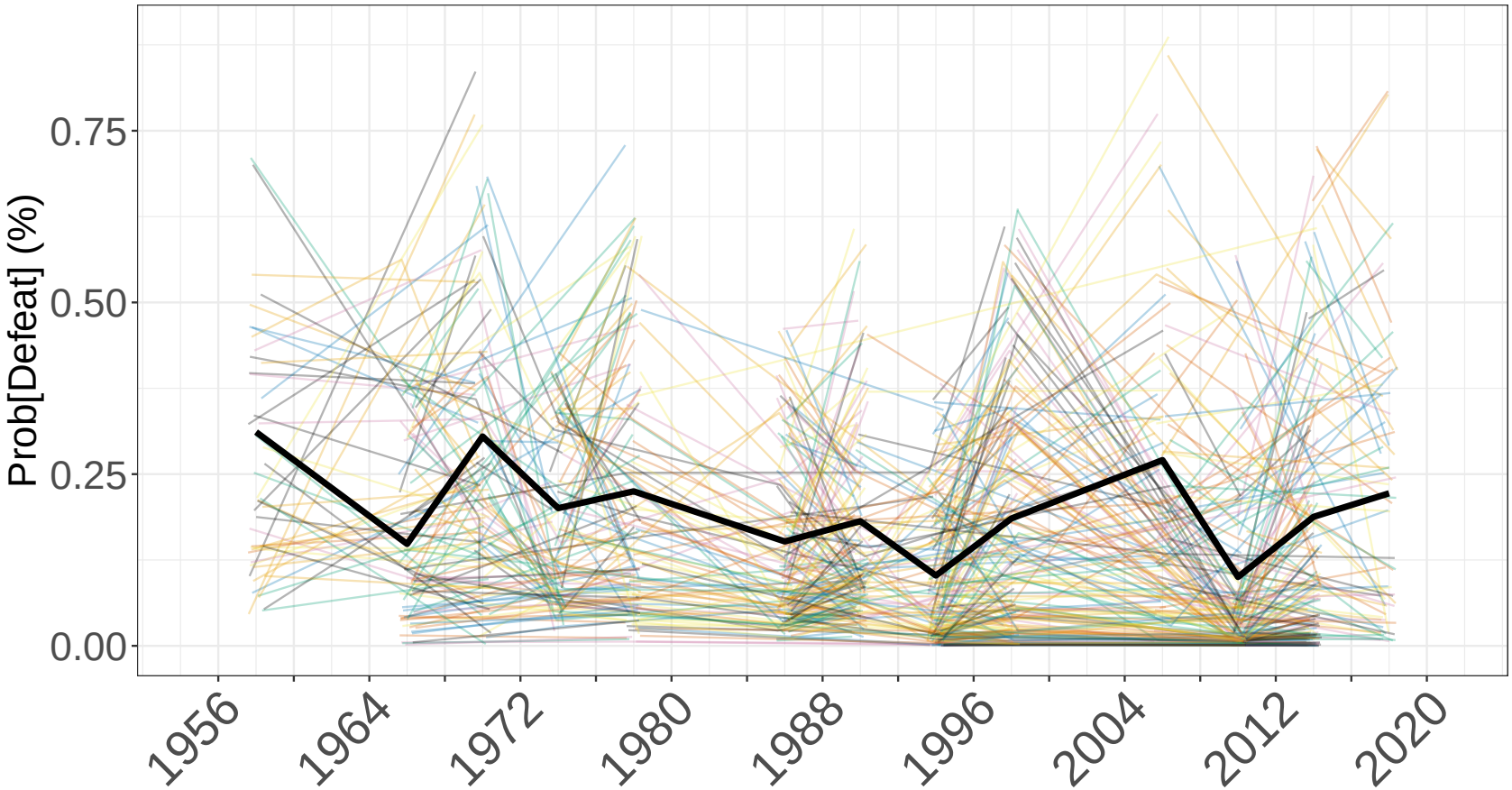

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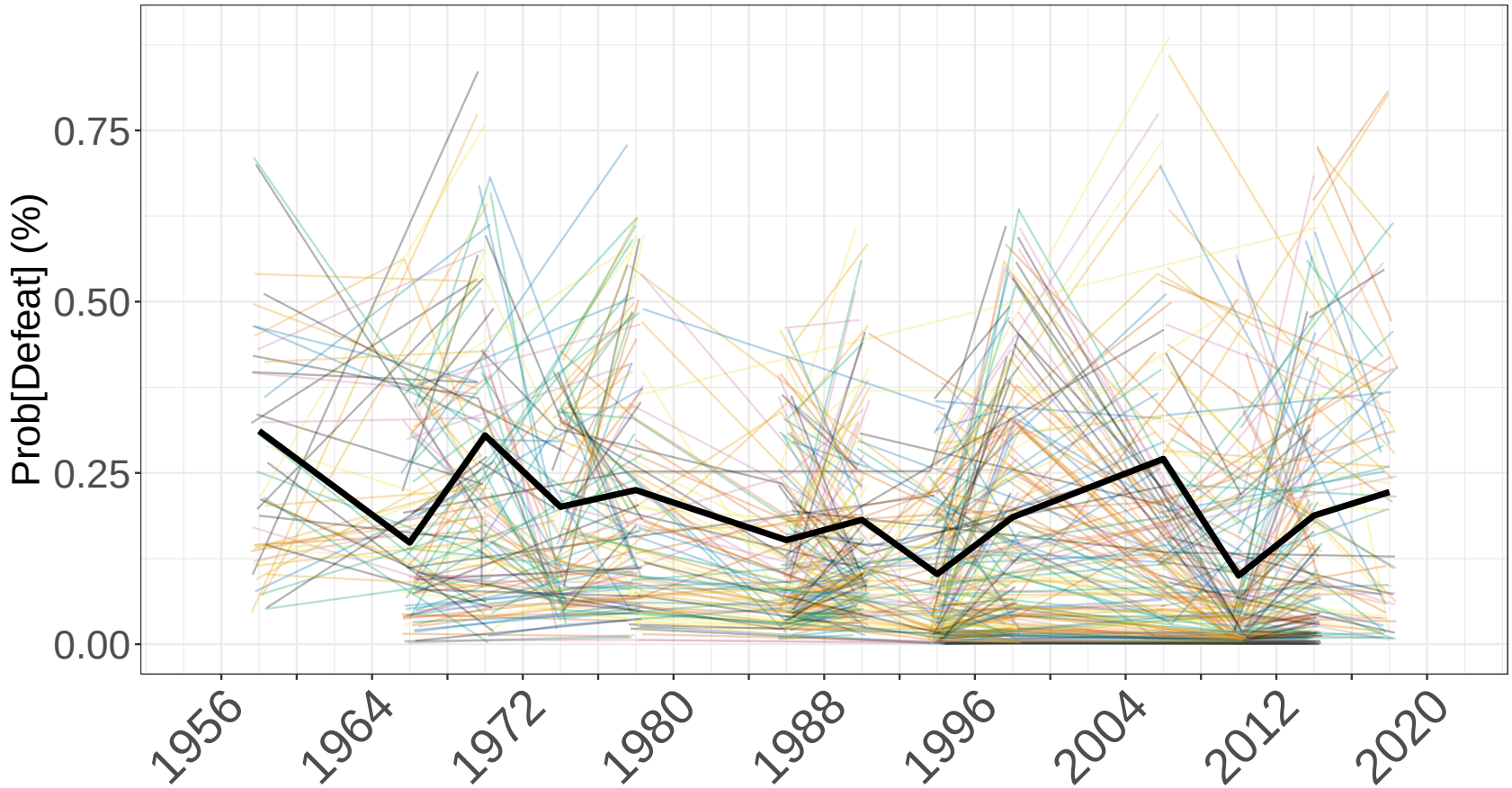

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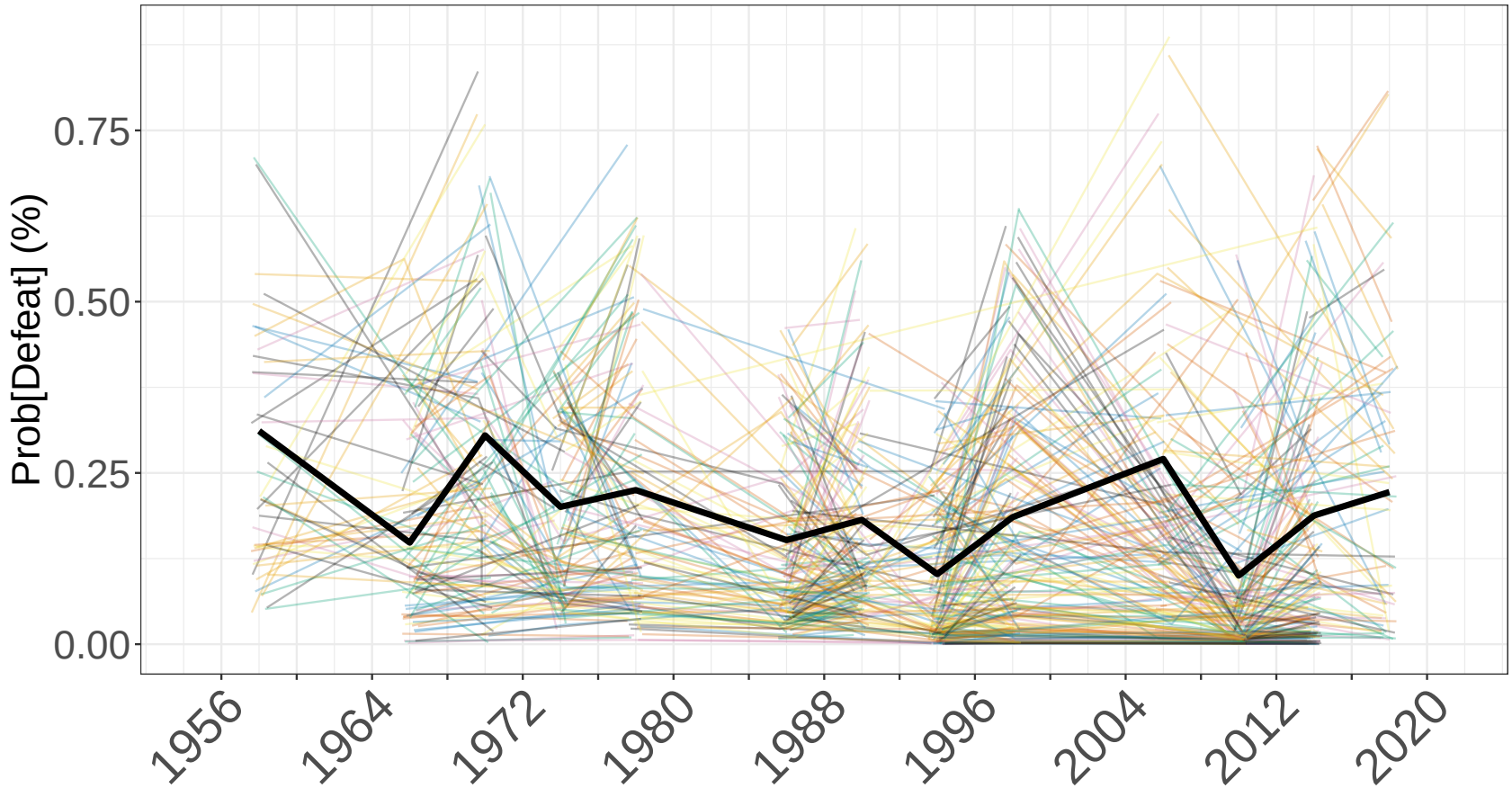

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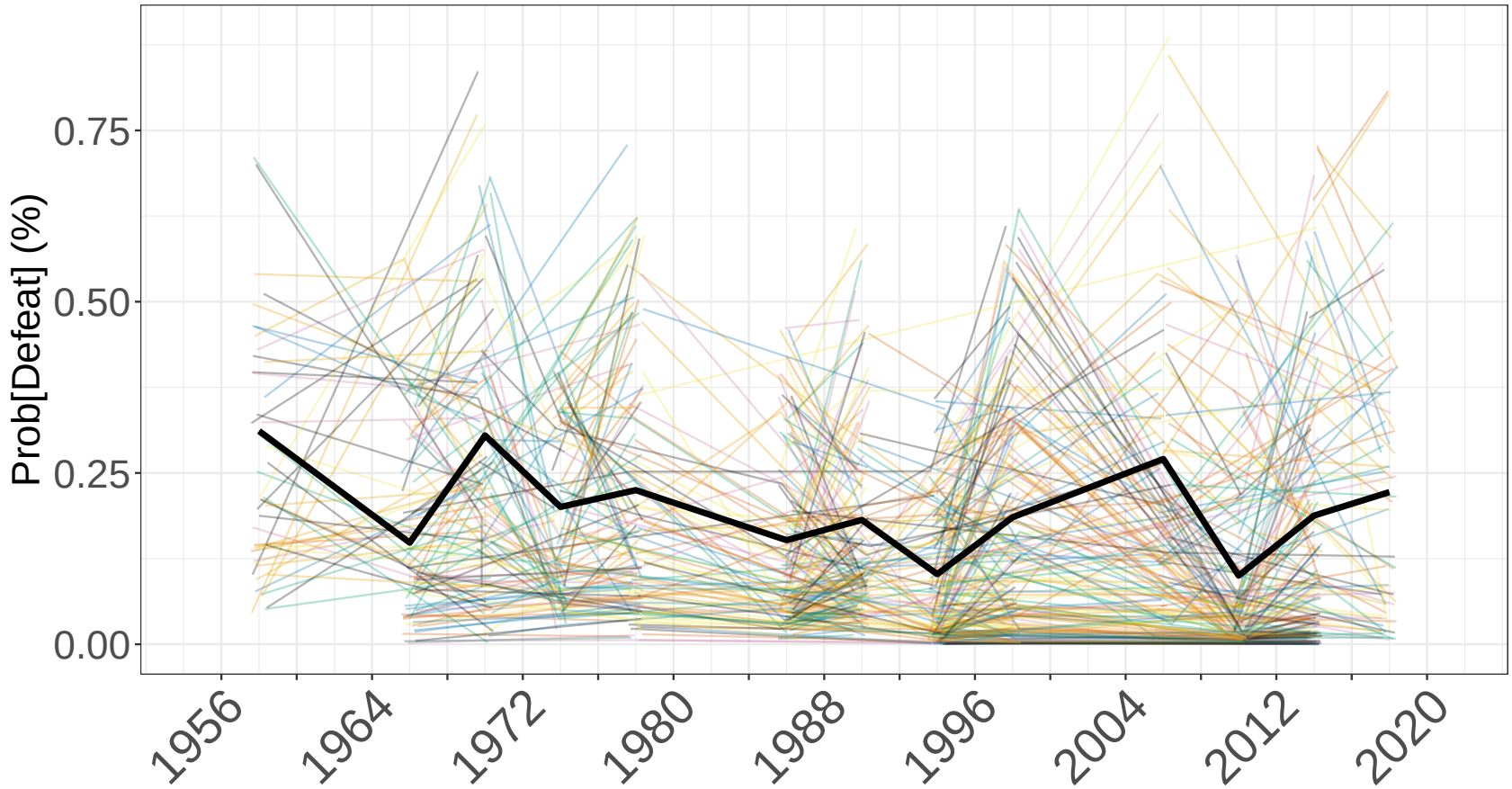

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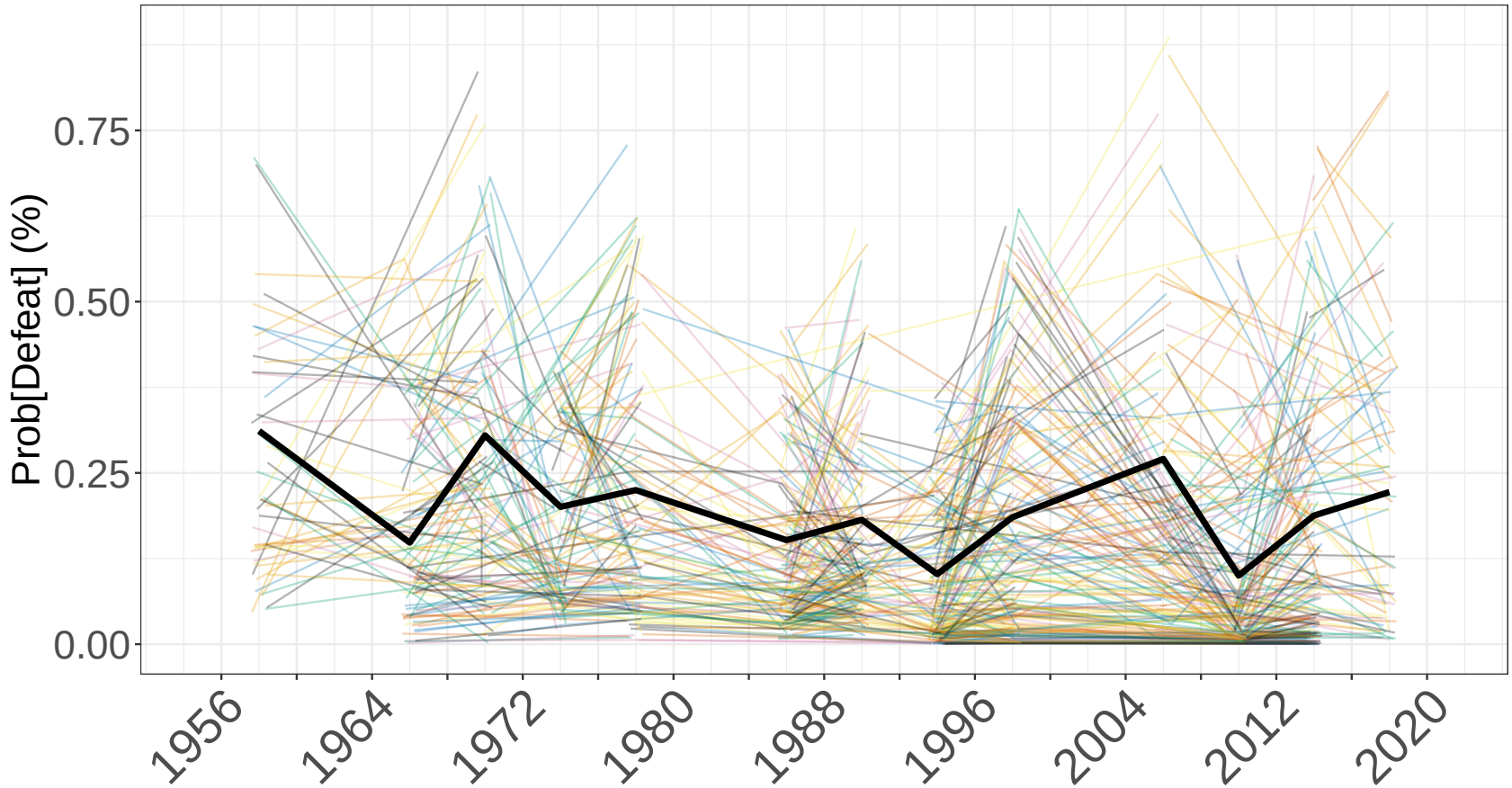

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Job security?

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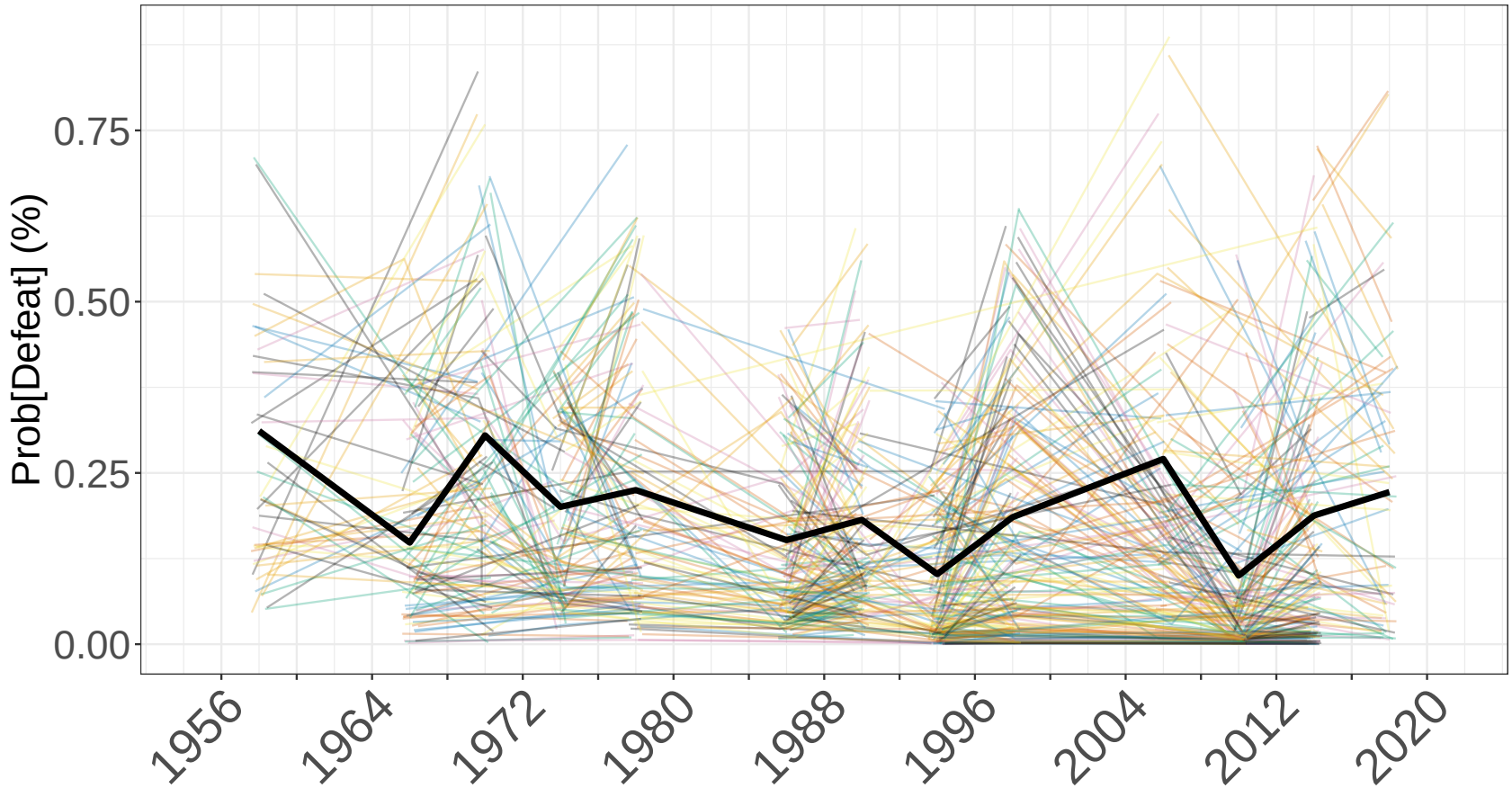

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Job security? Random terror!

Massive Political Change [With Prob(Defeat) constant?]

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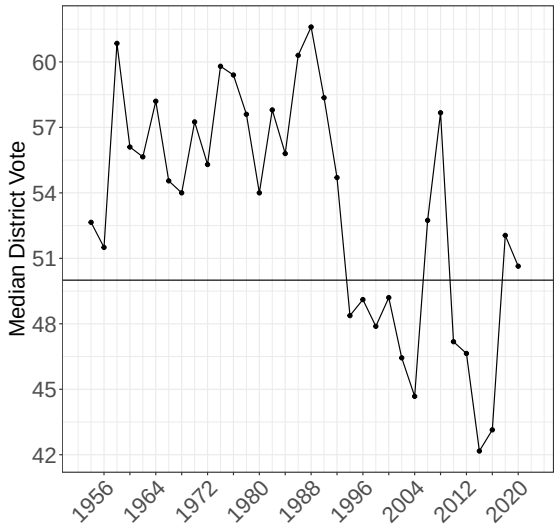
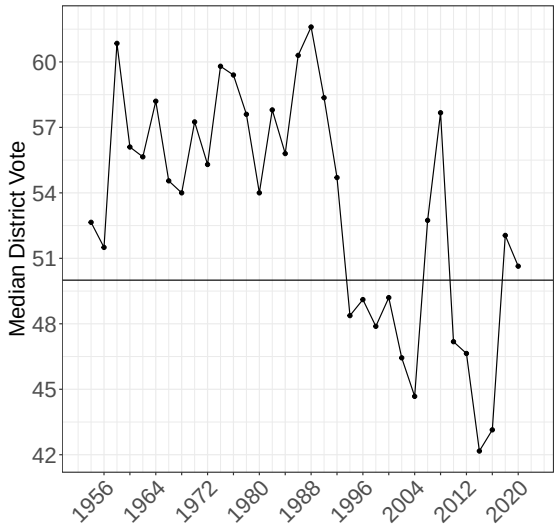


Median District Vote

Massive Political Change [With Prob(Defeat) constant?]



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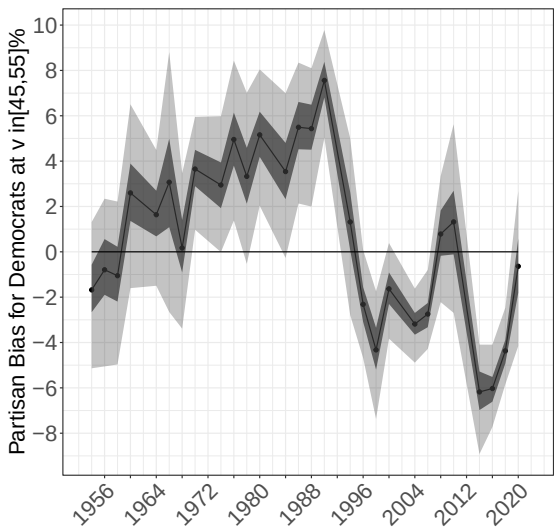
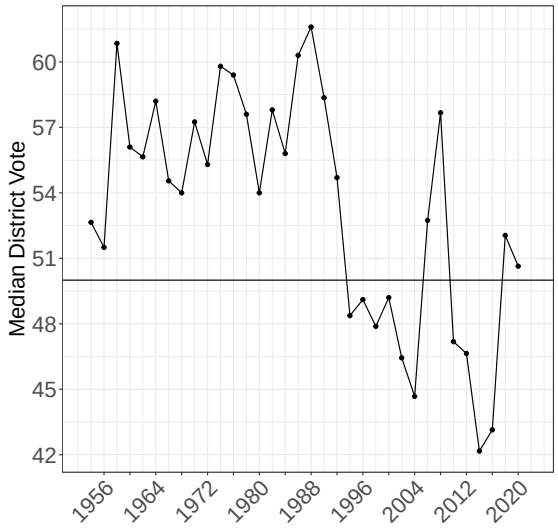


Partisan Bias

Massive Political Change [With Prob(Defeat) constant?]



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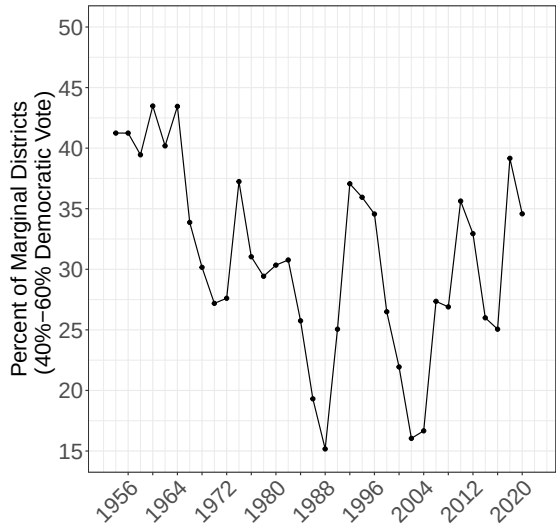
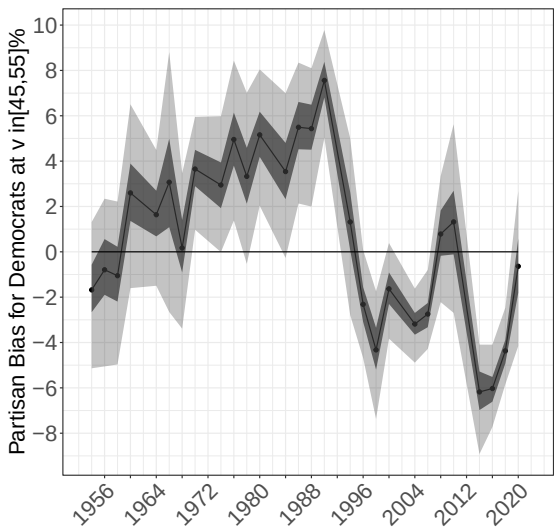


Electoral Marginals



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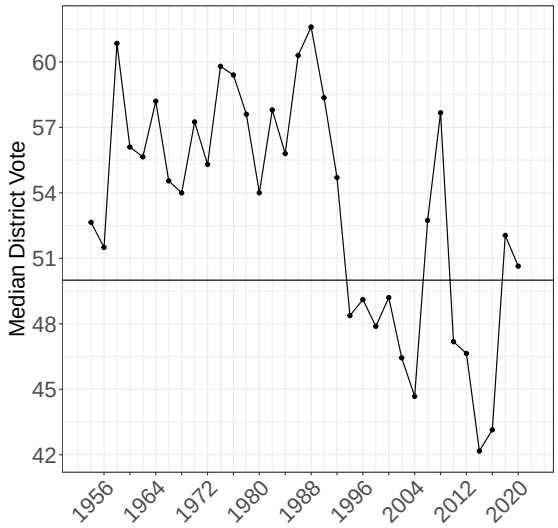

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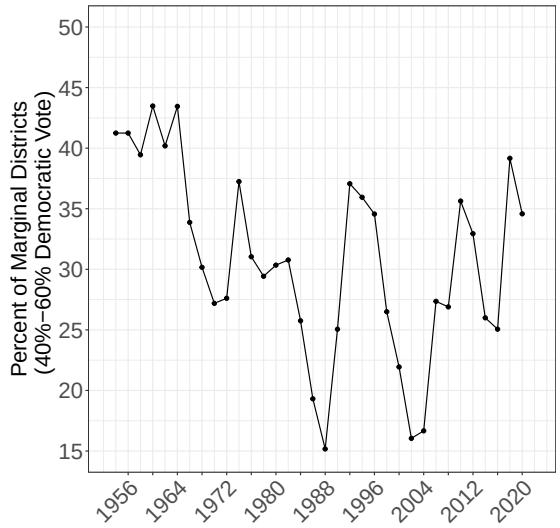

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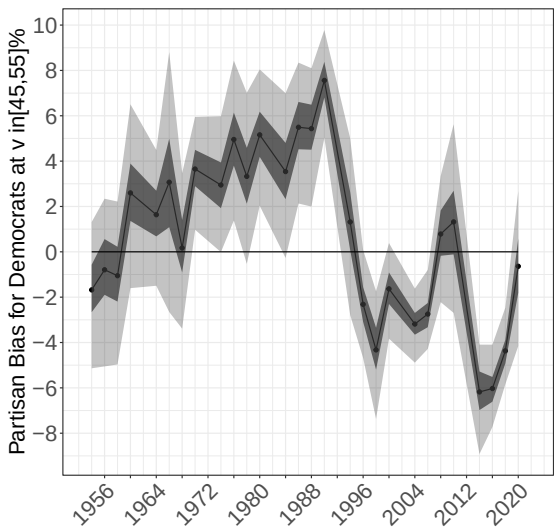

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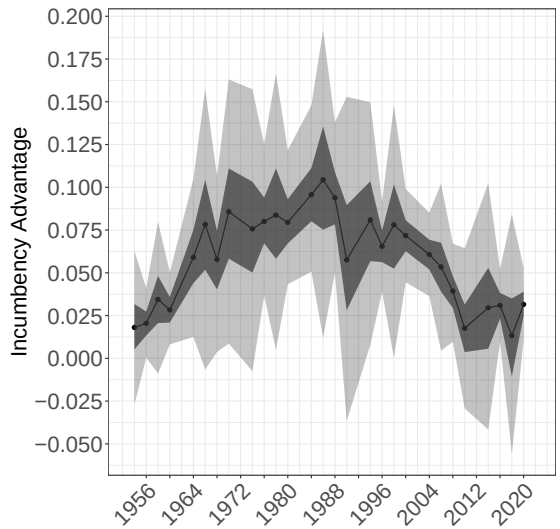

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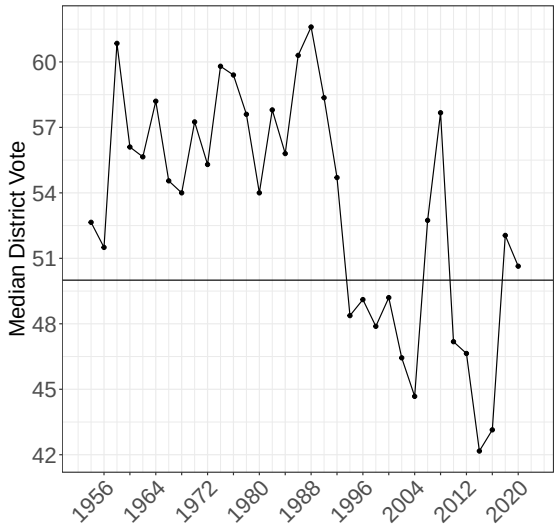

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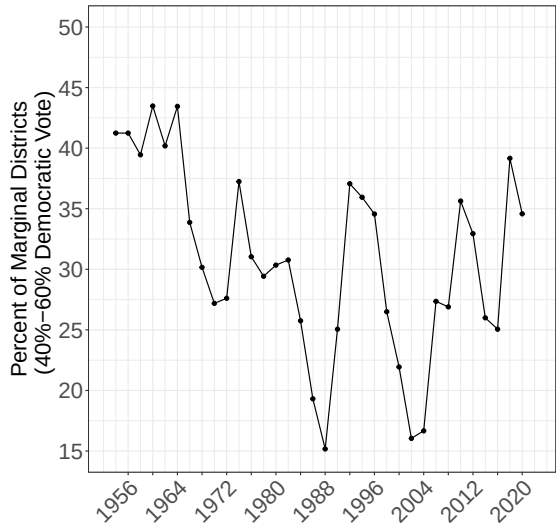

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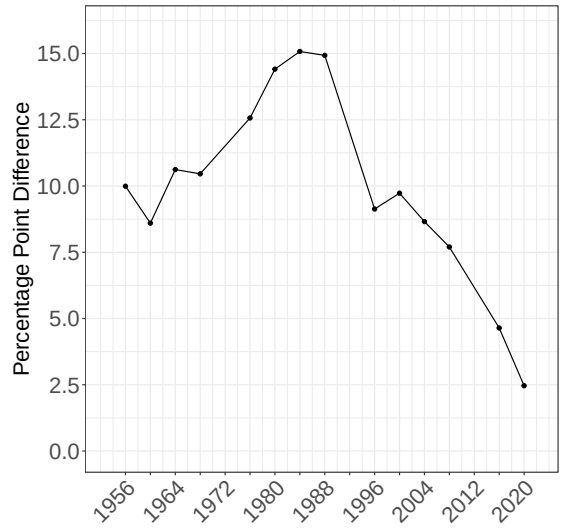
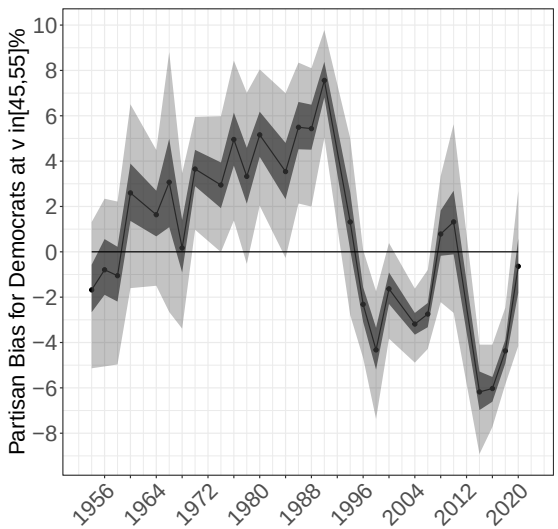


Split Ticket Voting



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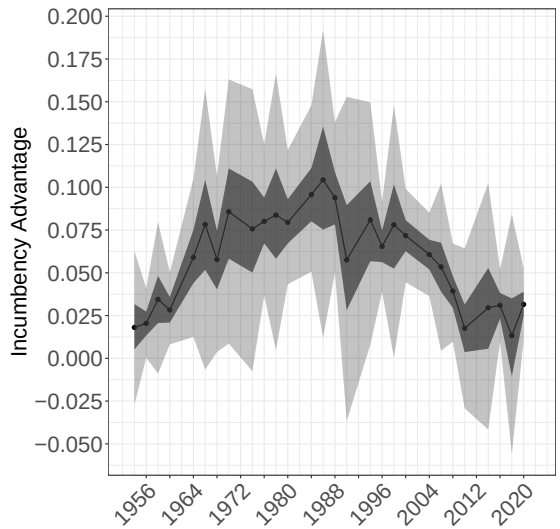

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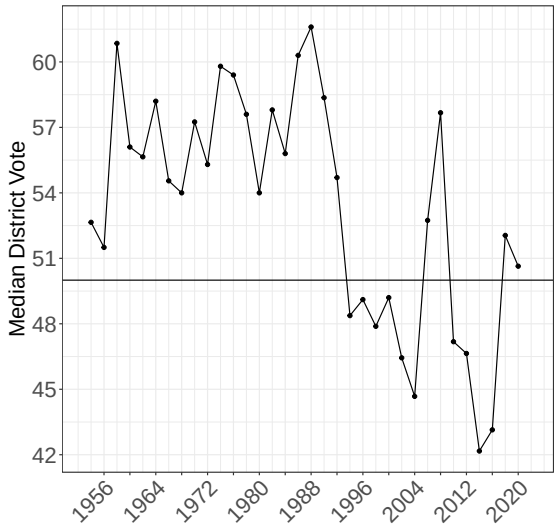

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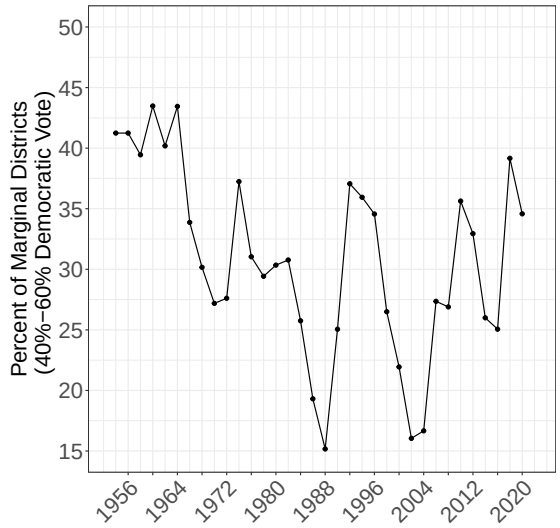

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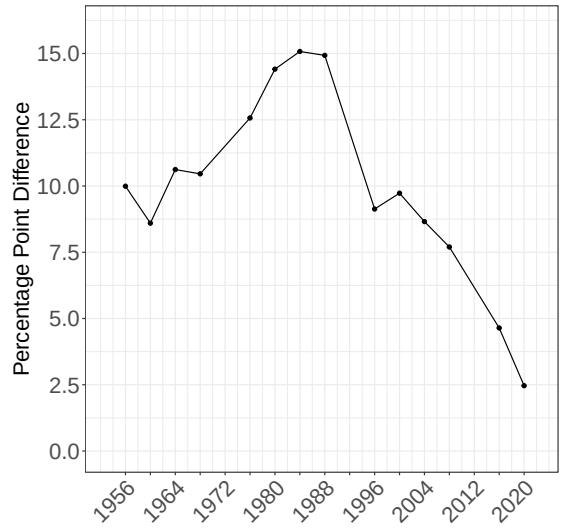

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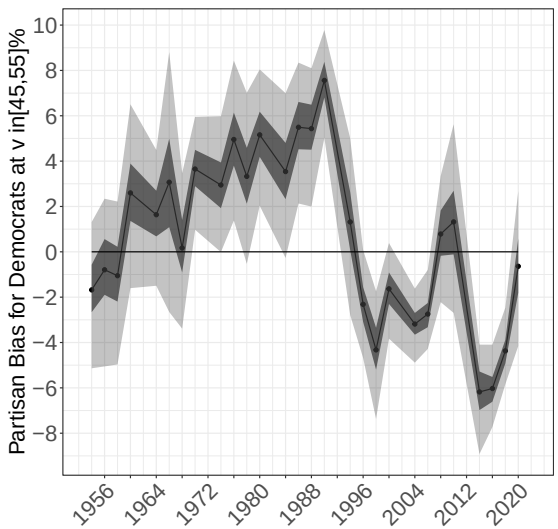

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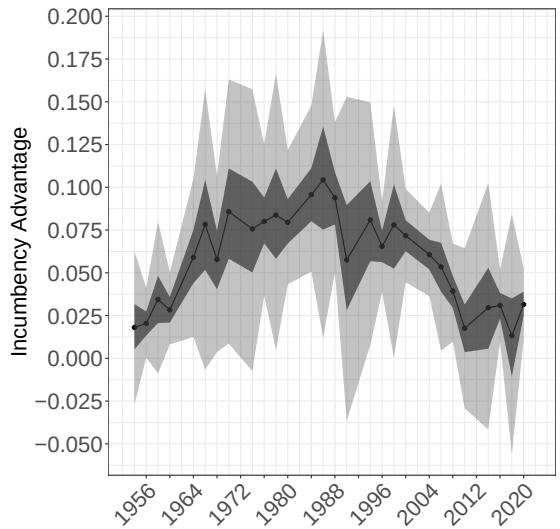

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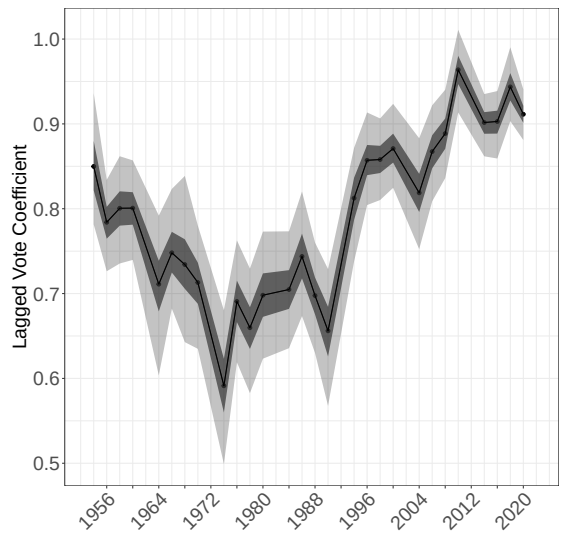

Lagged Vote

The Plan

Model Validation: Out-of-sample tests

Prob(Incumbent Defeat): High Mean, No Trend

Intermediate Variables: Massive Change

How No Change Leads to Massive Change

More than Central Tendency: Variation Matters

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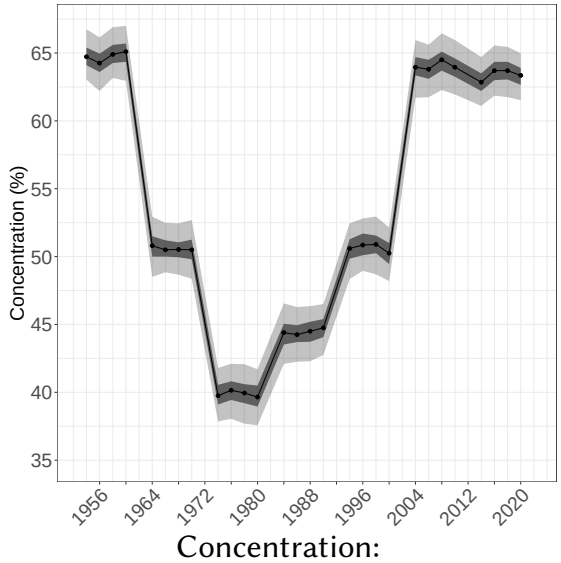

Concentration:

$$\int_{45}^{55} p(v|E[v] = 50)dv$$

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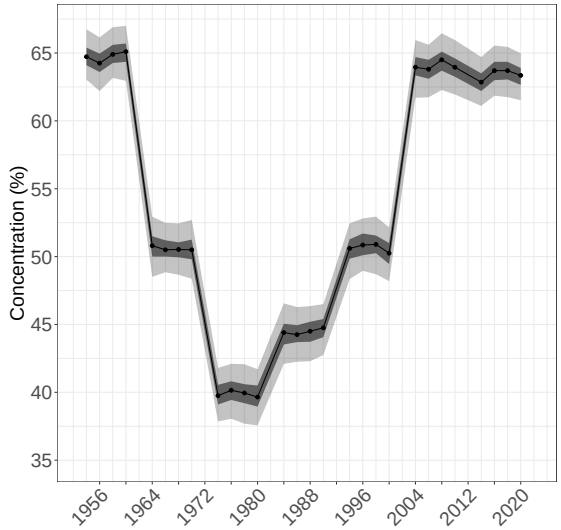

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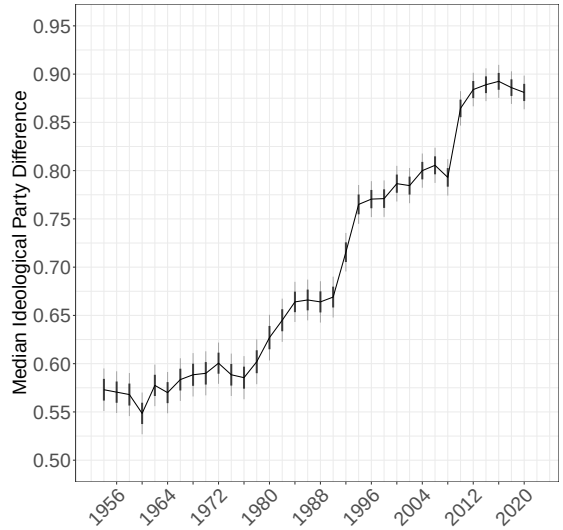
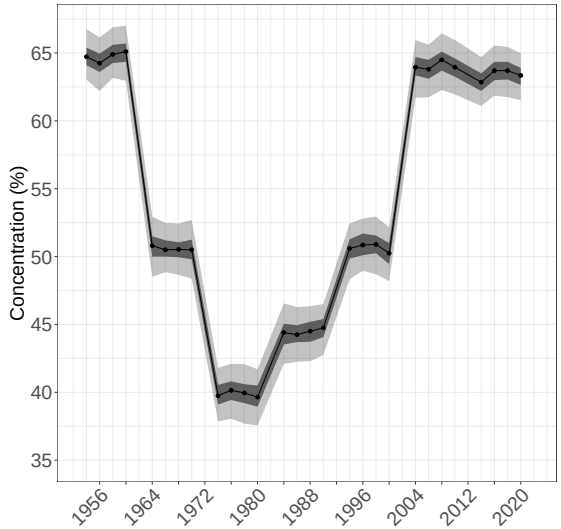


Ideological Polarization
(DW-NOMINATE)

More than Central Tendency: Variation Matters



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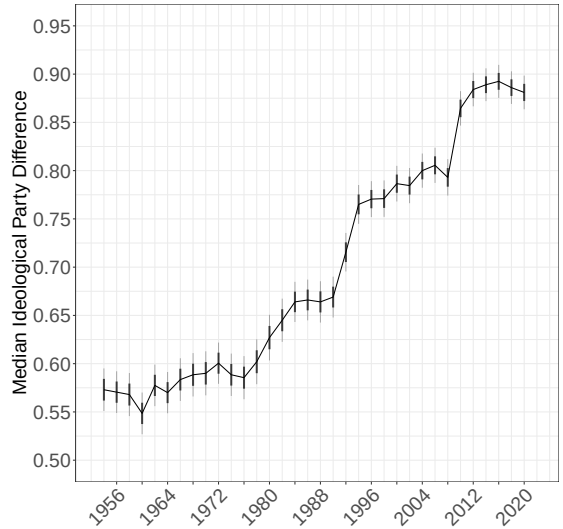

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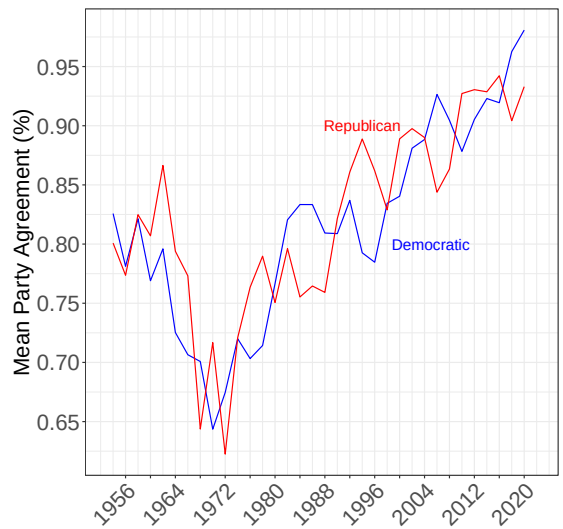
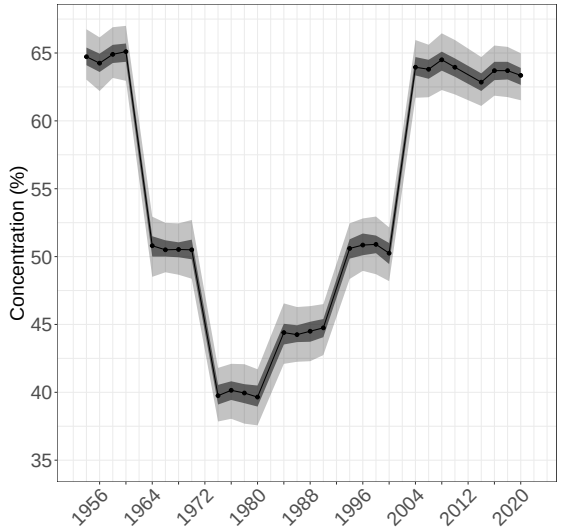


Legislator-Leader Party Agreement (Roll calls)

More than Central Tendency: Variation Matters



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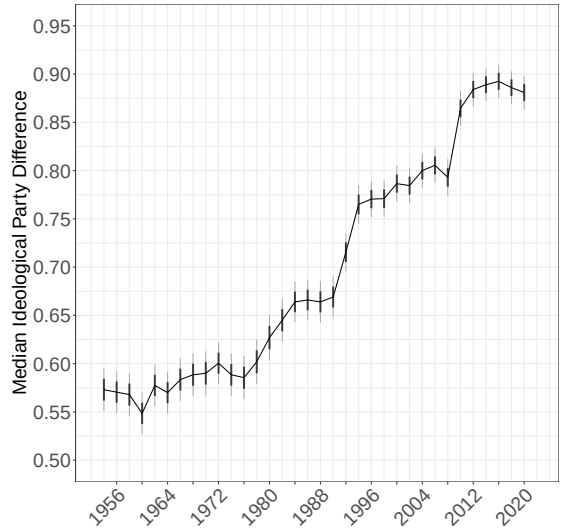

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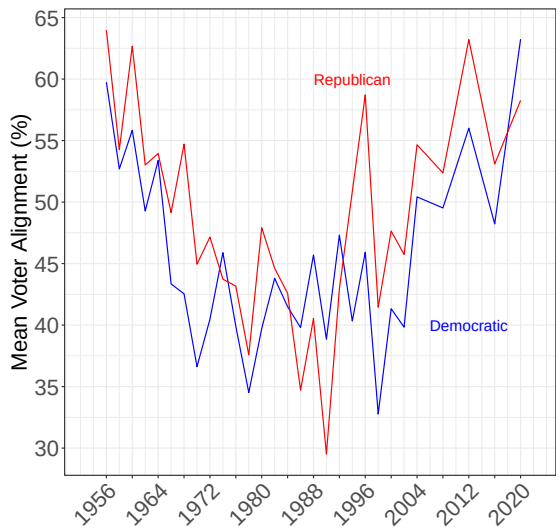
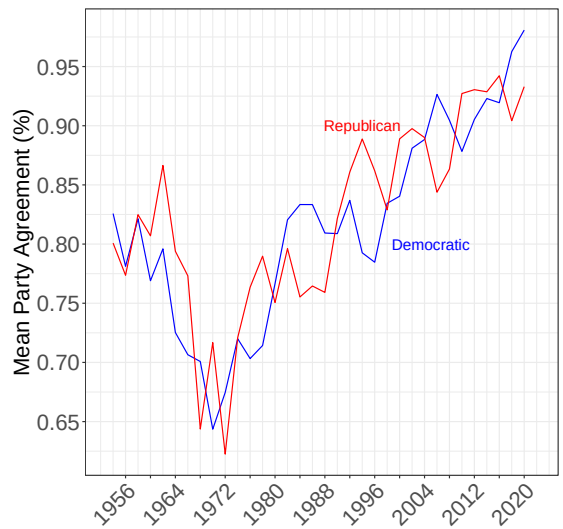


Party ID-Vote Agreement (ANES)



Legislator-Leader Party Agreement (Roll calls)

“Adding” it up

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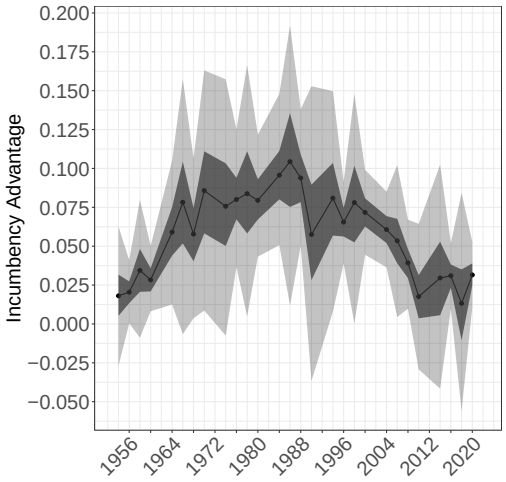
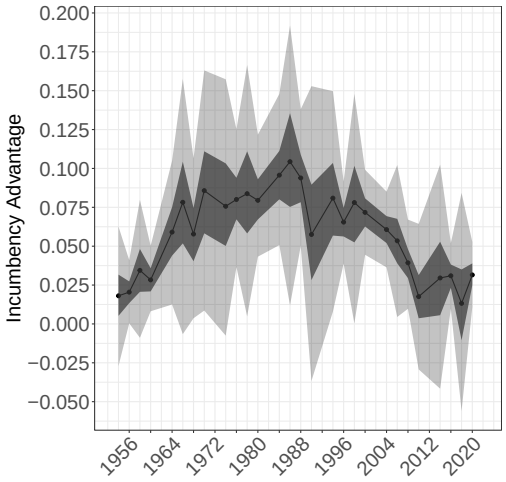


Incumbency Advantage

“Adding” it up



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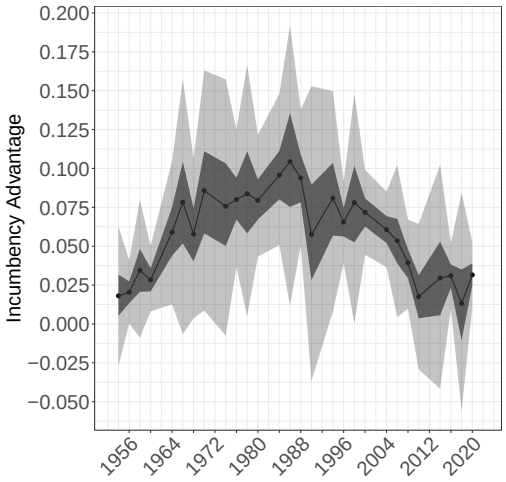

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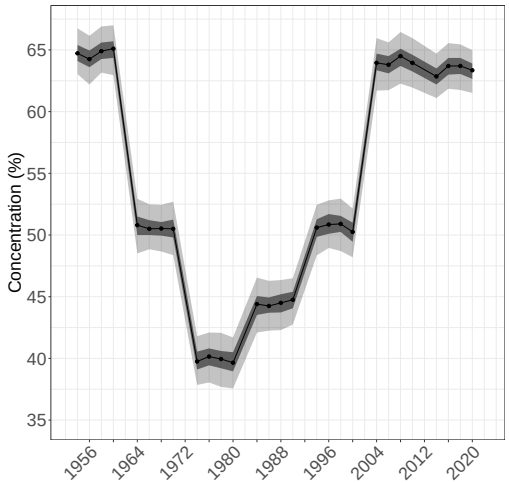

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$$\int_{45}^{55} p(v|E[v] = 50)dv$$

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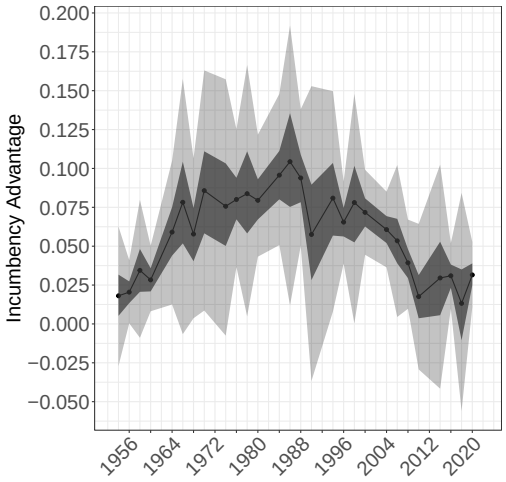

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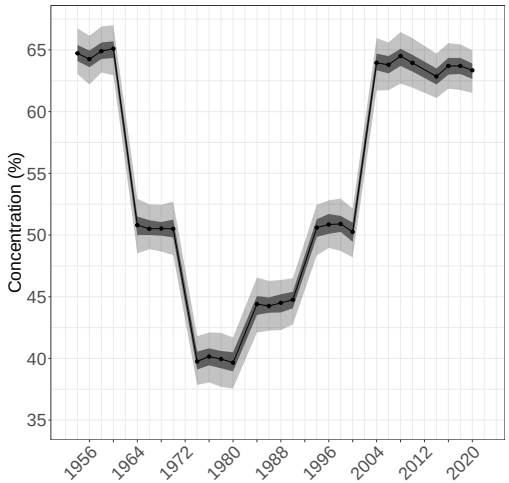

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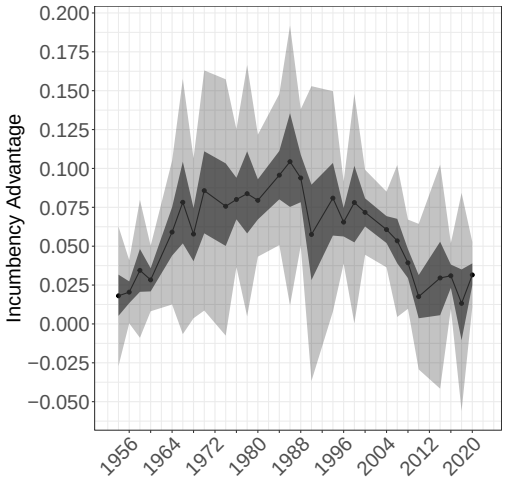

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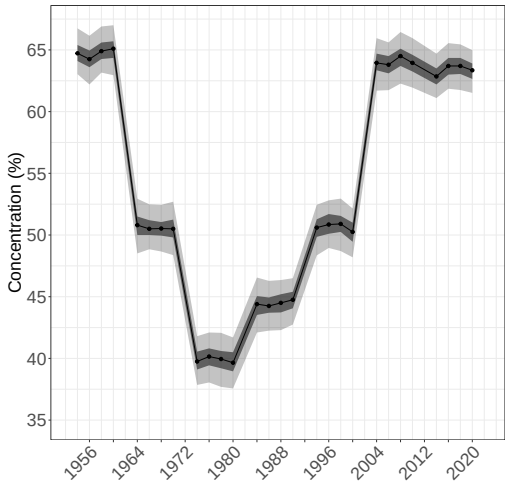

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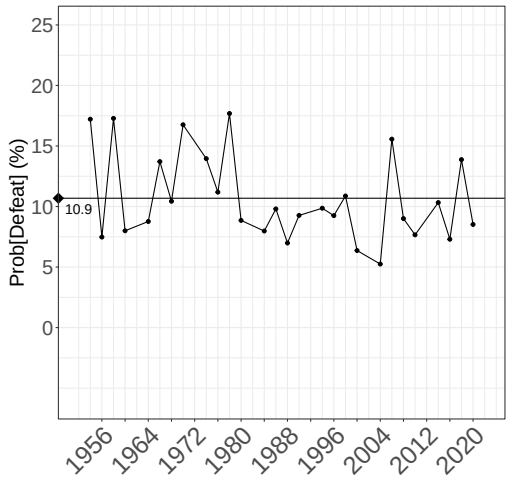

Incumbency Advantage

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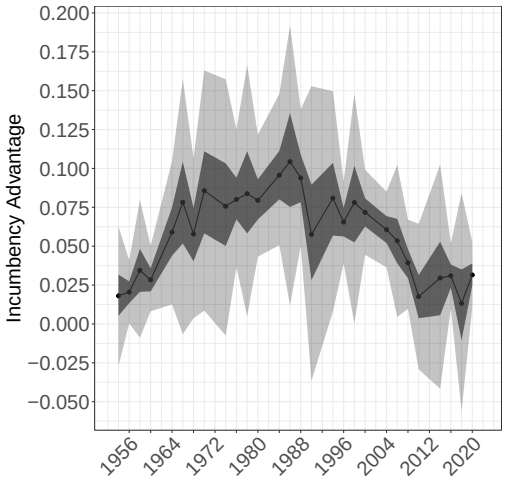
Mean Prob(Defeat)

“Adding” it up



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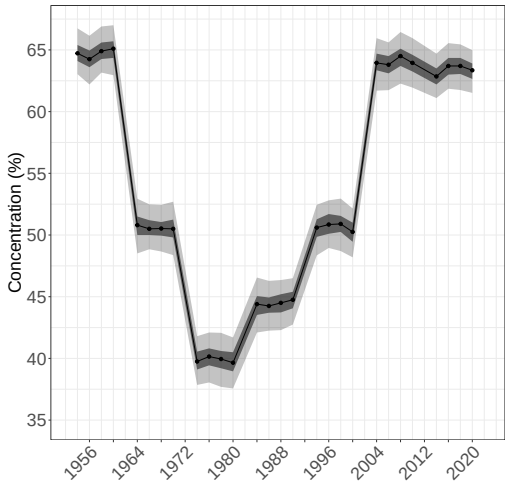

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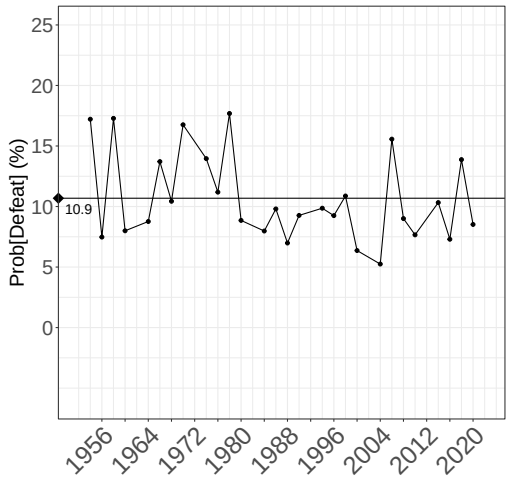

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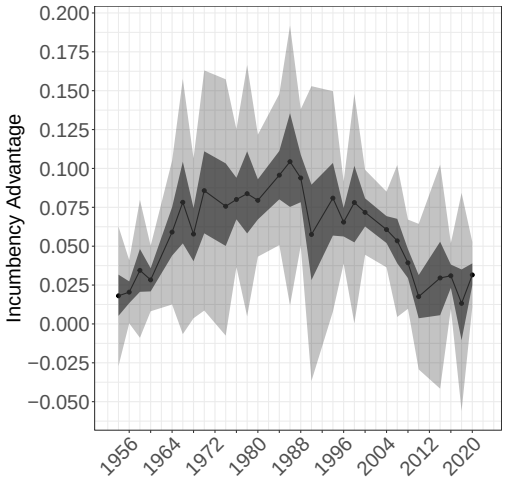

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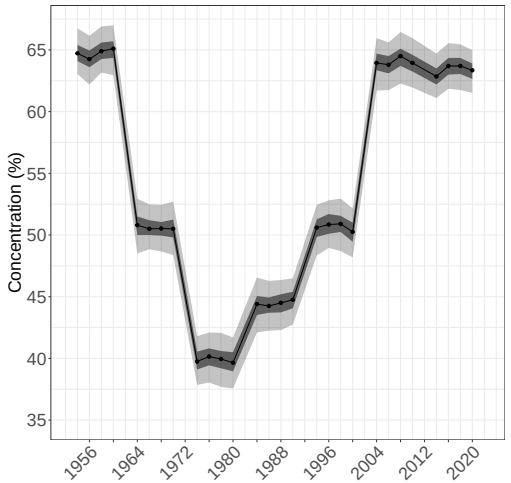

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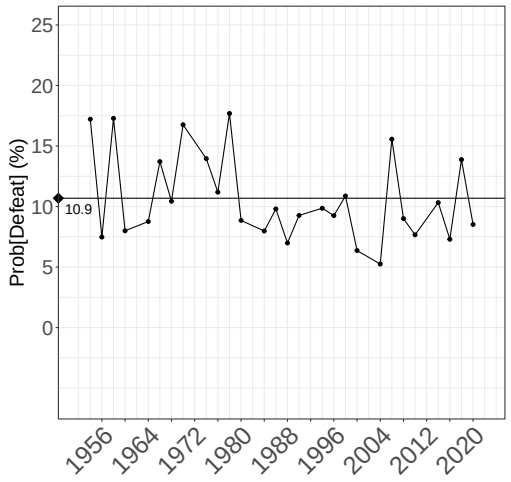

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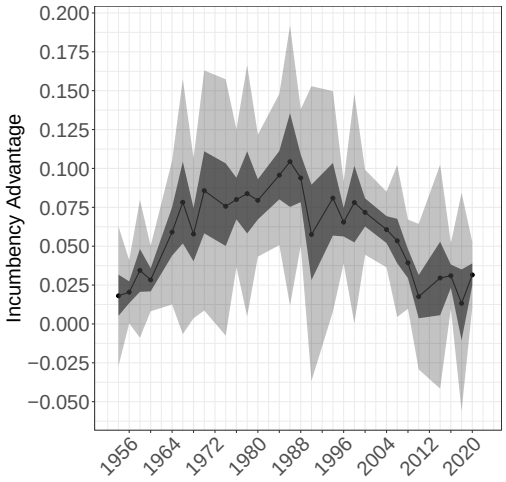

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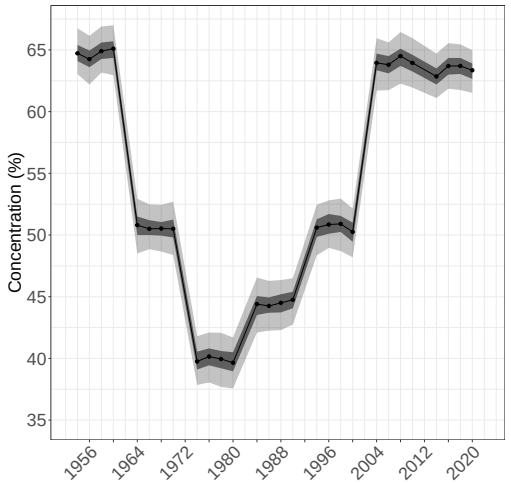

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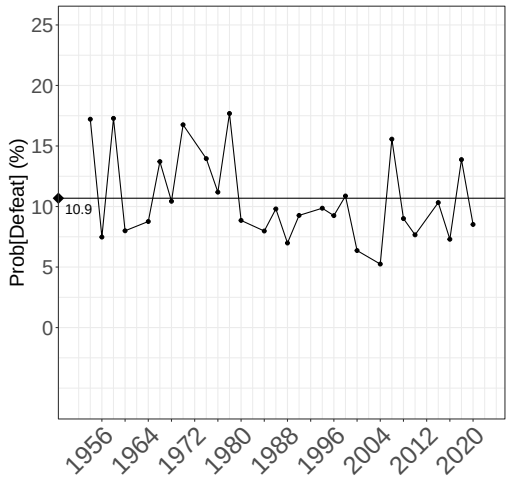

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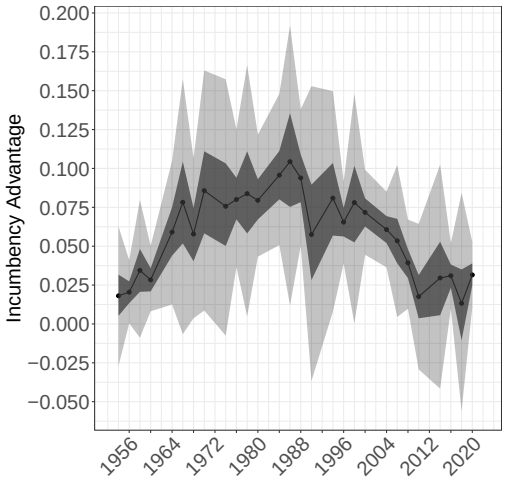
- Different combos of {Polarization, Partisanship, IncAd, Marginals, Gerrymandering bias} ⇝ the same Prob(Defeat)

"Adding" it up



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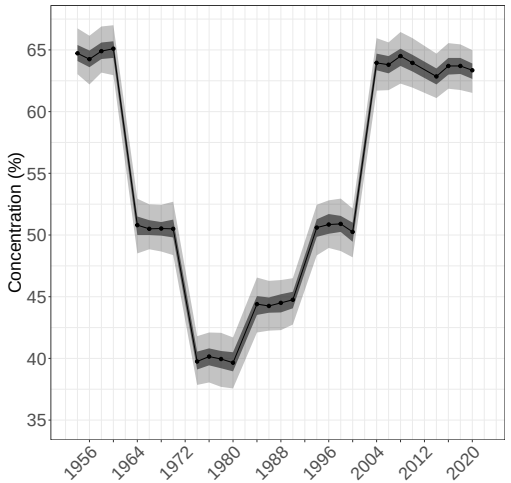

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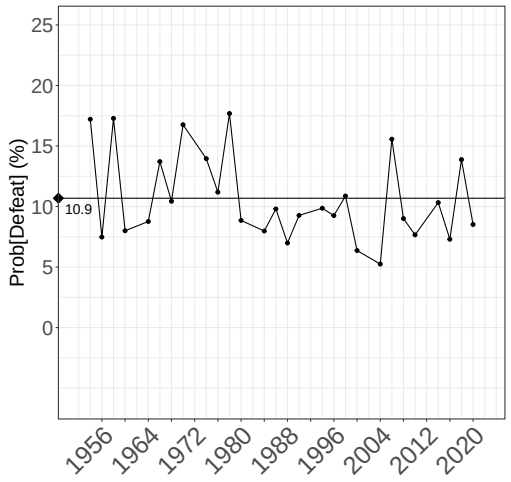

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- (This part of) American democracy actually seems to work

Papers, slides, software, data

GaryKing.org