Polarization and Political Selection: Online Appendix

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Analysis with Primary Elections

In the baseline model, we assume that there exists no primary election and examine the effect of polarization on the quality of the candidates. In this appendix, we develop a model of electoral competition with primary elections. We show that the effect of polarization on the quality of candidates is non-monotonic. As polarization increases, the quality of candidates increases until the level of polarization reaches a threshold. Above the threshold, as polarization increases, the quality of candidates decreases.

Empirically, we show that polarization has no significant correlation with measures of competitiveness of primary election, including numbers of candidates and whether a run-off happens in a primary election.

Model with Primary Elections

Model We consider a primary election in party J. We assume that the primary election features a two-candidate race. Denote a candidate in the primary by J_m where

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$m \in \{1,2\}$. Both candidates J_1 and J_2 commit to adopting z_J as the policy platform. Candidate J_m's campaign effort, denoted by a_{J_m}, has a positive effect on voters from both parties. Voter iJ of party J receives the following utility in the primary if candidate J_m becomes the party nominee.

$$u_{iJ}^{J_m} = a_{J_m} + \zeta_{iJ}^m$$

where ζ_{iJ}^m is the affinity shock. It is distributed uniformly along the interval $(-\frac{1}{2\eta}, \frac{1}{2\eta})$.

In stage 1, a professional decides whether to participate in her party's primary. If she participates in the party primary, she decides a campaign effort $a_{J_m} \geq 0$ in the primary election. The cost of campaign effort in the primary election $m_{J_m}(a_{J_m}) = a_{J_m}^2/2$. If she stays in the current practice, she puts an effort $e_1 \geq 0$ in her practice.

In stage 2, party J nominates the candidate who wins the primary election to be the party nominee. Party J's nominee exerts campaign effort $a_J \geq 0$ in the general election. A professional who practices in stage 2 puts an effort $e_2 \geq 0$ in her practice. The cost of campaign effort in the general election $m_J(a_J) = a_J^2/2$.

In stage 3, professionals (including the elected official) decide effort $e_3 \geq 0$ in their practices.

Results As we show in the baseline model, a professional's optimal level of effort in the final stage $e_3^* = \lambda$. She makes a payoff of $\lambda/2$ in stage 3. In stage 2, the equilibrium level of campaign effort in general election $a_L^* = a_R^* = \frac{\delta\alpha}{2d}$. The expected value from running in the general election is thus $\frac{1}{2}\alpha + \lambda/2 - c(a_J^*)$.

In the primary election, given the campaign effort a_{J_M}, voter iJ votes for candidate 1 if $a_{J_1} + \zeta_{iJ}^1 > a_{J_2} + \zeta_{iJ}^2$. Candidate 1' probability of winning the primary is $\Pr(\zeta_{iJ}^2 - \zeta_{iJ}^1 < a_{J1} - a_{J2}) = H(a_{J1} - a_{J2})$ where $H()$ is the cdf of $\zeta_{iJ}^2 - \zeta_{iJ}^1$. Candidate 1's problem

$$\max_{a_{J_1}} \omega_w H(a_{J_1} - a_{J_2}) + \omega_L \left(1 - H(a_{J_1} - a_{J_2})\right)$$

where the value of winning the primary $w_W = \frac{1}{2}\alpha - m_J(a_J^*) + \lambda/2$ and the value of losing the primary $\omega_L = \lambda/2 + \lambda/2$. We focus on symmetric equilibrium. In the equilibrium $a_{J_1} = a_{J_2} = (\omega_W - \omega_L)h(0)$.

Proposition. *A1 The equilibrium level of campaign effort in party J's primary election* $a_{J_1}^* = a_{J_2}^* = \frac{1}{2}\alpha - m_J(\frac{\delta\alpha}{2d}) - \lambda/2$.

Campaign effort in the primary $a_{J_m}^*$ is increasing in the level of polarization d. Polarization reduces the campaign cost in the general election, which in turn increases the value of winning the primary. As the value of winning primary increases, candidates put more campaign effort in the primary. Campaign effort in the primary $a_{J_m}^*$ is decreasing in a candidate's intrinsic motivation λ. If a candidate wins the primary, she will give up her practice in stage 2. The higher the intrinsic motivation, the higher the value of practicing. Winning primary is thus less attractive for a highly motivated candidate.

A primary candidate expects to win the primary with probability 1/2. The value of running in the primary over the three stages is therefore $v^P(\lambda, d) \equiv \frac{1}{2}\omega_W + \frac{1}{2}\omega_L - m_{J_m}(a_{J_m}^*)$, where $w_W = \frac{1}{2}\alpha - m_J(\frac{\delta\alpha}{2d}) + \lambda/2$, $w_L = \lambda/2 + \lambda/2$ and $m_J(a_J^*) = m_J(\frac{\delta\alpha}{2d})$. To focus on interesting tradeoffs, we assume that for a potential candidate with $\lambda = 0$ the value of running in the primary $v^p(0, d) \geq 0$. The value of staying in the current practice over the three stage is $\lambda/2 + \lambda/2 + \lambda/2$. A potential candidate bids for the nomination if

$$\frac{1}{2}\omega_W + \frac{1}{2}\omega_L - m_{J_m}(a_J^*) > \lambda/2 + \lambda/2 + \lambda/2.$$

Simplifying the above, we have

$$\frac{1}{2}\left(\frac{1}{2}\alpha - m_J\left(a_J^*\right)\right) - m_{J_m}\left(\frac{1}{2}\alpha - m_J(a_J^*) - \lambda/2\right) - \frac{3}{2}\lambda > 0$$

where $a_J^* = \frac{\delta\alpha}{2d}$. We summarize potential candidates' decision to participate in the primary election as follows.

Proposition. *A2 The participation decision in the primary*

$$\sigma = \begin{cases} 1 \text{ } if & \lambda < \bar{\lambda} \\ 0 \text{ } if & \lambda \geq \bar{\lambda} \end{cases}$$

where $\bar{\lambda} = \frac{1}{2}\left(\alpha - (\frac{\delta\alpha}{2d})^2\right) - 3 + \sqrt{9 - \alpha + (\frac{\delta\alpha}{2d})^2}$. $\bar{\lambda}$ *is increasing in* d*, if* $d < \bar{d} \equiv \frac{\frac{1}{2}\delta\left(\alpha - (\frac{\delta\alpha}{2d})^2\right)}{\sqrt{2\left(\alpha - (\frac{\delta\alpha}{2d})^2\right) - 32}}$ *and* $\bar{\lambda}$ *is decreasing in* d*, otherwise.*

A potential candidate participates in the primary if her intrinsic motivation is lower than a threshold $\hat{\lambda}$. As polarization d increases, $\hat{\lambda}$ increases until the level of polarization reaches a threshold $\bar{d}$. Above the threshold, as polarization d increases, $\hat{\lambda}$ decreases. When polarization is in a low range, it incentivizes potential candidate with high intrinsic motivation to bid for the party nomination. When polarization is at a high level, it discourages potential candidates with high intrinsic motivation to bid for the party nomination. Notice that as shown in the previous proposition, polarization reduces the cost of the general election. A lower cost of running in the general election does incentivize a higher campaign effort in the primary election, but its effect on the equilibrium value of running in primary is non-monotonic.

Empirics: Primary election

In this section, we assess the effect of polarization on competition of the primary election. We use the number of primary candidates and whether the primary has a runoff as measures of competitiveness of primary election. We show that polarization is not correlated with these competitiveness measures.

We then estimate the linear model

$$Y_{st} = \alpha_t + \beta V_{st} + \epsilon_{st} \tag{0.1}$$

where Y_{st} is measure of competitiveness of primary election in state s at year t, α_t is a year fixed effect, V_{st} is voter polarization at the state s year t, and ϵ_{st} is an error term.

Table A.4 probes the effect of polarization on the competitiveness of the primary election. First, Column 1 reports the statistics from the baseline specification with the outcome being the log of the number of primary candidates. The coefficient on polarization is not statistically significant. Column 2 shows the coefficient is slightly smaller, but still insignificant, upon inclusion of state fixed effects. Column 3 shows that polarization, if anything, decreases the likelihood that the primary has runoff. The effect is no longer significant once we include state fixed effects (Column 4).

Different Size of Partisan Voters

In the baseline model, we assume that both parties have the same number of voters. Now we consider that party L has ρ share of the voters and party R has $(1-\rho)$ share of the voters. The rest of the model remains the same as that in the baseline model.

The practicing decision in stage 2 is the same as that in the main model. A professional puts an effort $e_2^* = \lambda$ and makes a payoff of $v_2(\lambda) \equiv \lambda/2$ in stage 2.

In the voting stage, given the campaign effort a_L by candidate L and a_R by candidate

R, the swing-voter ideology is

$$x_J = \frac{(a_L - a_R)}{2(z_R - z_L)} + \epsilon = \frac{(a_L - a_R)}{2d} + \epsilon.$$

Because candidates adopt the mean ideology of voters in their respective parties, as polarization among voters increases, the candidates' policy platform diverge. When the candidates' policy platform diverge, campaign effort has a weaker impact on the swing voter's ideology. Therefore, polarization among voters decreases the impact of campaign effort on the swing voters' ideology. Notice that this effect of polarization on the swing voters' ideology is orthogonal to the size of partisan voters. All voters in group J with an ideology to the left of the swing voter in group J (i.e. $x_{iJ} \leq x_J$) vote for the candidate of party L. Candidate L's vote share thus is

$$\pi_L = \frac{(a_L - a_R)}{2(\underline{b} + \bar{b})(z_R - z_L)} + \frac{\epsilon}{\underline{b} + \bar{b}} + \frac{\left((1-\rho)\,\underline{b} + \rho\bar{b}\right)}{\underline{b} + \bar{b}} = \frac{(a_L - a_R)}{2(\underline{b} + \bar{b})d} + \frac{\epsilon}{\underline{b} + \bar{b}} + \frac{\left((1-\rho)\,\underline{b} + \rho\bar{b}\right)}{\underline{b} + \bar{b}}$$

with an analogous expression for candidate R.

The winner is by plurality rule. Candidate L's probability of winning is

$$p_L = \Pr[\pi_L \geq 1/2] = \frac{\left((1-\rho)\,\underline{b} + \rho\bar{b}\right)}{\underline{b} + \bar{b}} + \delta\frac{(a_L - a_R)}{2d}$$

and Candidate R's probability of winning is $p_R = 1 - p_L$.The marginal effect of campaign effort a_L on candidate L's winning probability is decreasing in ideological polarization d. Notice that this marginal effect doesn't condition on candidate L's share of partisan votes.

Expecting the voters' decision, candidate J chooses campaign effort a_J to maximize the following expected utility.

$$\max_{a_J} p_J\alpha - {a_J}^2/2$$

Because the effect of campaign effort on winning is the same as that in the main model, candidates exert the same level of campaign effort as that in the main model. The following proposition summarizes the results.

Proposition. *A3 The equilibrium level of campaign effort* $a_L^* = a_R^* = \frac{\delta\alpha}{2d}$.

This is chosen by both parties. As polarization increases, the marginal effect of campaign effort on the probability of winning election decreases. Therefore, as polarization increases, campaign effort in equilibrium decreases. In the equilibrium, candidate L's probability of winning is $p_L^* \equiv \left((1-\rho)\,\underline{b} + \rho\bar{b}\right) / \left(\underline{b} + \bar{b}\right)$ and $p_R^* = 1 - p_L^*$.

If a potential candidate from party J runs as the candidate of her affiliated party, she expects to win with probability p_J^*. If she wins, she receives a net payoff of $\alpha + v_2(\lambda) - c(a_J^*)$ over the two stages. If she loses, she works in the current profession receiving a payoff of $v_2(\lambda)$. The expected value from running for office is thus $p_L^*\alpha + v_2(\lambda) - c(a_J^*)$. The value from staying at current practice over the two stages is $v_1(\lambda) + v_2(\lambda) = \lambda$. A potential candidate from party J bids for the nomination if

$$p_J^*\alpha + v_2(\lambda) - c(a_J^*) > v_1(\lambda) + v_2(\lambda)$$

which simplifies to

$$p_J^*\alpha > v_1(\lambda) + c(a_J^*)$$

The benefit of running for from party J is $p_J^*\alpha$. The cost of running is the campaign effort $c(a_J^*)$ and the opportunity cost $v_1(\lambda)$ of giving up practicing in stage 1. The opportunity cost is increasing in the level of intrinsic motivation. Potential candidates with lower intrinsic motivation thus lower opportunity cost have more incentives to run. Polarization leads to a lower campaign cost and thus attracts highly motivated individuals to run. This is true for potential candidates from both parties. The party with larger share of voters expects a higher probability of winning and thus attracts highly motivated individuals to run. We summarize a potential candidate's decision to bid for nomination as follows.

Proposition. *A4 A potential candidate from party J with quality level*

$$\lambda < \hat{\lambda}_J \equiv 2p_J^*\alpha - (\frac{\delta\alpha}{2d})^2$$

bids for the party nomination to run for a office. The expected quality level of elected official in party J, $\hat{\lambda}_J/2$, is increasing in voter polarization d. The expected quality level of elected official in party L is increasing in $\rho$and the expected quality level of elected official in party R is decreasing in ρ.

As polarization d increases, $\hat{\lambda}$ increases. Polarization incentivizes potential candidates with high intrinsic motivation to bid for the party nomination. The expected level of intrinsic motivation of elected official in a party is increasing in the number of partisan voters.

Robustness: the office reward α

Recall that the interior solution to candidate J's maximization problem is $a_J = \frac{\delta\alpha}{2d}$ and it yields a payoff of $\frac{1}{2}\alpha - \frac{1}{2}(\frac{\delta\alpha}{2d})^2 < 0$. If $\alpha > \frac{4d^2}{\delta^2}$, $\frac{1}{2}\alpha - \frac{1}{2}(\frac{\delta\alpha}{2d})^2 < 0$. A candidate has incentives to deviate from $a_J = \frac{\delta\alpha}{2d}$ to no effort which yields a payoff 0. So, the interior solution $a_J = \frac{\delta\alpha}{2d}$ can't be an equilibrium when $\alpha > \frac{4d^2}{\delta^2}$.

Suppose that $a_J = a \geq 0$ in the equilibrium. A candidate has incentives to deviate from a to $a+\iota$, $\iota \in (0, \frac{\delta}{d}\alpha - 2a)$. Putting effort a yields a payoff of $\frac{1}{2}\alpha - \frac{1}{2}a^2$. If one deviates to $a+\iota$, one receives $\frac{1}{2}(1+\frac{\delta\iota}{d})\alpha - \frac{1}{2}(a+\iota)^2$. The difference between these two values is $\frac{1}{2}\frac{\delta\iota}{d}\alpha - \frac{1}{2}(2a\iota + \iota^2) > 0$. Therefore, if $\alpha > \frac{4d^2}{\delta^2}$, equilibrium doesn't exist. If $\alpha > \frac{4d^2}{\delta^2}$, our prediction that polarization affects the quality of the candidates doesn't hold.

We've shown that $\hat{\lambda} = \alpha - (\frac{\delta\alpha}{2d})^2$. Because $\lambda \in [0,1]$, if there exists any λ such that potential candidate λJ bids for nomination, it must be that $\hat{\lambda} \in (0, \bar{\lambda})$. That is, $0 < \alpha - (\frac{\delta\alpha}{2d})^2 < 1$. As we have discussed, to ensure the existence of equilibrium of campaign effort, we assume that $\alpha < \frac{4d^2}{\delta^2}$. This implies that $0 < \alpha - (\frac{\delta\alpha}{2d})^2$. Now, the condition reduces to $\alpha - (\frac{\delta\alpha}{2d})^2 < 1$. This condition implies that $\alpha < \frac{2d}{\delta}(\frac{d}{\delta} - \sqrt{\left(\frac{d}{\delta}\right)^2 - 1}$ or $\alpha > \frac{2d}{\delta}(\frac{d}{\delta} + \sqrt{\left(\frac{d}{\delta}\right)^2 - 1}$.

If $\alpha \in [\frac{2d}{\delta}(\frac{d}{\delta} - \sqrt{\left(\frac{d}{\delta}\right)^2 - 1}, \frac{2d}{\delta}(\frac{d}{\delta} + \sqrt{\left(\frac{d}{\delta}\right)^2 - 1}]$, $\hat{\lambda} = \alpha - (\frac{\delta\alpha}{2d})^2 \geq 1$. All potential candidates bid for the nomination and polarization won't affect the quality of candidates. In other words, our prediction that polarization affects the quality of the candidates doesn't hold.

Model Proofs

Proof. Proof of Proposition 1

Candidate L chooses campaign effort a_L to solve

$$\max_{a_L} p_L\alpha - {a_L}^2/2$$

where$p_L = \frac{1}{2} + \delta(\frac{1}{2}\frac{(a_L - a_R)}{d})$. The solution to the maximization problem is $a_L^* = \frac{\delta\alpha}{2d}$.

For Candidate R, she chooses campaign effort a_R to solve

$$\max_{a_R} p_R\alpha - {a_R}^2/2$$

where$p_R = \frac{1}{2} - \delta(\frac{1}{2}\frac{(a_L - a_R)}{d})$. The solution to the maximization problem is $a_R^* = \frac{\delta\alpha}{2d}$. □

Proof. Proof of Proposition 2

Let $\hat{\lambda}$ be the value of λ that solves the following equation

$$\frac{\alpha}{2} = \frac{1}{2}\lambda + m_J(a_J^*)$$

We have

$$\hat{\lambda} \equiv \alpha - (\frac{\delta\alpha}{2d})^2$$

Because $\frac{1}{2}\lambda$ is increasing in λ, any $\lambda < \hat{\lambda}$ satisfies

$$\frac{\alpha}{2} > \frac{1}{2}\lambda + m_J(a_J^*).$$

□

Proof. Proof of Proposition A2

Let the net value of participating in the primary be $f(\lambda; d)$.

$$f(\lambda; d) \equiv v^p(\lambda; d) - (v_1(\lambda) +_2 (\lambda) + v_3(\lambda)) = \frac{1}{2}\left(\frac{1}{2}\alpha - c\left(a_J^*\right)\right) - c\left(1/2\alpha - c(a_J^*) - \lambda/2\right) - \frac{3}{2}\lambda$$

Arrange the above, we have a quadratic function of λ

$$f(\lambda; d) \equiv -\frac{1}{8}\lambda^2 + \frac{1}{4}\left(\frac{1}{2}\alpha - c\left(a_J^*\right) - 3\right)\lambda - \frac{1}{8}\left(\frac{1}{2}\alpha - c(a_J^*)\right)^2 + \frac{1}{2}\left(\frac{1}{2}\alpha - c\left(a_J^*\right)\right)$$

We assume that $v^p(0; d) \geq 0$, it must be that $f(0; d) \geq 0$. Let $\lambda_1 < \lambda_2$ be the roots to $f(\lambda; d) = 0$. Because $f(0; d) \geq 0$ and the coefficient on λ^2 is negative, it must be that $\lambda_1 < 0 < \lambda_2$. Therefore, for $\lambda > 0$, there exist an unique $\bar{\lambda}$ such that $f(\bar{\lambda}; d) = 0$. $\bar{\lambda} = \lambda_2 = \frac{1}{2}\left(\alpha - (\frac{\delta\alpha}{2d})^2\right) - 3 + \sqrt{9 - \alpha + (\frac{\delta\alpha}{2d})^2}$. Because $f(0; d) \geq 0$ and the coefficient on λ^2 is negative, for any $\lambda < \bar{\lambda}$, $f(\lambda; d) > 0$ and therefore $\sigma = 1$. For any $\lambda > \bar{\lambda}$, $f(\lambda; d) < 0$ and thus $\sigma = 0$.

Now, we prove the relationship between $\bar{\lambda}$ and d. Let $g(d) \equiv (\frac{\delta\alpha}{2d})^2$.

$$\partial\bar{\lambda}/\partial d = \partial\bar{\lambda}/\partial g \cdot \partial g/\partial d = \left(-\frac{1}{2} + \frac{1}{2}(9 - \alpha + g)^{-1/2}\right) \partial g/\partial d.$$

$\partial g/\partial d < 0$. If $-\frac{1}{2} + \frac{1}{2}(9 - \alpha + g(d))^{-1/2} < 0$, $\partial\bar{\lambda}/\partial d > 0$ and $\partial\bar{\lambda}/\partial d \leq 0$ otherwise. Define $\bar{d}$ such that $g(\bar{d}) = \alpha - 9$. If $d < \bar{d}$, $\partial\bar{\lambda}/\partial d > 0$ and $\partial\bar{\lambda}/\partial d \leq 0$ otherwise. Solve for $\bar{d}$, we have

$$\bar{d} \equiv \frac{\frac{1}{2}\delta\left(\alpha - (\frac{\delta\alpha}{2d})^2\right)}{\sqrt{2\left(\alpha - (\frac{\delta\alpha}{2d})^2\right) - 32}}.$$

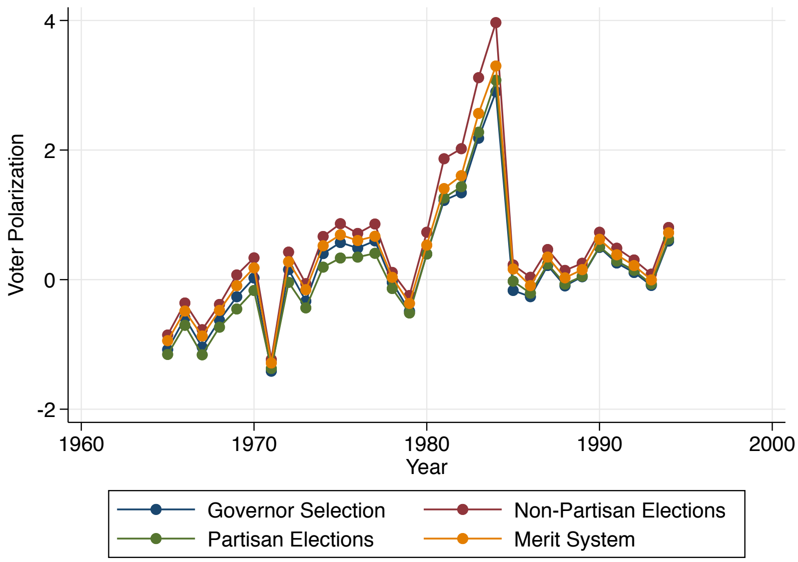
□

Table A.1: Summary Statistics on Area of Law and Related Industries

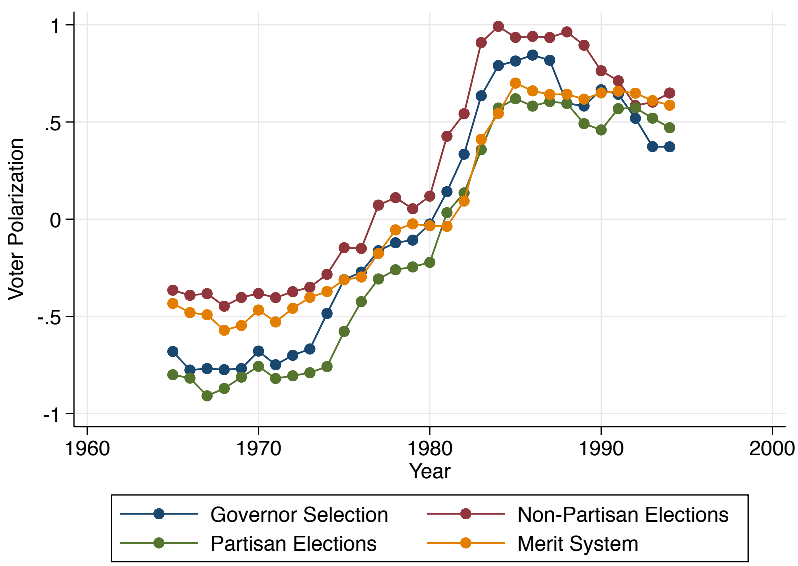
Area of Law	Freq.	Percent	Related Industrial Sector	Freq.	Percent
Criminal Law	191810	21.85	Real Estate	28527	13.64
Civil Procedure	74757	8.52	Law Enforcement	10758	5.14
Evidence	66377	7.56	Automobiles	10206	4.88
Torts	57915	6.6	Insurance	9158	4.38
Damages & Remedies	45073	5.14	Tax	8509	4.07
Contracts	40888	4.66	Construction & Engineering	6332	3.03
Real Property	36408	4.15	Workers' Compensation	5397	2.58
Constitutional Law	34038	3.88	Banking	4917	2.35
Family Law	32191	3.67	Legal & Compliance Services	4682	2.24
Workers' Compensation	22955	2.62	Automobile Insurance	4124	1.97
Insurance Law	19375	2.21	Property Management	4108	1.96
Administrative Law	18264	2.08	Transportation	3890	1.86
Wills, Trusts & Estates	18179	2.07	Child Welfare	3689	1.76
Tax & Accounting	16978	1.93	Employment Services	3679	1.76
Employment Law	14601	1.66	Health & Medical	3478	1.66
Habeas Corpus	13426	1.53	Oil & Gas	3189	1.52
Appellate Procedure	13140	1.5	Railroads	2777	1.33
Professional Responsibility	12052	1.37	Hospitals	2719	1.3
Motor Vehicles & Traffic Law	9644	1.1	Education	2586	1.24
Land Use Planning & Zoning	9122	1.04	Trucking	2097	1
Government	8942	1.02	Bridges & Roads	1751	0.84
Mortgages & Liens	7531	0.86	Agriculture & Farming	1729	0.83
Landlord & Tenant	5499	0.63	Mortgage Lending	1680	0.8
Construction Law	4997	0.57	Manufacturing	1612	0.77
Elections & Politics	4972	0.57	Real Estate Agents & Brokers	1573	0.75
Eminent Domain	4943	0.56	Unions	1485	0.71
Labor Law	4790	0.55	Financial Services	1469	0.7
Government Employees	4773	0.54	Judiciary	1448	0.69
Debtor Creditor	4260	0.49	Politics	1336	0.64
Employee Benefits	4208	0.48	Teachers	1300	0.62
Medical Malpractice	4113	0.47	Medical Procedures	1273	0.61
Personal Property	3994	0.46	Public Works	1223	0.58
Corporate Law	3958	0.45	Life Insurance & Annuities	1155	0.55
Negotiable Instruments	3843	0.44	Apartment Leasing	1127	0.54
Education Law	3803	0.43	Mining & Natural Resources	1115	0.53
Banking & Finance	3380	0.39	Drug Trafficking	1105	0.53
Alcohol & Beverage	3213	0.37	Sewer & Water	990	0.47
Civil Rights	3138	0.36	Electric	985	0.47
Health Law	2950	0.34	Water & Sewer	972	0.46
Transportation Law	2839	0.32	Physicians	966	0.46
Partnerships	2333	0.27	Firearms & Weapons	962	0.46
Natural Resources	2301	0.26	Motorcycles	919	0.44
Legal Malpractice	2285	0.26	Water	904	0.43
Products Liability	2280	0.26	Food & Beverage	888	0.42
Alternative Dispute Resolution	2144	0.24	Commercial Real Estate	883	0.42
Communications & Media	2048	0.23	Property & Casualty Insurance	854	0.41
Environmental Law	1857	0.21	Administration	837	0.4

Figure A.1: Decision Quality Over Time, By Appointment System

(A) Voter Polarization Over Time, by Appointment System

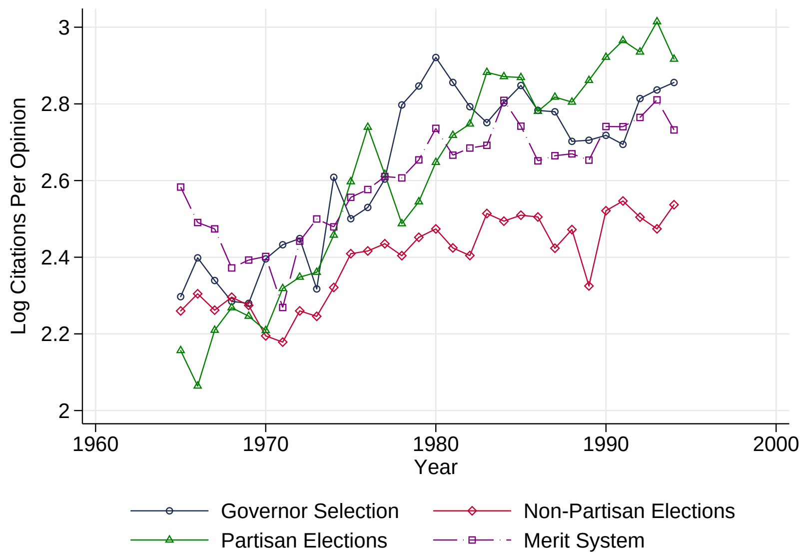


(B) Judge's Starting Voter Polarization Over Time, by Appointment System



Notes. Panel A: The curent average voter polarization by system, over time. Panel B: The average starting-year polarization of judges over time, by system.

Figure A.2: Decision Quality Over Time, By Appointment System



Notes. Log citations per opinion, averaged by state-year, and plotted by year, separately for the four appointment systems.

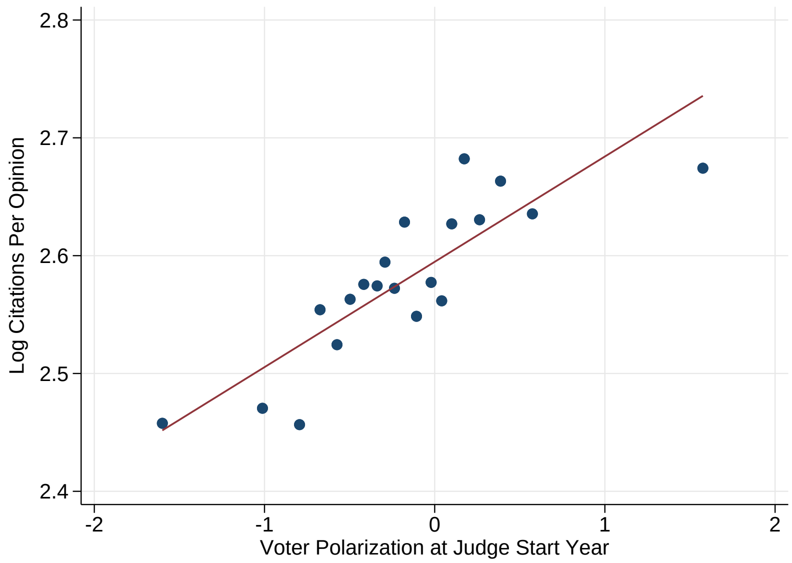
Table A.2: Robustness Checks: Effect of Start-Year Polarization on Judge Quality in Partisan System

	Effect on Quality				
	(1)	(2)	(3)	(4)	(5)
				Previous Judges	Previous Non-Judges
Starting-Year	0.0612*	0.0556+	0.0604*	0.0963+	0.0994*
Polarization	(0.0249)	(0.0274)	(0.0244)	(0.0526)	(0.0352)
N	2580	2699	2699	1176	1407
Adj. R^2	0.754	0.779	0.759	0.699	0.751
Court-Year FE's	x	x	x		
Cohort FE's	x	x	x		
State×Start-Year	x	x	x		
Electoral Cycle FEs			x		

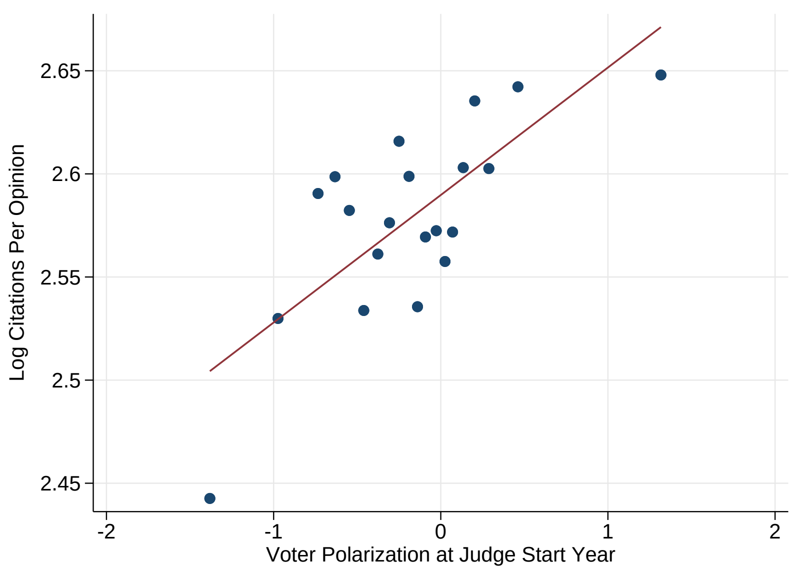
Supporting reesults. Column (1) uses alternative weighting by size of caseload. Outcome is log positive citations per opinion. Cohort FE's include fixed effects for starting decade. State×Start-year means state fixed effects, interacted with judge starting year. Electoral cycle FE's includes indicators for year when judge is up for re-election. Standard errors adjusted for two-way clustering by state and year, in parentheses. $+p < .1, *p < .05, **p < .01$.

Figure A.3: Binscatter for Starting-Year Polarization and Judge Quality, Just Partisan Elections

(A) Court-Year Fixed Effects

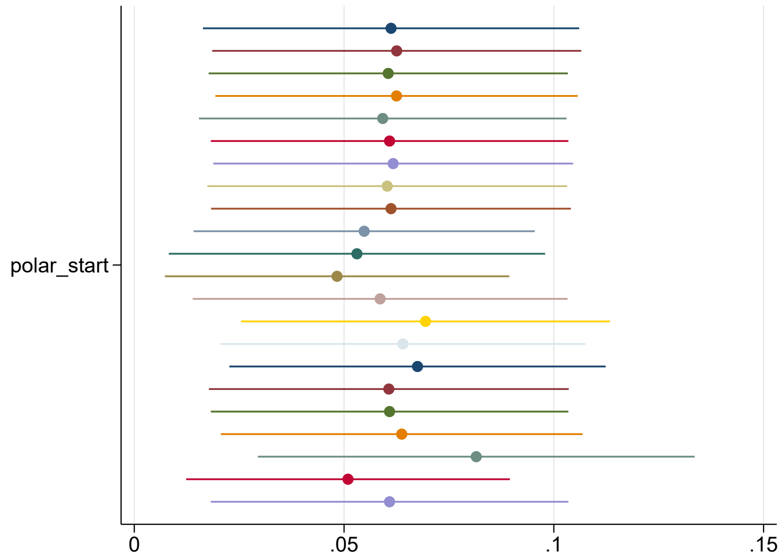


(A) Court-Year Fixed Effects and Cohort Fixed Effects



Notes. Binscatter of citations per opinion against starting-year polarization, just partisan-election states. Bottom panel adds cohort fixed effects.

Figure A.4: Polarization at Starting Year and Judge Quality, Drop an Individual State



Notes. Coefficient plot for each of the 22 regressions of log positive citations per opinion on judge starting-year polarization and state-year fixed effects where we dropped an individual partisan-election state. 95% confidence intervals constructed with two-way clustering by state and year.

Table A.3: Effect of Polarization on Campaign Spending in General Election in Partisan System

	Campaign Spending
	(1)
Polarization	-0.721*
	(0.324)
N	163
Adj. R^2	-0.003
Year FE's	x

Sample includes all partisan elections. Outcome is standardized campaign spending in general election. Standard errors clustered by year in parentheses. $+p < .1, *p < .05, **p < .01$.

Table A.4: Effect of Polarization on Primary Competition in Partisan System

	(1)	(2)	(3)	(4)
	Log # Primary Candidates		Primary has Runoff	
Polarization	0.0503	0.00564	-0.137*	-0.0415
	(0.136)	(0.160)	(0.0640)	(0.0534)
N	268	265	268	265
Adj. R^2	-0.030	0.338	0.028	0.309
Year FE's	x	x	x	x
State FE's		x		x

.OLS estimates for Equation (0.1). Sample includes all partisan elections. Outcomes are (1, 2) log number of primary candidates and (3, 4) whether primary has runoff. $+p < .1, *p < .05, **p < .01$.