Preferences and Incentives of Appointed and Elected Public Officials: Evidence from State Trial Court Judges

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Introduction

- This paper compares the influence on policy decisions of two selection systems: appointment and election.
- The paper focuses on the behavior of state court judges in the State of Kansas, which has within-state variation in the selection systems. In some jurisdictions the judge is appointed by the Governor, in others the judge is elected by the citizens.

Three Key Analyses

1. Use variation in sentencing to asses how much preferences and reelection incentives affect judges decisions.

2. Simulations to asses how payoffs affect reelection incentives and sentencing outcomes.

3. Compute how reelection concerns affect incentives to hold office.

Methodology

- Specify and estimate a dynamic structural model:
    - Judges make criminal sentencing decisions considering reelection probability and their own preferences.
    - Exit decisions from the bench, considering payoffs from the bench, outside options, and reelection prospects.
- Combines rich individual-level data on judges sentencing decisions with information on judges electoral outcomes, individual characteristics, and career profiles.
- Maximum likelihood model, 243 districts since 1976.

Data Description

- 31 districts: 17 appointed (87 judgeships), 14 elected (73 judgeships).
- Similar characteristics in terms of metropolitan, liberal-conservative.
- All judges serve in periods of 4 years.
- Criminal Sentencing Guidelines: specify standard, minimum, and maximum sentence. Discretion between margins.

Preliminary Analysis

- ▶ Shorter tenure on the bench for elected judges.
- ▶ Elected judges that leave bench more likely to work than retire.
- ▶ Sentences are divided into 5 categories: Harsh, Standard Harsh, Standard, Standard Lenient, and Lenient
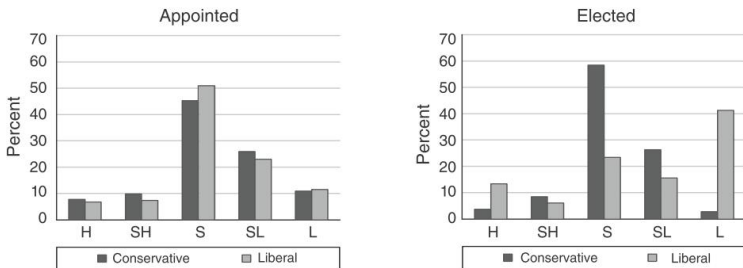

FIGURE 2. DISTRIBUTION OF SENTENCING DECISIONS BY POLITICAL ORIENTATION

Model - Timing

- Finite Horizon Model, 75 years old max (must retire). Cycles of 2 periods, each period is 2 years.
- At the end of each period judge observe "political climate" and decides to stay or exit voluntarily $c_i \in \{Stay, Exit\}$.
- If judge decides not to exit voluntarily in election period, he incurs in a cost of α_R.
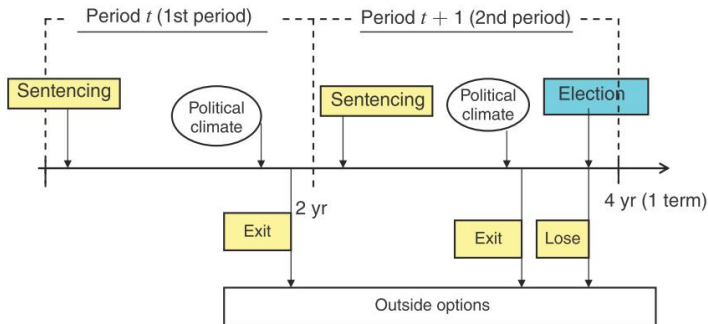
Model - Payoff from Bench

▶ Payoff from seat on the Bench:

$$v(T_i, p_{it}) = W_B + \alpha_B + u(T_i, p_{it}) + \zeta_{it}^p$$

W_B	Wage
α_B	Non pecuniary benefits
T_i	"Type" of judge (harsh, standard, lenient)
p_{it}	sentencing decision
ζ_{it}^p	Shock

Model- Utility from Policy

▶ The underlying utility function is:

$$\tilde{u}(x_i^*, x) = \gamma \exp\left(-\left(\frac{x_i^* - x}{\sigma_u}\right)^2\right) - \gamma$$

▶ Where γ, σ_u scale parameters, x_i^* ideal point, and x implemented policy.

▶ Problem: x is continuous, we only estimate discrete "Types" and Sentences, therefore instead of $\tilde{u}$ we use u.

$$u(T_i, p_{it}) = \begin{cases} \int_0^{0.2} \tilde{u}(x^*, x)\, dx/0.2, & \text{if } p_{it} = L \\[2mm] \int_{0.2}^{0.4} \tilde{u}(x^*, x)\, dx/0.2, & \text{if } p_{it} = SL \\[2mm] \int_{0.4}^{0.6} \tilde{u}(x^*, x)\, dx/0.2, & \text{if } p_{it} = S \\[2mm] \int_{0.6}^{0.8} \tilde{u}(x^*, x)\, dx/0.2, & \text{if } p_{it} = SH \\[2mm] \int_{0.8}^{1} \tilde{u}(x^*, x)\, dx/0.2, & \text{if } p_{it} = H \end{cases}$$

Model- Reelection Probability and Outside Option

- Reelection probability depends on policy implemented in the last two periods.

- The political orientation of districts can be either conservative or liberal $Dist_i \in \{Con, Lib\}$, constant over time.

- Other variables: age, tenure, party, district political climate (3 categories, percentage vote republican) (XR_{it}).

- Probit model $WINP = Pr\{g(XR_{it}) + \eta_{Eit} \geq 0\}$

- Outside option can be either retire (leisure) or work somewhere else (linear function of private experience, 3 categories 1-5, 6-10, 10+ years).

Solution, Estimation, and Identification

- ▶ Backward induction, simulated maximum likelihood using nested algorithm as in Rust (1987).
- ▶ For the construction of the likelihood function specify conditional probability of choices derived from value functions of dynamic programming problem.
- ▶ Value functions start from the final, absorbing state (occupation after exit).

$$VR_{it} = \sum_{\tau=t}^{\tau=T} \left[\delta^{\tau-t} \, \Pi_{s=t}^{s=\tau}(1 - \pi_d(Age_{is})) \cdot UR_{i\tau} \right]$$

$$VW_{it} = \sum_{\tau=t}^{\tau=T} \left[\delta^{\tau-t} \, \Pi_{s=t}^{s=\tau}(1 - \pi_d(Age_{is})) \times \left\{ \Pi_{s=t}^{s=\tau}(1 - \pi_r(Age_{is})) \cdot UW_{i\tau} \right. \right.$$
$$\left. \left. + \, (1 - \Pi_{s=t}^{s=\tau}(1 - \pi_r(Age_{is})))UR_{i\tau} \right\} \right].$$

Values, Values, Values...

▶ The present value of exit is:

$$VE(\mathbf{XE}_{it}) = E_\epsilon E_\xi \max\{VR(\mathbf{XE}_{it}) + \xi_{1it}, VW(\mathbf{XE}_{it}, \epsilon_i^W) + \xi_{2it}\},$$

▶ The present value of running:

$$VRun(\mathbf{XC}_{it}, p_{it}, p_{it-1})$$

$$= \alpha_R + (1 - WINP(\mathbf{XR}_{it})) \times VE(\mathbf{XE}_{it}) + WINP(\mathbf{XR}_{it})$$

$$\times VC(T_i, \mathbf{XE}_{it+1}, Noncrime_i, Party_i, Dist_i, SOD_{it}),$$

▶ The present value of holding an office, evaluated at period with decision to run:

$$EV(\mathbf{XC}_{it}, p_{it}, p_{it-1})$$

$$= E_\xi \max\{VRun(\mathbf{XC}_{it}, p_{it}, p_{it-1}) + \xi_{1it}, VE(\mathbf{XE}_{it}) + \xi_{2it}\}.$$

Values, Values, Values... (2)

▶ The present value of holding an office, evaluated at period with no decision to run:

$$EV(\mathbf{XC}_{it}, p_{it}) = E_\xi \max\{VC(\mathbf{XC}_{it}) + \xi_{1it}, VE(\mathbf{XE}_{it}) + \xi_{2it}\}.$$

▶ The value of dictating policy $\hat{p}$

$$V_{\hat{p}}(\mathbf{XC}_{it}) = W_B + \alpha_B + u(T_i, \hat{p}) + \delta(1 - \pi_d(Age_{it})) \cdot EV(\mathbf{XC}_{it}; p_{it} = \hat{p}),$$

▶ The value of continue.

$$VC(T_i, \mathbf{XE}_{it}, Noncrime_i, Party_i, Dist_i, SOD_{it-1})$$

$$= E_\zeta \max_{\hat{p} \in \{H, SH, S, SL, L\}} \{V_{\hat{p}}(\mathbf{XC}_{it})\}.$$

Identification - Results

- With all these values we can get the likelihood functions (omitted from this presentation).

- *Party affiliation and political climate*: asymmetry between republican and democrat, more important for republican since Kansas is deep-red, in general democrat judges were elected with unfavorable democrat climate, while republican were not necessary, so they have valence characteristics that makes them more resistant to political climate.

- *Sentencing decisions*: For elected judges the effect of sentencing decisions critically depends on the political orientations of their districts. In conservative districts the most preferred is standard, lenient least preferred. In liberal lenient most preferred, harsh least preferred.

Identification - Results

- Estimated non-pecuniary benefit α_B is \$174,878. Their wage is about \$200,000.

- Estimation says that standard type judges incur in larger welfare loss from something lenient or harsh than extreme type judges from doing something standard. (counterintuitive)

- The proportion of standard preference type is significantly higher among appointed than elected judges, yielding a substantial homogeneity among appointed judges.

- In general pretty good fitness for almost everything (next slide).

Goodness of fit

TABLE 6—GOODNESS OF FIT: RELATIVE FREQUENCY OF SENTENCING DECISIONS (*percent*)

Decision	Appointed (1)		Elected (2)	
	Data	Model	Data	Model
H	7.4	7.9	9.8	8.9
SH	8.9	10.6	7.0	7.1
S	47.8	46.7	36.5	37.7
SL	24.8	25.7	19.7	19.8
L	11.2	9.2	27.0	26.6

Elected (by district)

Decision	Conservative (3)		Liberal (4)	
	Data	Model	Data	Model
H	3.8	4.7	13.4	11.6
SH	8.5	4.3	6.2	8.8
S	58.5	60.6	23.5	23.0
SL	26.4	24.7	15.6	16.6
L	2.8	5.7	41.3	40.0

Elected (by party)

Decision	Democrat (5)		Republican (6)	
	Data	Model	Data	Model
H	14.2	11.9	6.7	6.1
SH	8.3	10.1	6.1	4.3
S	34.2	37.0	38.2	38.3
SL	24.2	22.0	16.4	17.8
L	19.2	19.1	32.7	33.5

Discussion

▶ Appointed judges are more homogeneous, we would expect closer to the median voter of the State, as opposed to the median voter of their district.

▶ More homogeneity means more consistency in sentencing in the entire state.

▶ Voters are unlikely to be well informed about the characteristics and political ideology of judicial candidates.

▶ Reelection incentives may have unintended consequences of discouraging public officials with good outside options from staying in office.

Counterfactual Experiments - Appointed/Elected

TABLE 9—SENTENCING PATTERNS UNDER ALTERNATIVE PREFERENCES AND REELECTION INCENTIVES (*percent*)

Preference Retention	Conservative district			Liberal district		
	Simulation (a) Elected Life tenured	Baseline Elected Reelection	Simulation (b) Appointed Reelection	Simulation (a) Elected Life tenured	Baseline Elected Reelection	Simulation (b) Appointed Reelection
H	20.5	4.7	3.9	17.6	11.6	7.8
SH	12.1	4.3	4.0	11.5	8.8	8.0
S	26.9	60.6	63.3	29.2	23.0	32.4
SL	19.1	24.7	24.7	20.1	16.6	19.7
L	21.4	5.7	4.2	21.6	40.0	32.2

Preference Retention	Overall			
	Simulation (a) Elected Life tenured	Baseline Elected Reelection	Simulation (b) Appointed Reelection	Baseline Appointed Life tenured
H	18.7	8.9	6.2	7.9
SH	11.7	7.1	6.4	10.6
S	28.3	37.7	44.5	46.7
SL	19.7	19.8	21.6	25.7
L	21.6	26.6	21.2	9.2
Simpson index	0.214	0.265	0.298	0.310

Counterfactual Experiments -Wage

- ▶ Wage affects depending on the non-pecuniary benefit. If the benefit is small, then increasing wage will make elected officials more responsive to the electorate, but not if the benefit is large since all judges follow electorate preferences in the first place.

- ▶ Being a criminal judge gives a lot of reputation, but being a school board member or regulator does not, so different effects for different positions.

- ▶ Decreasing salary will make judges with good outside options to leave, decreasing human capital level of public officials.

Conclusions

- ▶ Sentencing behavior of elected judge is far more variable than appointed judges.
- ▶ Sentencing harshness of elected judges is strongly related to political ideology of voters, appointed is not.
- ▶ Appointed judges preferences are more homogeneous.
- ▶ Reelection incentives critically depend on prestige of office (non monetary payoffs).
- ▶ Reelection concerns reduce welfare of judges, making judges with good outside options to leave.