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CENTRE FOR CRIME JUSTICE AND POLICING

Queuing Up For Justice:
Elections and Case Backlogs

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- In the U.S. prosecutors have a significant amount of discretion.
  - whether to drop a case
  - which charges to file
  - whether to plea bargain or take to trial

- The amount they exercise discretion over is enormous.
  - 2344 local prosecutor offices
  - 2.3 million felony cases each year
  - 95% of all criminal prosecutions

- In the U.S. “chief” prosecutors face election in 46 states
  - Connecticut, New Jesery, Rhode Island, Alaska

- Appointments common around the world

- There little previous work on the effect of elections on prosecutor’s choices.
  - The little that exists focuses on US Attorneys

    Boylan (JLawE, 2004) & Boylan and Long (JLawE, 2005)

Rasmusen, Ramseyer, Raghav (ALER, 2009)

- First, rigorous investigation into the behavior of prosecutors.
- Consider the impact of public financing on intensive margin and extensive margin.
- Empirical evidence shows that increased funds shift out both margins.

Our Previous Work (Bandyopadhyay and McCannon, *JPET, 2015*)

- We first developed the signaling model where outcomes were used to convey information on the unobservable skill of incumbent prosecutors.
  - differentiate between sentence lengths and conviction rates
  - distortions caused by elections depend on the metric used by the voters

Bandyopadhyay and McCannon (Public Choice, 2015)

- Panel data set from North Carolina studied.

- Main Findings:
  - Re-election campaigns are associated with increases in the number of convictions coming from jury trials (relative to plea bargains)
  - The presence of a challenger leads to even more jury trial convictions (and fewer plea bargains)
  - “safe” seats use the courtroom less

Mistakes?

- McCannon (2013, *JELS*) also shows the more mistakes are made.
  - NY data of appeals of felony convictions
  - More modifications when DA is in re-election

- All of the research supports zealous prosecution due to re-election concerns.

Implications of the Research

- State-level prosecutors are acting as if voters are focusing on sentences obtained rather than conviction rates.
- Suggests that distortions caused by asymmetric information are leading to suboptimal uses of the criminal justice system.
- But the “effort” story of RRR provide an alternative implication.

This paper

- Unresolved issue
  - Effort or Information?
- Elections could provide good incentives and improved behavior.
- Distortions (due to asymmetric info) reduce welfare.

Effort

- Elections may provide oversight and encourage effort exertion (rather than shirking).
- This causes more cases to be taken to trial and would explain the result.
- Such an effect would be welfare improving.

Differentiating the Theories

- Effort exertion would lead to more prosecution overall.
- Fewer cases left pending (backlog).
- Distortion caused by trials would encourage a re-allocation of resources to trials away from processing cases.
- More cases left pending

Theoretical Framework

- N — # of cases filed
- R — resources available
- $a \in \{t, p, n\}$ — actions available
- N_a — # of cases with action a
  - $N_t + N_p + N_n = N$
- c — cost to file
- C_a — cost of taking a on a case
  - $C_t > C_p > C_n = 0$ — $\kappa \equiv C_t - C_p > 0$

Theoretical Framework

- Budget Constraint:

$$cN + C_t N_t + C_p N_p \leq R$$

- $\theta \in [0, \theta_m]$ quality/quantity of evidence

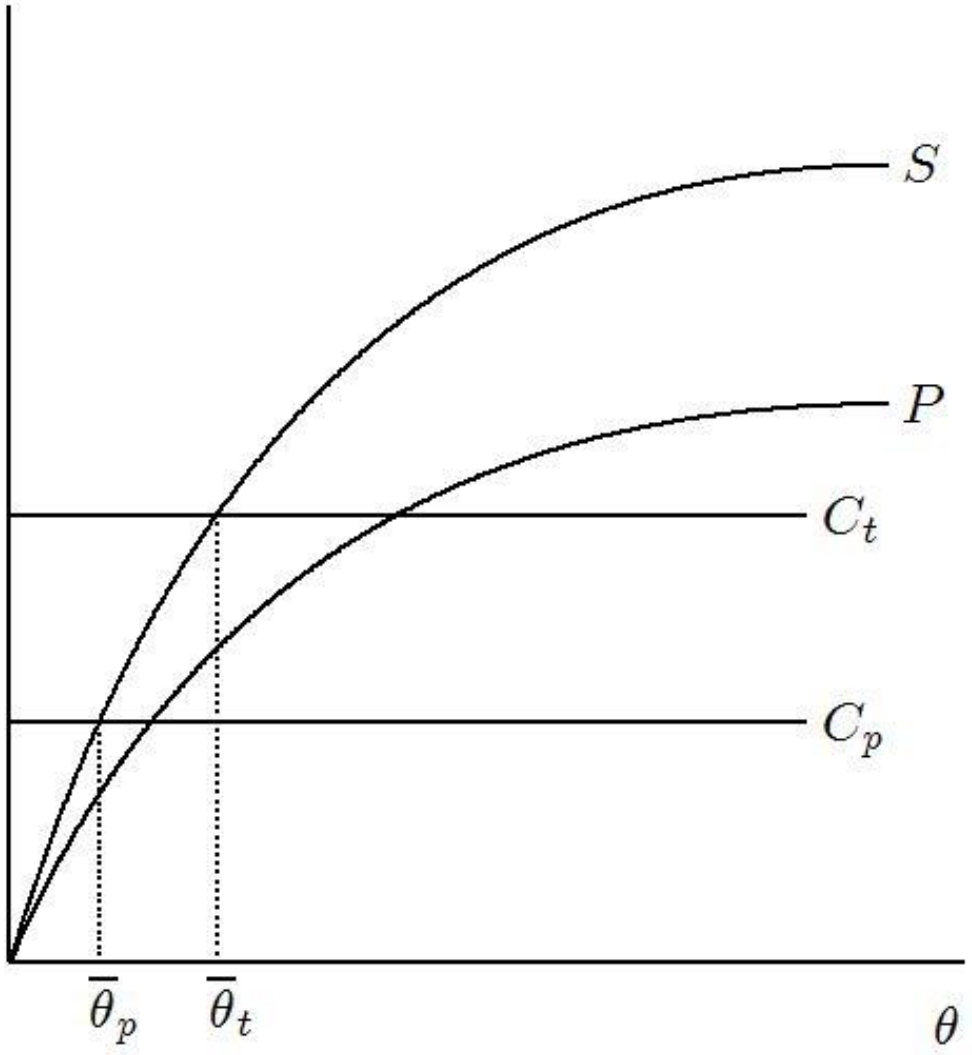
- $S(\theta)$ expected sanction if $a = t$
- $P(\theta)$ expected sanction if $a = p$

Theoretical Framework

Assumptions:

- $dS/d\theta > 0$ & $dP/d\theta > 0$ $\qquad D(\theta) = S(\theta) - P(\theta)$
- $dD/d\theta > 0$
- $\exists\ \overline{\theta}_t \ni S(\theta) > C_t$ for θ greater and $S(\theta) < C_t$ o/w
- $\exists\ \overline{\theta}_p \ni P(\theta) > C_p$ for θ greater and $P(\theta) < C_p$ o/w
- $\exists\ \theta' \ni D(\theta) > \kappa$ for $\theta > \theta'$

Theoretical Framework

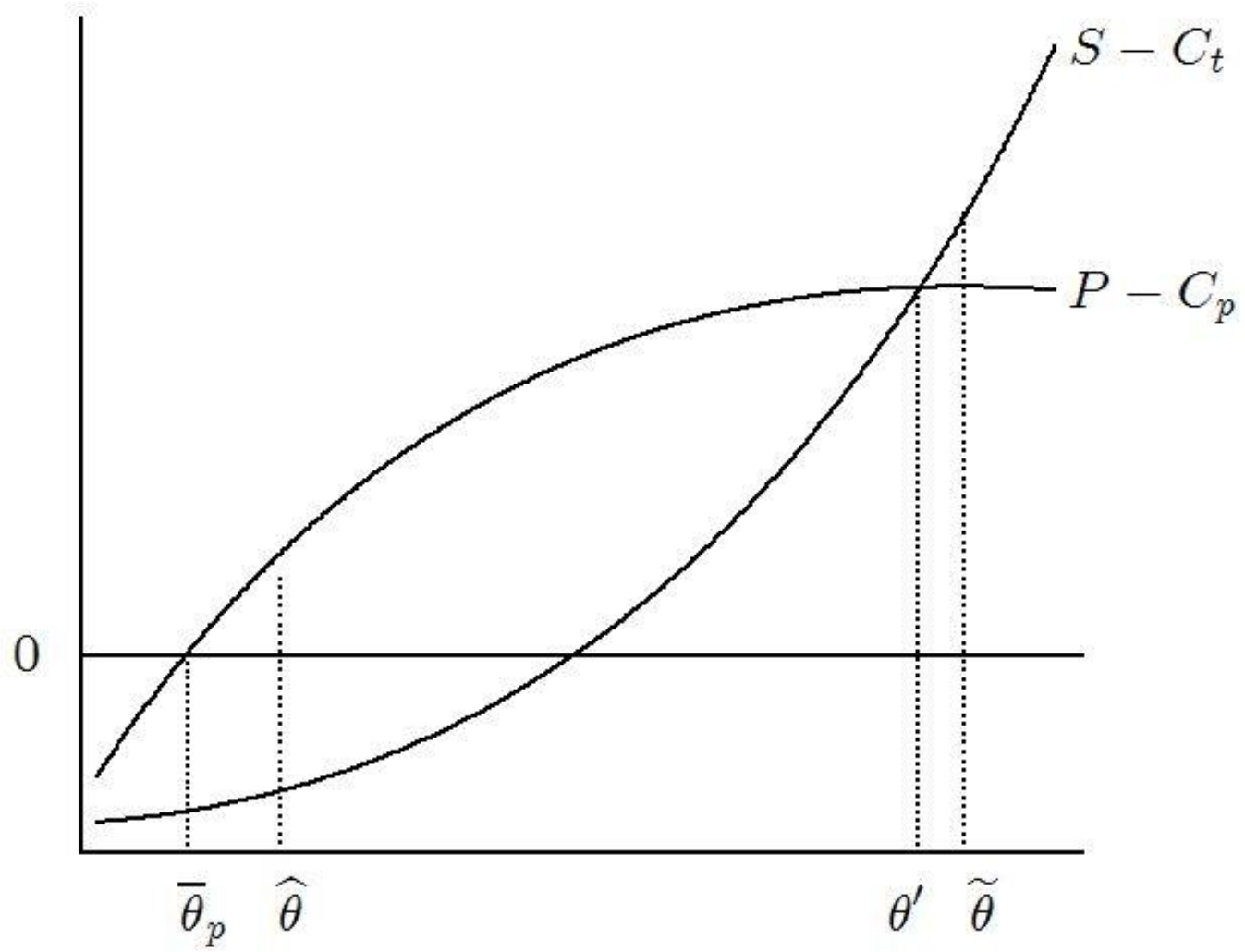


Decisionmaking with Resource Constraints

$$u(a) = \begin{cases} S(\theta) - C_t & if\ a = t \\ P(\theta) - C_p & if\ a = p \\ 0 & if\ a = n \end{cases}.$$

$$U = \int_{\theta_1}^{\theta_2} [P(\theta) - C_p]\, dF(\theta) + \int_{\theta_2}^{\theta_m} [S(\theta) - C_t]\, dF(\theta).$$

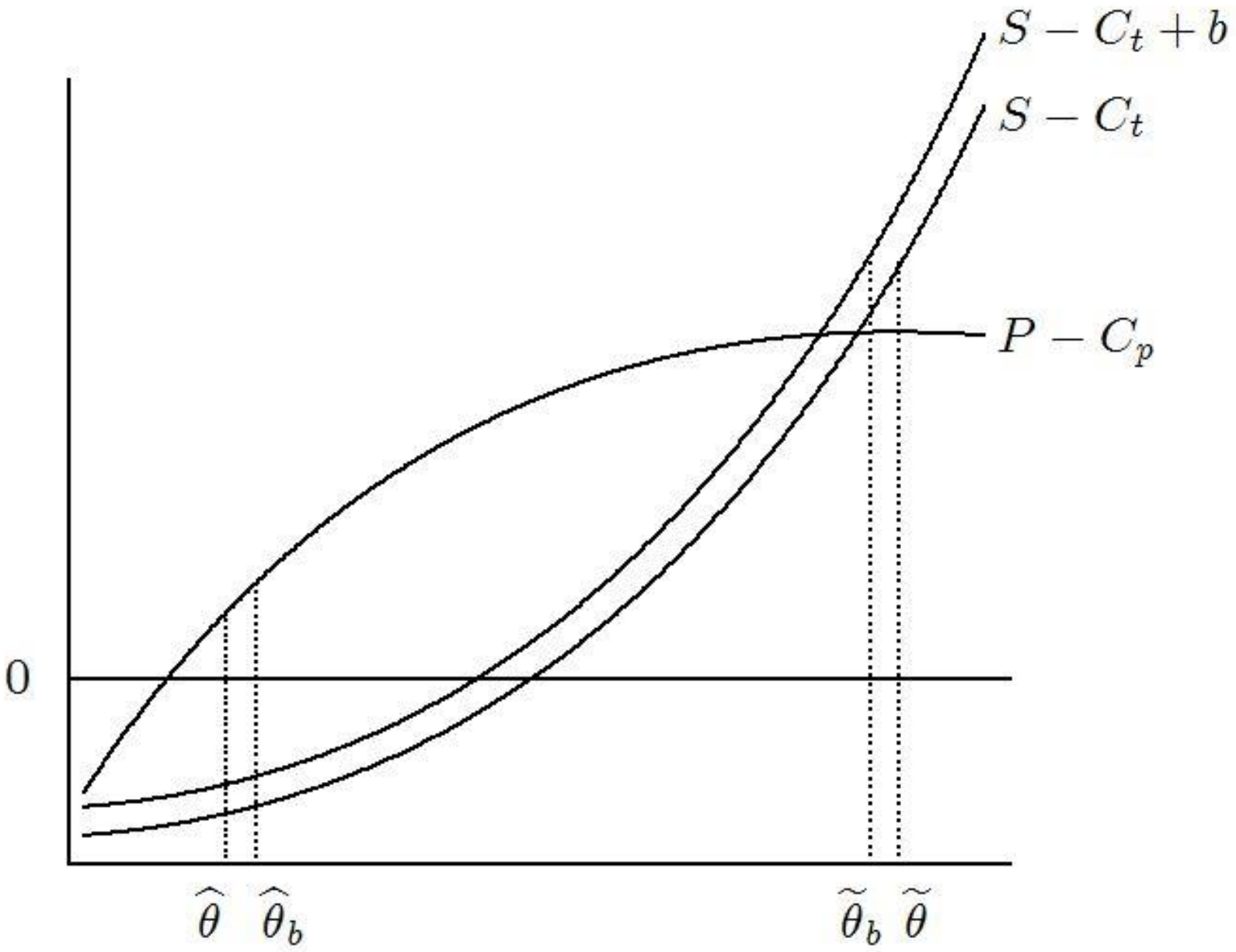
$$\frac{R}{N} \geq \int_{\theta_1}^{\theta_2} C_p\, dF(\theta) + \int_{\theta_1}^{\theta_m} C_t dF(\theta) + c.$$


$S - C_t$
$P - C_p$
0
$\overline{\theta}_p$
$\widehat{\theta}$
θ'
$\widetilde{\theta}$

Retention Concerns Under Asymmetric Information

$$u_b(t) = S(\theta) - C_t + b.$$

$$U_b = \int_{\theta_1}^{\theta_2} [P(\theta) - C_p]\, dF(\theta) + \int_{\theta_2}^{\theta_m} [S(\theta) - C_t + b]\, dF(\theta).$$


$S - C_t + b$
$S - C_t$
$P - C_p$
0
$\widehat{\theta}$
$\widehat{\theta}_b$
$\widetilde{\theta}_b$
$\widetilde{\theta}$

Retention Concerns Under Slack Resources

- g gain for re-election conviction
- e utilized resources
- $w(x)$ benefit from slack resources, x

$$U_g = \int_{\theta_1}^{\theta_2} [P(\theta) - C_p + g]\, dF(\theta) + \int_{\theta_2}^{\theta_m} [S(\theta) - C_t + g]\, dF(\theta) + w\left(\frac{R}{N} - e\right)$$

Retention Concerns Under Slack Resources

- if $g = 0$

$$\tilde{\theta} < \tilde{\theta}_{g=0}$$

$$\hat{\theta} < \hat{\theta}_{g=0}$$

- if $g > 0$

$$\tilde{\theta}_{g>0} < \tilde{\theta}_{g=0}$$

$$\hat{\theta}_{g>0} < \hat{\theta}_{g=0}$$

Differentiation of the Theories

- In re-election season both the asymmetric information and the effort theories predict more jury trial convictions (compared to no election pressures).
- In re-election season the asymmetric information theory predicts a growth in the backlog of cases.
- In re-election season the effort theory predicts a reduction in the backlog of cases.

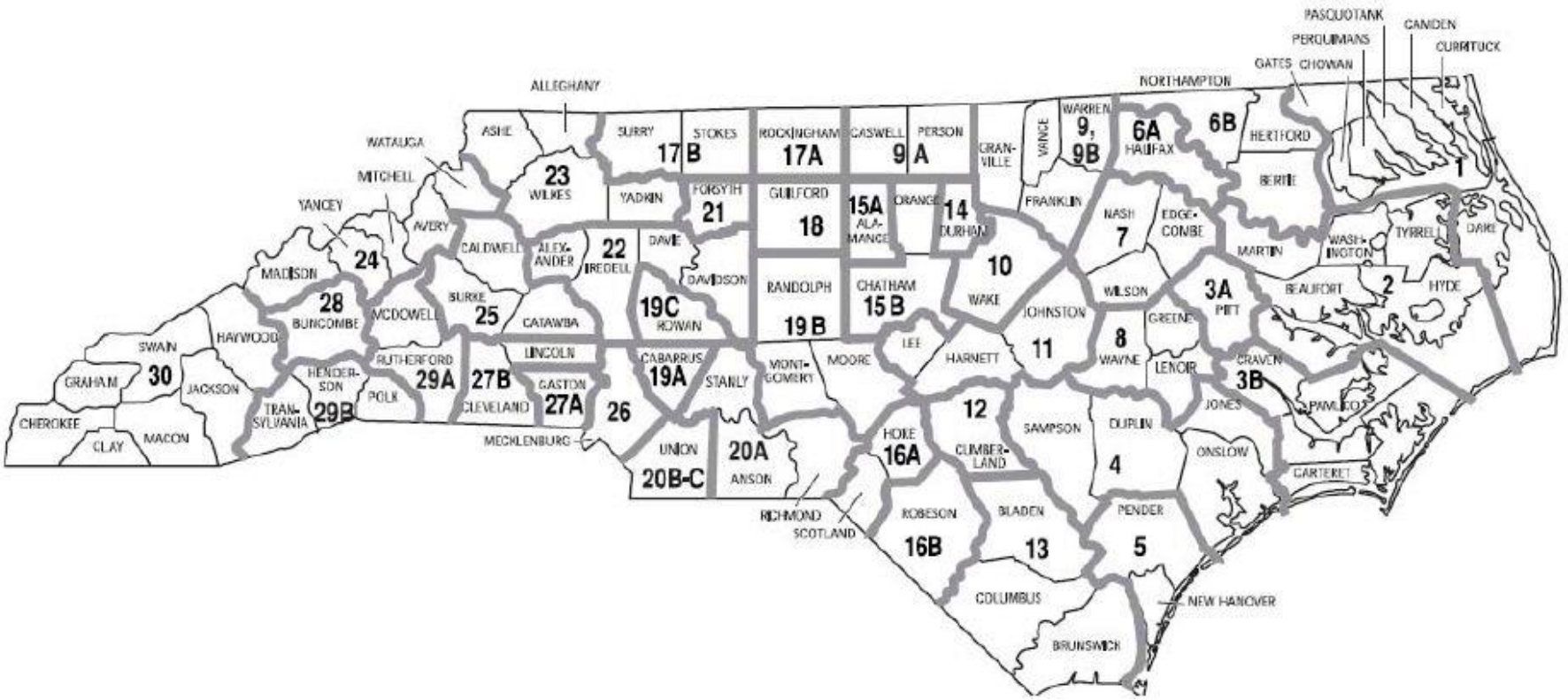
Empirics

- We use a panel dataset from North Carolina to test whether the hypotheses from the theoretical model can be observed.

- NC partitions the state into 43 prosecutorial districts. Each district has an elected “chief” DA who runs in a partisan election and serves 4-year terms.

North Carolina District Court Districts

Effective June 30, 2007



Description of the Data

- North Carolina Trial Court Caseload report
  - each report spans from July 1 to June 30
  - data from 1990-00 to 2009-10 (11 years)
  - only felony convictions considered

NC Office of State Budget and Management

- socio-economic variables
  - ***density*** = population/miles^2
  - ***male*** = % of pop that is male
  - ***white*** = % of pop that is white
  - **%16-24** = % of pop between 16 and 24
  - ***ur*** = unemployed/(employed + unemployed)
  - ***lfpr*** = labor force/population
  - ***rep*** = 1 if incumbent is a Republican

North Carolina State Board of Elections

- 1998, 2000, 2002, 2004, 2006, 2008, 2010 elections
- both primary and general election
- variables:
  - ***CI*** = 1 iff in the district in the year before an election an incumbent ran for re-election and there was a challenger (either primary or general)
  - ***reelect*** = 1 iff in the district in the year before an election the incumbent runs in the next year

Notes on the Data

- 100 counties & 43 prosecutorial districts
  - totals added across counties, then %s calculated
- adjustments to districts
  - 2006: one county split from d20; incumbent vacated = two new districts, d20A & d20B
  - 2 (of 5) split from d29; DA unchallenged for 29B =d29B(continuation) & d29A
  - 2008: 4 of d22 split into two 2 county districts; incumbent (06) remained DA for d22B; open election for d22A
  - 1999-00 to 2005-06 = 39 districts; 2006-07 & 2007-08 = 41 districts; 2008-09 & 2009-10 = 43 districts (N=441)
- missing data
  - population (along with gender and race) missing for 1999
  - $POP_{99} = POP_{96} + 0.75(POP_{00} - POP_{96})$

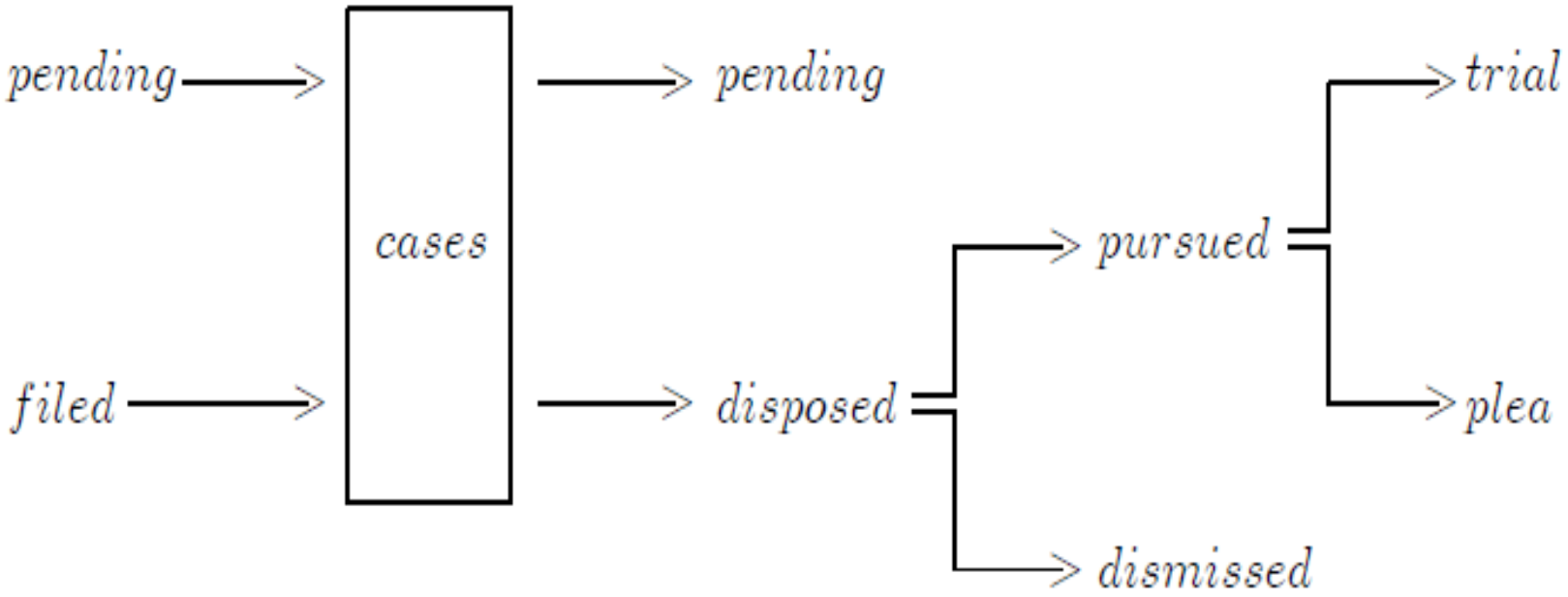
Elections in North Carolina

Table 3: Prosecutor Elections in North Carolina

	1998	2000	2002	2004	2006	2008	2010	total
# of elections	37	4	37	4	39	4	39	164
# of contested general	11	0	5	1	10	1	8	36
# of contested primary	7	2	9	0	12	1	3	34
# uncontested elections	19	2	25	3	21	2	30	102
# of vacancies[6]	5	3	6	2	12	1	7	36

Caseload Flows

Figure 1: Caseload Flow Chart



	mean	st. dev.	min	max
dependent variables				
backlog	66.551	310.14	-1085	1932
pending	1543.1	1280.3	114	8310
dismiss	0.1759	0.0659	0.0395	0.3589
election variables				
CI	0.0544	0.2271	0	1
reeleect	0.2109	0.4084	0	1
caseload variables				
filed	2574.6	1770.7	529	10077
trial	50.420	40.722	1	225
age	202.74	55.911	81.874	475.00
socio-economic variables				
density	269.45	294.69	35.806	1698.5
$\%16-24$	0.1295	0.0235	0.0952	0.2052
male	0.4905	0.0098	0.4685	0.5280
white	0.7409	0.1559	0.3489	0.9772
ur	0.0631	0.0217	0.0127	0.1442
lfpr	0.4843	0.0428	0.3742	0.5721
rep	0.2857	0.2857	0	1

Table 4: Fixed Effects Results ($N = 441$)

	backlog	*pending*
CI	164.411 **	97.931 **
	(68.164)	(43.398)
reelect	-113.154 **	16.207
	(51.033)	(49.422)
rep	286.300 ***	193.469
	(95.330)	(155.488)
filed	0.2405 ***	0.6735 ***
	(0.0300)	(0.0509)
trial	-0.7891	-1.0194
	(0.6756)	(0.7133)
age	-0.9469 ***	3.5717 ***
	(0.3590)	(0.5231)
density	-1.944 ***	0.5045
	(0.3838)	(0.8381)
male	3603.95	10639.0
	(7896.55)	(12186.5)
white	1655.59 **	-1333.22
	(804.191)	(1992.94)
$\%16-24$	-6019.27 **	6000.05
	(3150.11)	(4329.25)
ur	570.787	1094.06
	(1205.98)	(1598.96)
lfpr	-702.936	-364.597
	(1739.76)	(1163.81)
year effects?	YES	YES
adj R^2	0.121	0.968
F	1.92 ***	200.02 ***

Rates?

Table 5: Additional Results ($N = 441$)

	FE	**FE**	**RE**	**RE**
	backrate	*pendrate*	*backlog*	*pending*
CI	0.0360 *	0.0321 **	161.012 **	104.765 *
	(0.0187)	(0.0122)	(72.114)	(60.859)
reelect	-0.0199	-0.0053	-43.429	-10.7318
	(0.0143)	(0.0106)	(41.056)	(33.388)
controls:				
caseload	YES	YES	YES	YES
socio-economic	YES	YES	YES	YES
year	YES	YES	NO	NO
adj R^2	0.1127	0.7061		
F	1.8467 ***	17.018 ***		
AIC	-1026.55	-1317.76	6297.12	6639.54

* 10% level; ** 5% level; *** 1% level. HAC robust standard errors are reported in **FE**.

Correcting for Reverse Causality

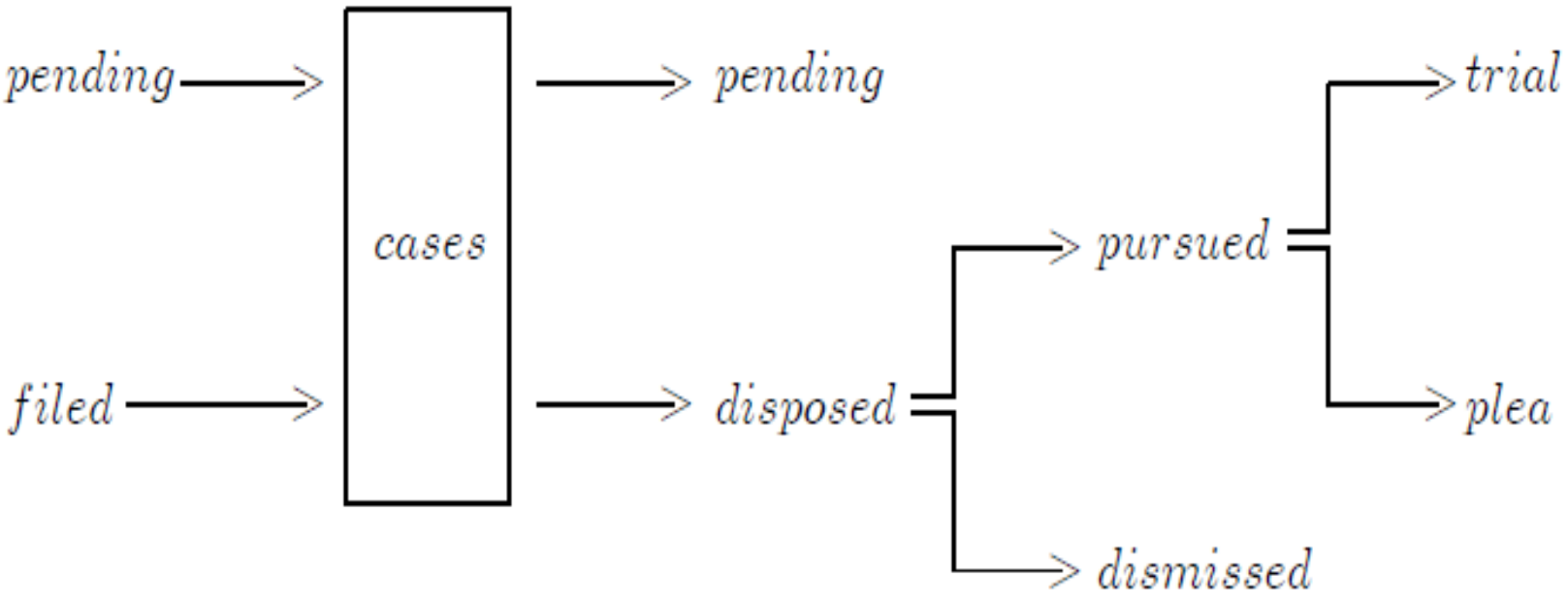
Table 6: 2SLS Results ($N = 396$)

	backlog	*backrate*	*pending*	*pendrate*
CI	155.496 **	0.0351 *	270.861 **	0.0482 ***
	(73.474)	(0.0183)	(107.056)	(0.0172)
reelect	-42.469	-0.0042	-54.412	-0.0075
	(41.563)	(0.0103)	(60.560)	(0.0097)
adj R^2	0.0434	0.0177	0.8862	0.4342
F	2.5193 ***	1.6343 ***	256.160 ***	22.449 ***
AIC	17473.3	10897.3	17711.8	10836.4

* 10% level; ** 5% level; *** 1% level. HAC robust standard errors are reported.

Caseload Flows

Figure 1: Caseload Flow Chart



Where is the reduction coming from?

Table 7: Results (dep. var. = *dismiss*, $N = 441$)

	FE	**FE**	**RE**
CI	-0.0150 *	-0.0174 **	-0.0151 *
	(0.0079)	(0.0080)	(0.0084)
reelect	0.0122 *	0.0054	0.0041
	(0.0065)	(0.0042)	(0.0046)
controls:			
caseload	YES	YES	YES
socio-economic	YES	YES	YES
year	YES	NO	NO
adj R^2	0.7691	0.7721	
F	23.209 ***	27.614 ***	
AIC	-1732.90	-1746.92	-1082.34

* 10% level; ** 5% level; *** 1% level. HAC robust standard errors are reported in FE.

Summary

- Re-election concerns increase the number of unresolved (pending) cases.
  - both in absolute level and relative amount
  - backlogs expand /accelerate
- Since election concerns do not affect inflows to the caseload, this results in fewer disposed cases.
  - criminal justice system provides less justice

Summary (continued)

- The decreased disposal of cases seems to be disproportionately affecting dismissals.
  - fewer dismissals relative to convictions pursued
  - reduction in disposed cases comes from disproportionally fewer cases being dismissed

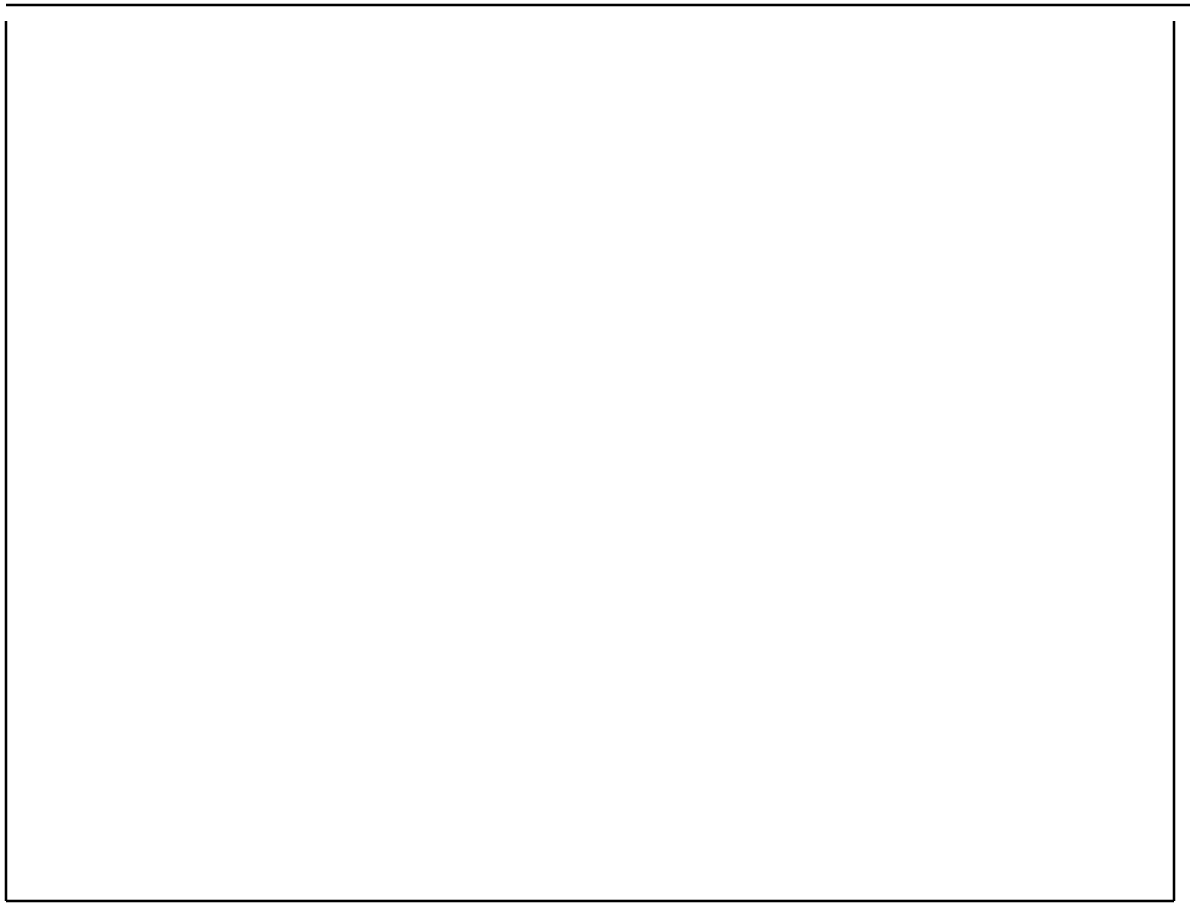
- … and of those convictions pursued more are taken to trial (plea bargaining reduced)

Summary (continued)

- The evidence supports our contention that signaling in the asymmetric information environment is distorting the decisions of prosecutors.

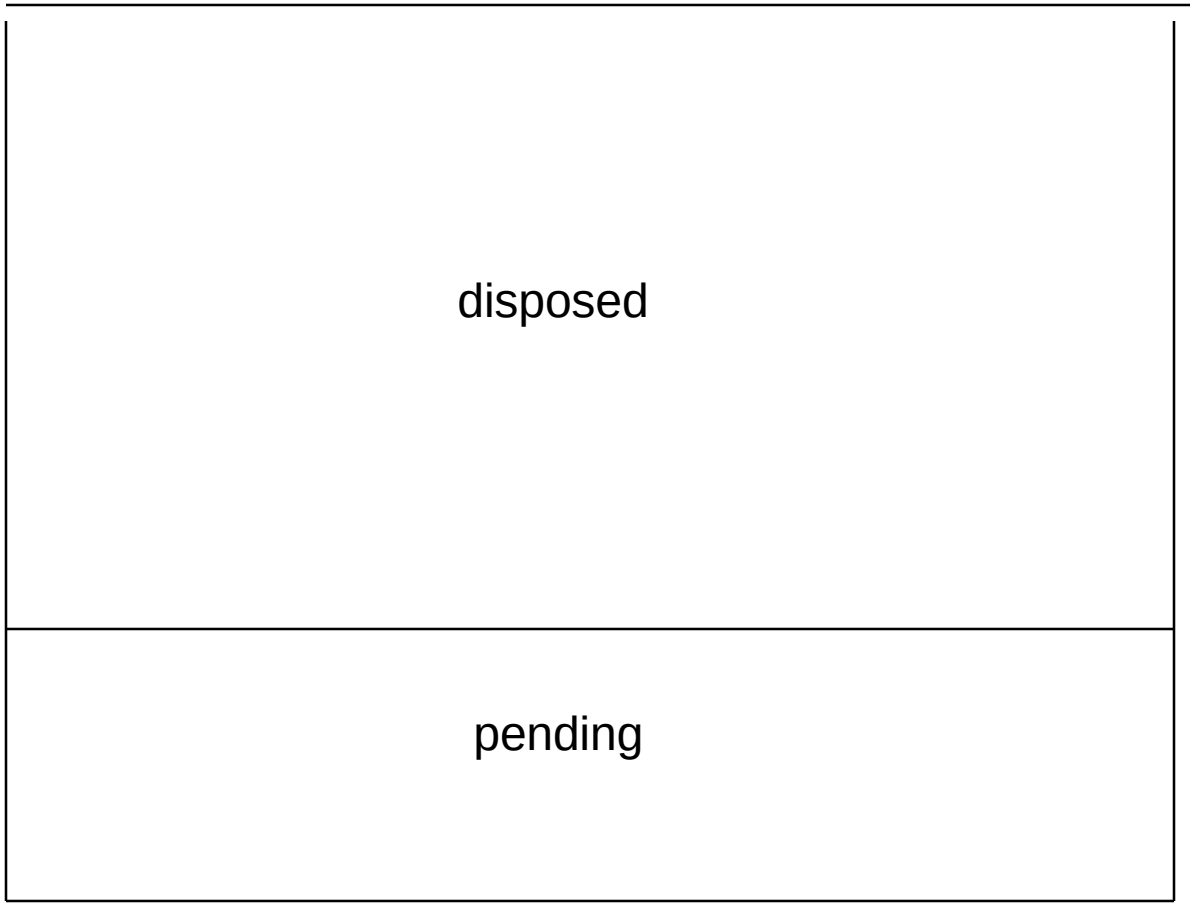
- The evidence is not consistent with the theory that effort exertion is the driver of more trials.

- cases

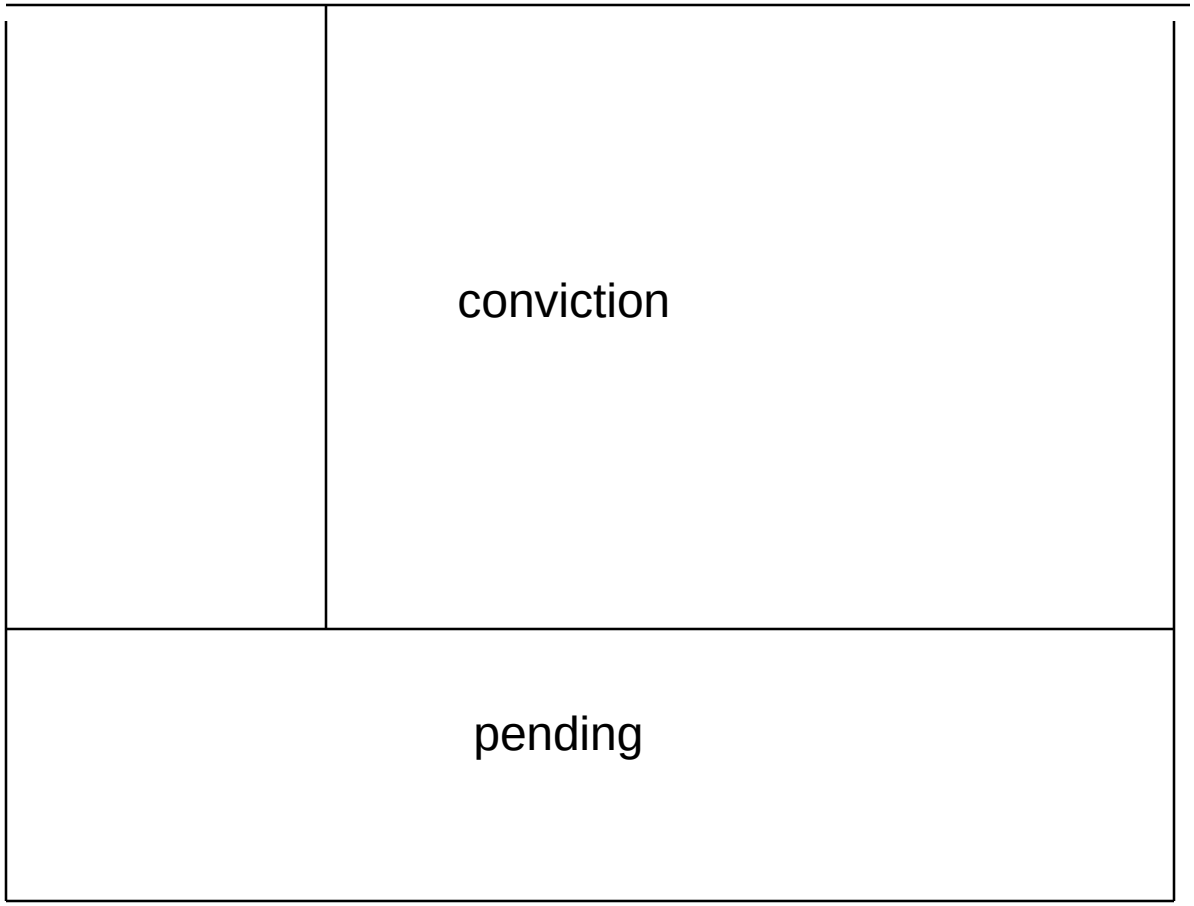


- cases

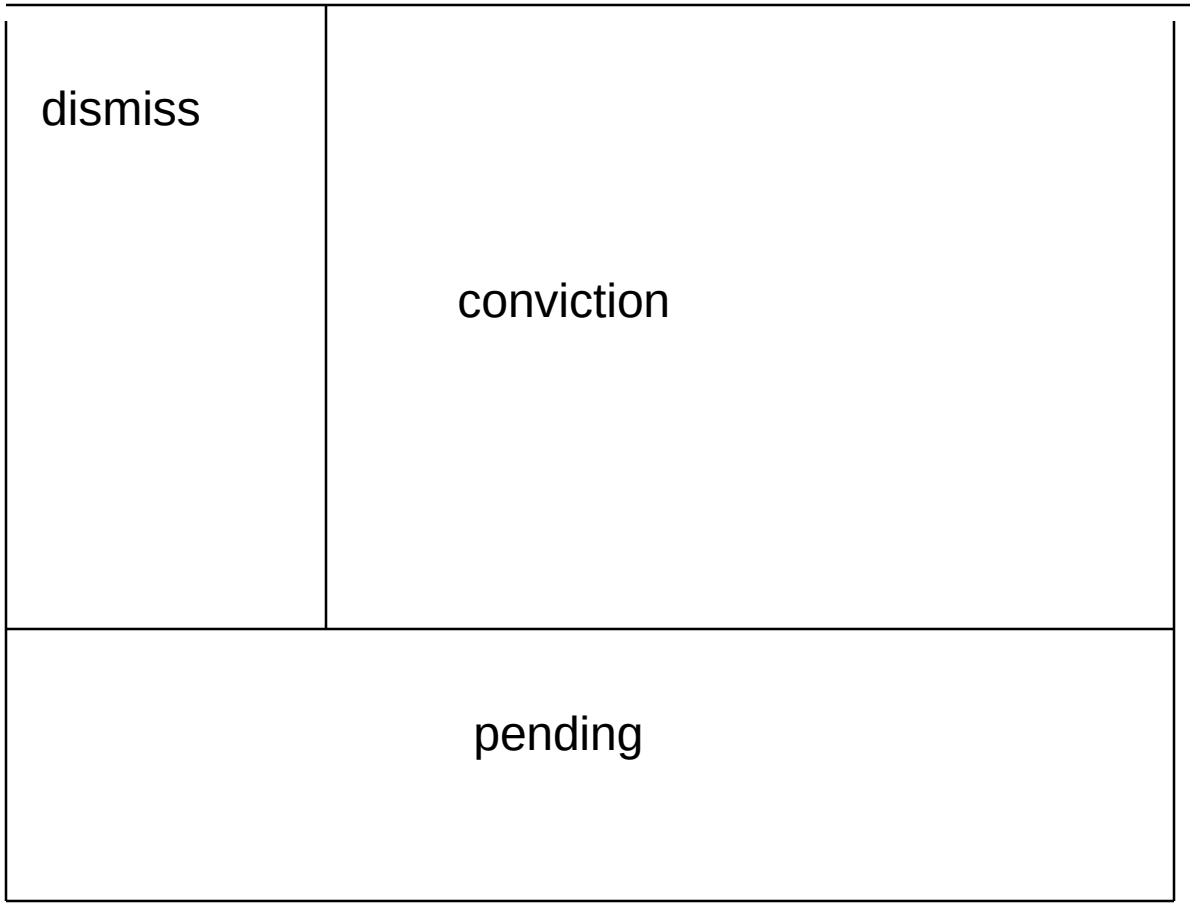
- cases



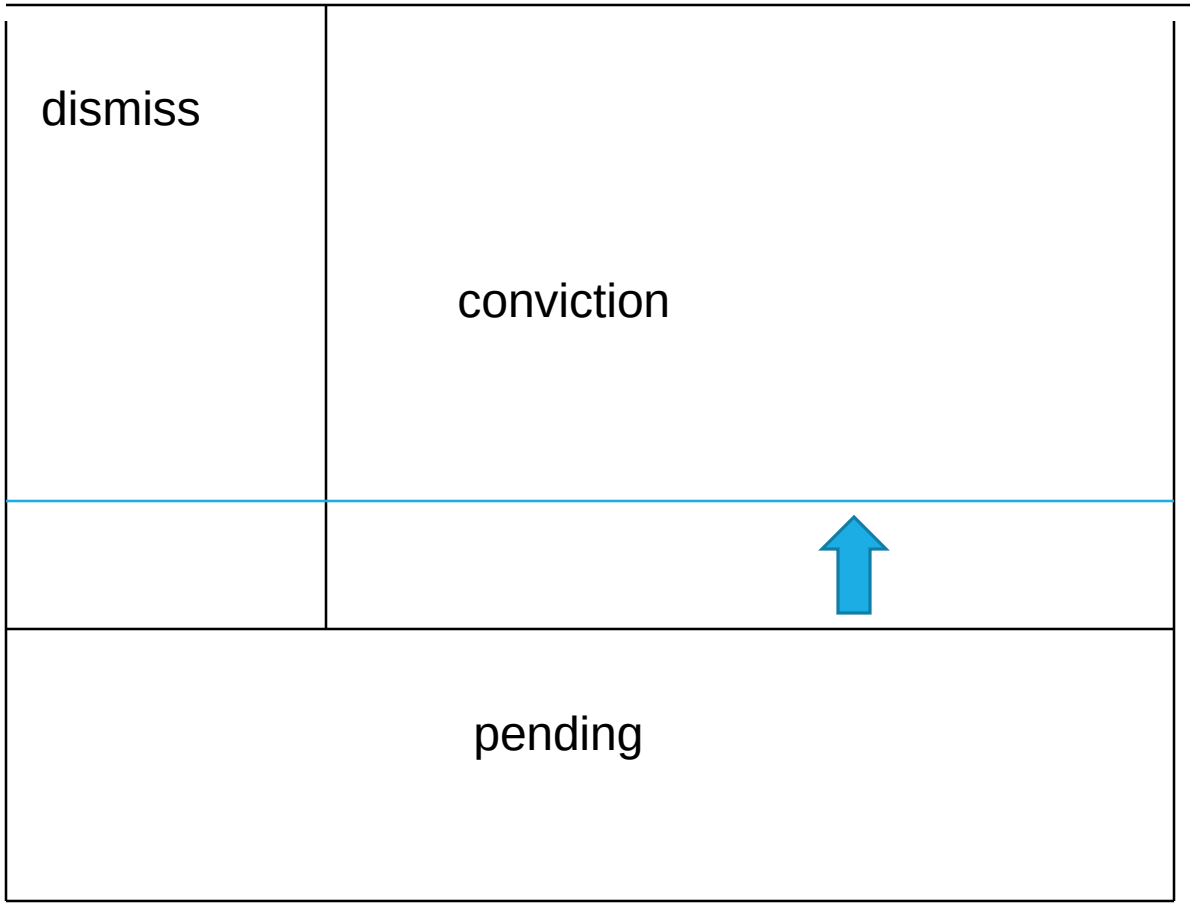
- cases



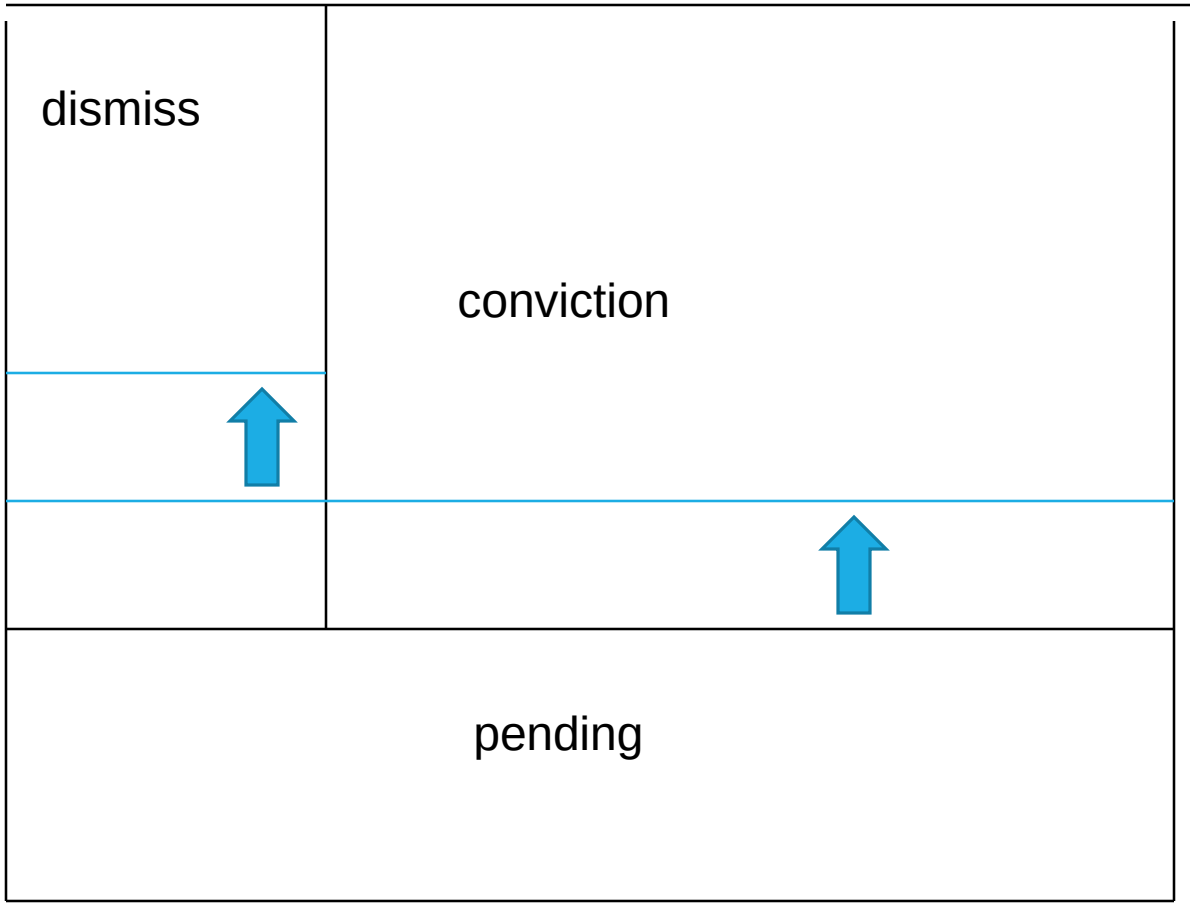
- cases



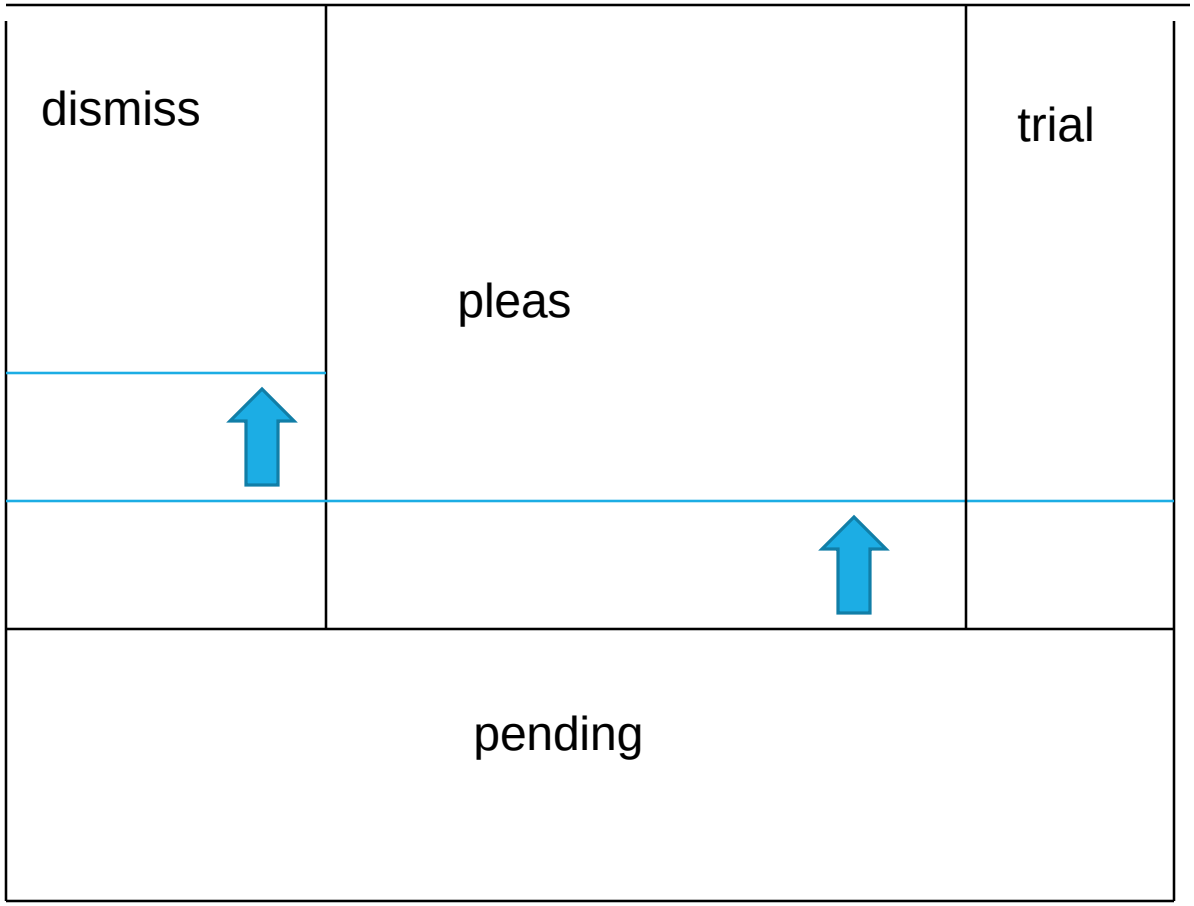
- re-election concerns



re-election concerns



- re-election concerns



- re-election concerns

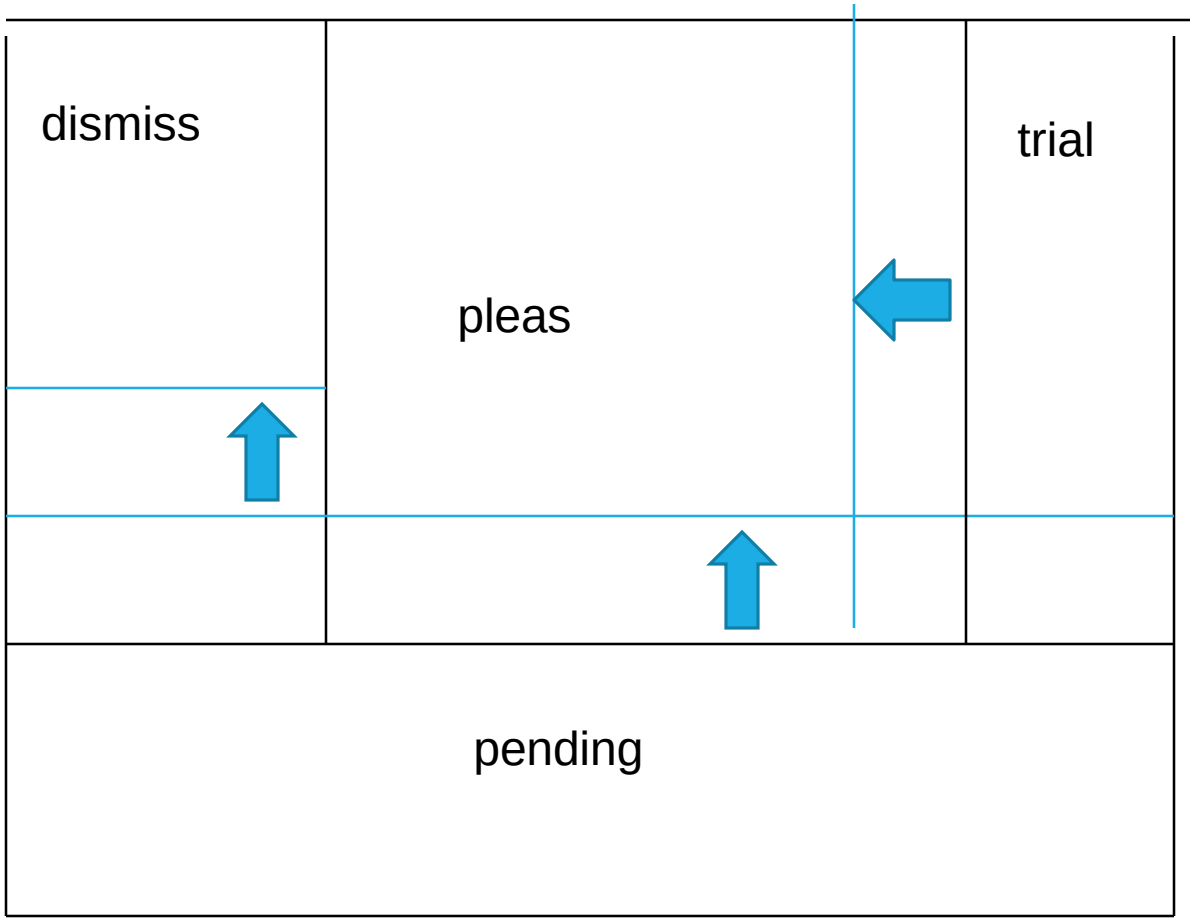


Table S4: Additional Fixed Effects Results

panel =	balanced	balanced	small dist.	small dist.
dep. var. =	*backlog*	*pending*	*backlog*	*pending*
CI	154.649 **	83.706 *	172.212 ***	116.612 ***
	(68.368)	(46.410)	(64.878)	(40.490)
reelect	-47.004	-0.0182	-102.186 *	-35.595
	(53.803)	(0.0169)	(54.910)	(37.420)
controls:				
caseload	YES	YES	YES	YES
socio-economic	YES	YES	YES	YES
year	YES	YES	YES	YES
adj R^2	0.1032	0.9714	0.1529	0.9275
F	1.7888 ***	233.758 ***	2.1664 ***	83.684 ***
AIC	5509.17	5317.92	5710.70	5541.43
N	385	385	408	408

* 10% level; ** 5% level; *** 1% level. HAC robust standard errors are reported.

Table $S5$: Alternative Standard Errors ($N = 441$)

	backlog		*pending*
CI	(77.032) ***	unadjusted	(59.256)
	(68.839) **	heteroskedasticity-robust	(53.805) *
	(75.289) **	clustered by district	(47.825) **
	(30.190) ***	clustered by year	(31.716) ***
reelect	(59.093) *	unadjusted	(32.408)
	(57.192) **	heteroskedasticity-robust	(50.125)
	(56.211) **	clustered by district	(54.516)
	(64.891) **	clustered by year	(19.945)

Table S6: Alternative Specifications ($N = 441$)

	ln *pending*	*backlog*	*backlog*	*pending*	*pending*
CI	0.082 ***	159.965 **		103.326 **	
	(0.025)	(66.474)		(47.306)	
reelect	-0.011	-113.510 **		12.902	
	(0.023)	(50.399)		(50.650)	
CI_{t+1}		-32.471	-56.468	48.644	33.178
		(50.592)	(54.268)	(58.712)	(54.365)
$reelect_{t+1}$		-26.528	-16.816	-69.978	-68.381
		(44.606)	(45.791)	(61.061)	(59.461)
controls:					
caseload	YES	YES	YES	YES	YES
socio-economic	YES	YES	YES	YES	YES
year	YES	YES	YES	YES	YES
adj R^2		0.118	0.108		0.967
F		1.86 ***	1.80 ***		199.00 ***
AIC		6319.5	6322.7		6113.3