

U.S. State Prosecutors' Choices of Prosecution Rates and Conviction Rates

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 13 October 2005. <http://www.rasmusen.org/papers/prosecutors-raghav-ramseyer-rasmusen.pdf>.

Potential cases will be indexed by “strength”, θ . The number of cases of type θ is represented by a density function $g(\theta)$. The prosecutor has a budget of B . Each case that he prosecutes incurs a fixed cost of F and a variable cost of e . The probability of conviction is $\theta P(e(\theta))$

term: Term length of the chief prosecutor in years

inoffice: how many years he has been in office

budget: the budget for prosecution, in thousands of dollars

felclosed: felony cases “closed”

felconv: felony convictions

pop: population of the district in thousands

indexcrime: number of FBI index crimes (murder, rape, aggravated assault, robbery, burglary, larceny, and motor vehicle theft, of which larceny is the most numerous)

winrate = $100 * \text{felconv} / \text{felclosed}$

crimerate = $\text{indexcrime} / \text{pop}$

budcrime = $\text{budget} / \text{index crimes}$

budpros = $\text{budget} / \text{felclosed}$

prosrates = $100 * \text{felclosed} / \text{indexcrime}$

prosrates	Coef.	Std. Err.	t	P> t
+-----				
budcrime	.9204621	.013643	67.47	0.000
term	-.0635043	.0595848	-1.07	0.287
appointed	-1.526984	.3025974	-5.05	0.000
inoffice	-.0055458	.0029778	-1.86	0.063
murderfrac~n	-.0025918	.0087032	-0.30	0.766
pop	.1373654	.0237005	5.80	0.000

Marginal effects after IV tobit

$$y = E(\text{winrate} * |0 < \text{winrate} < 100) \text{ (predict, ys(0, 100))}$$

$$= 82.05228$$

variable	dy/dx	Std. Err.	z	P> z
+-----				
proshat	-3.589891	.83292	-4.31	0.000
budpros	3.236371	.52737	6.14	0.000
crimer~e	-3.635633	.81265	-4.47	0.000
murder~n	-.3384699	.14795	-2.29	0.022
pop	-1.263522	.39582	-3.19	0.001

