

A Spatial Analysis of Predictors of the Relative Severity of Prison

By

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Previous Offender Research

- May and associates have examined data from 588 probationers and parolees and determined that Blacks, males, and people who have served time in prison are all more likely to prefer prison over the alternative sanction than their counterparts.
- Wood & May (2003) determined that Black and Male probationers in Indiana were more likely to prefer prison over alternative sanctions than their counterparts.

Previous Offender Research

- Wood et al. (2005) found that males were more likely than females to express preferences for prison over shock incarceration (boot camp). Wood and Grasmick (1999) also observed significant gender differences. Other studies have reported variations by age, marital status, and offense type (Crouch, 1993; Petersilia & Deschenes, 1994a, 1994b; Spelman, 1995).
- There is also evidence (Apospori & Alpert, 1993; Wood & Grasmick, 1999) that having experienced a given sanction influences subsequent perceptions of the punitiveness of that sanction.

Previous Offender Research

- Spelman (1995) and May et al. found that previous incarcerations were associated with a preference for prison over alternatives; it may be that, as McClelland and Alpert (1985, p. 317) observed, arrestees "with large numbers of previous convictions tend to see imprisonment as relatively trivial."
- A major gap in this literature is the lack of research regarding the public's opinion of the severity of alternative sanctions when compared to prison.

Officers

- Flory, May, Minor, & Wood (2005) examined these perceptions among probation and parole officers
- Determined that Officers matched offenders on ranking perceptions with offenders willing to do less time in the community for every sanction (with the exception of community service)

Judges

- In 2005, we examined perceptions of sanctions among judges
- Judges generally were closer to offenders than officers but, again, offenders were willing to do less time for each sanction than judges
- Judges were willing to do significantly more time than officers for day reporting, halfway house, day fines, and community service

Previous Public Research

- Roberts and Stalans (1997) review a number of studies conducted with a number of different populations, all of which show some support among the public for community sanctions in lieu of prison given certain conditions.
- Brown and Elrod (1995) determined that the majority of the residents who completed their mail survey believed that electronic monitoring should be used as an alternative to incarceration (91%). 73% of the respondents also felt that EM is effective in deterring future crime.

Public Opinion and the Crime Rate

- *In the 2003 Sourcebook of Criminal Justice Statistics*, people were asked if they thought more money and effort should go to attacking the social and economic problems that lead to crime through better education and job training or if more money and effort should go to deterring crime by improving law enforcement with more prisons, police, and judges?
- In 2003, **69 percent said we should attack the social problem**, and 29 percent said we should have more law enforcement.

Public Opinion and SES

- Low income households have a stronger and more significant perception of crime because some are located in impoverished neighborhoods that crime occurs on a regular basis.
- Recent studies have shown that those individuals with low income, African American, and lower education have higher objective levels of risk and fear of victimization.
- Those living in high-income households have fear of victimization, but they have the ability to avoid neighborhoods with high crime rates.

Exchange Rates

- May, Wood, and their colleagues have labeled their method of assessing the relative severity of prison “exchange rate theory”
- In this method, they ask respondents to compare how much of a certain sanction they would be willing to serve in order to avoid a certain time in prison

Problem Statement

- No research examines exchange rates among the public
- No research examines structural predictors of public opinion regarding the severity of prison
- This study is an attempt to fill both those voids

Methodology

Data were collected from a sample of Kentucky residents (in the late spring of 2006).

- The survey that was given to Kentucky residents over the age of 18 was very similar to the one previously administered to offenders, officers, and judges in other studies by May and colleagues.

Survey Instrument

- Eight-page questionnaire adapted from the one used in several other studies. (May et al., in press; Wood and May, 2003; Wood and Grasmick, 1999; and Wood et al., 2005).
- The respondents were presented with descriptions of ten alternative sanctions.
- Respondents were asked to consider twelve months of medium-security imprisonment and to indicate how many months of the alternative they were willing to serve to avoid twelve months imprisonment.

Public Sample

- 4,000 mailing addresses were purchased from a direct mailing firm that assured maximum coverage of Kentucky households.

Predictors

- Jefferson County (700 addresses) and Fayette county (300 addresses) were over-sampled because these counties contain the majority of African Americans in Kentucky.
- Race is one of the strongest predictors of perceptions of the relative punitiveness of prison.

Survey

- The remaining 3,000 addresses were sampled from throughout the rest of the state.
- Of the 4,000 respondents for whom we originally received an address, 380 were determined to be invalid addresses, and 1313 respondents provided a usable questionnaire. Only Blacks and Whites were used for this effort, limiting the sample to 1263.
- The participation rate was 36.3 percent.

Table 1. Comparison of Respondent Characteristics with Census Data for Kentucky Residents

Demographic Variable	Sample (Frequency & %)	*Population 2000 Census (Frequency & %)
Gender	727 (55.4)	1,975,368 (48.9)
Male	580 (44.2)	2,066,401 (51.1)
Female	6 (.5)	
Missing Data		
Race	1197 (91.2)	3,678,740 (91.0)
White	76 (5.8)	311,000 (7.7)
Black	35 (2.7)	96,581 (2.4)
Other	5 (.4)	
Missing Data		
Marital Status**	934 (71.1)	1,844,628 (57.3)
Married	364 (27.7)	1,367,539 (42.7)
Unmarried	15 (1.1)	
Missing Data		
Age	201 (9.6)	401,858 (13.4)
18-24	434 (20.6)	632,494.2 (21.0)
25-35	458 (22.0)	637,074 (21.2)
36-45	383 (18.4)	539,033.2 (17.9)
46-55	282 (13.6)	361,716.4 (12.0)
56-65	207 (9.5)	432,219.4 (14.4)
66 and over	126 (6.0)	
Missing Data		
Education	126 (10.0)	685,000 (25.9)
No high school diploma	562 (44.1)	888,277 (33.6)
High school Diploma or GED	210 (16.6)	619,651 (23.4)
Some College	253 (19.8)	271,418 (10.3)
College Graduate	89 (7.1)	182,051 (6.9)
Some Graduate or Professional	73 (5.6)	
Missing Data		
Income	110 (8.4)	220,692 (13.9)
Less than \$10,000	181 (13.8)	256,494 (16.1)
\$10,001-\$20,000	119 (9.1)	232,489 (14.6)
\$20,001-\$30,000	174 (13.3)	197,200 (12.4)
\$30,001-\$40,000	149 (11.4)	174,456 (11.0)
\$40,001-\$50,000	198 (15.2)	274,530 (17.2)
\$50,001-\$75,000	269 (20.6)	235,878 (14.8)
Over \$75,000	106 (8.1)	
Missing Data		

TABLE 2: Sample Descriptive Statistics

	N=1263 (percent)
Gender	
Male	696 (55.3)
Female	557 (44.3)
Ethnicity	
White	1154 (91.7)
Black	104 (8.3)
Mean Age	51.7
Highest Education Level	
8 th grade or less	60 (4.9)
Some High School	64 (5.1)
High School Graduate	538 (42.8)
Some College	217 (17.3)
College Graduate	254 (20.2)
Some Graduate /Prof. Studies	89 (7.1)

TABLE 3: Exchange Rates

Sentence	Mean	S.D.	Max.
Boot Camp	6.38	6.15	48
County Jail	7.78	5.85	36
Electronic Monitoring	15.06	13.22	96
Regular Probation	24.62	21.99	120
Day Reporting	19.34	16.74	300
Intermittent Incarceration	15.55	12.84	60
Halfway House	15.07	11.53	60
Day Fine	15.62	20.47	120
ISP	16.26	13.88	60

Table 4: Comparison of Public and Offender Exchange Rates

Public

Offenders

Sentence (Months)

30 Months

Regular Probation (24.62)

24Months

20 Months

Day Reporting (19.34)

Intensive Supervision Probation (16.26)

Day Fine (15.62)

Intermittent Incarceration (15.55)

Halfway House (15.07)

Electronic Monitoring (15.06)

15 Months

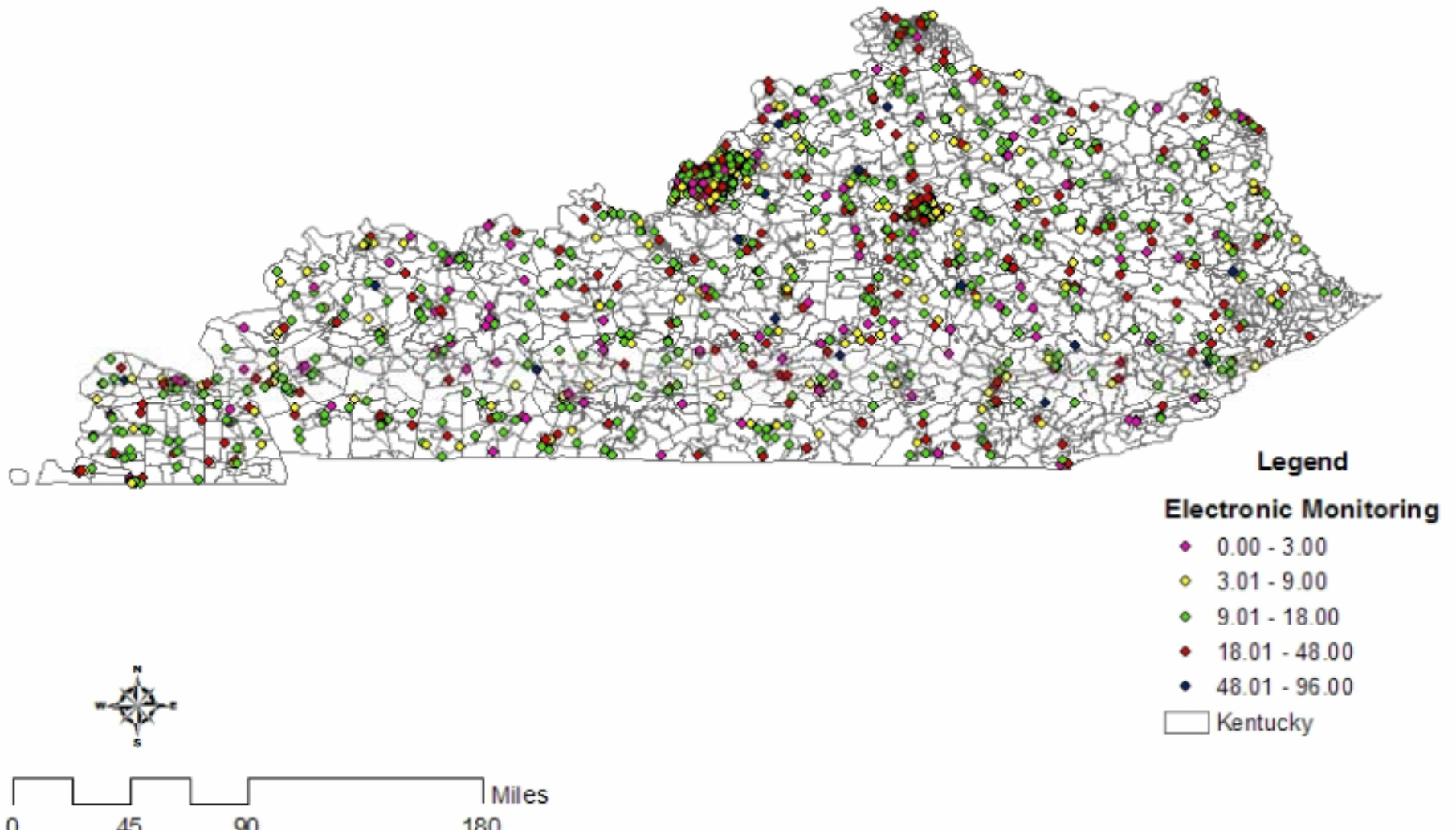
Prison (12.00)

8 Months

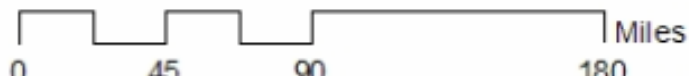
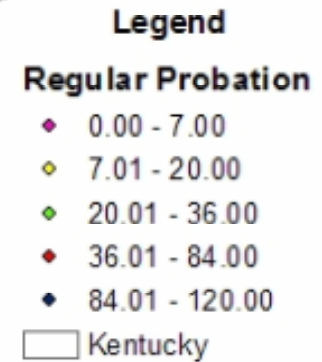
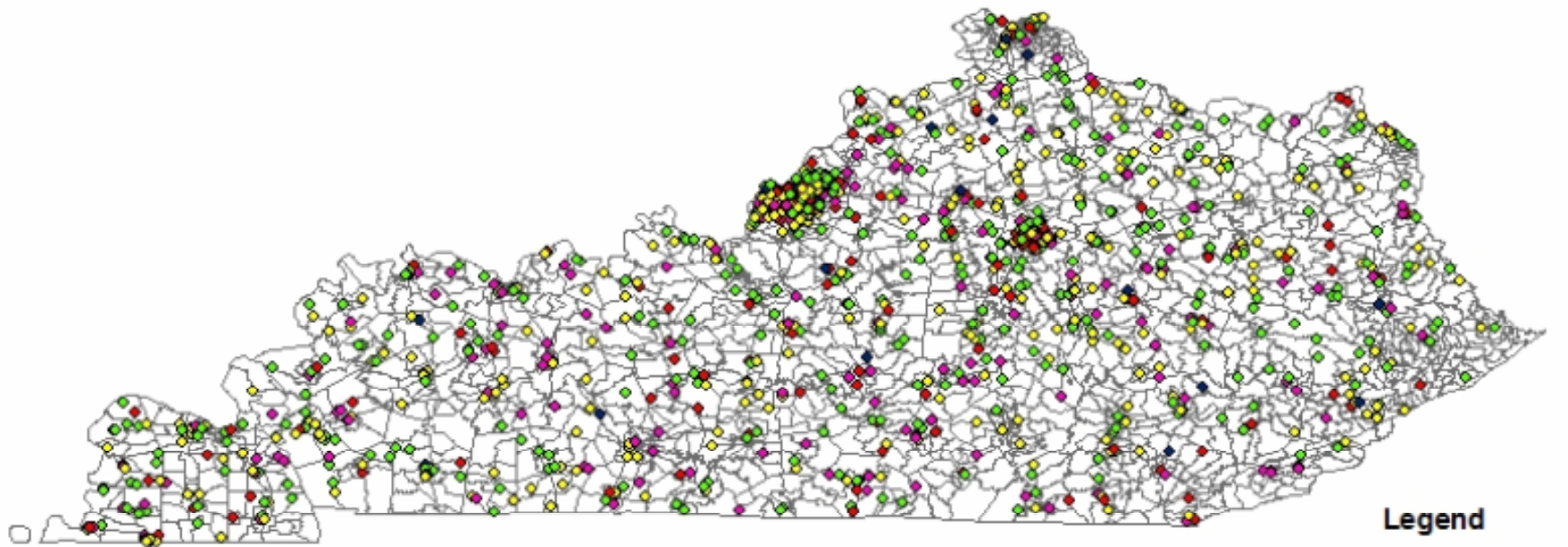
County Jail (7.77)

Boot Camp (6.38)

Average Months of Electronic Monitoring Respondent would serve to avoid 12 months in Medium Security Prison



Average Months of Regular Probation Respondent would serve to avoid 12 months in Medium Security Prison



Analyses

- First, we sought to estimate a series of HLM Models for each of the 9 exchange rates
- Level 1- Gender, race, age, marital status, education
- Level 2- Census Tract
- Given that the vast majority of the research we read suggested that Level 1 analyses should be conducted first to insure those relationships were meaningful, we conducted those first and found few meaningful relationships.

Structural Predictors

- Because we were far more interested in the structural than the demographic predictors anyway, we chose to estimate a mean exchange rate for each of the 9 alternative sanctions for each census tract
- There were 560 unique census tracts represented among the respondents in the data
- The most respondents in any one track was 27
- The mean respondents per track was 2.24

Estimation Techniques

- We estimated bivariate correlations between a number of census variables that we felt would represent social disorganization theory and deleted one of each pair with a .90 or higher correlation)
- We then estimated stepwise regression models for each of the 9 exchange rates using the independent variables listed below:

Independent Variables

- Female headed households with children under 18
- Total population living in same house as five years ago
- Median household income in 1999
- Total households receiving public assistance
- 100% ct. housing units
- Total count of owner occupied housing units
- Total employed male population >18
- Percent of housing units that are vacant
- Percent of housing units owner-occupied
- % of population that is Black

Stepwise Regression Results

Exchange Rate	Significant Independent Variables	Direction	Adj. R²
Jail	None		
Boot Camp	% of Total Housing Units that Were Vacant	Inverse	.009
	1999 Median HH Income	Inverse	
Electronic Monitoring	Female Headed Households with Kids Under 18	Positive	.003

Stepwise Regression Results

<i>Exchange Rate</i>	<i>Significant Independent Variables</i>	<i>Direction</i>	<i>Adj. R²</i>
Regular Probation	Female Headed Households with Kids Under 18	Positive	.006
Day Reporting	Female Headed Households with Kids Under 18	Positive	.008
	1999 Median HH Income	Positive	

Stepwise Regression Results

<i>Exchange Rate</i>	<i>Significant Independent Variables</i>	<i>Direction</i>	<i>Adj. R²</i>
Intermittent Incarceration	Female Headed Households with Kids Under 18	Positive	.004
Halfway House	None		
Day Fine	Female Headed Households with Kids Under 18	Positive	.003
ISP	FHH w/Kids < 18	Positive	.006