

Mustard and Lott Replication

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Introduction

In this analysis I am attempting to replicate the results

Background and Economic Theory

Table 1: State Rollout of Concealed Carry

Years	States
1977	Alabama, Connecticut, New Hampshire, North Dakota, South Dakota, Vermont, Washington
1981	Indiana
1986	Maine
1988	Florida
1989	Virginia
1990	Georgia, Pennsylvania, West Virginia
1991	Idaho, Mississippi, Oregon
1992	Montana

Data

Empirical Mode and Estimation

Two Way Fixed Effects

Table 2: National Sample Summary Statistics

Variable	N	Mean	St. Dev.
Shall Issue Dummy	816	0.19	0.39
Arrest Rate for a particular crime			
Violent Crimes	802	41.09	22.20
Property Crimes	809	16.92	4.68
Murder	806	91.30	55.94
Rape	799	41.02	17.39
Robbery	808	31.46	13.59
Aggravated Assault	809	44.62	16.98
Burglary	809	13.80	4.57
Larceny	809	18.54	5.20
Auto Theft	808	22.35	37.61
Crime Rate for a particular crime per 100,000			
Violent Crimes	816	483.93	318.94
Property Crimes	816	4,618.34	1,210.46
Murder	816	7.77	6.88
Rape	816	33.98	15.07
Robbery	816	163.42	176.25
Aggravated Assault	816	278.76	159.65
Burglary	816	1,239.34	417.76
Larceny	816	2,968.71	751.02
Auto Theft	816	410.30	231.15
Real per capita income data			
Personal Income	816	9,351.82	4,689.70
Unemployment Insurance	816	50.02	38.08
Income Maintenance	816	115.28	70.95
Retirement payments per person over 65	816	1,002.23	546.47
Population	816	4,646,787.00	5,010,350.00
Population per square mile	816	355.97	1,408.25

Table 3: Two Way Fixed Effect Regression Results

Dependent Variables:	lvio	lmur	lrap	laga	lrob	lpro	lbur	llar	laut
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Variables</i>									
Shall issue law dummy	-0.0699*	-0.0550	-0.0378	-0.0641	-0.0299	0.0023	-0.0317	0.0090	0.0193
	(0.0391)	(0.0379)	(0.0453)	(0.0474)	(0.0466)	(0.0215)	(0.0256)	(0.0212)	(0.0401)
Arrest rate for the crime category	-0.0003	-0.0004*	-0.0007	-0.0029***	-0.0015	-0.0023*	-0.0060***	-0.0011	-0.0003**
	(0.0004)	(0.0002)	(0.0006)	(0.0008)	(0.0009)	(0.0012)	(0.0019)	(0.0011)	(0.0001)
Population per square mile	-0.0008***	-0.0008***	0.0003	-0.0007***	-0.0009***	-0.0005***	-0.0006***	-0.0005***	-0.0008**
	(0.0002)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0001)	(0.0003)
Real per capital income data:									
Retirement payments per person over 65	0.0001	0.0002	-7.16×10^{-5}	0.0001	0.0001	-5.94×10^{-5}	6.14×10^{-6}	-6.89×10^{-5}	6.56×10^{-5}
	(0.0001)	(0.0001)	(8.76×10^{-5})	(0.0002)	(0.0002)	(6.72×10^{-5})	(0.0001)	(6.54×10^{-5})	(0.0001)
Personal income	2.16×10^{-5}	4.37×10^{-5}	1.63×10^{-5}	$4.75 \times 10^{-5**}$	-2.72×10^{-5}	$-3.36 \times 10^{-5*}$	-3.95×10^{-5}	$-3.23 \times 10^{-5**}$	$-6.45 \times 10^{-5*}$
	(1.71×10^{-5})	(2.9×10^{-5})	(2.39×10^{-5})	(2.15×10^{-5})	(3.02×10^{-5})	(1.75×10^{-5})	(2.52×10^{-5})	(1.43×10^{-5})	(3.35×10^{-5})
Income maintenance	-0.0002	-0.0002	-0.0006	0.0007	-0.0009	-0.0002	-0.0002	-0.0002	-0.0006
	(0.0006)	(0.0004)	(0.0007)	(0.0008)	(0.0007)	(0.0003)	(0.0004)	(0.0003)	(0.0007)
Unemployment insurance	-0.0002	-0.0009*	-0.0005	-1.81×10^{-5}	-0.0008	0.0004	0.0007*	0.0004	-0.0006
	(0.0004)	(0.0005)	(0.0004)	(0.0004)	(0.0005)	(0.0003)	(0.0004)	(0.0003)	(0.0006)
Population	$6.05 \times 10^{-8***}$	2.43×10^{-8}	$-5.76 \times 10^{-8**}$	$6.64 \times 10^{-8**}$	$6.12 \times 10^{-8*}$	3.08×10^{-8}	3.71×10^{-8}	2.44×10^{-8}	$7.66 \times 10^{-8*}$
	(2.02×10^{-8})	(2.83×10^{-8})	(2.48×10^{-8})	(2.37×10^{-8})	(3.32×10^{-8})	(1.78×10^{-8})	(2.65×10^{-8})	(1.56×10^{-8})	(3.61×10^{-8})
ppwm1019	-67.75	35.85	-69.55	-17.45	-150.7***	-21.92	-10.01	-31.77	-45.32
	(44.05)	(47.73)	(53.73)	(68.53)	(48.32)	(21.58)	(33.90)	(21.24)	(42.81)
ppbm1019	222.6**	162.7	-49.98	348.1**	197.4	19.08	20.20	-7.450	328.0**
	(77.94)	(98.61)	(103.5)	(120.7)	(130.3)	(61.76)	(96.81)	(58.08)	(119.5)
ppnm1019	357.2	-407.1	-58.62	466.0	228.6	131.4	365.5**	44.66	38.23
	(206.1)	(319.6)	(188.6)	(271.6)	(222.9)	(103.3)	(170.8)	(74.89)	(222.4)
ppwf1019	75.22	-37.48	81.06	19.49	157.1***	28.53	11.36	40.50*	45.59
	(44.76)	(48.25)	(57.46)	(69.48)	(50.97)	(23.08)	(35.18)	(22.67)	(46.77)
ppbf1019	-163.1**	-96.81	44.73	-295.3**	-161.6	2.184	-8.400	25.99	-276.4**
	(75.03)	(98.61)	(98.68)	(112.5)	(111.8)	(56.58)	(86.23)	(54.16)	(111.7)
ppnf1019	-279.5	350.6	153.3	-373.3	-167.8	-146.4	-380.1**	-56.35	-23.43
	(204.6)	(276.4)	(180.9)	(256.0)	(230.8)	(108.8)	(176.9)	(77.93)	(229.5)
ppwm2029	4.834	20.51	3.572	-4.094	44.13*	5.920	10.01	7.838	6.416
	(15.53)	(15.08)	(14.55)	(18.95)	(21.91)	(7.574)	(10.74)	(6.271)	(20.01)
ppbm2029	-4.124	-50.20	134.1	-83.05	-35.76	-27.51	-59.19	-15.55	-122.4*
	(40.84)	(64.15)	(119.7)	(62.56)	(71.33)	(35.65)	(37.43)	(34.36)	(62.94)
ppnm2029	-64.95	120.3	63.76	-64.31	-108.6	-95.23*	-95.75	-75.44	-85.69
	(99.36)	(152.6)	(115.7)	(128.6)	(173.4)	(53.62)	(80.17)	(51.38)	(124.4)
ppwf2029	3.919	-18.12	24.64	14.34	-43.77	-4.257	-8.442	-4.947	-10.94
	(18.29)	(19.03)	(17.35)	(21.46)	(26.90)	(7.981)	(13.61)	(6.581)	(20.68)
ppbf2029	11.31	59.85	-86.21	83.52	27.84	35.33	43.28	31.89	131.1**

Observations	802	806	799	809	808	809	809	809	808
R ²	0.97909	0.94701	0.93976	0.96156	0.98311	0.95910	0.95208	0.96166	0.95518
Within R ²	0.40574	0.29930	0.50171	0.44814	0.48069	0.48718	0.46057	0.48721	0.54198

Clustered (state & year) standard-errors in parentheses

*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Bacon Decomposition

Callaway and Sant'anna

Sun and Abraham Event Study

Conclusion