

Are Workers Effective Lawmakers?

Supplemental Appendix

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Online Supplemental Index

Contents

1	Occupational Categories (Makse 2019)	2
2	Computing State Legislative Effectiveness Scores	3
3	Descriptive Statistics	5
4	Demographics of Working-Class State Legislators	6
4.1	Figure 4.1: Numerical Representation of Workers in State Legislatures (1989-2018)	7
4.2	Table 4.2: Class-Based Effectiveness Given Gender, Race, and Party	9
5	Additional Models	10
5.1	Table 5.1: Class-Based Legislative Effectiveness Given Professionalism, Term Limits, and % Worker	10
5.2	Table 5.2: Class-Based Legislative Effectiveness for Legislators' First Term	11
5.3	Table 5.3: Class-Based Legislative Effectiveness Interacted With Seniority	12

1 Occupational Categories (Makse 2019)

Working-Class Occupations	Blue-collar Contractors & Construction Workers Office & Clerical Workers Public Safety Professions Retail & Service Professions Semi-Skilled Laborer Skilled Trade Unskilled Laborers
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White-Collar Occupations	Artist Attorney & Judge Business Executive Business owner Clergy Consultant Conservation Professions Design Professions Doctor Education Administrator Education Staff Educator Engineer Finance & Banking Financial Specialists Government Homemaker Humanities Professions Insurance IT Professions Journalism and Media Management Specialists Medical Professions Military Professions Non-profit Operations Managers Physical Scientist Politics & Advocacy Real Estate Social Scientist Social Worker Sports & Entertainment Technician Transportation
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2 Computing State Legislative Effectiveness Scores

State Legislative Effectiveness Scores (SLES) are weighted averages calculated for individual legislators (i) in each legislative term (t) within each legislative chamber. SLES consider the number of bill's a legislator (i) introduced (BILL), received action in committee (AIC), received action beyond committee (ABC), passed their chamber (PASS), and became law (LAW) (Bucchianeri et al. 2020, p.6). Each bill is weighted by its overall significance. Commemorative bills are weighed $\alpha=1$, substantive bills are weighed $\beta=5$, and substantive/significant bills are weighed $\gamma=10$.

Finally, this equation is normalized (n/5) across N legislators to ensure SLES takes a mean value of 1 for each chamber (Bucchianeri et al. 2020, p. 6). I z-score the SLES variable to produce a normal distribution with a mean of zero.

The equation below explains how SLES scores are calculated. For a more detailed description of how legislative effectiveness scores are calculated see Volden & Wiseman (2014), and for more information on state legislative effectiveness scores see Bucchianaeri et al. (2020).

$$SLES_{it} = \left[\begin{array}{l} \frac{\alpha BILL_{it}^C + \beta BILL_{it}^S + \gamma BILL_{it}^{SS}}{\alpha \sum_{j=1}^N BILL_{it}^C + \beta \sum_{j=1}^N BILL_{it}^S + \gamma \sum_{j=1}^N BILL_{it}^{SS}} \\ + \frac{\alpha AIC_{it}^C + \beta AIC_{it}^S + \gamma AIC_{it}^{SS}}{\alpha \sum_{j=1}^N AIC_{it}^C + \beta \sum_{j=1}^N AIC_{it}^S + \gamma \sum_{j=1}^N AIC_{it}^{SS}} \\ + \frac{\alpha ABC_{it}^C + \beta ABC_{it}^S + \gamma ABC_{it}^{SS}}{\alpha \sum_{j=1}^N ABC_{it}^C + \beta \sum_{j=1}^N ABC_{it}^S + \gamma \sum_{j=1}^N ABC_{it}^{SS}} \\ + \frac{\alpha PASS_{it}^C + \beta PASS_{it}^S + \gamma PASS_{it}^{SS}}{\alpha \sum_{j=1}^N PASS_{it}^C + \beta \sum_{j=1}^N PASS_{it}^S + \gamma \sum_{j=1}^N PASS_{it}^{SS}} \\ + \frac{\alpha LAW_{it}^C + \beta LAW_{it}^S + \gamma LAW_{it}^{SS}}{\alpha \sum_{j=1}^N LAW_{it}^C + \beta \sum_{j=1}^N LAW_{it}^S + \gamma \sum_{j=1}^N LAW_{it}^{SS}} \end{array} \right] \left[\frac{N}{5} \right]$$

Note: Equation from Bucchianaeri et al. 2020 (p.6)

3 Descriptive Statistics

Table 1: Descriptions of Key Variables

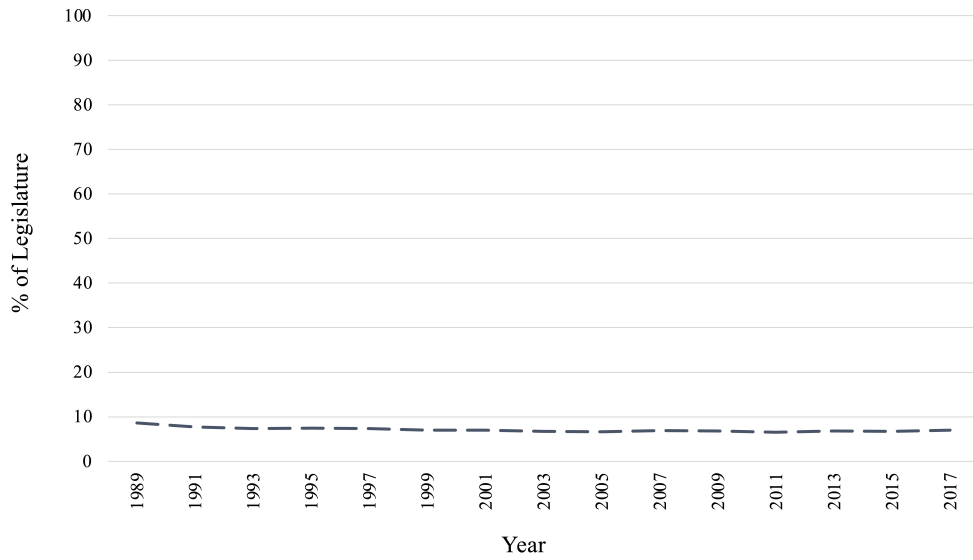
Variables	Min	Max	Mean	Std. Dev.
Dependent Variables				
Legislative Effectiveness Variables				
SLES (SLES_z)	-2.94	9.92	.009	.981
Bill Introduction (BILL)	0	.287	.014	.015
Action in Committee (AIC)	0	.323	.014	.016
Action Beyond Committee (ABC)	0	.367	.014	.017
Pass One Chamber (PASS)	0	.014	.014	.018
Become Law (LAW)	0	.014	.014	.019
Electoral Variables				
Reelected	0	1	.784	.412
Challenged	0	1	.737	.440
Vote Share	0.015	1	.713	.225
Independent Variables				
Worker	0	1	.068	.253
% Worker	1.11	22.97	6.88	.991
Female	0	1	.232	.422
Black	0	1	.023	.149
Hispanic	0	1	.184	.184
Race (other)	0	1	.031	.031
White	0	1	.929	.257
Democrat	0	1	.487	.499
Seniority	1	25	3.894	3.245
Committee Chair	0	1	.279	.449
Majority Party	0	1	.620	.485
Governor Same Party	0	1	.539	.498
Majority Leadership	0	1	.055	.229
Minority Leadership	0	1	.032	.176
Polarization	0	4.999	.674	.602
Leader, Speaker, President	0	1	.028	.165
Term Limits	0	1	.233	.427
Professionalism (Squire)	.027	.629	.216	.124
Vote Share	.015	1	.713	.225
Senate	1	2	1.283	.450
N				48,220

4 Demographics of Working-Class State Legislators

My data set includes 51,929 legislator-term specific observations. Of those legislator-term specific observations, 3,572 are from working-class backgrounds. From this, on average, 6.8% of state legislators are workers. The numerical representation of workers in state legislatures peaked in 1990 at around 10% (though the early data is sparse); however, the percentage of workers serving in state legislatures since 1990 has remained consistent around 6%. Figure A.4.1 shows the numerical representation of workers in state legislatures from 1989-2018.

The figures below present the partisan, race, and gender breakdown of workers across state legislatures. Workers are approximately evenly split between the two parties (Republicans = 47%, Democrats = 52%). Workers are overwhelmingly white (94%) and male (88%). I condition on gender, race, and partisanship to ensure that demographic factors aren't confounding the estimates of workers' effectiveness. I also consider whether demographic factors moderate workers' effectiveness. To do this I interact gender, race, and partisanship with the worker variable. All three of the interactions are not statistically significant, indicating that demographic factors do not moderate workers' effectiveness.

4.1 Figure 4.1: Numerical Representation of Workers in State Legislatures (1989-2018)



4.2 Table 4.2: Class-Based Effectiveness Given Gender, Race, and Party

	1	2	3
	SLES	SLES	SLES
Worker	-0.0163 (-0.56)	-0.0360 (-1.38)	0.00190 (0.05)
Female	0.0148 (0.90)	0.0108 (0.67)	0.00914 (0.57)
Worker + Female	-0.101 (-1.56)		
Non-White		-0.0525 (-1.85)	
Worker + Non-White		0.124 (0.81)	
Democrat			0.216** (3.02)
Worker + Democrat			-0.0565 (-1.07)
% Worker	0.0141 (0.45)	0.0142 (0.46)	0.0151 (0.49)
Black	0.0554 (0.79)		
Hispanic	0.167* (2.40)		
Race (other)	-0.0790 (-0.62)		
White	0.144* (2.52)		
Democrat	-0.0240 (-1.72)	-0.0234 (-1.69)	-0.230*** (-3.35)
Seniority	0.0212*** (6.96)	0.0211*** (6.96)	0.0211*** (6.95)
Committee Chair	0.513*** (30.36)	0.513*** (30.37)	0.512*** (30.31)
In Majority	0.356*** (20.30)	0.358*** (20.42)	0.362*** (20.55)
Governor Same Party	0.0339** (3.02)	0.0336** (3.00)	0.0382*** (3.40)
Majority Leadership	0.179*** (4.78)	0.178*** (4.75)	0.180*** (4.79)
Minority Leadership	0.107** (2.92)	0.107** (2.93)	0.113** (3.08)
Polarization	-0.175*** (-11.05)	-0.172*** (-10.89)	-0.170*** (-10.69)
Leader, Speaker, President	-0.0372 (-0.55)	-0.0373 (-0.55)	-0.0387 (-0.57)
Term Limits Applied	0.114*** (6.76)	0.116*** (6.89)	0.112*** (6.63)
Professionalism (Squire)	-0.104 (-1.82)	-0.0967 (-1.72)	-0.100 (-1.79)
Vote Share	0.0384 (1.31)	0.0398 (1.36)	0.0383 (1.31)
Senate	-0.164*** (-10.10)	-0.164*** (-10.12)	-0.168*** (-10.26)
Intercept	-0.332 (-1.40)	-0.194 (-0.85)	-0.00269 (-0.01)
State Fixed Effects	✓	✓	✓
Term Fixed Effects	✓	✓	✓
N	48220	48220	48220
Adjusted-R ²	0.18	0.18	0.18

t statistics in parentheses

* p < 0.05, ** p < 0.01, *** p < 0.001

5 Additional Models

5.1 Table 5.1: Class-Based Legislative Effectiveness Given Professionalism, Term Limits, and % Worker

	1	2	3
	SLES	SLES	SLES
Worker	-0.0497 (-0.91)	-0.0342 (-1.09)	-0.330 (-1.34)
Professionalism (Squire)	-0.0649 (-1.11)	-0.0596 (-1.05)	-0.0599 (-1.06)
Worker + Professionalism (Squire)	0.0804 (0.36)		
Term Limits	0.0643*** (3.91)	0.0638*** (3.77)	0.0642*** (3.91)
Worker + Term Limits	0.00595 (0.11)		
% Worker	-0.0116 (-0.37)	-0.0116 (-0.38)	-0.0152 (-0.49)
Worker + % Worker	0.0429 (1.22)		
Female	0.00326 (0.20)	0.00321 (0.20)	0.00312 (0.19)
Black	0.0610 (0.87)	0.0615 (0.88)	0.0612 (0.87)
Hispanic	0.168* (2.38)	0.169* (2.39)	0.168* (2.38)
Race (other)	-0.0913 (-0.71)	-0.0908 (-0.70)	-0.0909 (-0.70)
White	0.156** (2.70)	0.156** (2.71)	0.156** (2.71)
Democrat	-0.00749 (-0.54)	-0.00753 (-0.54)	-0.00760 (-0.55)
Committee Chair	0.547*** (31.53)	0.547*** (31.54)	0.547*** (31.54)
In Majority	0.337*** (19.53)	0.337*** (19.52)	0.337*** (19.54)
Governor Same Party	0.0317** (2.81)	0.0317** (2.81)	0.0318** (2.82)
Majority Leadership	0.207*** (5.58)	0.207*** (5.58)	0.207*** (5.58)
Minority Leadership	0.133*** (3.60)	0.133*** (3.60)	0.133*** (3.61)
Polarization	-0.184*** (-11.63)	-0.185*** (-11.62)	-0.184*** (-11.61)
Leader, Speaker, President	-0.00954 (-0.14)	-0.00957 (-0.14)	-0.00942 (-0.14)
Vote Share	0.0927** (3.20)	0.0928** (3.20)	0.0933** (3.22)
Senate	-0.167*** (-10.21)	-0.167*** (-10.21)	-0.166*** (-10.20)
Intercept	-0.114 (-0.49)	-0.115 (-0.49)	-0.0907 (-0.38)
State Fixed Effects	✓	✓	✓
Term Fixed Effects	✓	✓	✓
N	48220	48220	48220
Adjusted-R ²	0.18	0.18	0.18

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

5.2 Table 5.2: Class-Based Legislative Effectiveness for Legislators' First Term

	1	2	3	4	5	6
	BILL	AIC	ABC	PASS	LAW	SLES
Worker	0.000273 (0.65)	0.000143 (0.34)	0.0000824 (0.19)	0.0000857 (0.19)	-0.0000107 (-0.02)	-0.0300 (-1.29)
% Worker	-0.00224* (-2.52)	-0.00230** (-2.93)	-0.00208** (-2.63)	-0.00231** (-2.70)	-0.00238* (-2.39)	-0.102* (-2.01)
Female	-0.000427* (-2.04)	-0.00000815 (-0.04)	0.000323 (1.35)	0.000515 (1.93)	0.000574 (1.89)	-0.0158 (-1.05)
Black	-0.00148 (-1.42)	-0.00174 (-1.36)	-0.00103 (-0.76)	-0.000358 (-0.24)	0.000124 (0.08)	0.0250 (0.32)
Hispanic	-0.000473 (-0.51)	-0.00122 (-1.03)	-0.000995 (-0.82)	-0.000649 (-0.48)	-0.000576 (-0.04)	-0.0130 (-0.18)
Race (other)	-0.00191 (-1.30)	-0.00337 (-1.86)	-0.00283 (-1.54)	-0.00300 (-1.62)	-0.00354 (-1.85)	-0.177 (-1.71)
White	-0.000354 (-0.41)	-0.000608 (-0.54)	-0.000504 (-0.44)	-0.000123 (-0.10)	0.000664 (0.47)	0.0510 (0.80)
Democrat	-0.000541** (-2.76)	-0.00136*** (-6.63)	-0.00155*** (-7.36)	-0.00163*** (-7.26)	-0.00174*** (-6.89)	-0.0408** (-3.02)
Committee Chair	0.00755*** (14.03)	0.00971*** (16.03)	0.0103*** (16.06)	0.0109*** (15.42)	0.0116*** (13.98)	0.417*** (13.23)
In Majority	0.00212*** (7.33)	0.00363*** (12.28)	0.00409*** (13.43)	0.00422*** (13.17)	0.00354*** (10.03)	0.249*** (13.36)
Governor Same Party	0.000727*** (3.65)	0.00104*** (4.97)	0.000923*** (4.19)	0.000916*** (3.89)	0.00123*** (4.63)	0.0371** (2.74)
Majority Leadership	0.00282 (1.72)	0.00396* (2.15)	0.00430* (2.10)	0.00376 (1.80)	0.00344 (1.43)	0.191* (1.99)
Minority Leadership	0.00125 (0.79)	-0.000840 (-0.63)	-0.000794 (-0.57)	-0.000664 (-0.48)	-0.000659 (-0.04)	0.0628 (0.81)
Polarization	0.000177 (0.82)	-0.000577** (-2.58)	-0.00124*** (-5.36)	-0.00177*** (-7.30)	-0.00215*** (-8.19)	-0.182*** (-12.31)
Leader, Speaker, President	-0.00111 (-0.44)	-0.000618 (-0.23)	0.0000762 (0.02)	0.000199 (0.06)	0.00106 (0.30)	-0.00824 (-0.05)
Term Limits	0.00157*** (6.12)	0.00170*** (6.25)	0.00118*** (4.17)	0.000769* (2.50)	0.000837* (2.39)	0.0582*** (3.33)
Professionalism (Squire)	-0.0000802 (-0.11)	0.000429 (0.54)	0.00151 (1.85)	0.00214* (2.43)	0.00256* (2.55)	0.565*** (9.09)
Vote Share	-0.00159*** (-3.63)	-0.00159*** (-3.41)	-0.00178*** (-3.70)	-0.00176*** (-3.42)	-0.00200*** (-3.38)	-0.0932** (-2.98)
Senate	0.0127*** (39.86)	0.0119*** (37.21)	0.0115*** (34.87)	0.0113*** (31.76)	0.0112*** (28.00)	-0.0530** (-3.11)
Intercept	0.0138 (1.92)	0.0155* (2.32)	0.0147* (2.17)	0.0167* (2.28)	0.0171* (2.00)	0.553 (1.32)
State Fixed Effects	✓	✓	✓	✓	✓	✓
Term Fixed Effects	✓	✓	✓	✓	✓	✓
N	9927	9927	9927	9927	9927	9927
Adjusted-R ²	0.39	0.40	0.40	0.37	0.32	0.20

t statistics in parentheses

* p < 0.05, ** p < 0.01, *** p < 0.001

5.3 Table 5.3: Class-Based Legislative Effectiveness Interacted With Seniority

	1	2	3	4	5	6
	BILL	AIC	ABC	PASS	LAW	SLES
Worker	0.000281 (0.47)	-0.0000111 (-0.02)	0.000120 (0.19)	0.0000386 (0.05)	-0.000246 (-0.30)	-0.0496 (-1.18)
Seniority	0.0000872 (1.82)	0.0000746 (1.52)	0.0000678 (1.39)	0.0000513 (1.07)	0.0000867 (1.67)	0.0208*** (6.69)
Worker + Seniority	-0.00000868 (-0.06)	0.00000791 (0.05)	0.0000272 (0.16)	0.000120 (0.59)	0.000208 (0.86)	0.00559 (0.46)
% Worker	-0.00130*** (-3.53)	-0.00113** (-2.99)	-0.00105** (-2.93)	-0.00113** (-2.86)	-0.00111* (-2.54)	0.0142 (0.46)
Female	-0.0000374 (-0.15)	0.000543 (1.96)	0.000654* (2.40)	0.000744** (2.67)	0.000845** (2.77)	0.0107 (0.66)
Black	-0.00275* (-2.30)	-0.00332** (-2.67)	-0.00301* (-2.37)	-0.00280* (-2.20)	-0.00240 (-1.59)	0.0546 (0.78)
Hispanic	-0.000688 (-0.62)	-0.00127 (-1.09)	-0.000826 (-0.70)	-0.000751 (-0.62)	-0.000504 (-0.36)	0.167* (2.40)
Race (other)	-0.00162 (-0.65)	-0.00157 (-0.71)	-0.00141 (-0.61)	-0.00552** (-2.78)	-0.00613** (-3.04)	-0.0792 (-0.62)
White	-0.00166 (-1.64)	-0.00203 (-1.89)	-0.00174 (-1.59)	-0.00166 (-1.51)	-0.00126 (-0.99)	0.143* (2.51)
Democrat	0.000279 (1.28)	-0.000760*** (-3.30)	-0.000807*** (-3.41)	-0.000928*** (-3.82)	-0.000939*** (-3.59)	-0.0238 (-1.71)
Committee Chair	0.00561*** (23.98)	0.00746*** (27.77)	0.00844*** (29.50)	0.00885*** (29.59)	0.00883*** (26.68)	0.513*** (30.38)
In Majority	0.00236*** (9.36)	0.00428*** (14.98)	0.00468*** (16.02)	0.00496*** (18.62)	0.00435*** (15.02)	0.355*** (20.29)
Governor Same Party	0.000590*** (3.44)	0.000747*** (4.06)	0.000642** (3.25)	0.000760*** (3.81)	0.00124*** (5.81)	0.0340** (3.03)
Majority Leadership	0.00297*** (4.47)	0.00411*** (5.60)	0.00510*** (6.39)	0.00563*** (6.96)	0.00580*** (6.94)	0.179*** (4.78)
Minority Leadership	0.00251** (3.21)	0.00211* (2.17)	0.00173 (1.72)	0.000634 (0.97)	0.000449 (0.64)	0.107** (2.93)
Polarization	-0.000213 (-0.88)	-0.00131*** (-4.74)	-0.00213*** (-7.45)	-0.00236*** (-10.52)	-0.00269*** (-11.30)	-0.175*** (-11.05)
Leader, Speaker, President	0.0000530 (0.05)	0.00101 (0.79)	0.00173 (1.24)	0.00296* (1.96)	0.00407* (2.35)	-0.0371 (-0.55)
Term Limits	0.00148*** (5.57)	0.00162*** (5.99)	0.00181*** (6.21)	0.00179*** (5.88)	0.00194*** (6.02)	0.114*** (6.76)
Professionalism (Squire)	-0.00815*** (-11.03)	-0.00759*** (-9.88)	-0.00757*** (-9.85)	-0.00761*** (-9.54)	-0.00743*** (-8.42)	-0.103 (-1.81)
Vote Share	-0.00192*** (-4.63)	-0.00192*** (-3.83)	-0.00179*** (-3.39)	-0.00142** (-2.76)	-0.00147** (-2.60)	0.0380 (1.30)
Senate	0.0142*** (46.71)	0.0135*** (43.22)	0.0131*** (40.86)	0.0132*** (40.47)	0.0132*** (37.73)	-0.164*** (-10.10)
Intercept	0.00698* (2.30)	0.00730* (2.33)	0.00659* (2.17)	0.00671* (2.08)	0.00652 (1.77)	-0.331 (-1.40)
State Fixed Effects	✓	✓	✓	✓	✓	✓
Term Fixed Effects	✓	✓	✓	✓	✓	✓
N	48220	48220	48220	48220	48220	48220
Adjusted-R ²	0.30	0.30	0.30	0.30	0.26	0.18

t statistics in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001