

TABLE 10.1 Regression Analysis of the Effect of Drunk Driving Laws on Traffic Deaths

Dependent variable: traffic fatality rate (deaths per 10,000).							
Regressor	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Beer tax	0.36 (0.05) [0.26, 0.46]	-0.66 (0.29) [-1.23, -0.09]	-0.64 (0.36) [-1.35, 0.07]	-0.45 (0.30) [-1.04, 0.14]	-0.69 (0.35) [-1.38, 0.00]	-0.46 (0.31) [-1.07, 0.15]	-0.93 (0.34) [-1.60, -0.26]
Drinking age 18		0.10		0.03 (0.07) [-0.11, 0.17]	-0.01 (0.08) [-0.17, 0.15]		0.04 (0.10) [-0.16, 0.24]
Drinking age 19				-0.02 (0.05) [-0.12, 0.08]	-0.08 (0.07) [-0.21, 0.06]		-0.07 (0.10) [-0.26, 0.13]
Drinking age 20				0.03 (0.05) [-0.07, 0.13]	-0.10 (0.06) [-0.21, 0.01]		-0.11 (0.13) [-0.36, 0.14]
Drinking age						0.00 (0.02) [-0.05, 0.04]	
Mandatory jail or community service?				0.04 (0.10) [-0.17, 0.25]	0.09 (0.11) [-0.14, 0.31]	0.04 (0.10) [-0.17, 0.25]	0.09 (0.16) [-0.24, 0.42]
Average vehicle miles per driver				0.008 (0.007)	0.017 (0.011)	0.009 (0.007)	0.124 (0.049)
Unemployment rate				-0.063 (0.013)		-0.063 (0.013)	-0.091 (0.021)
Real income per capita (logarithm)				1.82 (0.64)		1.79 (0.64)	1.00 (0.68)
Years	1982–88	1982–88	1982–88	1982–88	1982–88	1982–88	1982 & 1988 only
State effects?	no	yes	yes	yes	yes	yes	yes
Time effects?	no	no	yes	yes	yes	yes	yes
Clustered standard errors?	no	yes	yes	yes	yes	yes	yes
F-Statistics and p-Values Testing Exclusion of Groups of Variables							
Time effects = 0			4.22 (0.002)	10.12 (<0.001)	3.48 (0.006)	10.28 (<0.001)	37.49 (<0.001)
Drinking age coefficients = 0				0.35 (0.786)	1.41 (0.253)		0.42 (0.738)
Unemployment rate, income per capita = 0				29.62 (<0.001)		31.96 (<0.001)	25.20 (<0.001)
\bar{R}^2	0.091	0.889	0.891	0.926	0.893	0.926	0.899

These regressions were estimated using panel data for 48 U.S. states. Regressions (1) through (6) use data for all years 1982 to 1988, and regression (7) uses data from 1982 and 1988 only. The data set is described in Appendix 10.1. Standard errors are given in parentheses under the coefficients, 95% confidence intervals are given in square brackets under the coefficients, and p -values are given in parentheses under the F -statistics.