

Appendix Table A.1: Characteristics of Underground, Bituminous Coal Mines: Sample Means

Variable	Union Mean	Nonunion Mean	Variable	Union Mean	Nonunion Mean
<b>Total sample size<sup>a</sup></b>			<b>Mine characteristics</b>		
Mine-quarters	5,807	34,501	Mine age (in years)	17.04 (16.38)	6.84 (7.67)
Mines <sup>b</sup>	356	2,455			
<b>Injury Rates (per annual FTE)</b>			Productivity	7.38 (4.07)	6.87 (4.61)
Nontraumatic injuries	0.0954 (0.1602)	0.0712 (0.3395)	Percent Captive Production	0.0702 (0.2425)	0.0649 (0.2788)
Total injuries	0.1309 (0.1878)	0.1112 (0.3961)	Subsidiary indicator	0.2037 (0.4781)	0.4027 (0.4046)
Traumatic injuries	0.0356 (0.0850)	0.0400 (0.1830)	Longwall indicator	0.3113 (0.4630)	0.0399 (0.1957)
Fatalities	0.0003 (0.0060)	0.0011 (0.0535)			
<b>Mine and Controller Size Measures</b>			Subunits contained <sup>c</sup>		
Mine FTEs	193.36 (207.11)	57.73 (86.68)	Surface	0.8582 (0.3487)	0.8254 (0.3796)
Size Quartile 1	15.98 (23.74)	12.05 (9.47)	Mill or prep plant	0.2757 (0.4469)	0.0434 (0.2037)
Size Quartile 2	31.57 (31.04)	28.21 (14.04)	Mining method percentages		
Size Quartile 3	64.38 (50.17)	50.81 (25.20)	Conventional	7.87 (26.92)	16.56 (37.04)
Size Quartile 4	330.76 (202.89)	166.34 (140.6624)	Continuous	65.45 (42.70)	77.24 (41.15)
Mine Employees	175.5273 (181.12)	51.25 (72.82)	Longwall	26.37 (38.84)	3.33 (16.25)
Mine Tonnage	366,144 (459,358)	120,636 (263,832)	Shortwall	0.18 (3.75)	0.01 (1.08)
Controller FTEs	1,451.81 (1,910.59)	632.69 (1,146.56)	<b>Geological features</b>		
Controller employees	1,292.98 (1,673.56)	542.75 (980.04)	Number of Coal beds	1.0206 (0.1593)	1.0019 (0.1786)
Controller tonnage	3,115,829 (4,591,858)	1,307,115 (2,529,356)	Mean coal bed thickness (in yards)	1.0097 (0.8820)	0.8976 (0.7159)
			Recoverable reserves (in millions of tons)	20,623 (32,875)	7,019 (28,223)

**Information Presented:** This table contains mean values for all underground, bituminous, active mine-quarters in each group; standard deviations are in parentheses. Each variable mean is calculated among all observations that contain information on that variable. See Appendix C for complete variable definitions.

<sup>a</sup> Total sample sizes represent counts (of mine-quarters and of mines, respectively) as opposed to mean values.

<sup>b</sup> Because a mine that was unionized for part of the sample period and nonunionized for part of the sample period

is counted here as both a union mine and a nonunion mine, some mines are double counted for a total of 2,811 mines. There are 2,645 underground bituminous coal mines with at least one active quarter from 1993-2010. The difference between these two numbers, 166, represents the number of mines that switched union status at some point during the sample period. Of these 166 mines, only 164 contain information on controller. Therefore, the sample size in the public-fields version of the fixed-effects models presented in Appendix Table A.3 – focusing exclusively on mines that changed union status during the sample period – is 164.

c Only descriptive statistics for the surface and the mill or prep plant subunits are shown here. Other subunits include auger subunit; culm-refuse subunit; dredge subunit; independent shops or yard subunit; strip, quarry, or pit subunit; underground subunit; and other subunits. Descriptive statistics for all ten subunits are available on the *Companion Website* (<http://amorantz.stanford.edu/companions/union-coal-mine-safety/>).