

Boone County

History and Population¹

Boone County was formed in 1847 from parts of Kanawha, Cabell, and Logan counties. The county was named in recognition of Daniel Boone, noted hunter and explorer, whose home was in the Kanawha Valley from 1789 to 1795. The county is southwest of Kanawha County and abuts Raleigh, Wyoming, Lincoln, and Logan counties. Boone County is approximately 506 square miles and has an elevation of 716 feet at Madison. Madison, the county seat, was incorporated in 1906 and named for William Madison Peyton, a pioneer coal operator. Local cities include Danville, Whitesville, and Sylvester. Coal, lumber, and natural gas are the leading industries. Chief agricultural products are tobacco and strawberries.

In 1990, Boone County had a population of 25,870 people. In the last sixty years, Boone County population has fluctuated between 25,556 (in 1940) to a high of 33,173 (in 1950). Boone County is largely a rural area. According to the 1990 U.S. Census, 88.2 percent of the population reside in rural areas. The remaining 11.8 percent (3,051 residents) live in urban cities. Boone County is predominately white with 98.92 percent of total population being Caucasian. Only 0.83 percent were reported to be of African-American origin, 0.19 percent of Spanish origin, and 0.26 percent were other races. Overall, Boone County has a small population living in mostly rural areas. It appears as a typical central Appalachian community.

Education

In 1998, Boone County had eleven elementary schools, three middle or junior high schools, three high schools, one vocational school, and one other school (not categorized). There are no higher education institutions in the county. The nearest colleges are *Southern West Virginia Community College* in Logan County, *College of West Virginia* in Raleigh County,

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All data obtained from internal Center estimates (baseline and simulations) or from the following publicly available sources: *West Virginia Blue Book 1997*, *U.S. Census*, *U.S. Bureau of Labor Statistics*, *WV Bureau of Employment Programs Labor Market Information and County Profiles*, *WV Department of Education Reports Cards*, *U.S. Census American Factfinder*.

Marshall University in Cabell County, *University of Charleston* in Kanawha County, and *West Virginia State College* in Kanawha County.

In 1990, only 54.1 percent of people twenty-five years of age and older were high school graduates. This is lower than the state average of 66.0 percent and lower than the national average of 77.6 percent. Almost a fourth of this age group had less than a ninth grade education and only 6.4 percent were college graduates or higher. However, the 1998 dropout rate for high school students was only 2.4 percent. The dropout rate was slightly lower than the state average of 2.9 percent and significantly lower than the national average of 12.1 percent.

The Economy

One US Route (Corridor G - 119) and five WV Routes (3, 17, 85, 94, 99) are located within Boone County. The local system of highway mileage totals 271 miles, less than 1 percent of the state total. Expressway, truck lines, and feeder systems total 113 miles, comprising 1.86 percent of the state total. CSXT operates extensive railroad lines within the county. There are motor freight carriers and parcel services available but there are no airports or bus services. Along with the population declines, the automobile registrations have dropped nearly 6 percent in the last decade and currently stand at just over 19,000. The nearest navigable river is the Kanawha River on which significant coal barge traffic travels.

In 1997, 65.9 percent of workers residing in Boone County worked in the county while 30.1 percent of workers commuted to another county. Only 1 percent worked in another state (with 3 percent not reporting). The single largest employers in 1999 include the *Boone County Board of Education*, *Eastern Associated Coal Corporation*, *Elk Run Coal Company*, *Hobet Mining Incorporated*, and *Independence Coal Company*. There were 7,910 people included in the 1999 civilian labor force, 7,030 employed workers and 880 unemployed. The 1999 unemployment rate was 11.1 percent, higher than the state average of 6.6 percent and more than double the national average of 4.1 percent.

Clearly, the industry with the most number of workers and highest wages is mining (See Table 1). Seven of the ten largest employers in 1999 were coal companies. In 1998, there were 2,831 people working in mining. More than one out of every three persons in the county were working in that industry. Government employed the second highest number of workers with a

total of 1,486 workers, or one out of five of the county total. Retail trade and services were the third and fourth largest employers. The county enjoyed \$147,933,000 in retail sales in 1999. Construction, manufacturing, transportation and public utilities, wholesale trade, and finance, insurance, and real estate each had less than 375 workers and each industry individually comprised no more than 5 percent of total employment in the county.

In 1998, the average wage for mining was \$57,029. The second, third, and fourth highest wages were in wholesale trade, transportation and public utilities, and construction, all of which are industries with less than 5 percent of total employment. Retail trade has the third largest number of workers but suffered from the lowest average wages.

It is evident that mining is the dominant industry in Boone County, by employing the largest number of workers and paying the highest wages. The average annual wage in Boone County was \$34,375 and the per capita wage was \$17,735. Both of these income measurements would be significantly reduced if there were negative changes in the mining industry without positive comparable changes in other industries. As an example, excluding mining wages reduces the 1998 average annual income to just \$20,424. Mining employs 38 percent of all workers and compensates its employees over 87 percent more than the second highest paying industry, see Table 1.

Table 1
1998 Employment and Wages, by Industry

Industry	Employment	Average Annual Wages (\$)
West Virginia	678,568	25,278
Boone County	7,442	34,375
Mining	2,831	57,029
Construction	159	26,666
Manufacturing	118	21,074
Transportation & Public Utilities	369	28,631
Wholesale Trade	166	30,405
Retail Trade	1,236	13,656
Finance, Insurance, and Real Estate	137	18,418
Services	927	19,460
Government	1,486	23,146

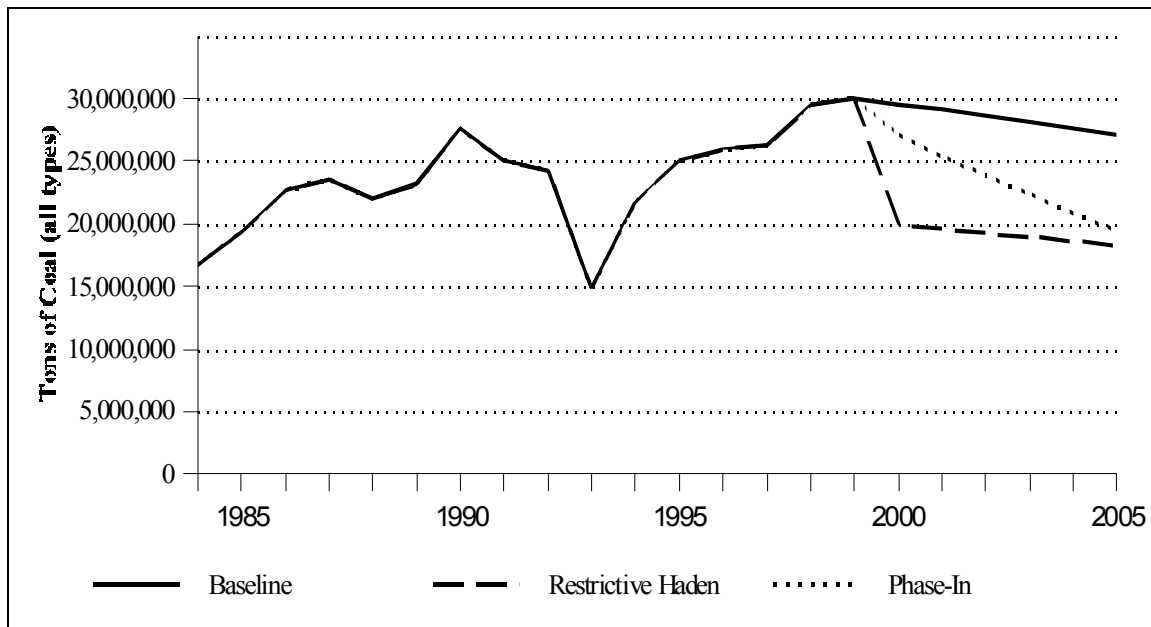
Table 2 illustrates the structure of the mining industry in the county. These data, from 1999, offer the most recent count of mining and mining related firms in the county. Their average sales and the average number of employees illustrate the distribution of firm size in the county. The issues of firm size and regional *economies of scale* are discussed in more detail in Chapter 3 and Appendix C of this study.

Table 2
The Structure of Coal Mining in Boone County (1999)

Activity	# of Firms	Mean Employees	Average Sales (\$million)
Bituminous coal and lignite-surface mining	3	212	36.9
Bituminous coal surface mining	2	194	63.6
Bituminous coal and lignite loading and preparation	2	43	29.4
Bituminous coal-underground mining	8	174	46.4
Coal mining services	7	96	3.3

Note: This is the most current firm structure available.

Figure 1
Boone County: Baseline and Simulation



Forecast and Simulations

Using the method described in the main text of this study we generated a baseline forecast and two simulations of potential regulatory impacts on the coal industry in Boone County. The baseline and two simulations both involve an expected decline in output, wages and employment. The change in coal production through 2005 is illustrated in Figure 1.

Baseline

The expected baseline forecast illustrates decreases in wages, employment, and output in Boone County. The assumptions and methods of generating these forecasts and simulations are described in the text. However, briefly, the baseline forecast is that of a benign regulatory environment, or one where the recent Haden Decision does not impact the permitting of mines. The baseline forecast change in output, wages and employment is illustrated in Table 3.

Table 3
Boone County: Baseline

Industry	Employment	Wages	Output
Agriculture	0	\$0	\$1,000
Mining	51	2,908,000	14,324,000
Construction	2	82,000	175,000
Manufacturing	0	8,000	31,000
TCPU	4	171,000	537,000
Trade	16	263,000	580,000
FIRE	2	36,000	330,000
Services	9	198,000	405,000
Other	1	8,000	8,000
Total	-85	-\$3,674,000	-\$16,391,000

Note: figures may not sum due to independent rounding and exclusion of some minor categories. TCPU is transportation, communications and public utilities, FIRE is finance, insurance and real estate.

These results reflect only commercial sector impacts. Declining demand for some types of government services will also result in declining public sector employment. Our forecast suggests that a loss of 18 public sector jobs will ensue from the baseline impacts noted above. The public sector impact is difficult to estimate since the loss in employment does not respond to

declining demand as quickly as does the private sector. The loss in output, and the uncertainty in the coal industry will also have a revenue effect on the county. Sales tax, income tax and business taxes will all experience declines due to the expected drop in coal production. The county currently levies \$21.4 million out of an assessed value of \$934.4 million. Declining employment and an uncertain future for the coal industry will doubtless imperil the actual market valuation of property in the county, reducing the stability of the property tax base in the near term.

Haden Decision Phase-In

The expected phase-in of the Haden decision would also result in decreases in wages, employment, and output in Boone County. This impact assumes the average life span of a permitted coal seam at seven years. Hence, the impact of fully restricting surface mining would result in a gradual loss of output, employment and wages. The effects are illustrated in Table 4.

Table 4
Boone County: Haden Decision Phase-In

Industry	Employment	Wages	Output
Agriculture	1	\$2,000	\$8,000
Mining	51	2,908,000	84,335,000
Construction	13	483,000	1,031,000
Manufacturing	2	45,000	180,000
TCPU	23	1,006,000	3,161,000
Trade	93	1,550,000	3,414,000
FIRE	12	210,000	1,941,000
Services	53	1,167,000	2,385,000
Other	7	46,000	46,000
Total	-255	-\$7,417,000	-\$96,501,000

Note: figures may not sum due to independent rounding and exclusion of some minor categories. TCPU is transportation, communications and public utilities, FIRE is finance, insurance and real estate.

Not illustrated in Table 4 is the loss in public sector employment of roughly 104 jobs due to a combination of declining demand and revenue losses. This total has not been illustrated because it was felt that the actual termination of jobs would occur in later periods than the loss of commercial activity.

The Restrictive Haden Decision

The forecast impact of a very restrictive interpretation of the Haden decision would result in a rapid and dramatic decline in both surface and underground mining. This would result in decreases in wages, employment, and output in Boone County. The effects are illustrated in Table 5.

Table 5
Boone County: Restrictive Haden Decision

Industry	Employment	Wages	Output
Agriculture	4	\$5,000	\$28,000
Mining	1,021	58,197,000	289,293,000
Construction	45	1,658,000	3,535,000
Manufacturing	8	153,000	619,000
TCPU	77	3,452,000	10,843,000
Trade	317	5,318,000	10,843,000
FIRE	40	720,000	6,659,000
Services	181	4,004,000	8,182,000
Other	23	159,000	159,000
Total	-1,716	-\$73,666,000	-\$330,161,000

Note: figures may not sum due to independent rounding and exclusion of some minor categories. TCPU is transportation, communications and public utilities, FIRE is finance, insurance and real estate.

As in the baseline and Haden phase-in simulations we have not illustrated the public sector job losses, which we estimate at roughly 357 positions in this scenario. Of course the Haden Decision phase-in and the restrictive Haden Decision simulations converge at seven years, or the beginning of 2007. The impact of this affects the aggregate employment, output and wages within the counties. The impact on individual firms is more difficult to simulate. Firm response to decreased demand can result in lay-offs, a shift in the focus of the firm's activity or a complete closure of the firm.

The illustrative impact on the number of firms in a sample set of industries in Boone County is illustrated in Table 6.

Table 6
Boone County: Selected Restrictive Haden
Decision Induced Firm Losses

Industry	Job Losses	Total Employment	Total Firms (1999)	Potential Firms Lost
Railroads and Related Services	23	65	2	1
Wholesale Trade	38	187	22	8
Building Materials and Gardening	30	55	2	1
General Merchandise Stores	22	131	11	4
Food Stores	78	402	25	14
Automotive Dealers & Service Stations	29	169	23	11
Eating and Drinking Places	59	187	20	8
Miscellaneous Retail	51	114	33	19
Banking	18	102	6	3
Real Estate	17	38	13	7
Nursing and Protective Care	17	111	2	0
Legal Services	23	44	7	6
Labor and Civic Organizations	15	17	7	5

The Impact on Public Services

The full Haden Decision may potentially impact not only the private sector jobs, wages and output, but also the public sector which supports them. While a full accounting of the change in both tax revenues and expenditures is outside the scope of this study, it seems apparent that a loss in employment will dramatically affect the county. Building from considerable recent historical evidence, the dramatic decline in jobs, due to the Haden Decision, will reduce demand for key public services through out-migration. Indeed, there is little evidence that the potential decline in employment following these events will differ substantially from that of the early 1980's, when unemployment and out-migration soared. This means that the jobs lost through the dissipation of coal mining activity will not be absorbed in other sectors. The highly skilled workers displaced in Boone County however, can find ample similar opportunities elsewhere. A simple adjunct to this simulation is to estimate the declining demand for public education caused by this impact. Declines in employment have continued to reduce public school enrollment. Potential out-migration due to the restrictive Haden Decision may result in a decline in enrollment of 7 percent (or roughly 333 of 4,685 students in the county). The rate at which this occurs is outside the scope of this study. Part of this impact is captured in the one time loss of public sector jobs noted above, however; there is a likely later losses as local governments

consolidate services. This impact will have dramatic implications regarding the staffing and potential consolidation of schools within the county. In addition, the Severance Tax loss to the state of this decision will be roughly \$3,289,000 of which roughly \$2,466,000 is Boone County's share. This represents a dramatic county revenue shortfall for which there is not likely an adequate alternative source. The impact on property taxes and revenues other than severance taxes has not been estimated in this study.

Summary & Conclusions

The impacts on Boone County described in this section reflect a best estimate of the baseline forecast and simulated effects of the Haden Decision given its two potential outcomes of litigation. The impacts outlined here are conservative, and are not intended to be alarmist, but instead seek to offer planning guidance to local officials, both public and private.