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**Socioeconomic Trends in Mining Dependent
Counties in Appalachia**

by

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Introduction

There is a significant body of literature that documents the important socioeconomic implications of extractive industry dependency (e.g. Jensen et al. 1999; Lobao 1996; Nord and Luloff 1993; RSS Task Force 1993). Since 1980, places with a higher concentration of employment in extractive industries have higher levels of poverty (Lichter and McLaughlin 1995), greater racial and gender inequality (Tickamyer and Latimer 1993; Tickamyer and Tickamyer 1991), and higher levels of under/unemployment (Jensen et al. 1999; Maggard 1994; Couto 1994) than areas with low extractive employment. While all extractive industries have faced severe economic problems over the last few decades (Lobao 1990; Nord and Luloff 1993; Gramling 1996), the effects of industrial restructuring have been very tough on the coal mining industry. This is particularly true in the rural regions of Appalachia, where nearly 75% of all coal miners have historically been employed, and where coal mining dependency led to record levels of unemployment, poverty, and significantly lower incomes in the 1980s (Billings and Tickamyer 1993; Isserman 1995; Mencken 1997; Maggard 1994; Couto 1994).¹

While a volume of research has focused on the impact of industrial restructuring in coal communities during the 1980s, less work has been done on these communities during the 1990s. In this analysis we examine trends since 1970, with an eye towards post-1980s trends in the most coal intensive counties in Appalachia.

Industrial Restructuring in the Coal Industry.

¹ For example, coal dependent McDowell County WV experienced a forty-two percent loss in population between 1980 and 1990, and during that same period experienced a 34% increase in the number of SSI recipients. In 1987, per capita income in McDowell County reached only fifty-percent of that for the entire United States, and in 1990 had a 38% official poverty rate, almost 3 times the national rate of 13%.

Coal mining along with steel, textiles, and apparel formed the basic foundation for the industrial revolution in the United States (Couto 1994). The initial coal mines in Appalachia provided fuel for the foundries, factories and steel mills of the early industrial revolution. Coal mining had an important presence in Appalachia during the 1900s. Many Appalachian boomtowns, such as Clinchco, VA, were created during the first half of the century. From World War II through the early 1960s, the demand for Appalachian coal was strong and consistent. In the late 1960s, coal companies began replacing labor with capital as some workers were phased-out by new production processes (particularly long-wall mining). However, the energy crisis of the 1970s created a greater demand for energy produced by coal.² The increase in demand created more job opportunities in the industry, and the 1970s were a time of expansion in the coal industry. Coal mining earnings grew 214% in inflation-adjusted dollars, and employment in mining grew by 50% (Couto 1994).

Dilger and Witt (1994) identify three trends that transformed the industry during the 1980s. First, the economic restructuring from manufacturing to services lessened the demand for coal to produce direct energy for factories. In fact, coal consumption by coke plants declined by 59% between 1980 and 1998 (Energy Statistics Sourcebook, 1999).³ Second, new environmental laws decreased the demand for high-sulfur content Appalachian coal. Extracting this type of coal was a labor-intensive process. Cleaner

² In 1973 the price of coal was 61 cents/million BTUs, in 1974 the price was 102 cents/million BTUs (Energy Statistics Sourcebook 1999).

³ While there was a decline in the amount of coal used in coke plants, in total it represents a very small portion of all coal produced and consumed in the United States.

burning low-sulfur coal is located near the surface, and mechanized capital intensive surface or strip mining is used to extract this coal.⁴

The third, and perhaps most important trend is the further mechanization of the coal extraction process. Foreign competition accelerated the mechanization of many manufacturing processes in the United States. However, since 1980 ninety percent of all coal produced in the United States was consumed domestically, and only .8% of all coal consumed in the United States was imported (Energy Statistics Sourcebook 1999). For manufacturing, restructuring was a product of global competition. In the coal mining industry competition came among domestic producers because of overproduction (outward shifting supply curve) and price competition, which led to lower prices per ton in conjunction with increased production and consumption.⁵ Keen competition further accelerated cuts in production costs through mechanization.

Mechanization increased the productivity of coal extraction, thus lowering the price per ton. Falling prices created even greater competition among suppliers of coal. Competition shut down many of the less competitive mines that could not survive on small profit margins, particularly the underground mines that employed more workers. Over 1600 mines were closed in West Virginia during the late 1970s through mid-1980s, and the number of coal miners in the state decreased from 55,627 in 1980 to 28,876 in 1990 (Dilger and Witt 1994; Hawley 1994; Couto 1994; Maggard 1994).

However, the demand for Appalachian coal remained strong during this period. Hawley (1994) shows that the amount of West Virginia coal produced in 1990 was 40% higher than in 1980, despite a 47% decrease in the number of coal industry workers.

⁴ More recently, the controversial technique known as 'mountain top removal' has been employed to extract surface coal.

Moreover, during the 1980s over 50% of all electricity produced in the United States was coal generated. And in 1998, a record 187 million tons of coal were produced from West Virginia (Energy Statistics Sourcebook 1999). In summation, employment downturns in the industry were not the product of lessened demand, but of a number of inter-related market factors that conjoined to displace workers in the industry.

Sociology of Regional Processes

Political economy theory focuses on the distribution of power and the exploitation and domination of labor by local elites and absentee owners. Based on an analysis of Clay County, Kentucky, Billings and Blee (2000) argue that development in Central Appalachia is limited by historical patterns of economic and political domination. This pattern established before the Civil War created an institutionalized framework of local social and economic arrangements such that market-driven capitalism "...resulted in the production of wealth for only a privileged few in Clay County, not prosperity for the majority (p. 320)." Decisions are made in corporate headquarters located in major metropolitan areas, with little incentive to reinvest in the extractive industry communities (RSS Task Force 1993; Matvey 1987). In addition, natural resource communities have a tendency to be dominated by one absentee firm, which gives the firm a tight control over the local community. Lack of competition creates, essentially, monopsony labor markets, giving firms greater control over workers, and workers significantly less power and choice.

Not only does this system work to exploit labor (Haynes 1997), but it also works to dominate local governance in Appalachia. Often these firms will purchase surrounding lands in order to control land use. As the major employer in town, such entities have

⁵ The price of coal fell 24% between 1983 and 1990, while the production of coal increased 24%.

exceptional political power and influence, and exert significant control over local taxation and expenditures (RSS 1993). Billings and Blee (2000) reveal a corrupt system of *clientelism* in Clay County, KY, in which local elite rivals patronize clients to further their own (elite) interests. This system limits the ability of local governments to foster and manage economic development policies and actions that could bring positive change. Economic and political domination by absentee-owners in conjunction with local elites creates an environment whereby local tax revenues and social and public infrastructure expenditures are limited to the interests of local and absentee elites.

The political economy perspective addresses changes in the coal mining industry partly as a response to overproduction and competition. Owners further revolutionize the means of production by replacing labor with machines in order to maintain profits in the face of overproduction and declining coal prices. In addition, it is important to sustain the local governance system that keeps business and operation taxes and local government spending at levels that do not cut into profits (Haynes 1997). In other words, it is important to maintain the political and economic 'status quo' in coal counties so that companies can still produce coal and make profits.

The restructuring of the industry via mechanization of the extraction process created a state of equilibrium, a balance between these communities and their environments. Ecosystems in equilibrium do not change very much in size, structure and organization. Change or disequilibrium results when new economic activities are found. However, the political economy perspective suggests that new economic activities are not likely to be discovered for two reasons. First, there is a need to maintain the political and economic 'status quo.' This is accomplished by purchasing and controlling local land use.

Second, coal communities have insufficient infrastructure for private capital accumulation. Historically, coal mining has been a labor-intensive activity, and firms in these industries do not invest in human capital (RSS Task Force 1993). As a result workers do not developing human capital on the job, and coal miners do not develop job skills that are useful in a post-industrial economy. Also, many jobs in this industry do not require a high school diploma, which explains the historical pattern of higher high school drop out rates in natural resource dependent counties (Isserman 1995). Furthermore, many of these communities in Appalachia are very far removed from urban economies, where the majority of post-industrial job growth occurred (USDA 1993). Many of these counties are without interstate highway systems. Billings and Tickamyer (1993) imply that when employment in the mining industry declined significantly in the early 1980s, what was left behind were isolated communities with large pools of unemployed workers not prepared for the post-industrial job market. We expect to find little change in the socioeconomic conditions of these counties since the employment downturn in the coal industry in the mid-1980s. We explore this expectation for coal dependent communities in Appalachia in the analysis that follows.

Data and Analysis

We identify 18 historically coal dependent counties in Appalachia (see Map 1). In our analysis we utilize Couto's (1994) definition of a coal dependent county: one in which at least 10% of total earnings were in the coal mining 2 digit SIC code in 1970. All of the coal dependent counties are in Kentucky (Clay, Floyd, Harlan, Letcher, Martin, Perry, Pike), Virginia (Buchanan, Dickenson, Tazewell, Wise) and West Virginia (Boone, Fayette, McDowell, Mingo, Nicholas, Raleigh, Wyoming).

Map 1 about here

We analyze these counties on key socioeconomic indicators. Our preliminary analysis showed that these 18 counties are homogenous on most indicators. We have aggregated indicators for these counties to construct measures for the entire coal-mining region. The analysis is conducted for the four broadly defined categories of socioeconomic indicators: Earnings and income; employment/population; local government; and general welfare. Each of these categories represents key sets of issues to be explored in socioeconomic impact assessment (Burdge 1998). We examine a number of empirical indicators within each of these categories.

Table 1 about here

Earnings and Income. Earnings and income are standard indicators used to analyze economic growth trends. Table 1 presents the trend for 2 digit SIC coal-mining earnings for this 18 county coal-mining region.⁶ Comparing earnings across time requires that they be standardized into constant dollars in order to adjust for inflation. We standardize these yearly earnings using the Consumer Price Index. Between 1970 and 1979, coal mining earnings for the region grew by 121% in inflation-adjusted dollars. However, between 1979 and 1990, coal mining earnings decreased by 52% in inflation-adjusted dollars, and between 1990 and 1996, the rate of decline was 34%. In fact, in inflation adjusted dollars, coal-mining earnings in 1996 were near equal to their value in 1969. This decline in coal-mining earnings reflects the further mechanization of the production process, using fewer workers to produce more coal because data on coal

⁶ These data come from the Regional Economic Information System distributed by the U.S. Department of Commerce Bureau of Economic Analysis.

production suggest little downturn in production during the same period (Energy Statistics Sourcebook 1999).

Table 1 shows the trends in coal mining earnings as a percentage of total nonfarm earnings for years 1969-96. These data show the dominance of the coal industry in this region. During parts of the 1970s, over half of all earnings in this region were from coal mining. Even after 1983, these percentages are well-above 20%, or more than twice the percentage needed for a county to be considered coal dependent. The simultaneous decline and continued dominance of coal in the late 1980s and 1990s indicates a lack of new and alternative industry development in this region. Coal is still King following the employment bust of the 1980s, there are just fewer subjects on the King's payroll.

Table 1 also presents data on per capita income. In 1980, the per capita income rate for the coal dependent region of Appalachia reached its zenith, 80% of U.S. per capita income. By 1988, the per capita income rate for the coal-mining region of Appalachia had fallen to 65% of the U.S. per capita rate, and remained at this level through 1996.

Employment and Population. In 1975, the civilian labor force in the Appalachian coal region was 221,790 workers. The size of the civilian labor force in the Appalachian coal region peaked in 1983 at 275,421. By 1989, the size of the civilian labor force returned to pre 1980s level-- 224,240 workers -- and has remained relatively stable since then.⁷ Table 1 presents the trends in mining employment from 1969-96. The data show a steady and continuous decline in employment of over 60% since 1982. Chart 1 presents unemployment rate trends for both the Appalachian coal region and the United States from 1975-1996. These data show that in the early 1980s, unemployment rates

began to rise sharply, reaching a region-wide rate of over 20% in 1983. The unemployment rate in the Appalachian region fell throughout the remainder of the 1980s, reaching a low point in 1990 of 10%. However, the unemployment rate for the Appalachian coal region is approximately twice the national unemployment rate for each year following 1990.

Chart 1 about here

Data on population change in the Appalachian Coal counties are presented in Table 3 (below). In 1980, the 18 county regional population was 756,214. By 1990, that number had declined to 657,510. Each of the 18 counties in this region experienced net population loss between 1980 and 1990. McDowell County in West Virginia experienced the highest net population loss of 42%, while the region as a whole experienced a 15% decrease in population during this period. For the nation as a whole, the population growth rate between 1980 and 1990 was 9.8%. The decline in the Appalachian coal region unemployment rate in the late 1980s most likely reflects the out-migration of unemployed workers, as opposed to the re-employment of the unemployed. Population projection data for the region provided by REIS of the Bureau of Economic Analysis suggest a .1% decrease in population between 1990 and 1996 in the Appalachian coal region.

We do not have data on out-migration from 1990 to present. However, we do have a proxy measure, trends in the birth rate per 1000 (chart available upon request). From 1980 to 1994, the U.S. birth rate has remained relatively constant at approximately 16 per 1,000. The Appalachian coal region birth rate declined from 16 per 1000 in 1982 to approximately 12 per 1000 in 1989. Since then it has remained relatively constant.

These data are from the Bureau of Labor Statistics, USA Counties 1998 CD.

We propose that the decline in the birth rate between 1982 and 1989 represents, in part, out-migration of child-bearing age population. The lack of a continuing downward trend since 1990 suggests that out-migration, particularly of the child-bearing age population, has decreased significantly.⁸

Local Government. Another area where the impact of over-dependence and boom and bust cycles can be felt is through its impact on local institutions, particularly local governments and their abilities to raise revenue and provide local services (Gramling 1996; Johnson et al. 1995). Local governments rely mostly upon locally generated revenues to provide key infrastructure and social services. Using Census of Government's data, we examine trends in local government finances from the 1970s through the early 1990s. We compare Appalachian coal region rates to the U.S. rate for years available. Table 2 presents a variety of local government finance data for available years between 1972 and 1992. These data show that the Appalachian coal region per capita revenue rate is about 50% of the per capita rate for all local governments in the United States. Moreover, the general expenditure data show the same trend. Local governments in the Appalachian coal region spend significantly less per capita than the national per capita rate. However, this gap has remained consistent from the early 1970s through the early 1990s. There was no significant drop-off between 1982 and 1987 in the Appalachian coal region, which we might have expected given the downturn in the coal industry during the early 1980s.

⁸ When new census data are released, we will be able to test better this idea.

Table 2 about here

We also examine several specific measures of local government spending: per capita health service, police protection and highway spending (Table 2). These comparisons reveal remarkable differences in the per capita spending rates between the counties in the Appalachian coal region and the U.S. rate. For each measure, the Appalachian coal region rate lags far behind. However, these trends have remained consistent over time. In the late 1970s there was a significant gap that has remained relatively constant through the early 1990s. Surprisingly, the data for local government spending on education show little difference in the local government per capita spending rate in the Appalachian coal region, and the national per capita local government spending rate. However, due to the geographic isolation of many of the Appalachian coal counties, a substantial proportion of this spending is on transportation.

The analysis of local government spending and revenues show dramatic differences in per capita rates between the counties of the Appalachian coal region and the local government per capita spending rates for the nation as a whole. However, these trends did not emerge after the coal bust of the 1980s, but were present during the 1970s. Local government finances are similar in the late 1980s and 1990s in the Appalachian coal region as they were prior to the bust of the 1980s. What these data suggest is that local government spending in the Appalachian coal region faces tighter prioritizing than what is typical for a local government in the United States. Local government education spending is on par with the national per capita average in most years. But all other spending categories are significantly lower.

Over-dependence and boom/bust cycles can also create problems for local government finances, particularly if short-falls in revenue create debts for local governments. Table 2 also presents data on general and long-term debt for the Appalachian coal region and the U.S. local government rate. For both general and long-term per capita debt, the Appalachian coal region had rates significantly lower than the U.S. rate for all years available. On the positive side, local governments in this region were not saddled with huge debts following the coal bust of the early 1980s. However, the lack of general and long-term debt may also reflect the inability of local governments to pass bonds for capital and school improvement projects.

Table 3 about here

General Welfare. We examine trends in levels of education, poverty, disability rates, and SSI rates. Table 3 shows the situation for education and poverty in the Appalachian coal region at the end of the 1990s. These data show that the counties in the Appalachian coal region were far behind the nation on educational attainment at the end of the 1980s. Some counties have non-high school completion rates at least twice the national rate of 24%, and all Appalachian coal counties in 1990 had percentages of adults not graduating from high school higher than the U.S. rate. This is one of the legacies of natural resource dependency. These industries employ larger proportions of non-high school graduates. As with the inner cities of Chicago in Wilson's (1987) work, when the jobs leave and people move away, those with the least skills (i.e. those that did not graduate from high school) are often left behind. The data from Table 3 on poverty rates are almost a direct replication of the high school completion data. All Appalachian coal counties had poverty rates higher than the national rate. The counties where the poverty

rates are the highest (e.g. Clay KY, McDowell WV) are also the counties where the high school completion rates are the lowest.

The data on Social Security Supplemental Income show that the rate of SSI cases in the Appalachian coal region has grown at a rate much greater than the national rate between 1990 and 1996. One of the most interesting findings in this study is the significant growth in the number of people on disability in the Appalachian coal region, particularly after 1989. From 1990 to 1996, the national growth in the number of persons receiving disability payments grew by 26%, in the Appalachian coal region it grew by 37.5%. Coal mining is dangerous work and it is an industry with a high worker injury rate. However, these data show a marked increase in disability rates during a period in which mining employment continued to decrease rapidly, and these post-1990 disability growth rates are much higher than they were during the 1980s. In Chart 2, we contrast mining employment decline rates with disability growth between 1992 and 1996. There is a remarkable similarity in these traits. We believe that disability has become a de facto income maintenance strategy in depressed regions of Appalachia, as unemployed workers are placed on disability. There are some suggestions of this trend in existing research (Dorsey 1991), but this conclusion is in need of further empirical investigation.

Chart 2 about here

Conclusion

Much of the research on coal mining dependence produced over the last ten years has focused on trends during the 1980s (Maggard 1994; Couto 1994; Billings and Tickamyer 1993; Mencken 1997). However, it has been 17 years since the mining dependent counties in Appalachia started experiencing significant, permanent downturns.



What is absent from the current body of literature is an examination of trends since this time period. We attempted to fill this gap with a descriptive analysis of socioeconomic conditions in Appalachian coal mining counties since 1970, with an emphasis on trends during the later 1980s and 1990s.

Sociological theory and research on regional processes generated an expectation that we would find economically stagnant communities that were ill-equipped to participate in the post-industrial economy of the 1990s. The task of documenting socioeconomic conditions in the region during the 1990s is made more difficult because much of the socioeconomic analysis relies upon decennial census data. However, using a variety of other data we have been able to present a picture of a region post-1990 that meets with the expectations we presented above.

First, the data from the end of the 1980s show a region with low education levels, high unemployment and poverty rates. What data we do have from the 1990s show that there has been some relative stability--compared to the 1980s-- in the Appalachian coal region. Trends in per capita income data show that the Appalachian coal region is no longer losing ground to the U.S. per capita rate, post 1990. However, the coal region percentage of U.S. per capita income has remained steady at 65% since the mid-1980s. The regional birth rate had stabilized since 1990, after a decline between 1985 and 1989, suggesting a slower rate of out-migration of women of child-bearing age. Population projection data also indicate much more population stability in the region than in the years prior to 1990.⁹ However, the finding of more stability in the region during the

⁹ Population projection data for the region provided by REIS of the Bureau of Economic Analysis suggest a .1% decrease in population between 1990 and 1996 in the Appalachian coal region.

1990s is not a good sign. It indicates that the poor socioeconomic conditions that existed at the end of the 1980s, documented in Table 3, have not changed since then.

This finding of stability and stagnation is consistent with our expectations. Critical political-economy perspectives predict that stability arises from a system of domination and exploitation and surplus extraction. Historically the coal industry has created a system of exploitation and dependence in Appalachia by purchasing surrounding lands so that other competitors and industries cannot compete for labor. This gave coal companies total control over their workers' lives, and this control was reflected in the old company stores and scrip systems (Haynes 1997). The socioeconomic conditions in the Appalachian coal region during the 1980s were created by the imperative of capitalism. Intense competition among domestic coal producers during a period of falling prices accelerated the process of revolutionizing the means of production through mechanization of the extraction process. Many of the mines closed, and thousands of workers lost their jobs (Dilger and Witt 1994). Those mines that remained opened were employing fewer and fewer workers. The aftermath of this transformation was a region of geographically isolated, very poor people unprepared to participate in the high-skill economy of the 1990s.

We presented the argument above that the system of economic and political domination in Appalachia extended to local governance. This economic and political domination by absentee-owners in conjunction with local elites creates an environment in which local tax revenues and social and public infrastructure expenditures are controlled by the interests of local and absentee elites (Billings and Blee 2000; Matvey 1987). Our analysis on local government finances revealed some very interesting trends. The data

show that both general revenues and expenditures are significantly lower in the Appalachian coal region than the average local government rates for the United States. This is not surprising. However, this trend remained constant over time, from 1972 through 1992. The 1970s were a period of expansion in coal mining employment, while the 1980s were a period of contraction. Yet, there were no discernable patterns regarding local government finances among the Appalachian coal counties across this time period. And the only notable trend was that the Appalachian coal region per capita rate for both revenues and expenditures was about half of the national rate for local governments in each year.

These results are consistent with the arguments concerning elite domination of local governance. Extending back in time before the downturn in coal mining employment of the 1980s, we see significantly lower local government spending rates for local services and infrastructure. Therefore, the low levels of spending that we see for the later 1980s and 1990s are not necessarily a reflection of changing economic conditions, but the continuation of a pattern of spending that began prior to the downturn in the coal industry. This finding is consistent with a pattern of historical political and economic domination of the local community by absentee-owners and local elites. A system of low taxation and low expenditures has been in place in this part of Appalachia for as far-back in time as these data allow us to measure.

Finally, over the last fifteen years employment levels in the Appalachian coal industry have remained static, while the production and consumption of Appalachian coal has steadily increased (Energy Statistics Sourcebook, 1999). We foresee no change in this situation. Furthermore, it appears that a large percentage of displaced workers were

moved to the disability income maintenance program. This is not a long-term solution to the current problem. Beginning in the 1980s, the Appalachian Regional Commission began spending considerable money on its distressed counties program (Wood and Bishack 2000). However, our data indicate that there is very little progress to show for it. The federal government should partner with local communities to find more effective ways of managing distressed areas.

Our analysis indicates that the coal industry will not be a new source of employment growth in Appalachia. Meanwhile, the coal counties in Appalachia have slipped farther behind all nonmetropolitan counties on key socioeconomic indicators. The average nonmetropolitan poverty rate in 1989 was 18.3%. Every county in the Appalachian coal region had a higher poverty rate, and half of the coal region counties had a poverty rate at least 1.5 times greater than the average rate for all nonmetropolitan counties. The 1990 average percentage of adults who did not graduate from high school was 32.4%. Over 60% of Appalachian coal region counties have rates at least 1.5 times greater. The future holds more of the same. Like the truly disadvantaged trapped in inner city poverty by industrial restructuring in the manufacturing sector (Wilson 1987), structural changes in the coal industry have created a region of truly disadvantaged in rural America, with little prospect for change.

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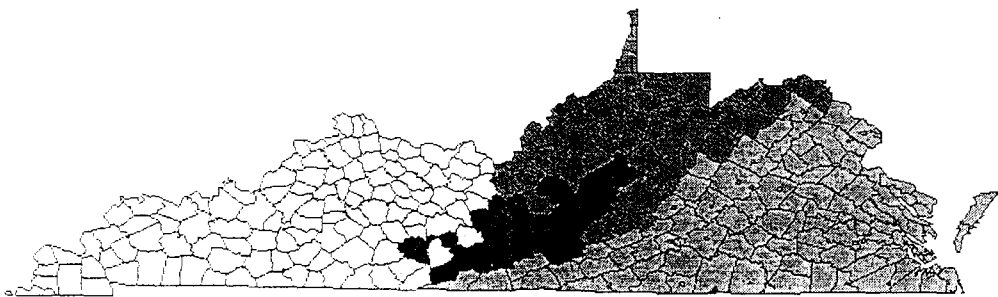
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Map 1. Mining Dependent Counties in Appalachia



200 0 200 400 Miles

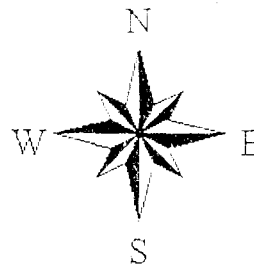


Table 1. Employment, Earnings and Income Data for Appalachian Coal Region 1969-1996.

Year	Coal Mining Employment	Coal Mining Earnings (1998\$\$s)	Percent of Nonfarm Earnings in Coal Mining	Per Capita Income (1998\$\$s)	er Capita Income as a Percent of U.S. Per Cap. Inc.
1969	47156	1919657.47	39.42	9756.76	57.21
1970	51561	2360348.65	43.50	11049.63	64.51
1971	51303	2386280.04	42.35	11439.07	65.76
1972	55157	2727734.13	43.68	12331.84	67.46
1973	54400	2765033.05	43.16	12988.70	67.92
1974	61506	3430574.40	48.35	13782.88	73.58
1975	70962	4247584.70	52.68	14659.66	79.58
1976	76054	4323742.28	50.77	14768.38	77.19
1977	79068	5132116.92	54.43	15620.90	79.47
1978	75863	5127197.50	53.05	15971.94	77.95
1979	77360	5235185.10	53.46	16233.37	79.30
1980	77667	5241336.05	55.15	16028.09	80.53
1981	75510	5037406.61	55.20	15703.07	78.59
1982	74911	4881514.02	54.75	15558.43	78.54
1983	57809	3773913.35	48.96	14513.56	71.64
1984	61736	4028722.72	49.76	15044.69	71.29
1985	58490	3650719.45	46.74	14889.80	68.25
1986	53540	3368797.01	44.47	14975.81	66.32
1987	48280	3013049.10	41.66	14755.95	64.35
1988	45366	2705529.60	39.04	14863.35	63.26
1989	44371	2459963.05	37.15	15054.40	63.05
1990	44706	2477655.57	36.94	15473.30	64.67
1991	41587	2256306.62	34.48	15484.44	65.76
1992	38999	2152877.13	32.56	15814.75	66.03
1993	35010	1892492.98	29.23	15766.83	65.41
1994	34423	1886781.24	28.76	15848.97	65.06
1995	32133	1788414.55	27.41	16061.58	64.32
1996	29233	1641925.20	25.72	16129.21	63.54

Table 2. Local Government Finances (1998 \$s).

	Per Capita Revenues				
	<u>1972</u>	<u>1977</u>	<u>1982</u>	<u>1987</u>	<u>1992</u>
US	\$1,956.67	\$2,184.02	\$2,048.76	\$2,436.36	\$2,659.85
App. Coal Region	\$882.71	\$1,039.01	\$1,116.84	\$1,384.35	\$1,571.41
	Per Capita Expenditures				
	<u>1972</u>	<u>1977</u>	<u>1982</u>	<u>1987</u>	<u>1992</u>
US	\$1,980.01	\$2,085.04	\$1,927.15	\$2,320.21	\$2,580.91
App. Coal Region	\$865.11	\$1,046.68	\$1,049.71	\$1,365.01	\$1,505.63
	Per Capita Health Services Spending				
	<u>1977</u>	<u>1982</u>	<u>1987</u>	<u>1992</u>	
US	\$144.85	\$156.11	\$176.90	\$213.63	
App. Coal Region	\$18.38	\$21.48	\$41.03	\$63.69	
	Per Capita Education Spending				
	<u>1977</u>	<u>1982</u>	<u>1987</u>	<u>1992</u>	
US	\$927.00	\$816.32	\$976.54	\$1,084.14	
App. Coal Region	\$760.92	\$725.28	\$926.31	\$1,028.97	
	Per Capita Highway Spending				
	<u>1977</u>	<u>1982</u>	<u>1987</u>	<u>1992</u>	
US	\$144.85	\$156.11	\$176.90	\$213.63	
App. Coal Region	\$18.84	\$39.90	\$48.17	\$57.21	
	Per Capita Police Service Spending				
	<u>1977</u>	<u>1982</u>	<u>1987</u>	<u>1992</u>	
US	\$108.68	\$102.89	\$124.94	\$139.04	
App. Coal Region	\$35.75	\$32.47	\$36.28	\$40.01	
	Per Capita General Debt				
	1982	1987	1992		
US	\$1,874.27	\$2,732.31	\$2,746.28		
App. Coal Region	\$755.34	\$1,158.55	\$928.21		
	Per Capita Long-term Debt				
	1982	1987	1992		
US	\$456.46	\$642.96	\$614.96		
App. Coal Region	\$89.24	\$120.58	\$111.47		

Source: Census of Governments, USA Counties 1998 CD.

Table 3. General Welfare Indicators in Appalachian Mining Counties

County	Percent not Graduating from High School 1990	Percent in Poverty 1989	Pop. Change 1980-1990	Disability Recipients Chg. 1990-96	SSI Recipients Chg. 1990-96
Boone, WV	45.91	26.99	-18.03	32.47	59.75
Buchanan, VA	57.5	21.85	-21.5	60.69	58.69
Clay, KY	61.13	40.18	-4.91	67.74	48.26
Dickenson, VA	52.95	25.88	-12.8	48.3	53.4
Fayette, WV	42.93	24.36	-20.7	38.17	57.17
Floyd, KY	49.17	31.23	-12.03	42.98	64.61
Harlan, KY	50.53	33.08	-14.9	72.91	70.72
etcher, KY	54.4	31.77	-13.7	87.2	77.19
Martin, KY	55.62	35.38	-11.5	64.29	73.7
McDowell, WV	57.67	37.72	-42.1	23.71	75.36
Mingo, WV	49.63	30.93	-11.1	31.68	73.18
Nicholas, WV	38.82	24.38	-5.3	59.12	46.84
Perry, KY	52.42	32.14	-11.12	90.29	85.09
Pike, KY	49.85	25.41	-11.9	47.67	74.23
Raleigh, WV	36.82	19.88	-13.1	25.29	53.29
Tazewell, VA	42.69	19.02	-9.7	17.68	56.45
Wise, VA	47.86	21.61	-10.9	37.76	55.29
Wyoming, WV	47.01	27.86	-23.9	39.18	77.26
Nation	24.76	13.1	9.8	26.1	37

Chart 1. Unemployment Rates
(Source: BLS)

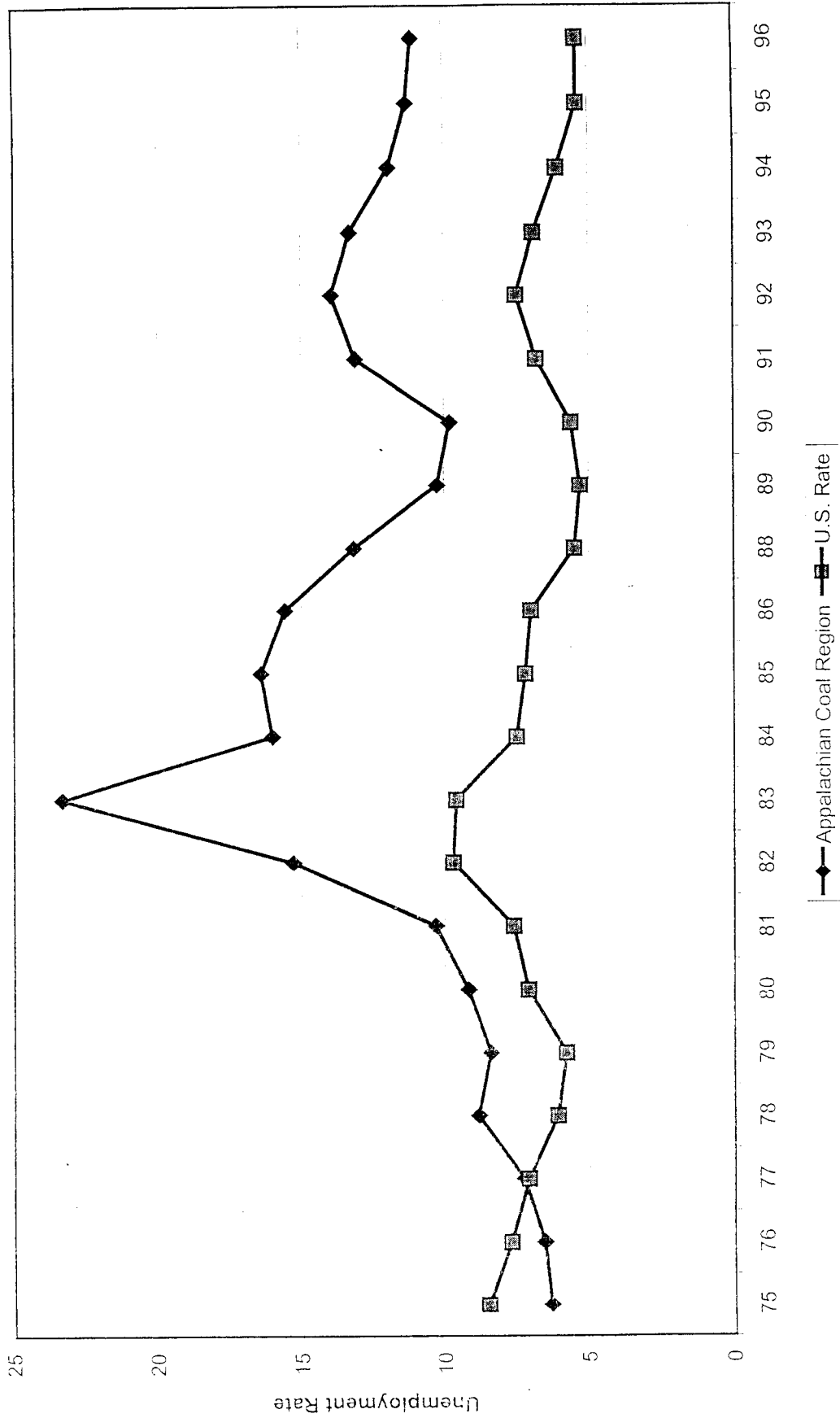


Chart 2. Comparison of Mining Employment Change and People Receiving Disability Benefits Change 1990-1996 (Source: USA Counties 1998)

