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MINIMUM PRICE FIXING
IN THE BITUMINOUS COAL INDUSTRY

CHAPTER I

THE BITUMINOUS COAL INDUSTRY UNDER UNREGULATED COMPETITION

IN THE year 1940 the United States government established minimum prices for the products of a great mining industry. It did this in spite of the fact that such interference with private enterprise has generally been regarded with disfavor. Why, then, were minimums set for the prices of bituminous coal? What were the economic conditions that existed in the industry prior to the drafting of the Guffey-Vinson Act? This chapter is devoted to a brief examination of these questions.

A. *Importance of the Industry in National Economy*

The bituminous coal industry occupies an essential place in our industrial system. It operates the vast storehouse of heat and power that is one of our principal sources of warmth and energy. In 1950 soft coal was the source of 64 per cent of the electricity that was produced from fuels.[1] In 1947, the latest year of record, 58 per cent of the power and fuel consumed by industrial establishments was directly provided by bituminous coal and coke.[2] In 1950 the 9,429 mines of this industry furnished about 44 per cent of the total output of directly competitive fuels in the United States.[3] In the same year the contribution of bituminous coal (and lignite) to *all* sources of fuel and energy amounted to 38 per cent.[4]

The importance of the industry is indicated also by the fact that in 1950 it was a source of livelihood of 415,582 wage earners[5] and of tens of thousands of salaried employees, proprietors, officers, and investors. In that year the bituminous coal industry paid out 1.3 billion dollars in wages and salaries.[6]

1. RELATED INDUSTRIES

The stability of the coal industry concerns not only the people who mine or sell coal or whose investments make operation possible but also the railroad industry, the producers of electric power, the

[1] *1952 Bituminous Coal Annual*, Bituminous Coal Institute, p. 116.
[2] *Ibid.*, p. 128.
[3] *Ibid.*, pp. 99, 113, and 114.
[4] *Minerals Yearbook, 1950*, U.S. Bureau of Mines, p. 333.
[5] *1952 Bituminous Coal Annual*, p. 99.
[6] *Survey of Current Business*, U.S. Department of Commerce, July 1952, p. 18.

manufacturers of iron and steel and other basic materials and products, as well as the millions of citizens who depend upon bituminous coal for warmth.

The transportation industry of the United States leans heavily upon bituminous coal as a source of revenue. Some of the southern railroad companies exist only by virtue of being carriers of coal. In 1950 about 81 per cent of the bituminous coal shipped from mines was carried in railroad cars.[7] In that year the average freight revenue obtained by railroads for hauling coal amounted to $3.09 per ton,[8] or about 39 per cent of the average wholesale price of the coal at its destination.

The bituminous coal that was produced and used during 1950 in the United States was distributed in the following amounts:[9]

Users	*Per Cent of Total*
Coke ovens, steel works, and rolling mills	24
Electric utilities	19
Retail deliveries	19
Railroad (Classes I, II, and III)	14
Cement mills	2
All other users	22
Total	100

By far the largest part of the primary energy used in manufacturing industries and public utilities comes from bituminous coal. Every state in the Union uses bituminous coal in generating energy for light, heat, and power.

The purchasers of bituminous coal include tens of thousands of carload-lot buyers, millions of householders, and innumerable factories, utilities, hotels, and apartment houses. They are scattered over the 48 states, the District of Columbia, and Alaska. In the five years that ended in December 1950 the average annual exportation of bituminous coal from the United States amounted to 41,838,000 tons.[10]

The intricate task of distributing coal is carried out through a number of channels. The simplest marketing arrangement occurs in distributing captive tonnage, i.e. coal shipped to affiliated, controlling, or owning corporations. In 1950, about 86,881,000 tons,[11]

[7] *1952 Bituminous Coal Annual*, p. 108.
[8] *Ibid.*, p. 147.
[9] *Ibid.*, pp. 112 and 113.
[10] *Ibid.*, p. 113.
[11] *1951 Bituminous Coal Annual*, Bituminous Coal Institute, p. 68.

or 17 per cent of total production, was handled in this way. The rest of the bituminous coal produced was distributed by the sales departments of operating companies, by separately incorporated sales agents, by independent wholesalers, by dock companies (which combine wholesaling in carload lots with retailing), and by retailers. In general, the large companies maintain their own sales departments and the small companies sell through independent wholesalers or jobbers. Retailers, who handle about one-fifth of the total production, purchase their coal from the mine or the wholesaler, and, in the Great Lakes area, from the dock companies. Very little is known about the amount of coal handled by each type of distributor or the methods used by the distributors.

In 1950 bituminous coal and lignite flowed from 9,429 mines, located in 28 states,[12] by a maze of hauls and crosshauls, to meet in competition in many consuming markets of the country. A large part of the total tonnage moved across state boundaries, and few, if any, states were self-sufficient.

It is obvious that few industries play such strategic roles in our national economy and that the stability of the industry is a matter of deep concern to many economic groups and to substantial numbers of American citizens.

B. *Economic Trends in the Industry*

Throughout much of its history bituminous coal was one of the country's rapidly growing industries. Table 1 discloses that each decade between 1840 and 1919 was characterized by an amazing growth from the average annual output in the preceding period. The rate of expansion was particularly pronounced from 1840 to 1889, production in each decade having been more than 150 per cent above that which preceded it. The industry continued to grow, but the decade 1910-1919 showed an increase in production of only 56 per cent, followed by a decade of very little increase. The thirties had an average annual output 25 per cent below that of the twenties. It took a war of world-wide proportions to restore the earlier trend and to establish a new production record for the industry.

Chart 1 reveals that the calculated full capacity, whether measured on a 308-day or 280-day working year, rose almost steadily from 1890 until 1923, the year of peak capacity for the industry.[13]

[12] *Bituminous Coal and Lignite in 1950*, Mineral Market Report No. 2032, U.S. Bureau of Mines, pp. 3 and 9.

[13] Annual capacity is computed as follows: divide total annual production by the number of days the mines worked during the year, then multiply this daily production by a hypothetical number of days (308 or 280) to arrive at

TABLE 1

Average Annual Production of Bituminous Coal and Lignite, by Decades, 1830-1949

Decade	*Average Annual Output (millions of net tons)*	*Percentage Change*
1830-1839	0.2	. . .
1840-1849	1.7	+750
1850-1859	4.5	+165
1860-1869	11.3	+151
1870-1879	30.1	+166
1880-1889	75.9	+152
1890-1899	138.4	+82
1900-1909	302.5	+119
1910-1919	471.6	+56
1920-1929	510.2	+8
1930-1939	385.3	−25
1940-1949	554.7	+44

Source: Computed from *Mineral Resources of the United States, 1921*, U.S. Geological Survey, Part II, p. 482; and *Minerals Yearbook, 1950*, U.S. Bureau of Mines, p. 269.

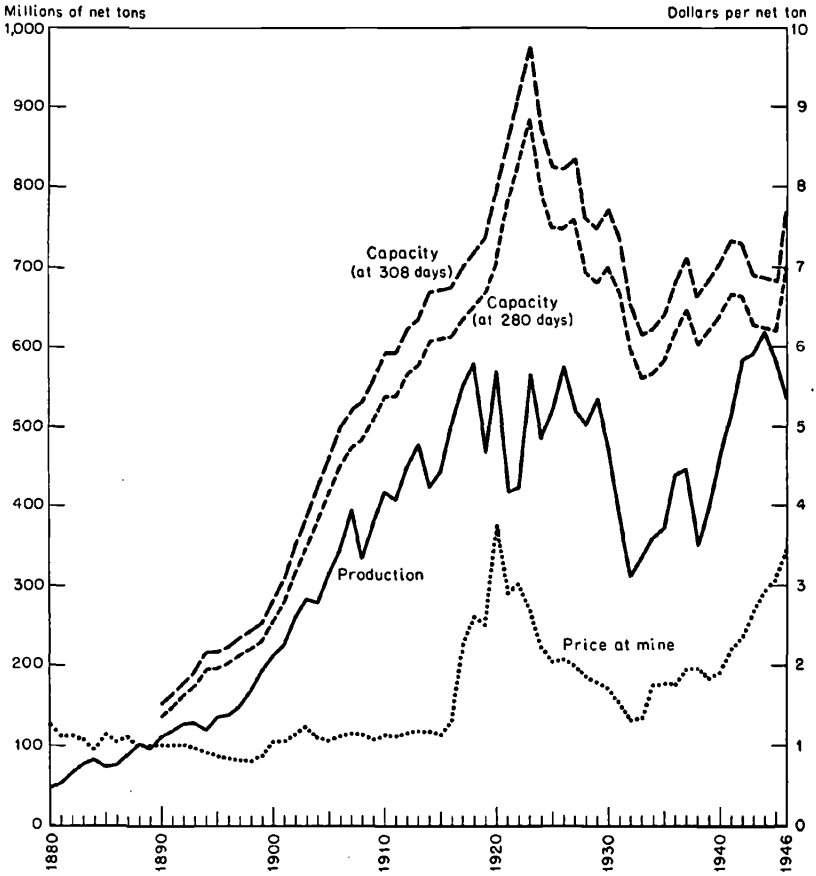
Production moved forward with minor setbacks until 1907, and at a slower rate and with more pronounced variations until 1918. Thereafter, until 1926, annual output fluctuated widely, and the downward trend which began the following year continued, except for 1929, until 1932 when the annual output fell below that of 1905. Responding to the forces of recovery in the thirties and an extraordinary wartime demand for coal in the forties, production began to climb, reaching a new high of approximately 620 million tons in 1944.

Thus the three stages of development in the bituminous coal industry were: (1) the period prior to 1924, when average annual output, with the exception of two decades, doubled approximately every ten years; (2) 1924 to 1932, when annual production declined drastically; and (3) 1933 to 1947, when annual output once again began an upward climb which carried it to a new high level. Only the first two periods will be considered in this chapter, since the attempts of the government to regulate the industry fell within the last period.

an estimate of annual capacity in a given year. This concept of the capacity of the bituminous coal industry has been adopted by the United States Bureau of Mines. A capacity line, based on 308 days, first appeared in *Mineral Resources of the United States, 1921*, U.S. Geological Survey, Part II, p. 487. It is possible that a more refined measure of the capacity of this industry could be developed. Thus far, however, the method described has generally been accepted.

CHART 1

Annual Capacity, Production, and Mine Price in the Bituminous Coal Industry, 1880-1946



Source: Annual reports of the U. S. Bureau of Mines.

1. PERIOD PRIOR TO 1924

It must not be assumed that the period prior to 1924 was one of peace and prosperity in the industry. Even in those years bituminous coal was subject to severe competition, successive price wars, and disturbed industrial relations.

Most authorities and government commissions have held that this industry has long been subject to recurring overdevelopment. It is asserted that excess capacity has characterized the industry at least as far back as 1890, and that it was probably present in the eighties

and possibly in earlier years. The extent of overdevelopment has not been established. It is not known how much of the existing unused capacity is necessary to meet the seasonal requirements of consumers of coal. The wide fluctuations in the number of days worked by the mines from year to year and the low average annual working time would seem to support the claim of excess capacity. From 1890 to 1923 inclusive, when the estimated full working time of industry in general ranged from 280 to 308 days per year, the mines averaged 210 days. During these 34 years the time worked by the mines exceeded 234 days in only two years, 1917 and 1918. In two years it fell below 150 days, and in ten years below 200 days.

Certain factors and conditions in this industry tend to bring about overdevelopment. The abundance and accessibility of coal deposits and the lack of restrictions on the opening up of old or new mines are ever-present inducements to the owners of coal lands to begin production at the first propitious opportunity. There is a temptation to develop these resources even at a small fractional return in order to offset the recurring taxes and interest charges and, in some cases, the cost of supervision. The wide geographic distribution of producing units tends to preclude voluntary action on the part of the operators to balance capacity with demand.

Mining equipment cannot be used for other purposes; development costs cannot be recovered except by producing coal; and overhead and maintenance costs go on when the mine is closed. As a result, mining is continued until not even the out-of-pocket costs are forthcoming. When this practice leads to bankruptcy, the mine is often reopened under new management at greatly reduced capital charges, making it possible to sell the output at still lower prices should conditions make that necessary. In this industry, as in others, a reduced demand is reflected in lower prices; but here, for the reasons given, lower prices do not lead directly to a reduction of capacity to the requisite level.

Overdevelopment is also brought about by the time required to open up a new mine. It takes three years or longer to bring a new mine up to its maximum rate of production, and, once started, the undertaking is usually completed. As a result, additional capacity may be brought into operation several years after the demand which led to its introduction has disappeared.

The railroads have also contributed substantially to overdevelopment in this industry. By lower ton-mile rates for long hauls and by the extension of railway facilities to new coal lands, the railroads

have made it possible for coal from remote fields to compete in the nearby markets of older fields. Investment in machine mining throughout this period established a higher ratio of fixed to direct costs which in turn supplies another incentive to keep production going as long as out-of-pocket costs can be obtained.

Other forces which serve to hold excess capacity at a high level are (1) pronounced seasonal variations in demand for bituminous coal[14] which can be offset only to a very limited extent by storage because of the danger of spontaneous combustion, the additional cost of rehandling, and the degradation of coal during storage and reloading; (2) alternating periods of prosperity and depression; (3) inelasticity of demand for coal in the short run which hampers the response of consumption to price changes; and (4) opening up of the southern coal fields which, because of thicker seams, lower wage scales, and modern equipment, produce better quality coals at lower prices.

During World War I and the years immediately following, the situation was further aggravated by (1) the plowing back of extraordinarily heavy profits into the industry, (2) a disturbing shortage of coal cars and the practice of relating the supply of such cars to the capacity of the mine, and (3) a number of prolonged labor disputes.

The severity of the competition in this industry is indicated by the changes in the average value per ton of coal at the mine (see Chart 1). Price wars characterized the industry in the decade of the eighties, notwithstanding an increase of 152 per cent in average annual production, and again in the nineties when average annual output increased 82 per cent. During these 20 years mine prices declined from $1.25 per ton in 1880 to $.80 per ton in 1898, and rose to $.87 per ton in 1899. From 1904 until the outbreak of World War I, years in which production increased from 279 million to 423 million tons, mine prices fluctuated within a surprisingly narrow range. When prices skyrocketed from $1.13 in 1915 to $3.75 in 1920, competition centered on the getting of coal cars in order to supply the insatiable markets for coal. Thereafter, especially after 1923, price again became a factor in selling coal.

2. PERIOD OF INTENSE COMPETITION, 1924-1932

The forces making for overdevelopment which seemingly had

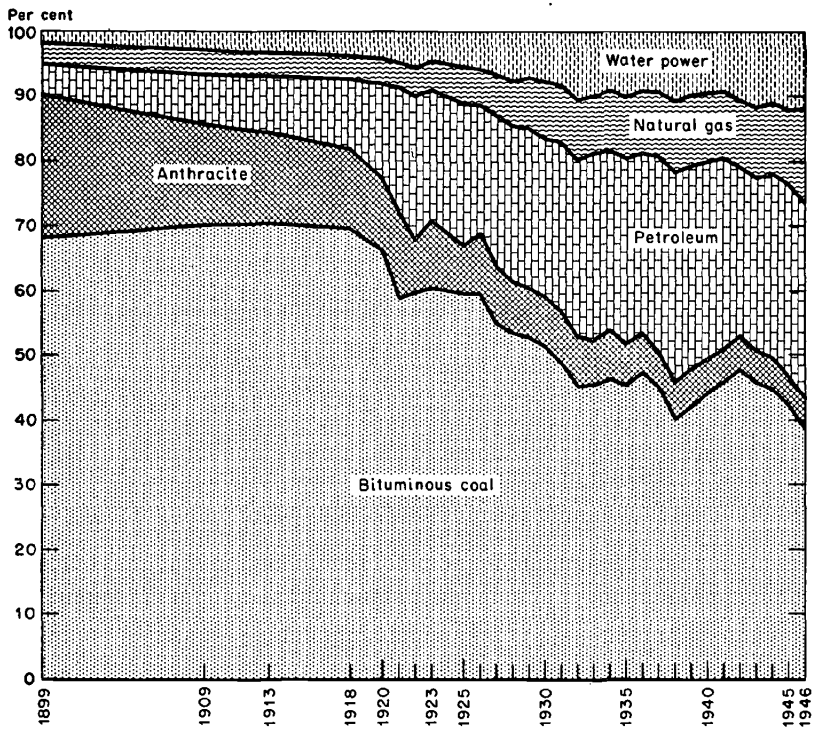
[14] In 1936 the minimum monthly output was 58.6 per cent of the maximum. (*Facts about the Bituminous Coal Industry*, Coal Operators' Committee, Appalachian Wage Conference, 1939, Table V, p. 13.)

been held in check during World War I and the years that immediately followed began to operate with renewed vigor in the twenties. Their impact was greatly augmented by an arrested demand growing out of (1) a shift in the demand for energy, (2) the more effective utilization of coal brought on by much higher prices during the war and postwar years, (3) a decline in the rate of growth of important coal-consuming industries, and (4) other factors to be enumerated later.

a. *Competition of other sources of energy.* Bituminous coal must meet competition from fuel oil, natural gas, and electricity created from water power. Chart 2 shows that the use of these competing sources of energy has been increasing for many years. The period 1924 to 1932 was one in which the competitors of coal made especially heavy inroads. In 1923 bituminous coal contributed 60.5 per cent of the annual supply of energy obtained from mineral fuels

CHART 2

Bituminous Coal and Its Competitors, 1899-1946
(percentage of total Btu supplied)



Source: Annual reports of the U. S. Bureau of Mines.

and water power in the United States. Nine years later, in 1932, the comparable figure was 45.0 per cent. During the same period the Btu equivalent of the domestic production and imports of petroleum increased from 20.0 to 27.6 per cent of the total energy, that of natural gas from 4.5 to 9.3 per cent, and that of water power from 4.6 to 10.6 per cent. One should not conclude, however, that competing fuels have directly displaced bituminous coal to the extent indicated by these figures. Much of the growth in the total energy supply has been due to the extensive use of gasoline in motor vehicles and of oil and gas for uses that can be said to be only in indirect competition with coal. It has been estimated that less than one-fourth of the 1929 consumption of fuel oil and about half of the natural gas consumption entered directly into competition with coal.[15] Notwithstanding these qualifications, it is nevertheless true that oil, natural gas, and hydroelectric power have been serious competitors of bituminous coal, especially during the years under consideration.

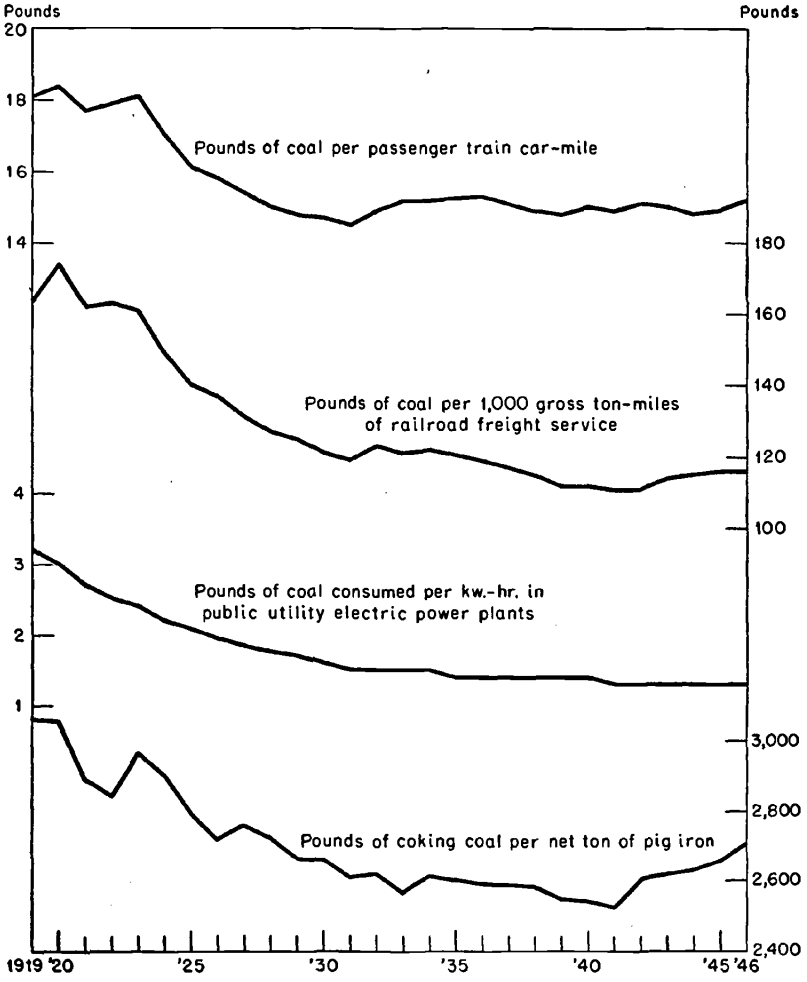
b. *Economies in use of coal.* Another important factor which has contributed substantially to the drastic curtailment in demand has been the marked advance in the technical efficiency of coal-burning equipment (see Chart 3). More effective utilization was a factor prior to World War I, but the rate of introduction of improved equipment was not significant until the early twenties when the postwar prices of coal at the mine reached extraordinarily high levels—$2.89 to $3.75 per ton from 1920 to 1922 inclusive, compared with $1.07 and $1.18 per ton in the prewar years, 1909-1915. Chart 3 shows that from 1923 to 1932 the amount of coal used by the railroads per passenger train car-mile dropped 18 per cent and that of per ton-mile of freight service 24 per cent. The reduction in the number of pounds of coal needed per kilowatt hour of electric-power production was even greater, 38 per cent, and the pounds of coking coal per net ton of pig iron used by iron and steel mills declined by 12 per cent.

Economies in the use of coal have also been applied to other manufacturing industries, particularly petroleum refining and the production of cement. Moreover, the demand for bituminous coal for use in households, apartment houses, hotels, etc., has been reduced by means of insulation, more efficient radiation, automatic heat control, and improved standards of furnace construction. Much

[15] F. E. Berquist and Associates, *Economic Survey of the Bituminous Coal Industry under Free Competition and Code Regulation* (National Recovery Administration, March 1936), pp. 25-26.

CHART 3

Coal Consumption in Four Major Uses, 1919-1946



Source: Annual reports of the U. S. Bureau of Mines.

of the saving in fuel utilization is the result of the cumulative effect of small economies and the general application of improvements and policies developed by the more efficient companies.

It is estimated that the average saving in fuel consumption "per unit of product in all branches of industry and transportation" between the end of World War I and the middle thirties was 20 to 30 per cent.[16]

[16] *Carter* v. *Carter*, In Equity No. 59374, In the Supreme Court of the District of Columbia, December 10, 1935, p. 37.

c. *Other factors in arrested demand for coal.* As pointed out by F. G. Tryon, the virtual completion of the railroad net of North America, the shift in manufacturing from crude, heavy products to lighter products requiring less fuel, and the great increase in the volume of secondary metals returned by industry in the form of scrap definitely retarded the growth of virgin iron consumption. Since the iron and steel industry has long been a large consumer of bituminous coal, these changes helped to check the growth in demand that had characterized the coal industry prior to 1919.[17] In part, this increase in demand has been offset by gradually increasing consumption in some of the processing industries. Undoubtedly, the decline in the rate of growth of population in this country during the years 1924-1932 has retarded the former rapid increase in the consumption of heat and power for industrial and domestic uses.

3. IMPACT OF EXCESS CAPACITY AND DECLINING DEMAND

The above analysis has disclosed the presence of one group of forces and conditions within the industry which places a continuous pressure on the owners of coal lands to increase existing capacity and to sell coal at prices that do not cover production cost, and of another group of factors which operates to bring about a drastic decline in the rate of increase (in the period under examination, an absolute decline) in the demand for bituminous coal.

The working out of these factors has resulted in chronic unemployment and low utilization of capacity. In the early years, 1890 to 1902 inclusive, the spread between capacity measured in terms of a 308-day working year and actual production did not exceed 95 million tons. From 1903 to 1913, it fluctuated from 104 to 198 million tons. The difference between capacity and annual production amounted to 245 million tons in 1914. It slowly receded during the war years to 138 million tons in 1918. The following year a new peak was established. Much higher records were reached in 1921 and especially in 1922, when the spread between capacity and annual production stood at 494 million tons—the highest recorded spread for the industry.

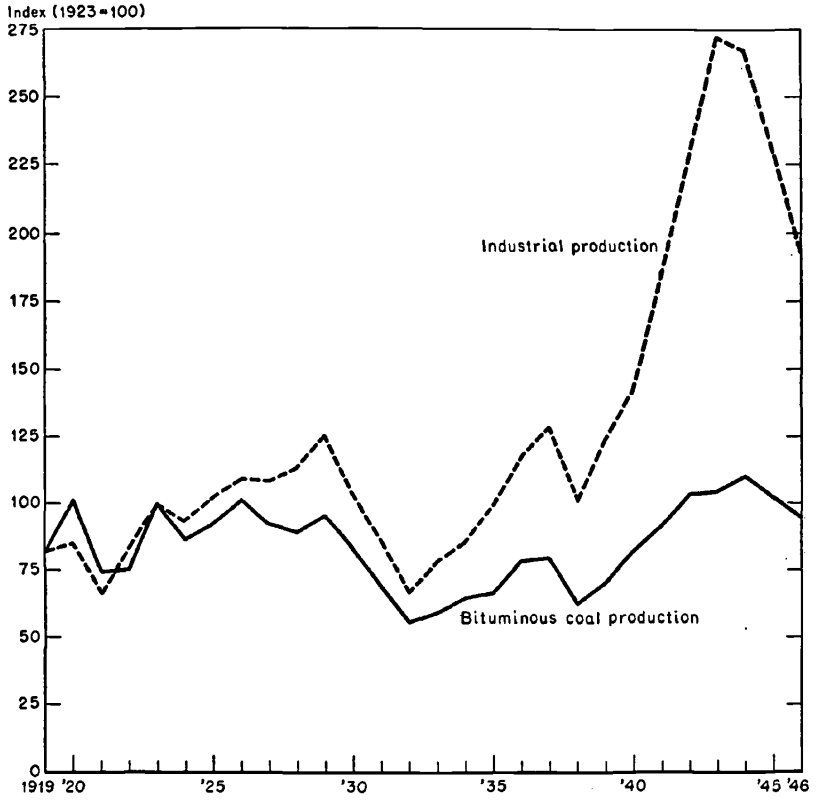
What effect did the operation of these economic factors plus the impact of the Great Depression have upon the industry and the people whose livelihood depended upon it?

a. *Changes in production, full-time capacity, and mine prices.* A glance at Chart 4 will show that after 1923 the annual produc-

[17] *The Trend of Coal Demand* (Ohio State University Press, 1929), pp. 6 and 7, and *Carter* v. *Carter*, . . . December 10, 1935, pp. 36-37.

CHART 4

Bituminous Coal Production and Total Industrial Production, 1919-1946



Source: Annual reports of the U. S. Bureau of Mines and the *Federal Reserve Bulletin*.

tion of bituminous coal moved irregularly until 1929 and then tumbled to a low point in 1932. The level of that year was the lowest in over a quarter of a century. After 1932 the index of bituminous coal production did not begin to recover as did the index of total industrial production, which in 1946 was 93 per cent higher than in 1923. Output of bituminous coal, on the other hand, despite an improvement over the low point, was, in 1946, 6 per cent below the 1923 average.

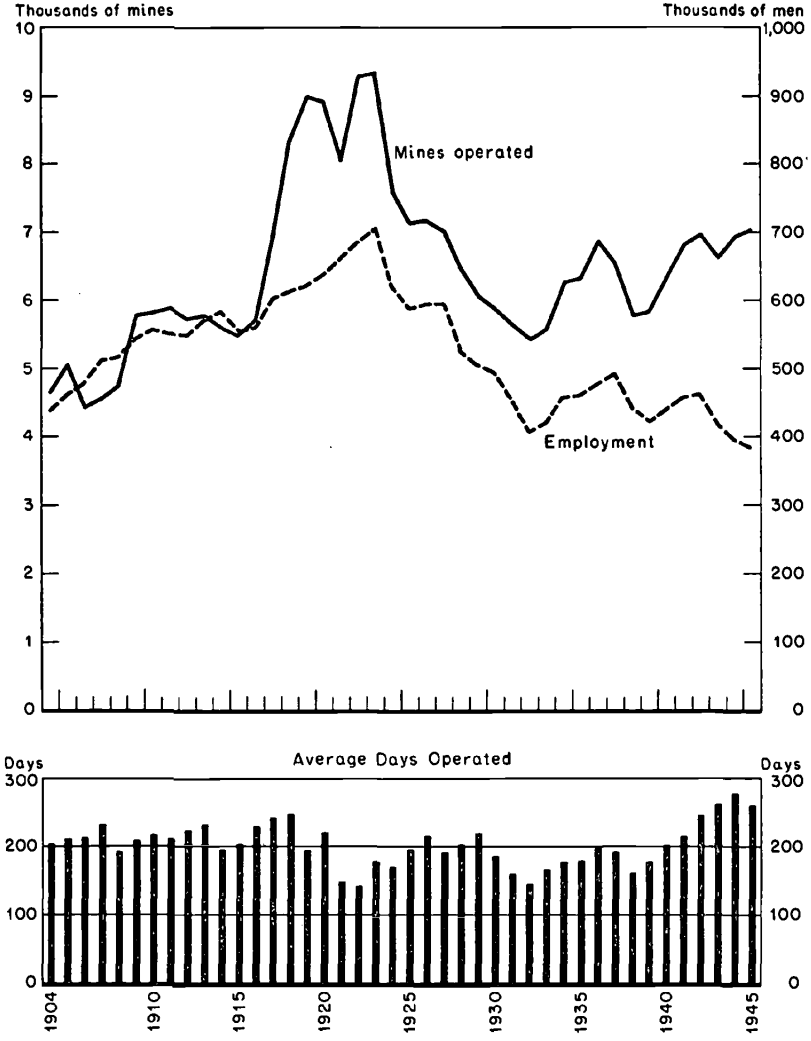
Full-time capacity also fell sharply during the period 1923 to 1932, from 970 million tons to only 653 million tons (see Chart 1). Despite this very substantial decline, the spread between capacity and annual production dropped only from 405 million to 343 million tons—not an impressive reduction after nine years of retrenchment. To add to the difficulties of the industry, average value

per ton at the mine also dropped precipitously, from $2.68 to $1.31, or 51 per cent. As a result, the total mine sales realization from all coal sold declined from $1.5 billion to $406 million.

b. *Decline in number of active mines and employment.* The sharp curtailment in production resulted in an extraordinary liquidation of coal mining properties. Chart 5 reveals an almost con-

CHART 5

Commercial Bituminous Mines—Number Operated, Employment, and Average Days Operated, 1904-1945



Source: Annual reports of the U. S. Bureau of Mines.

tinuous drop in the number of mines in operation from 1923, when the mines totaled 9,331, to 1932 when they numbered only 5,427. The retrenchment in production and the number of mining operations was accompanied by an equally pronounced decline in employment. The average number of men employed dropped from 704,793 to 406,380, a reduction of 42 per cent. In other words, the number of jobs lost to the mine workers during this nine-year period was almost 300,000. Moreover, as shown in the lower part of Chart 5, the number of days worked by the mine, which had a marked tendency to move toward higher levels in the second half of the twenties, dropped sharply after 1929 and fell to the second lowest level recorded in 57 years of bituminous coal mining.

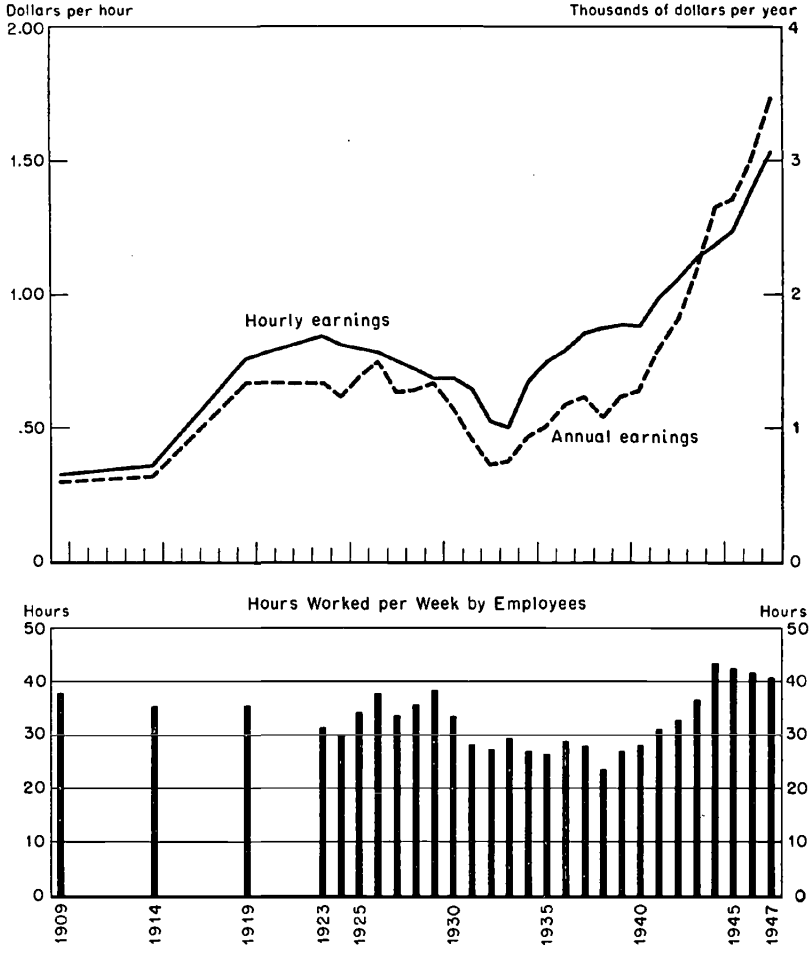
c. *Wages and hours.* The upper section of Chart 6 shows the impact of the prevailing economic forces within the industry upon miners' earnings and working time. Average hourly earnings which had mounted to $.845 in 1923, a new peak for this industry, began a sharp descent and fell to $.52 in 1932, a reduction of 38.5 per cent. Hourly earnings were further reduced by the collapse, in 1927, of the collective bargaining arrangement in the Central Competitive Field—a compact embracing Illinois, Indiana, Ohio, and the Pittsburgh Field of western Pennsylvania, which had been in effect for 29 years. Its dissolution ushered in a bitter struggle for markets. Because of a substantial increase in the number of days worked by the mines, average annual earnings held firmly until 1929 (even surpassing the 1923 earnings in several years) and then fell sharply. During this nine-year period annual earnings, which stood at $1,331 in 1923, dropped to $723 in 1932, a decline of 46 per cent. The extreme reductions in annual earnings after 1929 are explained in part by a decrease in rates of pay and in part by a very drastic curtailment in weekly hours of work—from 38 to 27 (see lower section of Chart 6).

d. *Net income or deficit.* Chart 7 presents the net income or deficit of the bituminous coal industry prior to deductions for income and excess profit taxes for the period 1917 to 1932 inclusive based on data compiled by the Bureau of Internal Revenue.

The very substantial net income which characterized World War I and the years immediately following had disappeared by 1925 and possibly earlier—no figures were compiled for the years 1922 to 1924 inclusive. The years for which data are available in the second half of the twenties (except 1929) and the early depression years were characterized by steadily increasing deficits. In 1925, out of 3,650 returns submitted for this industry, 2,585

CHART 6

Average Hourly and Annual Earnings and Hours Worked per Week by Employees in the Bituminous Coal Industry, 1909-1947



Source: U. S. Bureau of Labor Statistics.

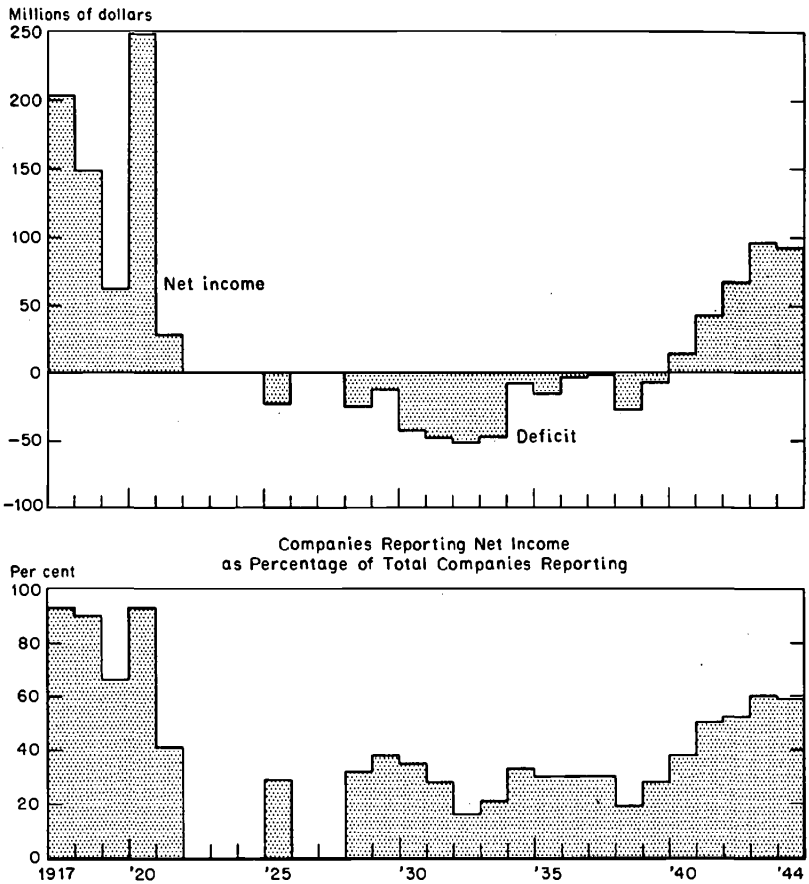
(71 per cent) reported no net income, and in 1932, 1,575 out of a total of 1,897 returns (83 per cent) reported no net income. The investors in this industry as a group must have taken heavy losses during this nine-year period.

It is evident that neither the coal miners nor the operators benefited from the drastic readjustments and curtailments described above. The consumers of coal seem to have been the only beneficiaries. The prices which they paid for their coal fell substantially.

Mine prices were cut in half, and costs of production reached a level that could not absorb the compensation which those engaged in the industry had a right to expect. The gains to the consumer, however, were not net gains. The disruption of so large a sector of

CHART 7

Net Income or Deficit of the Bituminous Coal Industry before Income and Excess Profits Taxes, 1917-1944



Source: *Statistics of Income*, U. S. Bureau of Internal Revenue.

our national economy could not fail to create heavy social and economic obligations and costs.

In the light of the disorganization that characterized this industry during the years 1923 to 1932, it is not surprising that efforts to

regulate it made their appearance in the late twenties. The nature of legislative and other experiments which attempted to bring about some semblance of stabilization in this chaotic industry is the subject matter of the next chapter.