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CHAPTER X

APPRAISAL OF MINIMUM PRICE FIXING UNDER THE BITUMINOUS COAL ACT OF 1937

THE peacetime regulation of the bituminous coal industry was the outgrowth of the instability that has long characterized the industry, more particularly during the years 1924 to 1932. (See Chapter I.) The fact of this instability is documented in "nineteen investigations or hearings by Congress or by specially created commissions" between 1913 and 1935.¹

A. *Legislative Background*

Confronted with falling prices and operating deficits, the operators turned to the National Recovery Administration even though its price-fixing code contained labor provisions which required acceptance of collective bargaining as well as a ceiling on hours and a floor under wages. When the National Industrial Recovery Act was invalidated, Congress enacted the Bituminous Coal Conservation Act. Once again minimum coal prices, wages, and hours of work were to be established under procedures laid down by the government, but the Act was declared unconstitutional: its labor provisions did not fall within the power of Congress to regulate interstate commerce and its tax refund provisions were punitive. To remedy these shortcomings of the 1935 Act, Congress passed the Bituminous Coal Act of 1937.² In this law the legislators carefully omitted all provisions regulating labor's wages and terms of employment,³ modified the tax provisions, and concentrated for the most part on the procedures and problems pertaining to minimum price fixing and the correlative marketing rules and regulations.

To administer the new Code, the Act created the National Bituminous Coal Commission and instructed it to establish minimum prices. It also empowered the Commission to set maximum prices when conditions necessitated such action, but no maximum price could be established for any mine which did not "yield a fair return on the fair value of the property." (Sec. 4-IIc.)

¹ *Carter v. Carter Coal Company* (1936), 298 U.S. 238.

² 50 U.S. Stat. at L. (1937) 72. The complete text of the Act is presented in Appendix G.

³ The declaration of public policy, however, set forth the rights of labor to organize and bargain collectively free from any interference, restraint, or coercion on the part of employers. (See Secs. 9a-1, -2, and -3.)

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Most of the remaining duties assigned to the Commission under this Act which were not directly related to the establishment of minimum prices were investigatory in nature. The Act specifically authorized the Commission "to initiate, promote, and conduct research designed to improve standards and methods used in the mining, preparation, conservation, distribution, and utilization of coal and the discovery of additional uses for coal, and for such purposes shall have authority to assist educational, governmental, and other research institutions in conducting research in coal. . . ." (Sec. 2a.) It was also instructed to study and investigate specific problems confronting the industry as well as the need and possible methods for the control of the production of coal.⁴ The results of its investigations together with its recommendations were to be reported annually to the Secretary of the Interior for transmission by him to Congress.⁵

The Act, which was to expire in April 1941, was extended for two years. In 1943 its life was extended for 30 days and then 90 days. On July 5, 1943 the Ways and Means Committee refused a further extension because in its opinion the Act (a) established a system of regulation inimical to free competition, (b) was no longer

⁴ For a more complete statement of the Commission's duties and responsibilities see Chapter III. Among other things, the Commission was instructed to study and investigate (Sec. 14a):

- The matter of increasing the uses of coal and the problems of its importation and exportation.
- The economic operations of mines with the view to the conservation of the national coal resources.
- The safe operation of mines for the purpose of minimizing working hazards, for which purpose it was authorized to utilize the services of the Bureau of Mines.
- The problem of marketing in order to lower distributing costs for the benefit of consumers.
- The necessity for the control of production of coal and methods of such control, including allotment of output to districts and producers within such districts.

⁵ In the *Third Annual Report under the Bituminous Coal Act of 1937 [for the] Fiscal Year Ended June 30, 1939*, the Bituminous Coal Division pointed out (p. 23) that "no comprehensive studies or investigations were instituted by the Commission." In the Commission's opinion "it seemed wiser to defer these activities until the immediate and major responsibility of establishing minimum prices and marketing rules and regulations had been fulfilled." Two years later the Director of the Bituminous Coal Division which succeeded the Commission stated that "definite progress has been made by the Division on these general research matters, but only on the preliminary phases of the undertakings contemplated by the Act. Substantial sums for technical personnel and equipment will be needed to meet fully the requirements of the Act." (*Annual Report of the Secretary of the Interior, Fiscal Year Ended June 30, 1941*, p. 214.)

necessary because conditions in the industry had improved, and (c) had failed to prevent strikes in the industry.

B. Objectives Sought by Congress

Minimum price fixing was introduced presumably to carry out some objective or objectives. What did Congress have in mind when it decided to eliminate the practice of selling bituminous coal at prices below the cost of production as defined in the Act? A knowledge of the goals sought would seem to be a necessary condition for an intelligent appraisal of the Act.

1. INTENT OF CONGRESS AS DISCLOSED BY THE ACT

A study of the Act does not throw much light on the intent of Congress. The statement of purpose contained in the first paragraph reads in part: "That regulation of the sale and distribution in interstate commerce of bituminous coal is imperative for the protection of such commerce; that there exist practices and methods of distribution and marketing of such coal that waste the coal resources of the Nation and disorganize, burden, and obstruct interstate commerce in bituminous coal, with the result that regulation of the prices thereof and of unfair methods of competition therein is necessary to promote interstate commerce in bituminous coal and to remove burdens and obstructions therefrom."

This statement of purpose was probably intended to establish the right of Congress to pass such legislation rather than to set forth the objectives sought. As a result it stresses the need for the removal of burdens and obstructions to interstate commerce which are occasioned by present methods of distributing and marketing bituminous coal. Since these methods also "waste the coal resources of the Nation," we may infer that the conservation of coal resources is an implied objective of the Act, an inference supported by the specific instruction of Congress that the Commission investigate "the economic operations of mines with the view to the conservation of the national coal resources." (Sec. 14a-1.)

Since minimum prices were to approximate weighted average costs, it might be argued that the objective of the price-fixing procedure was to protect the interests of the investors in this industry. In fact Eugene V. Rostow⁶ asserts that "the statutory cost standards are decidedly undesirable in that they include royalties, taxes, depreciation, and depletion allowances in the cost figure which is

⁶ "Bituminous Coal and the Public Interest," *The Yale Law Journal*, February 1941, p. 572.

to be 'the basis for the proposal and establishment of minimum prices'; and adds, "the inclusion of these items as 'costs' makes preservation of the value of the capital invested in the mines, and payment of royalties for the use of the coal property, an objective of the minimum price scheme." It should be pointed out that the Act specifically excluded from the weighted average costs taxes on income, excess profits, and unassigned acreage. In addition, it excluded interest on investment and such items as bad debts, demurrage charges, the cost of developing new mines as well as the cost of carrying idle or abandoned mines. It should be noted, as pointed out by Walton H. Hamilton,⁷ "that public policy, as expressed in current legislation generally, does not subsume his [Mr. Rostow's] disregard for the return to capital. Nor does his presumption accord with the amenities of business enterprise."

Moreover, a study of the intent of Congress in earlier legislation would suggest that Congress was less interested in preserving "the capital invested in the mines and payment of royalties" to the owners of coal than it was in the establishment of a floor for costs which it regarded as reasonable in order that the industry could support a more adequate wage structure developed through collective bargaining.⁸ This connection may be seen in the NRA Code for bituminous coal, which not only made provision for minimum price fixing but established minimum wages and maximum hours and encouraged collective bargaining, and in the Bituminous Coal Conservation Act of 1935, the passage of which was demanded by John L. Lewis and was undoubtedly hastened by a threatened coal strike, which provided specific machinery for the determination of wages and hours. The Coal Act of 1937 omitted wage and hour provisions only because their inclusion had been declared unconstitutional by the Supreme Court in its invalidation of the 1935 Act.

2. OBJECTIVES AS STATED BY GOVERNMENT OFFICIALS ADMINISTERING THE ACT

The statements of federal officials responsible for administering the provisions of the Act may be of help in determining the objec-

⁷ "Coal and the Economy—A Demurrer," *The Yale Law Journal*, February 1941, p. 600, note 7.

⁸ Of interest in this connection is the statement of Donald H. Wallace that "the primary purpose" of the Act "was the establishment of minimum prices in order to insure sufficient income to the mines to enable them to pay higher wage schedules negotiated by collective bargaining." ("A Critical Review of Some Instances of Government Price Control, *Economic Standard of Government Price Control*, Monograph No. 32 [Temporary National Economic Committee, 1941], Part IV, p. 461.)

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tives sought by Congress. The *Third Annual Report under the Bituminous Coal Act of 1937* [for the] *Fiscal Year Ended June 30, 1939* states:

"The condition of the bituminous-coal industry, as disclosed by the studies and investigations made by the former Commission and the present Division, confirmed the necessity for some form of public regulation of the industry. It was found that in the period from April to December 1937, inclusive (the latest period for which cost and realization records are available), the commercial bituminous mines were losing money at the weighted average rate of slightly over 11 cents per ton. . . .

"After 1937 the operating deficit in the bituminous-coal industry seems to have increased. . . .

"This situation threatened to repeat the grave consequences which prices below costs have frequently had before in the industry. The money losses lead to widespread bankruptcy, impoverishment of workers and of mining communities, and shrinkage in local tax revenues. Such consequences in one of the Nation's largest industries tend to spread the retarding effect throughout not only the food, clothing, and mine-supplying industries, but into the whole national economy.

"It was to meet such a situation, recurrent throughout the 1920's and threatening to follow from the collapse of prices at the end of the National Industrial Recovery program, that Congress enacted the Bituminous Coal Act of 1937 in order to place a flooring under coal prices."⁹

In a radio address Frederic L. Kirgis, the Director of the Consumers' Counsel Division established by the Act, said:

"In the administration of the Act it is hoped that destructive competition between producers will be eliminated; that the miners will receive adequate annual incomes under better working conditions; that consumers will be able to buy coal at reasonable prices and that the coal resources will be conserved to assure an adequate supply for future generations, which could not be done so long as producers were employing the wasteful mining methods brought about by cutthroat competition."¹⁰

Mr. H. A. Gray, Director of the Bituminous Coal Division, in his annual report in 1940, wrote:

"Although the circumstances and conditions of the long depression in the coal industry have many aspects, it can be simply

⁹ Pp. 4 and 5.

¹⁰ September 22, 1939.

stated that the most significant fundamental condition of the coal industry which has led to the minimum price legislation is the fact that the industry's productive capacity has been far in excess of the demand for bituminous coal."¹¹

3. OBJECTIVE AS STATED BY U.S. SUPREME COURT

In the *Sunshine Case*, upholding the constitutionality of the Act, Justice Douglas stated that "*its aim is the stabilization of the industry primarily through price-fixing and the elimination of unfair competition.*"¹² In summarizing the situation which made such legislation necessary he added:

"For a generation there have been various manifestations of incessant demand for federal intervention in the coal industry. The investigations preceding the 1935 and 1937 Acts are replete with an exposition of the conditions which have beset that industry. Official and private records give eloquent testimony to the statement of Mr. Justice Cardozo in the Carter Case that free competition has been 'degraded into anarchy' in the Bituminous coal industry. Over-production and savage, competitive warfare wasted the industry. Labor and capital alike were the victims. Financial distress among operators and acute poverty among miners prevailed even during periods of general prosperity."¹³

4. AUTHORS' INTERPRETATION OF CONGRESSIONAL OBJECTIVES

The history of legislative investigations conducted by Congress and those of specially created commissions as well as the statements of Justices Cardozo and Douglas and the governmental officials quoted above make it unmistakably clear that Congress was much disturbed over the impact of severe competition upon this industry and particularly on the standards of living of those dependent upon the industry for a livelihood. Undoubtedly the primary purpose of the Act was to protect the workers, the operators, and mining communities from the consequences of the rigorous play of economic forces. Congress also was concerned with wasteful mining methods but presumably did not feel competent to deal with the problem and so instructed the Coal Commission to "initiate, pro-

¹¹ *Annual Report of the Secretary of the Interior*, . . . June 30, 1940, p. 452.

¹² *Extension of Bituminous Coal Act of 1937*, Hearings on H.J. Res. 101, Revised, U.S. House Committee on Ways and Means, 77th Cong., 1st sess., March 1941, p. 165.

¹³ *Ibid.*, p. 168.

mote, and conduct research" designed to improve "the economic operations of mines with the view to the conservation of the national coal resources" and to make its recommendations. Similar action was taken concerning (1) the development of new uses and new markets for coal, (2) the safe operation of coal mines, (3) more effective marketing practices to lower distribution costs, and (4) the problem of production control.

Congress apparently concluded that a floor for prices below which coal could not be sold would support a wage structure developed through collective bargaining and (by assuring a more nearly adequate cost structure) hold in check the inherent tendency of the industry to engage in drastic price cutting, thereby making it possible for the producers to pay the negotiated wage scales. In this way it presumably hoped, as stated by Justice Douglas, to achieve "the stabilization of the industry." In other words, minimum price fixing was the immediate objective by which Congress hoped to attain its long-run goal of stabilization of the industry through the elimination of excessive competition and the establishment of a closer relationship between the demand for bituminous coal and the industry's productive capacity.

C. Other Proposals for Bringing Order into the Industry

The objectives sought and the methods selected by Congress to achieve them have been challenged. Those who were critical of the Act argued that the objectives were too narrowly conceived. They asserted that the regulation of coal prices in order to protect those engaged in the industry from destructive competition and to encourage research in the conservation of coal resources and other problems confronting the industry was too limited an approach to bring capacity, output, and demand into effective balance and thereby to bring stability to the industry.

The many proposals which have been submitted for the regulation of this industry cover a wide range of objectives. They include (1) the more efficient production of coal, to ensure lower costs as well as conservation of coal resources, (2) the diminution of waste in distribution by a minimization of crosshauls, (3) the reduction of waste in consumption by a more effective application of appropriate coals to different uses, (4) the elimination, insofar as possible, of the waste of human resources and the encouragement of the rehabilitation of displaced coal-mining labor, and (5) the establishment of a long-range integrated program which would effectively

regulate all fuel and energy, including coal, oil, natural gas, and water power, in the interest of the public.¹⁴

The method adopted by Congress in the Bituminous Coal Act of 1937 to bring stability to the industry has also been criticized. It is frequently argued that price fixing without control of production or capacity cannot bring capacity and demand into balance, but on the contrary will only exaggerate the condition. Similarly, it is asserted that minimum price fixing will hold marginal mines in the industry and lead to the opening of new mines and, therefore, will discourage rather than encourage stability of prices, wages, and profits or, for that matter, of operations.

Many methods or procedures have been recommended to bring stability to the industry. *One group of writers advocates governmental ownership and operation.* At the close of World War I the United Mine Workers of America advocated such a program for the industry.¹⁵ A bill introduced in the House in 1939 proposed the establishment of a National Natural Resources Corporation "which would buy and operate coal mines, oil wells, water power plants, natural gas fields, plants for the manufacture or distribution of the products thereof, and plants for the manufacture of equipment and appliances needed for the use thereof, to meet the domestic needs and supply farm markets."¹⁶

A second group recommends extensive governmental regulation and control of the operation of coal mines whether privately or governmentally owned. Under this heading fall plans which would regulate the number of mines and/or their capacity and production by licensing of mines, control of investments in the industry, regulation of the extension of transportation facilities to new mines or

¹⁴ See "Proposals for Stabilization of the Bituminous Coal Industry" by L. E. Young in the *Proceedings of the Third International Conference on Bituminous Coal* (Carnegie Institute of Technology, 1931), Vol. 1, pp. 53-81; the discussion of alternative methods of bituminous coal regulation by Ellery B. Gordon and William Y. Webb, "Price Fixing in the Bituminous Coal Industry," *Economic Standards of Government Price Control*, Monograph No. 32 (Temporary National Economic Committee, 1941), Part III, pp. 319-32; "A Proposal for Regulation of the Coal Industry" by John E. Orchard in *The Quarterly Journal of Economics*, February 1925, pp. 196-240; "War Time Price Control" by Jules Backman in *Contemporary Law Pamphlets* (New York University, 1940), Ser. 4, No. 5; "Price Fixing in the Bituminous Coal Industry—A Legal-Economic Problem," by Stephen P. Burke in *West Virginia Law Quarterly*, April 1935, pp. 225-48; and the objectives set forth by the Bituminous Coal Producers Committee, *United Mine Workers Journal*, June 15, 1944, pp. 8 and 9.

¹⁵ *How to Run Coal* the "District No. 2" plan (September 20, 1919) (Gordon and Webb, *op.cit.*, p. 325, note 18).

¹⁶ *Op.cit.*, p. 325.

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fields, withholding of the coal lands of the public domain, closing down of marginal mines, and the establishment of production quotas. Other proposals aimed at achieving effective governmental regulation and control, either in lieu of or to supplement the above suggestions, are price control, establishment of marketing zones, regulation of the margins of jobbers and dealers, standardization of cost accounting methods in use at coal mines, establishment of compulsory marketing organizations under governmental supervision to minimize general duplication of selling effort and selling expenses, control of wage rates and related terms of employment to protect the public against exorbitantly high labor costs and therefore prices, rehabilitation or resettlement of mine labor permanently unemployed, and establishment of collateral regulation of oil and natural gas.

A third group urges limited or partial regulation and control within a framework which encourages private initiative and enterprise. They advocate measures such as minimum price control and the coordination of such prices in consuming markets or the establishment of minimum wage rates for the industry or standard rates of pay for major occupations.

A fourth group recommends self-regulation by the industry under governmental supervision by means of voluntary or compulsory marketing agencies or arrangements.

A fifth group advocates, not regulation and control, but federal assistance to the industry. Under this heading may be included (1) financial assistance by the government for the conduct of research to develop new uses for coal, more effective utilization, and greater efficiency in coal mining, (2) stimulation of coal exports, (3) building of storage facilities at major points of consumption, (4) promotion of year-round consumer buying, and (5) encouragement of geographic and occupational mobility of coal miners.

A sixth group advocates a "hands off" policy and urges that private enterprise be left to function without federal regulation or assistance notwithstanding severe competition and instability of operations.

An appraisal of the many objectives and measures for achieving stability in the bituminous coal industry, absorbing as that may be, does not fall within the task undertaken by those responsible for this study. They have set as their primary task the analysis and appraisal of the minimum price-fixing experiment conducted under the Bituminous Coal Act of 1937.

D. *An Appraisal*

Earlier it was pointed out that minimum price fixing was the immediate goal by which Congress sought to achieve its long-run objective of stabilizing the industry. An appraisal of this experiment in minimum price fixing would seem to require examination of the three following questions:

Were the provisions of the Act and particularly the criteria and procedures to be utilized in price fixing such that those who were assigned the task of administering the Act could attain the immediate goal of Congress?

Were the policies adopted and the procedures utilized by the administering agencies the best that could be formulated under the Act, and how well did these agencies perform their tasks?

Assuming adequate legislation and competent administration, can minimum price fixing attain the long-run objective of Congress to eliminate the disturbing effects of excessive competition and, by bringing the industry's productive capacity into closer relationship with effective demand for bituminous coal, achieve the stabilization of the industry?

I. APPRAISAL OF THE ACT AS AN EFFECTIVE INSTRUMENT FOR PRICE FIXING

In this section consideration will be given first to the criteria set forth in the Act for use in price fixing, next to the procedures by which prices were to be determined, and then to other provisions of the Act which had a bearing on the price-fixing process.

a. *Criteria to be used in price fixing.* The immediate objective of Congress was to set a floor for bituminous coal prices which would be high enough (1) to support a wage structure developed through collective bargaining and (2) to eliminate the prevalence of losses that had led to drastic price cutting. Such an undertaking could be delegated to the industry or governmental agencies only if Congress were to lay down workable criteria or standards for the guidance of those to whom the task of administering the Act was assigned. What were these criteria and were they adequate? A careful reading of the Act discloses that the minimum prices to be set were to:

—Be “free on board transportation facilities at the mines for kinds, qualities, and sizes of coal produced” in the several districts, and

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coordinated "in common consuming market areas" upon a fair competitive basis. (Secs. 4-IIa and b.)

—"Have due regard to the interests of the consuming public." (Sec. 4-IIa.)

—"Be just and equitable, and not unduly prejudicial or preferential, as between and among districts." (Sec. 4-IIb.)

—"Yield a return per net ton for each district in a minimum price area, . . . equal as nearly as may be to the weighted average of the total cost, per net ton" minus capital charges "of the tonnage of such minimum price area." (Sec. 4-IIa.)

—"Reflect, as nearly as possible, the relative market values, at points of delivery in each common consuming market area, of the various kinds, qualities, and sizes of coal" and take into account such factors as "values as to uses, seasonal demand, transportation methods and charges and their effect upon a reasonable opportunity to compete on a fair basis, and the competitive relationships between coal and other forms of fuel and energy." (Sec. 4-IIb.)

—"Preserve as nearly as may be existing fair competitive opportunities." (Sec. 4-IIb.)

—Preclude "dumping" of coal. (Sec. 4-IIa.)

It is apparent that Congress intended that the minimum prices to be established for bituminous coal were to be set at a level that would approximate the weighted average of the total production, administration, and "reasonable" selling costs in a given minimum price area. The price-fixing agency, however, was given some leeway in carrying out its task; minimum prices were not to be established which would "reduce or increase the return per net ton" for any district "by an amount greater than necessary to accomplish such coordination, to the end that the return per net ton upon the entire tonnage of the minimum price area shall approximate the weighted average of the total cost per net ton . . . of such minimum price area." (Sec. 4-IIb.) Evidently discretion was permitted to enable the Commission to give consideration to the interests of the consuming public and to ensure that the resulting minimum prices would (1) "be just and equitable," (2) "reflect, as nearly as possible, the relative market values," (3) "preserve as nearly as may be existing fair competitive opportunities," (4) ensure "a reasonable opportunity to compete on a fair basis," (5) maintain "com-

petitive relationships between coal and other forms of fuel and energy," and, presumably, (6) conserve our coal resources.

Even a casual study of these criteria discloses ambiguities and conflicts of purposes. As Eleanor Poland pointed out:

"It is implicit in the scheme that prices are to be kept above the competitive level so long as competitive prices are below costs, yet 'existing fair competitive opportunities' are to be preserved, and there must be 'due regard to the interest of the consuming public.' In co-ordinating prices for common consuming markets, it is necessary that the prices fixed for like kind, qualities, and sizes of coal be uniform at points of delivery, despite the fact that there are wide variations as between mines and between competing districts, both in costs of mining and of transportation. Yet the Division is called upon to see that these prices not only cover the average cost of production in each minimum-price area, but that they be 'just and equitable' both as between producers and between districts, and at the same time preserve 'existing fair competitive opportunities.'"¹⁷

The long hearings held by the Coal Division on cost determination, proposed minimum prices, and coordinated minimum prices disclose many differences of opinion not only as to interpretations of the Act's language—particularly the meaning of certain criteria—but as to the weight to be given to them and the manner in which they should be applied. A case in point was the controversy over "values as to uses." The Act provided that "classification of coal and price variations as to . . . values as to uses . . ." were to be proposed by each district board for its own district. The attempt to apply this criterion gave rise to disagreement as to its meaning, the stage of the price-fixing process at which it should receive attention, and the manner in which it should be applied. (See the discussion in Chapter VII.)

The phrase "existing fair competitive opportunities" was especially subject to conflicting interpretations. What was meant by "fair," and should the emphasis be placed on "existing" or "fair"? Should decisions relating to "existing fair competitive opportunities" be based on short-run or long-run considerations? If existing competitive opportunities were to be the primary determinant of coordinated minimum prices, as seems to have been the case, how could the resulting minimum prices conform to the requirement

¹⁷ Leverett S. Lyon, Victor Abramson, and Associates, *Government and Economic Life* (The Institute of Economics of the Brookings Institution, 1940), p. 982.

that they be "just and equitable" between producers and districts? Moreover, if "fair" competitive opportunities were to be the major consideration would not the established minimum prices interfere with the historic flow of coal and thereby impair existing competitive opportunities?

Eugene V. Rostow contended that the formula requiring prices to be set so as to yield a return per ton in each district in a minimum price area which is equal as nearly as may be to the weighted average of the total costs (as defined in the Act) of the tonnage in that minimum price area does not "have due regard to the interests of the consuming public." He pointed out¹⁸ that a particular mine—whether for reasons of location, managerial efficiency, or geological conditions—might have costs which would enable it to sell at prices below a minimum which would be set in relation to average costs of all mines in a large area. This would not be permitted under the Act. Whether minimum prices under these conditions resulted in a generally higher price for coal or a transfer of business to higher cost mines by preventing "distant low-cost mines from selling in certain markets," the public's interest in utilization of resources would not be served. This interest, he held, "calls for consideration only of the relation of prices to the internal cost conditions peculiar to each mine."

No one can gainsay Mr. Rostow's contention concerning the effect of the cost formula on low-cost mines and the resulting impact on both the prices and movement of their coals. Congress undoubtedly felt, however, that social costs as well as cost-price relationships should be considered. The "consideration only of the relation of prices to the internal cost conditions peculiar to each mine" was one of the important factors that contributed substantially to the instability that has characterized this industry throughout so much of its history and that led Congress to experiment with minimum price fixing.

From the wording in the Act it would seem that Congress intended weighted average costs, as defined, to be the primary determinant of minimum prices. The cost standards made it possible for the regulatory agency to establish minimum prices which would pass on to the consumers the cost of increased wage rates and other improved conditions of employment established under collective bargaining. The noncost criteria permitted deviations from the cost structure that were necessary to preserve existing competitive relationships in the industry so long as other conditions protected

¹⁸ *Op.cit.*, pp. 571-72.

by these criteria were met, that is, a minimum price structure that (1) was "just and equitable," (2) maintained "competitive relationships between coal and other forms of fuel and energy," etc. Because labor costs constitute approximately 60 per cent of the total costs, the cost standard was especially important in this industry.

Undoubtedly the task of those who had to administer the terms of the Act would have been much easier if Congress had set forth more clearly the meaning of the criteria or standards to be utilized in price fixing, the manner and particularly the stage of the price-determination process in which they should be used, and, to the extent that it was possible, had given some indication of their relative importance. Such action would not only have eliminated much of the controversy over the Act's criteria but would have focused attention on the overlapping of standards and the conflicts of purpose contained therein.

The question with which we are principally concerned, however, is this—Could this cost standard supplemented by ambiguous and conflicting noncost criteria actually have achieved the objectives of the Act and would it have resulted in minimum prices that would have ensured maximum economic consumption?

Donald H. Wallace examined this question at some length. Since the authors find themselves in agreement with his analysis, this presentation will closely follow his.¹⁹

Since the cost standard of the Act was designed to equate sales revenue and total costs (as defined) in each minimum price area, and at the same time to preserve equitable competitive relationships, and since costs included the prevailing negotiated wages and other vital costs, this standard would appear to promote the immediate objectives of the Act and lead to maximum economic consumption.

As Mr. Wallace noted, however, this conclusion becomes less certain when the question is raised: "Whose costs, what mines are to produce, and how is total production to be divided between high- and low-cost mines?"

Any scheme of price fixing will tend to allocate production, profits, employment, and wages. In its deliberations, therefore, a price-fixing agency is making decisions with respect to which mines will be permitted to operate, how they will share in the available business, whether fluctuations in production over time will be shared among those mines in operation or whether the number of mines in operation will change.

¹⁹ *Op.cit.*, pp. 463-66.

But the Act did not provide any precise standards for handling these problems of economic efficiency. It will be remembered that the price-fixing agency was to be guided by requirements that prices be "just and equitable" and "not unduly prejudicial or preferential," and that they "preserve as nearly as may be existing fair competitive opportunities." These terms, however, were not defined.

It might be possible for the regulatory agency under such an Act to define fairness in terms of relative efficiency of the various mines, Mr. Wallace pointed out, but this would be unlikely. Where such standards have been developed in interpretation of laws dealing with unfair competition and regulation of public utility rates, the process has been slow, and such standards have generally been modified by considerations of past relationships. Relative efficiency has usually not been considered by commissions and courts to be the major indicator of fair relationships.

It was to be expected, therefore, that reliance would be placed primarily on preservation of past relationships. This standard, however, presents certain problems. The price-fixing agency would have to decide whether to interpret it to mean past price relationships or past proportion of sales, except of course where such prices or proportion of sales reflected dumping or "unfair" competitive opportunities. Mr. Wallace pointed out that "with variations in total sales as, for example, between depression and recovery, it might be impossible to achieve the latter objective without altering past price relationships. The former interpretation would render equation of average price and average cost easier to obtain and would enable a closer approach to maximum economic consumption." Either interpretation would be difficult to apply in view of a lack of adequate records of such relationships and their tendency to fluctuate in the past, and surely in the future, as a result of changes in cost elements and shifts in demand.

We may conclude, then, with Mr. Wallace, that the Act did not require the price-fixing agency to consider what effects prices would have on consumption, utilization, and capacity, and so on costs, which in turn would affect future minimum prices. No criteria were "provided for the levels of consumption, production, operating capacity, and prices" at which total revenue and total costs were to be equalized.

It was not possible to ascertain the reasons which led the framers of the Act to choose the stated criteria for setting minimum prices. Whatever the reasons were, it seems clear that these criteria added to the difficulties of administering the Act. They were vague, over-

lapped one another, and in certain instances were contradictory. They disregarded the impact of minimum price fixing on consumption, utilization, and capacity. Taken together, they reveal that not enough consideration had been given by Congress to the complex problems confronting those who must establish minimum price schedules or to the long-run implications of the policies which their application involved.

b. *Price-fixing process.* The determination of minimum prices started with the computation of average costs of production, which was followed by the establishment of classification of coals and uncoordinated prices and then by the coordination of proposed minimum prices.

1) *Cost provisions of the Act.* Only the cost provisions of the Act bearing on the establishment of minimum price schedules are dealt with in this section. Those pertaining to the revision of such schedules will be taken up under the section on Revision of Minimum Price Schedules and the application of the cost standard in the determination of minimum prices will be considered under the Appraisal of the Policies and Procedures Utilized to Effectuate the Act.

Since minimum prices must yield a return per net ton approximating the weighted average cost per ton of each minimum price area, the Act's provisions with respect to costs were of considerable importance.

The Act provided that: "As soon as possible after its creation, each district board shall determine, from cost data submitted by the proper statistical bureau of the Commission, the weighted average of the total costs of the ascertainable tonnage produced in the district in the calendar year 1936. The district board shall adjust the average costs so determined, as may be necessary to give effect to any changes in wage rates, hours of employment, or other factors substantially affecting costs, exclusive of seasonal changes, so as to reflect as accurately as possible any change or changes which may have been established since January 1, 1936. [Was January 1, 1937 meant?] Such determination and the computations upon which it is based shall be promptly submitted to the Commission by each district board in the respective minimum-price area." (Sec. 4-IIa.)

The computation of "the weighted average of the total costs of the tonnage for each minimum-price area in the calendar year 1936, adjusted as aforesaid" was a task assigned to the Commission. (Sec. 4-IIa.)

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a) *Stages involved in cost computations.* The computation of average costs involved three stages. First the operators submitted data on costs and sales realization to the statistical bureau within their district. Next the statistical bureaus, which were agencies of the Commission, sent compilations of average district costs to their respective district boards which determined the weighted average of the total costs of the ascertainable tonnage produced in the district in the calendar year 1936 and adjusted it in accordance with the Act's provisions. Finally, the Commission brought together the cost data for the districts comprising a minimum price area and established a weighted average for the area. The resulting costs were used in determining both the proposed minimum prices and the coordinated minimum prices.

b) *Criticisms of the cost concept.* Criticisms have been leveled at the definition of costs specified in the Act for the purpose of price fixing. The Act required the Commission to include in its cost compilation "the cost of labor, supplies, power, taxes, insurance, workmen's compensation, royalties, depreciation and depletion (as determined by the Bureau of Internal Revenue in the computation of the Federal income tax) and all other direct expenses of production, coal operators' association dues, district board assessments for Board operating expenses only levied under the code, and reasonable costs of selling and the cost of administration." (Sec. 4-IIa.) The costs not included were bad debts, demurrage charges, cost of developing new mines and carrying idle or abandoned mines, taxes on unassigned acreage, taxes on income, taxes on excess profits, and interest on investment.²⁰

It is apparent that the concept of costs as defined by Congress for the purpose of the Act did not conform either to that of businessmen or to that of economists. It did not satisfy the coal operator because it failed to cover his total expenses (plus his profits) which, in his opinion, should equal his selling price. It fell short of the requirements of economists in that it eliminated certain expenses of production, particularly interest due to bondholders, and normal profits, which must be covered in the long run if a business is to survive.²¹

²⁰ For an analysis of the cost data and a description of the procedure used in collecting and computing them see Chapter VI.

²¹ Normal profits are usually conceived of as comprising the following:

- a. Interest at the current rate on the total investment beyond that covered by bonds.
- b. Wages of management beyond those included in salaries.
- c. Business risks beyond those covered by insurance.

(See Raymond T. Bye, *Principles of Economics*, Fourth Edition, *A Restate-*

Eugene V. Rostow asserted that Congress was too generous to the operators when it included royalties, certain taxes, and depreciation and depletion allowances.²² H. N. Eavenson believed along with others that the Act should have included all costs, pointing out that the omitted costs probably amounted to \$.05 a ton.²³ Thomas J. Michie, on the other hand, called attention to an offsetting gain. A substantial proportion of coal mining companies, he pointed out, receive profits—estimated at something under \$.05 a ton for the industry as a whole—from company-owned miners' dwellings and company stores. Neither of these sources of income was taken into consideration in the fixing of prices under the Coal Act.²⁴

Still others were of the opinion that the methods for determining depletion and depreciation permitted under the Act in accordance with the rules of the Bureau of Internal Revenue for reporting these items for income tax purposes (1) enabled operators to charge more depletion in any one year than proper accounting methods would permit and (2) resulted in the reporting of costs which were higher or lower than usual in the case of operations whose output was decidedly above or below their customary rates of production.

Messrs. Gordon and Webb²⁵ thought that it was a mistake to use the income tax basis for computing depletion and depreciation for the purpose of determining the costs to be utilized in minimum price fixing. In the case of depletion, they argued that "in view of the long record of losses in this industry" the "only true cost of depletion in any one year" should be the tonnage basis.²⁶

c) *Criticism of minimum price areas as a cost basis for coordination.* There is also criticism of the designation of the minimum price area as the cost basis for the coordination of minimum prices.

ment [Crofts, 1945], pp. 332-33 and Raymond T. Bowman, *A Statistical Study of Profits* [University of Pennsylvania Press, 1934], pp. 4-8.)

²² For quotation and comments see section B1 of this chapter.

²³ In a letter dated July 28, 1947.

²⁴ "The Guffey Act—Can It Work?" *Addresses and Committee Reports, Philadelphia Meeting, September 9-13, 1940*, American Bar Association, Section of Mineral Law, p. 24.

²⁵ *Op.cit.*, pp. 288-89.

²⁶ According to the rulings of the Bureau of Internal Revenue depletion could be charged for income tax purposes either on the basis of

- "(1) 5 per cent of gross income but not exceeding 50 per cent of the net income.
- (2) tonnage produced; a per ton rate being agreed upon, based on valuation of the coal owned and/or lease-hold as of March 1, 1913, if acquired before that time, or cost if acquired since that time." (*Loc.cit.*)

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Robert L. Ireland, an operator, believes that "the minimum price area idea as adopted could be applied in principle to an individual district" and that under such an arrangement the consumer of coal from a low cost district would be able to buy at lower minimum prices than would otherwise be in effect.²⁷ Eugene V. Rostow is especially caustic in his criticism. Starting with the assumption that the satisfaction of the public interest "calls for consideration only of the relation of prices to the internal cost conditions peculiar to each mine" he objects to the practice of relating prices to cost averages for large groupings of districts.²⁸

As pointed out earlier, Congress was concerned with social costs as well as cost-price relationships. It apparently believed that a system of prices based upon the internal costs of each mine was one of the factors that created the instability which has characterized this industry over long periods of time.

To appraise Mr. Rostow's assertion, the reader should understand that the bituminous coal industry has been bequeathed an extraordinary share of perplexing problems. Here are found not only the factors that commonly determine costs in manufacturing industries but also the special conditions under which minerals are extracted.

Important among the natural conditions is the thickness or height of the seam. Coal is mined in seams that range from "less than 2 feet to more than 50 feet." In 1950, the average seam thickness for all bituminous coal mines was 63 inches. It should be noted, however, that 35 per cent of bituminous coal and lignite was mined from seams less than 4 feet high, another 35 per cent from seams 4 to 6 feet, 22 per cent from seams 6 to 8 feet, and 8 per cent from seams over 8 feet high.²⁹ Needless to say the cost of mining in thin seams, other things being equal, is considerably higher than that in thick seams. Messrs. Young and Anderson stated that this factor "is probably the most important single item that determines whether the output per man per day shall be high or low."³⁰

Other physical conditions also affect productivity and therefore mining costs. Important among these are the character of the roof and bottom of the coal seam, the presence of impurities in the coal (such as bone, clay, slate and sometimes free sulphur), the dip

²⁷ In a letter dated September 26, 1947. ²⁸ *Op.cit.*, p. 572.

²⁹ W. H. Young and R. L. Anderson, *Thickness of Bituminous-Coal and Lignite Seams at all Mines and Thickness of Overburden at Strip Mines in the United States in 1950* (Information Circular 7642, Bureau of Mines, 1952), p. 1.

³⁰ *Loc.cit.*

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or pitch of the seam, depth of cover, and the presence of water or gas in the mine. Each of these factors has a direct bearing on the work of mining coal and, as a result, upon the amount that can be produced in a given period of time. If the roof is friable or if it is burdened with an immense weight of overhung rock, it must be supported with props or cribs. If the floor of the seam is composed of clay that "heaves," the mine car tracks in the rooms and the haulage ways must be frequently repaired. Where impurities exist in the coal, and they are found in varying degrees in many mines, they must be removed. The dip or pitch of the seam complicates the mining of coal. In surface mining, the depth of the overburden to be removed is a major cost item.

Still other factors, economic in character, have a marked influence upon costs. The factor of location determines accessibility to desirable markets. The more distant mine must offset this shortcoming with a coal of high quality, or a lower ton-mile rate for the coal it hauls, or lower wages or some other compensating advantage. If none of these is present, the owners must be content with a relatively low net return on the investment or even no return at all. In this industry money invested in coal mines is "frozen." The equipment cannot be used for other purposes, the cost of development cannot be recovered except by producing coal, and overhead and maintenance costs go on when the mine is closed. As a result the operator continues to mine coal as long as the bare operating costs are forthcoming. Other complicating factors are the size of the mine, the character of the management, wide annual fluctuations in the demand for coal, and its relatively inelastic demand.

It must be apparent, therefore, that costs vary not only from field to field and seam to seam but from mine to mine. These differences have always prevailed. A study of Table 81 will show the variations in costs for 21 producing districts for the years 1937 through 1940. In 1937, the average cost per ton was \$2.07 and the range in costs, \$1.48 to \$4.01. In 10 districts the costs were above and in 13 districts below the average cost of all fields.

Prior to 1934 the problem of price maintenance was further complicated by the division of the industry into union and nonunion areas. The unionized northern mines were compelled to operate with inflexible labor costs which constituted as much as 65 per cent of the total costs. For these operators, the opportunity to cut wages and therefore prices was practically nil. The nonunion operators, on the other hand, were free to and did cut wages and prices whenever marketing conditions made that desirable. In an unstable in-

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dustry such as bituminous coal, these conditions were not uncommon. As a result, the competition between northern and southern fields was exceedingly severe. Over the years, particularly from 1912 to 1933, the nonunion mines made heavy encroachments in the markets of the union fields.⁸¹

Now that the United Mine Workers of America have organized most of the industry, labor costs have been taken out of competition. The struggle for markets, however, has not been eliminated. As the demand for bituminous coal drops, the operators find it increasingly difficult to produce at a profit. The efficient, well-located companies know that mine costs decline as days worked by the month increase (see Chart 14 and discussion on pages 361-63 in this chapter). They may be tempted, therefore, to reduce prices in order to gain a larger share of the shrinking market. The less efficient operators in order to hold their customers must also reduce prices as long as sales income exceeds out-of-pocket costs. When prices fall too low, bankruptcy or reorganization takes place. As a result some of the mines are closed; others continue to operate on a lower capital investment.

If the mines and districts with relatively low costs could supply the country's needs for bituminous coal, then costs could perhaps be determined on a mine basis. Under these conditions prices would seek a level which would eliminate many of the high-cost mines and the high-cost districts. Unfortunately, the seasonal needs of consumers, wide annual fluctuations in demand, the pronounced proclivity of high-cost mines to stay in business (as suggested by Table 78), and the large number of owners of untouched deposits waiting for a propitious opportunity to begin production make such an arrangement unworkable, particularly in an industry which is operating in 30-odd states and which can bring effective pressure on political officeholders.

Under conditions such as those outlined above, any system of price fixing likely to be introduced will not be related to the costs of individual mines but will set a price floor which will protect a substantial number of high-cost mines.

If mine costs cannot be used, then an average cost figure for some geographic area becomes necessary. The framers of the Act—having decided to relate the minimum prices to the average costs of production—had two alternatives: (1) to base the prices of a given district on the average cost of the district or (2) to relate

⁸¹ Waldo E. Fisher, *Collective Bargaining in the Bituminous Coal Industry: An Appraisal* (University of Pennsylvania Press, 1948), pp. 15-17.

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the prices in each district to the cost level of some larger area. The first possibility was not practicable under the criteria which Congress established for minimum price fixing. Since coordinated minimum prices had to "preserve as nearly as may be existing fair competitive opportunities" and reflect as nearly as possible "the

TABLE 78
Corporations Engaged in Bituminous Coal Mining Reporting No Net Income to Bureau of Internal Revenue, 1925, 1928-1950

Year	Total Corporations Reporting (number)	Corporations Reporting No Net Income	
		(number)	(per cent of total)
1925	3,650	2,585	71
1928	2,705	1,842	68
1929	2,469	1,535	62
1930	2,239	1,458	65
1931	2,095	1,513	72
1932	1,864	1,575	84
1933	1,851	1,455	79
1934	2,017	1,357	67
1935	1,975	1,384	70
1936	1,945	1,355	70
1937	1,815	1,276	70
1938	1,887	1,524	81
1939	1,820	1,315	72
1940	1,756	1,080	62
1941	1,722	863	50
1942	1,737	831	48
1943	1,623	648	40
1944	1,584	652	41
1945	1,544	629	41
1946	1,640	627	38
1947	1,837	466	25
1948 ^a	2,163	729	34
1949 ^a	2,070	1,037	50
1950 ^a	1,988	884	44

^a Preliminary.

Source: *Statistics of Income*, Part 2, U.S. Bureau of Internal Revenue. 1925-47 reprinted in *1950 Bituminous Coal Annual*, Bituminous Coal Institute, p. 188; subsequent years in annual reports of the Bureau.

relative market values" of the various kinds, qualities, and sizes of coal, the geographic area had to be large enough to embrace the coal fields competing in common markets.

A casual study of Tables 79 and 80 will show that many districts did not sell their coals at prices commensurate with their respective average costs. In 1936, costs per ton exceeded sales realization per ton in the eight districts comprising Minimum Price

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TABLE 79

Reported Costs and Sales Realization of Bituminous Coal, by Producing District,
Minimum Price Area 1, Selected Years
(dollars per net ton, f.o.b. mine)

Producing District	1936		1938		1940	
	Average Costs	Sales Income	Average Costs	Sales Income	Average Costs	Sales Income
1 Eastern Pennsylvania	2.09	1.96	2.31	2.14	2.14	2.09
2 Western Pennsylvania	1.96	1.92	2.26	2.05	1.98	2.01
3 Northern West Virginia	1.63	1.51	1.78	1.62	1.65	1.63
4 Ohio	1.72	1.66	1.90	1.77	1.71	1.71
5 Michigan	3.59	3.44	3.90	3.73	3.90	3.88
6 Panhandle (West Virginia)	1.75	1.74	1.86	1.79	1.64	1.66
7 Southern Numbered 1	1.95	1.87	2.23	2.05	2.04	1.99
8 Southern Numbered 2	1.81	1.75	2.04	1.90	1.90	1.92

Source: As shown in Tables 11 and 13 of Chapter VI.

TABLE 80

Operators' Margins, by Producing District, Minimum Price Area 1,
Selected Years
(dollars per net ton, f.o.b. mine)

Producing District	1936	1938	1940
1 Eastern Pennsylvania	-.13	-.17	-.05
2 Western Pennsylvania	-.04	-.21	+.03
3 Northern West Virginia	-.12	-.16	-.02
4 Ohio	-.06	-.13	.00
5 Michigan	-.15	-.17	-.02
6 Panhandle (West Virginia)	-.01	-.07	+.02
7 Southern Numbered 1	-.08	-.18	-.05
8 Southern Numbered 2	-.06	-.14	+.02

Source: Computed from Table 79. Operators' margins are sales realization minus reported costs.

Area No. 1 by amounts which ranged from one cent to \$.15 and in 1938 by amounts which ranged from \$.07-.21 a ton. In 1940, however, three districts reported that their sales income per ton exceeded their costs per ton by \$.02 or \$.03, four districts that their costs still were higher than their sales income by amounts varying from \$.02-.05 a ton, and one district that its costs just equalled its sales income. It is apparent, therefore, that had minimum prices been fixed to approximate weighted average costs within individual districts, the operators in certain districts would have lost much of their business to neighboring districts because they would not have been able to maintain a competitive position by selling their coal at less than their average costs. If the failure

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to meet costs had been due to managerial inefficiencies alone, and if these mines had not been needed in the industry, it might be argued that this result would have been desirable. As we have seen, however, neither of these conditions prevailed.

In other words, if any significant volume of coal from one district competes in a given market with coal from another district, the average cost of each district cannot be used as the basis for setting coordinated minimum prices unless the average costs in the two districts are approximately equal. Thus in 1940 the average cost of coal in District 2 (Western Pennsylvania) was \$1.98 and that of District 4 (Ohio) was \$1.71. If minimum prices had been set for Western Pennsylvania to return \$1.98 and for Ohio to return \$1.71, more business than usual would have gone to Ohio producers. As a result the "existing fair competitive relationships" between the coals of these two districts would have been destroyed.

The second possibility, that of relating each district's minimum prices to the level of cost prevailing in some larger area, overcomes the difficulty arising under the first alternative. Under this arrangement, the price realizations of a given district could deviate both from its own average cost and that of the whole area and, because of offsetting variations in other districts, still permit the average realization of all districts to approximate the over-all average costs. In this manner the flexibility necessary to coordinate prices could be attained without sacrificing the use of a cost base.

It would have been possible to take all coal districts in the United States as the basic area. Under such an arrangement, however, the districts in the Far West would have had their prices related to a national average cost determined to a very large degree by the tonnage produced by eastern districts with which they have little or no competition. The same situation would prevail with respect to the minimum price areas in the East, since there is normally little competition between them. There was apparently no advantage to be gained by using the industry as a whole as a cost area.

Congress evidently decided that an area larger than the district but smaller than the industry was necessary to achieve coordination. The factors considered by the legislators are not known. Roger N. Quirk pointed out that testimony before Congress indicated that the provision of the Act which related district price levels to minimum price area costs "was somewhat of an afterthought. The bill was originally silent as to district levels and these vital words were apparently only put in in order to give the districts a lead as to

the levels which they were to 'propose.'³² A study of the minimum price areas suggests that the legislators sought to bring into a single area those fields which were actively competing with each other for common markets.

Mr. Rostow contended that the average costs as computed for minimum price areas have "played little or no part in the establishment of minimum prices" and that "the cost averages for a minimum price area include so many thousands of items that their presence in the background of the price-fixing process has not interfered in the least with the indefinite revision of the prices for each mine subject to competitive pressure; if the cost criterion were of any practical importance in price making, one would expect it to limit the possibility of subsequent changes in prices, each of which would affect the supposed equivalence between costs and returns. Actually, the Division has felt free, in its lengthy price proceeding, to revise prices and price relationships at will, and without reference to the impact of such changes on the averages of return. While the cost determination might have been significant in justifying an increase in the general average of realizations, it had no concrete place in the haggling which fixed the level of individual prices."³³

In support of his contention Mr. Rostow disclosed that the Director of the Coal Division in justifying the use of interim cost figures in determining minimum prices recognized that a variation of as much as \$.25 per net ton in the cost average would have had "no effect on the proposal and coordination of minimum prices."³⁴

Granted that some adjustments were inevitable to bring about coordination, was it necessary to establish price areas, as in Minimum Price Area No. 1, that embraced districts whose costs ranged from \$1.84 to \$3.65 per ton? The Chief of the Economic Division of the Consumers' Counsel and his assistant economist stated³⁵ that "a return per ton in minimum price area 1 within five, six, or seven cents of the weighted average cost, on the basis of past distribution" in their opinion "might be considered an approximation of cost, under all the difficulties incident to setting up a schedule of hundreds of thousands of prices."

³² "Regulation of the Bituminous Coal Industry in the United States" (preliminary edition, mimeographed, June 1939), Historical Appendix, p. 90.

³³ *Op.cit.*, p. 573.

³⁴ *Ibid.*, page 573, note 73.

³⁵ Gordon and Webb, *op.cit.*, p. 280.

In commenting on the charge that the realization of several of the districts differs from the cost of the price area, the Director of the Coal Division pointed out:

“But Congress did not contemplate that finally the realization for each district would really correspond to the cost of the price area. The districts differ markedly in weighted average costs both from each other and from the price area. In providing that the 4-IIa prices [uncoordinated prices], which were important primarily as setting up relationships between coals, should have a realization to each district corresponding to the cost of the price area, Congress was merely outlining a mechanics of initiating the coordination process, with its considerable changes from the 4-IIa prices, at such a level as to facilitate consummation of coordination with the realization of each minimum price area approximating the cost of the price area.”³⁶

The authors are of the opinion that the use of district costs for establishing minimum prices would have given the low-cost districts a competitive advantage and would have negated one of the Act's major objectives—“to preserve as nearly as may be existing fair competitive opportunities.” It is, however, hard to justify the wide latitude allowed the price-fixing agencies in making changes in the minimum price structure based on average costs for some of the minimum price areas designated in the Act. It may be that active competition in common markets should not be the sole basis for the determination of such areas.³⁷

2) *Determination of uncoordinated minimum prices.* The Act assigned to each district board the tasks of classifying the various kinds, qualities, and sizes of coal produced in its district and of determining minimum prices f.o.b. mine for both kinds and qualities of coal and sizes of coal which were to be used later in coordinating the coals of those districts serving common markets. Each board, except for one labor member, consisted of operator representatives. The board's responsibility was to establish for its district a price structure which would bring the prices of the different grades and sizes of coal into proper alignment in terms of inherent qualities, general market considerations, and types of consumers. The proposed schedule stated a single price for each

³⁶ *Findings of Fact, Conclusions of Law, and Order of the Director of the Bituminous Coal Division Establishing Effective Minimum Prices and Marketing Rules and Regulations under the Bituminous Coal Act of 1937* (General Docket No. 15), Bituminous Coal Division, August 1940, p. 42.

³⁷ Incidentally, the term “Minimum Price Area” is not indicative of its function—not as good as “Basic Cost Area,” for example, would be.

grade and size regardless of where it was produced in the district or the market to which it was to be shipped. These proposed schedules for each district were then transmitted to the Coal Division, which modified them when necessary and then approved them. This process of fixing price differentials which reflected quality, size, and use is frequently called "classification"—a term that, strictly speaking, should be applied only to the initial grouping of like coals irrespective of their size and use.

Unfortunately the Act was silent on the procedure to be followed in classifying coals. Moreover, its lack of clear-cut criteria left the impression that the resulting minimum price structure was to preserve the status quo. The importance attached in the Act to existing relative price relationships would suggest that Congress intended that minimum price schedules should be arrived at on an empirical basis. For these reasons and because of the great complexity of the problem—the many factors involved in price determination, the great diversity of coals and mining conditions as well as the important role which judgment and an intimate knowledge of coals and markets played in the process—it was probably a wise decision on the part of Congress to turn this phase of the price-fixing procedure over to the industry. However, the fact that judgment played such an important part in price determination and that differences in judgments necessitated negotiation and compromise of conflicting interests of competing coal producers³⁸ would seem to have made it advisable to include one or two government observers on each of these boards. It also points to the need for a statement on the classifying procedure to be used and especially for standards and criteria whose meaning and use in that procedure are clearly understood.

3) *Establishment of coordinated minimum prices.* The proposed uncoordinated price schedules submitted by each of the 22 districts

³⁸ The nature of this conflict has been forthrightly stated by George B. Harrington, President of the Chicago, Wilmington and Franklin Coal Company: "I think it can be fairly said that the tendency of each individual operator as he approaches the coordination proceedings will be to want to hold the business he has, at a higher price, of course, and at the same time to try to put himself into a position to get at least part of someone else's business." ("Merits and Demerits of Federal Regulation of the Coal Industry," *Mining Congress Journal*, June 1939, p. 21.)

To the operator putting "himself into a position to get . . . someone else's business" presumably involved the assignment to his coal, in the appropriate minimum price schedule, of a price which relative to the prices of his competitors' coals was lower than had formerly been received. He might even be willing to take a price *absolutely* lower if he thought the increased business going to him would be great enough.

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were formulated primarily to show value relationships within the district itself and to establish a single price for each grade and size of coal irrespective of where it was produced in the district or the market in which it was to be sold.

In the establishment of coordinated minimum prices, on the other hand, the boards and federal agencies were primarily concerned with the markets to which coal was to be shipped. To ensure that the coals of any district would continue to sell on a fair competitive basis in any market in which it was ordinarily sold, the prices of all competing coals from every district had to be coordinated in common consuming markets. This involved consideration of other factors and criteria, among which transportation charges upon coal were especially important. It was through freight absorption and market area schedules that coals of the same quality were to be delivered at the same price in any given market—a process that was, for practical purposes, forced upon the Commission by what it believed to be the Act's requirement that the minimum price schedules must preserve existing "relative market values" in common consuming markets.

We may question the advisability of "freezing" the existing relative economic position of the many producers in this industry, but since this was a major objective of the Act then the use of freight absorption and numerous market areas was inevitable.

The Act, it will be recalled, specified that the task of coordinating the proposed price schedules was to be undertaken by the district boards, but provided that should they fail to do so the function was to be taken over by the government. The conflict of interests between operators in all but six districts and the absence of any procedure for reconciling them made it necessary for the Coal Division to assume the coordinating function. When the tentative coordinated minimum price schedules were formulated, the Division published them, held hearings, made necessary revisions, and recommended their installation to the Secretary of the Interior.

The delegation of the initial responsibility for the coordination of minimum prices to the district board was, on the whole, a sensible arrangement. Even though the district boards in the majority of instances were unable to develop coordinated price schedules, much of the actual work performed by them was helpful to the Coal Division, and their deliberations called attention to and helped to clarify the conflicting issues. Undoubtedly this arrangement speeded up the coordinating processes and resulted in more realistic minimum prices.

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4) *Adjustment of inequitable minimum prices.* Under the Act, minimum prices were to be subjected to modification by the Coal Division upon its own motion or upon complaint by any operator, producers' board, or the Consumers' Counsel. Operators dissatisfied with the price schedules or any part of them were entitled to a public hearing.

Experience under the first price determination, revoked in February 1938, disclosed that this arrangement imposed "a quite unmanageable burden of hearings" on the Commission. In fact, the protests of coal producers and consumers "literally overwhelmed" the Commission with hearings.³⁹ A heavy volume of protests, however, was to be expected inasmuch as the Commission established those minimum price schedules without holding final hearings as required by the Act.

The adjustment procedure seemed adequate to deal with requests for modification under the second price determination. An operator who had a reasonably good case for a modification of his minimum prices was granted a temporary modification while the Commission examined the case more closely with a view to making the modification permanent, discontinuing it, or further modifying the prices. Operators dissatisfied with the Division's final ruling could always appeal to a Federal Circuit Court of Appeals for redress.

5) *Revision of minimum price schedules.* The Act provided that the administrative agency "from time to time, upon complaint or upon its own motion, review and revise the effective minimum prices" in accordance with the standards prescribed for the original establishment of minimum prices. Thus the Division, upon presentation of satisfactory proof by a district board that a change in excess of \$.02 a ton had occurred in the weighted average cost of a price area exclusive of seasonal changes, was under legal compulsion to effectuate a corresponding increase or decrease in minimum prices. In other words, adjustments in minimum prices seemed to be mandatory only after it had been demonstrated that actual average costs of a nonseasonal nature had changed or when an increase in any cost item, such as a higher federal employment tax, could be predicted.

Donald H. Wallace warned against revisions in prices on the basis of "past recorded costs" and of preserving "past competitive relationships, without regard for future changes that will ensue as a direct result of such adjustments, to say nothing of adjustment

³⁹ Quirk, *op.cit.*, p. 154.

to developing trends and probable future conditions."⁴⁰ He pointed out that "in a dynamic, changing situation standards are to be regarded as a goal toward which things should move. The endeavor must be to prevent movement away from the standard and to approximate it as closely as possible." He added, "in an industry subject to as many changing influences as coal . . . this desirable result cannot be attained unless adjustments in prices are based, not solely upon the past, but upon the best possible estimate of probable future results." The truth of this observation is borne out by his analysis of the relation of determined cost to actual costs.⁴¹

Messrs. Gordon and Webb held that the procedural provisions of the Act to keep minimum price schedules in line with actual average costs of production were cumbersome and would not prevent an "unresponsive lag between changes in market conditions and the adjustment of prices to meet them"—a condition which they believed to be "the most serious defect in the act." They stated that "in a case of increased demand and higher production levels, . . . this lag might cost the consumer several millions of dollars before new cost levels could be determined and a lower price schedule established."⁴² Mr. Wallace, however, pointed out that "it seems probable . . . that only a small proportion of the total costs specified in the act would remain constant with marked increase in production over a few years and that the saving on overhead might be offset by higher unit labor expense and other costs."⁴³

As a practical matter, the lag between cost and prices in periods of increased demand and higher production would seldom create a problem for the regulating agency. We would expect the mine workers' union to continue the practice it followed in the late thirties and early forties of making demands on the operators of a magnitude which would absorb any average net operating margins that might be considered excessive.⁴⁴

Gordon and Webb observed that when, on the other hand, costs increase "due to a definite slump in consumption and production, no adequate means seem available, under the act, for the industry to cut prices promptly to hold business. In fact, any change in price

⁴⁰ *Op.cit.*, p. 465.

⁴¹ *Ibid.*, pp. 465-70.

⁴² *Op.cit.*, pp. 316-17.

⁴³ *Op.cit.*, p. 467.

⁴⁴ In 1939 there was a negative margin of \$.05 a ton; in 1940 the margin amounted to \$.01 a ton or about .5 per cent of average per ton realization, in 1941 to \$.07 or 3.2 per cent, and in 1942 to \$.08 or 3.4 per cent. These margins were not net incomes since interest on investment, taxes on income, excess profit taxes, and certain miscellaneous expenses had not been deducted. (See section D1b of this chapter for items included in average costs.)

would probably have to follow costs upward, thus intensifying the slump in demand and production."⁴⁵

They added that should the Division increase the price level when the demand for coal and working time fell sharply for reasons other than seasonal changes, "such increases in price" would "discourage sales of coal, while opening the door to incursions of unregulated, competing fuels." In other words, the Act required that prices be raised at a time when "sound business policy would dictate reduced prices to encourage all possible sales and hold the consumers for the coal industry." Such action, they added, would "not give promise of attaining the act's objective of 'promoting interstate commerce in bituminous coal' or 'to promote the use of coal and its derivatives.'"⁴⁶

Donald H. Wallace's comments on the impact of the revision procedure on cost levels when a slump in consumption and production occurs are pertinent. He pointed out that the effects of the "bootstrapping process" of increasing prices might tend to go undetected for a time because total sales revenue of mine operators might at first increase as prices are raised. This is made possible by the fact that the mine price of coal is substantially less than the delivered price, enabling the mine price to change considerably with only a relatively small percentage change in the delivered price. Thus, he wrote: ". . . if an increase in mine prices of 5 per cent and in consumer prices of 2 per cent were attended by a 3 per cent decline in consumption the total revenue received by operators would be about 2 per cent larger, although the total amount spent on coal by consumers was 1 per cent smaller. In these circumstances the total losses of operators would be reduced by the price increase even if their total expenses remained the same, with the 3 per cent decline in production. In proportion as expenses contracted, the reduction of losses would be greater."⁴⁷

We see then that even though consumption declines, returns to operators could be higher than formerly. This situation, particularly if expected by operators and consumers to continue, would tend to slow the rate of abandonment of high-cost mines and hasten the rate of decline in coal consumption. Over the long run there might be a permanent contraction of the market for coal.

⁴⁵ *Op.cit.*, p. 317. Donald H. Wallace points out that such cost increases are "not unlikely, for if cost of production were \$2 a ton, and overhead represented 10 per cent of the total, a drop of 10 per cent in production would increase costs by 2 cents a ton. (In 1938 there was a drop of 20 per cent in output)." (*Op.cit.*, p. 467.)

⁴⁶ *Op.cit.*, pp. 317-18. ⁴⁷ *Op.cit.*, p. 468.

This bootstrapping process, it is argued, tends away from, rather than toward, the achievement of maximum economic consumption. In the face of declining consumption, the principle of consumption maximization may well call for revision of prices, but not upward. Lower minimum prices are indicated if the decline in consumption is due to an increase in coal prices or reductions in the prices of competing fuels, and perhaps if the decline results from improvements in fuel economy. In the two latter eventualities, hastened retirement of high-cost mines is important.

In order to move toward maximum economic consumption, Mr. Wallace suggested, the price-fixing agency would have to be directed to consider the impact of prices on consumption and "to adjust minimum prices so as to bring as soon as possible in the future an approximation of average price to average cost at the lowest average price which would equate production and consumption. The standard for minimum prices should be in terms of probable future costs rather than past recorded costs."⁴⁸ We might point out, however, that basing minimum prices on future costs would involve the making of many judgments which would give rise to fundamental differences of opinion and lead to challenge in the courts.

To overcome the present procedural limitations in the revision of minimum price schedules, especially during periods of declining demand, legislators might well have considered the advisability of creating a policy board (representing operators, miners, consumers, government agencies, and the general public) whose recommendation would supersede the more rigid provisions of the Act, as written, when such emergencies occurred. Messrs. Gordon and Webb suggested that such regulating agency "be entrusted with authority to act upon its judgment without the necessity for going through such a long, time-consuming legal procedure. The authority might take the form of a declaration of belief and provision that the minimum price schedule might be changed tentatively, subject to the full proper procedure and final findings."⁴⁹

c. Other provisions of the Act. There were many provisions relating to the determination or administration of minimum price schedules. For purposes of appraisal many of them have no special significance. Discussion is limited to those that were subject to controversy or were particularly pertinent to the price-fixing and administrative functions.

⁴⁸ *Ibid.*, p. 469.

⁴⁹ *Op.cit.*, p. 319.

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1) *Geographic areas used in price determination.* A grouping of coal operations into producing and selling areas was necessary in order to deal with the many geological, mining, and marketing problems which confronted the price-fixing agencies. That this fact was recognized by the framers of the Act is evidenced by the provision for districts, common consuming market areas, and minimum price areas.

The districting prescribed in the Act followed the pattern developed under the National Recovery Administration and the Bituminous Coal Conservation Act of 1935. In general, this arrangement of districts was satisfactory. It would have been helpful if Districts 7 and 8 had been constituted so as to include only low-volatile mines in District 7 and only high-volatile mines in District 8. The failure to effect such a separation made it necessary for all statistical data in these two districts to be compiled separately for low- and high-volatile mines.

The district boards and the Coal Division found it expedient to regroup coal producers into subdistricts, freight-origin districts, and their component freight-origin groups. These groupings were based upon the recommendations of the district boards or their representatives. In general, they followed logical lines, conformed to traditional practice, and served a useful purpose. Without them, particularly the freight-origin groups, the establishment of coordinated minimum prices would have been an impossible task.⁵⁰

Inasmuch as the Act did not define or set up "common consuming market areas" and the operators in some districts were unable to agree upon such areas, the task of delineating them was taken over by the Coal Commission. These areas were based in large measure on those established under the NRA Coal Codes and the 1935 Act. The controlling factors in their determination were competition, type of transportation used, and especially the complicated structure of freight rates which governs in large part the shipment of coal by rail to consuming markets.⁵¹ Such market areas are essential to the pricing procedure.

Important also were the minimum price areas, which were created by the Act to provide the cost basis for the coordination of minimum prices. The use of these areas was examined early in this chapter and needs no further consideration.

2) *Administrative agency established to effectuate the Act.* The Act established a National Bituminous Coal Commission of seven members, of whom two were required to have had experience as

⁵⁰ See the discussion in Chapter V.

⁵¹ *Loc.cit.*

producers and two had to be experienced coal mine workers. This arrangement, which gave the representatives of the operators and of the miners' union a majority voice on the Commission, has been objected to on the grounds that representatives of the beneficiaries of the Act should not be granted a controlling vote on the regulatory body.

Under the Act members of the Washington staff were to be appointed under civil service regulations except for "the secretary, a clerk to each commissioner, the attorneys, the managers and employees of the statistical bureaus . . . and such special agents, technical experts, and examiners as the Commissioners" might require. (Sec. 2a.) Numerous instances of appointments of a "political" character have been called to the attention of the authors. That the exceptions were substantial is supported by the steps taken by the Commission in 1938 to bring virtually its entire Washington staff under civil service.

This Commission was abolished on July 1, 1939 by the President's second reorganization order and its functions transferred to the Secretary of the Interior, who established a Bituminous Coal Division and placed a director in charge to administer the Act.⁵²

With the exception of certain spokesmen for the miners' union, there is general agreement that, on the basis of their respective records, the Coal Division was the more businesslike administrative agency. One of the severest critics of the Act and this experiment in minimum price fixing wrote, "the new Coal Division has been a tremendous improvement over the old Commission in efficiency and effectiveness, and dilatory tactics may be expected to disappear, if the Act becomes permanent."⁵³

3) *Consumers' counsel.* It will be recalled that the Act provided for a Consumers' Counsel to represent the interest of the consuming public. He was authorized to appear on behalf of domestic and industrial consumers in proceedings before the Commission, to

⁵² Neither the reorganization order nor the subsequent Act of Congress granted the Secretary authority to transfer these functions to some other person or agency. There is a difference of opinion as to the legality of the Secretary's action in creating a Coal Division and assigning to it functions—notably, that of establishing minimum prices—which the Act specifically delegated to him. The Director of the Coal Division apparently recognized the legal problem involved and presumably attempted to meet it as far as the determination of minimum prices was concerned by providing that complaints relative to established prices could be appealed to the Secretary himself. There is considerable doubt as to the propriety of this procedure, since the minimum prices were established, not by the Secretary as provided in the Act, but by the Coal Division. (Michie, *op.cit.*, pp. 30-31.)

⁵³ Rostow, *op.cit.*, p. 577.

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conduct independent investigations of matters pertaining to the industry and the administration of the Act, to require the Commission to furnish him needed information, and to appear before the Interstate Commerce Commission when freight rates affecting bituminous coal consumers were under consideration. The Counsel was independent of the Commission and later the Coal Division.

The establishment of an agency which granted statutory representation to consumers in the process of regulating an industry seems to have been a wise decision. It was especially important under the commission form of administration since the controlling vote rested with the representatives of labor and industry. It was necessary that some competent arm of government should safeguard the interest of consumers, particularly the small consumers who often had neither the knowledge nor the funds to intervene in their own behalf.

During the initial price-fixing process in the winter of 1937-1938, the Commission refused, contrary to the clear requirement of the Act, to furnish cost information requested by the Counsel. This action as well as the Counsel's opposition to the manner in which the initial minimum prices were established impaired the working relations between the two agencies, which at best were difficult to maintain on a harmonious level because of the role assigned to the Counsel. It required a nice balancing of values for him to determine how far to push the claims of consumers, particularly commercial consumers, without impairing the efforts of the Commission to bring stability into the industry. The absence of clearly stated criteria to govern the determination of minimum prices and of bench marks for ascertaining what constituted "discrimination" or "unfair" prices added to the Counsel's difficulties.⁵⁴

The information necessary to make an accurate appraisal of the accomplishments of the Office of the Consumers' Counsel is not available. That this agency served a useful purpose is shown by some of the functions and activities it performed:

It represented the interests of both large and small consumers at cost hearings.

It made studies of

- Prices paid for locomotive fuel in 1937
- The evidence presented at cost hearings
- The boundaries of market areas proposed by the Coal Commission

⁵⁴ Quirk, *op.cit.*, pp. 82-84.

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-The problem of ascertaining what items should be included in reasonable costs of selling

It cooperated with the Commission

-In developing rules and regulations for reporting costs

-In checking the computation of total costs for all districts

-In making spot checks of individual mines to ascertain the degree of accuracy and representativeness of the cost data

It compiled and distributed information of use to the consumers of coal and published the "Coal Consumers' Digest" and "Consumers' Notices."

It followed the work of the Commission and Division and registered protests when in its opinion (a) the requirements of the Act were not followed, or (b) the procedures utilized by these agencies did not conform with what was deemed in the best interest of the consumers; and it prodded these agencies to take action, when for example, as in 1941, it urged the Coal Commission to hold hearings to determine whether maximum prices should be established.

The Counsel estimated that the activities carried out by his office saved the consumers of coal at least \$33 million between October 1, 1940, and December 31, 1942.⁵⁵

4) *Hearings under the Act.* One of the reasons for the long delay in price determination was the number of hearings that the price-fixing agency was required to hold. Hearings were necessary (1) to ascertain whether the coals of North and South Dakota were lignitic, (2) to determine in which states bituminous coal, produced and consumed within the state, affected interstate commerce in coal, (3) on production costs, and (4) on the tentative coordinated minimum price schedules. Once the price schedules had been announced, the claims and protests of aggrieved producers and consumers became the occasion for more hearings, and subsequently additional hearings were necessary to determine the need for a general revision of the minimum price schedules and for establishing maximum prices. These hearings were not only time-consuming but added a great deal of work to the price-fixing agency, since they required much planning, careful preparation, and a written decision setting forth the facts of the case together with a carefully reasoned statement supporting the conclusions reached.

The practice of permitting those affected by an action of a government agency to demand a hearing, first by the agency and later

⁵⁵ *Annual Report, United States Office of the Bituminous Coal Consumers' Counsel for the Period November 1, 1941-December 31, 1942, p. 2.*

in the courts, is deeply rooted in American constitutional law and as Roger Quirk pointed out "may probably be considered to flow from the Constitutional provisions that 'no person' may be deprived of life, liberty or property 'without due process of law'. . . ."⁵⁶ Unfortunately, the verbatim written "record" of the proceedings at the hearing and the written "findings of fact" became "the basis on which any higher appeal court makes its decision. Hence, the great importance attached by the parties appearing at the various proceedings before the Commission to getting their extensive arguments included in the 'record.' It will readily be seen that proceedings on such a basis can be neither informal nor expeditious."⁵⁷

Eugene V. Rostow called attention to a preliminary monograph presented to the Attorney General's Committee on Administrative Procedure which contended "that some improvement might be achieved in the administrative procedure of the Coal Division by substituting 'conferences' for 'hearings' and thus reducing both the time and the bitterness of the price fixing process." The thought of those recommending the procedure was "that the conference should be used as a pre-hearing device to narrow the issues before a final, more or less formal public hearing." Mr. Rostow stated that "the recommendation seems to offer no real hope for speed." He added that those advocating it concede "that the bitterness of the competitive struggle in the coal industry may make the development of pre-hearing procedure a rather empty reform, adding one more occasion for violent controversy to the proceeding. . . . But the basic reason for the lengthiness of the procedure is the scope of the job imposed on the Division by the Act. There is no way of fixing thousands of coal prices in a hurry, if all the standards of the Act are to be served. Nor can hearings and the right of participation in them be generally denied; each operator has too big a stake in seeing that the standards of the Act are complied with."⁵⁸

In our zeal to ensure justice, we have perhaps excessively formalized the hearing procedure in the United States. We seem to have leaned over backward in our effort to avoid injustices to individual coal producers and in doing so placed the Commission (Division) in the position of defending itself on a great variety of minor matters. This procedure played into the hands of the irreconcilable producers who did not like the Act and who, therefore, seized upon every legal technicality that would postpone the promulgation of minimum prices. How to protect the essential interests of the coal

⁵⁶ *Op.cit.*, General Appendix, p. 22.

⁵⁷ *Ibid.*, pp. 29-30. ⁵⁸ *Op.cit.*, p. 577.

producers and consumers without providing opportunities for legal obstruction is an exceedingly difficult problem. The authors have no solution to offer. The practice of granting temporary relief in claimed hardship cases while an agency investigation is undertaken may serve as a useful device.

5) *Enforcement provisions.* Experience with price fixing under the NRA code for this industry indicates that the enforcement of minimum price schedules is one of the most difficult problems of control. Under both the NRA code and the Bituminous Coal Act of 1937 the function of selling was left in the hands of individual producers and distributors. Under such an arrangement there must be a high degree of voluntary compliance on the part of producers and wide consumer acceptance. These conditions are hard to achieve in a highly competitive market subject to drastic changes in sales volume. An alternative arrangement which would greatly simplify the enforcement problem is the use of central marketing agencies supervised by a government agency, but this possibility was not considered by Congress and probably would have been regarded as a departure from private enterprise.

There are many ways of evading minimum prices. The practice of substituting a higher priced coal on lower priced contracts will be discussed under the heading of distressed coal. The Act enumerated thirteen unfair methods of competition which were declared to constitute violations of the Coal Code. Congress sought to preclude the payment of various kinds of rebates, assumption of freight charges, granting of adjustments, discounts, brokerage commissions and other discriminatory allowances, the extension of special services or privileges to selected buyers and similar unfair marketing practices. (Sec. 4-IIi.) The Act also made it unlawful to sell coal below the established minimum prices. (Sec. 4-IIe.)

The nub of the enforcement problem is the detection of evasion. One device for achieving this purpose is the checking of sales invoices to contracts and spot orders which the Act required be sent to the Commission's statistical bureaus. (Sec. 4-IIa.) This device, however, had limited value, since substitution, delivery of more coal than billed, and certain other practices could not be revealed in this manner. Detection was also made possible by means of complaints passed on by individual producers, district boards, or the Office of the Consumers' Counsel. Another method was a system of unannounced inspection of sales records at the offices of producers or distributors, but this method was of little value in the case of small operators who keep inadequate records and ship by truck.

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Enforcement under the Act was to be attained by means of cease-and-desist orders enforceable in the courts (Sec. 5b and Sec. 6c) or by revocation of Code membership (Sec. 5b). Any producer who failed to become a Code member had to pay a 19½ per cent tax on all coal sold by him (Sec. 3b), and any Code member who violated the provisions of the Act had to pay twice that tax on coal sold in violation of the Act as a condition to reinstatement as a Code member. (Sec. 5c.) Wholesalers guilty of evasion were suspended from the register made up of all distributors who had agreed, before registering, not to engage in evasive practices.⁵⁹ A later modification of Marketing Rules and Regulations (Order of May 2, 1942) authorized the Compliance Coordinator, after hearings, to issue cease-and-desist orders and to suspend, cancel, or revoke registration.

The effectiveness of these enforcement measures will be discussed in the section on appraisal of the policies and procedures used by the Coal Division to effectuate the Act.

6) *Determination of maximum prices.* The Act authorized the Commission to establish maximum prices when conditions made it necessary "to protect the consumer of coal against unreasonably high prices." Such maximum prices had to "be established at a uniform increase above the minimum prices in effect within the district at the time, so that in the aggregate the maximum prices shall yield a reasonable return above the weighted average total cost of the district: *Provided*, That no maximum price shall be established for any mine which shall not yield a fair return on the fair value of the property." Donald H. Wallace remarked that "the proviso seems to be controlling and it may conflict with the reasonable return standard. For the standard the district is the unit; for the proviso, the mine is the unit. If the whole section should be taken to mean that no level of maximum prices could be fixed in a district which would make it impossible to fix maximum prices for any one operating mine in that district that would yield a fair return on the fair value of the property of that mine, then the fixing of maximum prices so as to give in the aggregate merely a reasonable return above the weighted average cost of the district might be rendered impossible."⁶⁰

This provision also fails to make it clear whether a uniform increase refers to an increase in cents per ton or a percentage in-

⁵⁹ Marketing Rules and Regulations issued by the Commission, March 24, 1939. (*Third Annual Report under the Bituminous Coal Act of 1937*, . . . June 30, 1939, pp. 19 and 20.)

⁶⁰ *Op.cit.*, p. 472.

crease. Messrs. Gordon and Webb called attention to the fact that "a uniform increase in cents per ton over whatever minimum prices might be in effect would have little, if any, effect upon the coordinated relationships already established. A percentage increase would definitely affect price relationships and would also be more difficult to execute and use."⁶¹

During World War II, the Administration, when confronted with the choice of setting a ceiling on prices either under the Coal Act of 1937 or the Emergency Price Control Act of 1942, chose to utilize the OPA machinery.

It is generally believed that the OPA policy of setting maximum prices in relation to actual prices that had prevailed in a suitable base period was preferable to the method, outlined in the Coal Act, of setting maximum prices at uniform distances above the minimum prices in the schedules. A number of reasons support this position.

First, the OPA gave the government greater freedom in setting prices and permitted quicker action.

Second, as actual prices rise above the minima there develops a lack of uniformity in the spreads. Maximum prices at a uniform level above the minima are therefore unrealistic.

Third, the provision in the Coal Act of 1937 that "no maximum price shall be established for any mine which shall not yield a fair return on the fair value of the property" was generally thought to be a serious limitation. The determination of a fair valuation of all coal mines would be a herculean task involving years of work. If the Coal Division had established maximum prices under this section of the Act and had granted each coal operator the right to protest the prices set for his mine, it would have been hopelessly entangled in endless litigation. Such an arrangement might well have encouraged speculative entrepreneurs to open mines with very high costs in expectation of obtaining profits on marginal operations during an emergency. It is quite possible, also, that a price high enough to yield a fair return on the fair value of the property in the case of high-cost mines might be one at which no coal could be sold. In any event, any maximum price which would permit high-cost mines a "fair return on the fair value of the property" would

⁶¹ *Op.cit.*, p. 309. It should be pointed out that persons associated with this industry think of both price and wage differentials in terms of cents per ton which must be maintained over time. The differentials in the prices of coal in the various size groups are commonly expressed in multiples of five cents per ton. Thus, an addition of \$.20 to all minimum prices in a given economic area would change the levels but retain the old differentials. Percentage increases would change the levels and distort the old differentials.

give rise to very handsome profits to the owners of low-cost mines.

We must assume that the framers of the Act believed that a coal shortage was a remote possibility and therefore did not bother to deal realistically with the problem. Certainly the provisions in the Act were unworkable unless producers and consumers were willing to accept the maximum prices established thereunder. Messrs. Gordon and Webb are of the opinion that "a cost-plus-a-reasonable-profit basis would certainly be a great deal more expedient and practicable" basis for setting maximum prices, especially so if such prices were "based upon the weighted average cost of each producing district."⁶²

In concluding this appraisal of the Coal Act as an effective instrument for price fixing, it may be said that the criteria as set forth in the law and some of the procedures established for determining minimum price schedules and for dealing with related problems were inadequate in important respects and added materially to the difficulties of administration.

Certainly the noncost criteria were conflicting and their meaning ambiguous. No attempt was made in the Act to weight their relative importance; nor was the stage of the price-fixing process at which each was to apply or the manner of application specified. Clarification of the meaning of these standards plus further guides in applying them would have eliminated much of the controversy over interpretation, would have revealed the conflicts in purpose, and would have greatly simplified the work of the administering agencies. There is considerable doubt whether the application of the criteria could have achieved the objectives of the Act and would have resulted in maximum economic consumption. The framers of the Act did not (1) establish standards or guides on the levels of consumption, production, and capacity at which current revenue and current expenses were to be equated or (2) make provision for consideration of the effect of the price level on consumption, rate of utilization, and capacity and consequently on costs. As a result of these omissions, further changes in minimum price levels were required.

No account was taken of profits from company-owned miners' dwellings and company stores in establishing minimum prices. Moreover, the income tax bases for computing depletion and depreciation permitted operators in certain years to charge excessive depletion and enabled operators whose output deviated substantially

⁶² *Ibid.*, p. 310.

from their customary production to report costs out of line with usual costs.

It is the authors' opinion that certain of the minimum price areas created by the Act, notably Minimum Price Area 1, embraced districts of such widely divergent costs that the price-fixing agencies were given too much latitude in making changes in the minimum price structure based on average costs. It is also believed that the Act was deficient in failing to specify a procedure for classifying coals and in not including government observers on the district boards assigned the task of establishing uncoordinated district prices and of developing later coordinated price schedules for various consuming market areas.

The lack of a clear understanding of the emphasis to be placed upon the preservation of existing relative market values in common consuming market areas led the Coal Division to make use of freight absorption and market area schedules in order to achieve coordination, with the result that past relative economic relationships tended to be frozen. It was also unfortunate that the Act related changes in minimum prices to actual changes in costs, thereby disregarding estimates of the impact of other factors and conditions which would affect future costs. Obviously, there are dangers in a dynamic industry in adjusting minimum prices to past costs and in establishing them in such a way as to preserve past relationships. The procedure for price revision was cumbersome and unsuited for dealing with a period of falling demand and production. Of real concern is the fact that in such periods decreasing production might well raise costs and occasion a rise in price schedules, thereby exaggerating the industry's depression, defeating the objective of maximum economic consumption, and pointing up the importance of adjustment of prices in the light of their effects on future consumption.

Experience under the Act has proven that the administration by a Coal Division under the general direction of the Secretary of the Interior was far more effective than under the seven-member Coal Commission. The writers question the wisdom of placing the controlling votes of a commission in the hands of persons who were representatives of the chief beneficiaries of the Act.

The procedural requirements for numerous hearings by the price-fixing agency delayed the process considerably, added greatly to the work of the agency, forced it to defend itself in many minor matters, and enabled operators who opposed the Act to delay final price setting through legal obstruction.

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The provisions in the Act for the setting of maximum prices when necessary to protect the consumer are of a nature as to suggest that Congress felt the need for such regulation too remote to require realistic treatment. The requirement that maximum prices be set at a uniform increase above the minimum prices in effect so that the maximum prices would yield a reasonable return above average costs for the district was unworkable, as was the provision that the price set for any mine had to yield a fair return on property value. Determination under this proviso would require years of work and endless litigation, provide great profits to low-cost mines, and encourage the opening of very high-cost mines. Maximum prices at a uniform level above minimum prices are unrealistic because of the lack of uniformity in the spread which develops as prices rise above minima.

Any appraisal of this Act should recognize that its framers did write a law that enabled its agencies to establish minimum prices in an industry perplexed by many problems. Here are found not only the factors which commonly determine prices in manufacturing industries but also the special conditions under which minerals are extracted. The writing of such a law was a real achievement.

Because the task was exceedingly difficult, the framers could hardly have foreseen all the problems that arose or have developed the most suitable formulae for their solution. Many of the limitations set forth above are those that became apparent as a result of the application of the criteria and procedures of the Act to the construction of minimum price schedules.

2. APPRAISAL OF POLICIES AND PROCEDURES UTILIZED TO EFFECTUATE THE ACT

Having completed our analysis of the Act as an instrument for price fixing, we are now ready to examine the policies and procedures used by the administrative agencies assigned the task of executing its provisions.

Any evaluation of policies and procedures should be made in the light of (1) the shortcomings of the Act, (2) the delaying tactics of producers and consumers who felt that their interests were not served by this legislation, (3) the enormous difficulties confronting those assigned the responsibility of administering the Act, and (4) the limited supply of personnel competent to deal with price-fixing problems in this industry.

a. *Immensity of task.* It is important for the reader to have some understanding of the magnitude of the task confronting the ad-

ministrative agencies. This experiment in minimum price fixing encompassed not just a few large corporations but "12,000 code members, shipping annually from 350 to 400 million tons of bituminous coal from more than 30 States. . . ." The prices to be established were to apply "to coals moving by every conceivable manner of transportation and for any widespread use; coal moving to its destinations by rail, truck, river, lake, tidewater, or a combination of these methods; . . . shipments for use as railroad locomotive fuel, in byproduct coke ovens and other coke-producing plants, for bunker or vessel fuel, and for general industrial, commercial, and domestic use."⁶³ These 12,000 code members sold their product to 90,000 carload lot buyers and directly or indirectly to millions of retail consumers.

Bituminous coal is not a standardized commodity. There is "an infinite variation in burning characteristics, coking qualities, sulphur and ash content and other characteristics. . . . There are also a great multiplicity of sizes."⁶⁴ Moreover, the character of coal is not fixed solely by its physical properties. The equipment in use must also be considered. As Walton H. Hamilton pointed out:

"Large industrial consumers run boiler tests on fuel before they enter into annual contracts; the chemical analysis may show one thing and the practical test quite another. Thus a coal may be rated as superior in one plant; where another type of equipment is used, it may be mediocre or poor. Ordinarily, in a particular consuming area, equipment is developed to suit the coals which have entered in the past. If new coals can penetrate the market, they may be at a price disadvantage irrespective of their quality. Not only are they unfamiliar and lack 'consumer acceptance'; the character of the burning equipment may not permit a full utilization of their qualities. Thus the engine, boiler, furnace through which coal is converted is an aspect of its identity."⁶⁵

It is apparent, therefore, that those who administered the Act had to determine costs and fix prices for a product whose value varied with its intrinsic qualities, its size, the use to which it was put, and often the equipment in which it was burned. The task was further complicated by the large number of producing units, the decentralization of the industry, wide variations in geological and mining conditions, pronounced differences in markets served, as

⁶³ *Third Annual Report under the Bituminous Coal Act of 1937, . . . June 30, 1939*, p. 17.

⁶⁴ *Annual Report of the Secretary of the Interior, . . . June 30, 1941*, p. 182.

⁶⁵ *Op.cit.*, p. 597.

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well as an extremely complicated system of freight rates under which the rate per car-mile varies depending upon the length of the haul, the territory served, and other considerations. In addition, the price-fixing responsibilities had to be carried out in accordance with criteria generally acknowledged to be ambiguous and conflicting. Finally, all interested parties could demand full and fair hearings during any of the major processes of administration.

b. *Preliminary education of producers and consumers.* We would have expected the Commission, given a task of such magnitude and complexity, to begin its work with a program of preliminary education of producers and consumers. Such a program could well have included a statement setting forth the fundamental requirements of the Act concerning the structure of coal prices to be established and the steps to be followed in determining minimum prices. It could have set forth standard terminology and presented an informed discussion of the criteria to be used, their lack of clarity and consistency, the Commission's opinion as to their meaning and relative importance as well as the manner and the stage of the price-determination process in which they were to be used. It could have recommended to advantage the procedures to be followed in preparing coal classifications, uncoordinated prices, and coordinated minimum prices. The recommended procedures should have informed the district boards of the action to be taken with respect to size groups, quality classifications, value as to uses, and other related matters.

It may be argued that the very complexity of the task assigned the Commission, lack of experience with minimum price fixing, and the ambiguity of the Act's provisions made such a program of education unwise, since it would lay the Commission open to challenge before the courts over its interpretation of the Act's intent and procedures. In answer it may be pointed out that the Commission included in its membership representatives of producers and employees and that it was in a position to obtain the assistance of highly competent constitutional lawyers, technical consultants in coal, and price economists. Conferences with representatives of the industry, even if they could not have obtained agreement on price-fixing policies and procedures, could have explored the relative merits of the possible courses of action to be followed in price determination and the factors and problems to be dealt with in each of the basic steps involved in the process. Besides their educational value, such conferences undoubtedly would have influenced the policies and methods used by the district boards. Certainly the fail-

ure to undertake such a program did not protect the Commission against legal action by producers and consumers opposed to federal regulation.

c. *Application of price-fixing criteria or standards.* It will be recalled that the criteria set forth in the Act were expressed in vague and general terms. It was not clear which factors were to be used in classifying coals or the weight to be assigned to them. Even the controlling purpose of price determination was subject to dispute. Some argued that the Act required the Commission to preserve each operator's existing markets and business; others maintained that the minimum prices to be established should provide "a fair field and no favor." The phrase "existing fair competitive opportunities" could be used to support both contentions, depending upon whether the emphasis was placed upon the qualifying term "*existing*" or "*fair*." Under these circumstances, the application of the Act's criteria by the price-fixing agencies is of especial interest.

In the initial price determination (set aside by the Commission as the result of court rulings suspending the established minimum prices of large groups of consumers), the Commission's instruction for the classification of coal stated that the district boards in grouping their coals should give "due consideration" to proximate analyses, physical characteristics, and characteristics of performance, but not to the use of coal for any particular purpose or any particular types of equipment. It also refused to admit market history and sales experience as factors in classification. There was no statement of the procedure to be followed or definition of the terms "characteristics of performance" and "physical characteristics." Moreover, there was no discussion of the Act's criteria or the weight to be attached to them.⁶⁶

In its second attempt to fix prices, the Commission was more cautious. It published a "General Outline of the Procedure to be Followed in the Re-establishment of Prices and Marketing Rules and Regulations." This outline set forth the basic steps to be followed in the price-fixing process. The Commission then released certain general rules and regulations to be followed in classifying coals and determining uncoordinated prices, most of which, however, had no bearing on the basic procedure to be utilized in carrying out these tasks. Instead of listing the factors to be considered in the classification of coals as did the initial order in 1937, the Commission merely recapitulated the price-fixing provisions of the Act and supplied a sample schedule showing the desired type and

⁶⁶ See the discussion in Chapter VII.

arrangement of the data.⁶⁷ The individual boards, in the absence of specific instructions from the Commission, were given a relatively free hand to develop an appropriate method for arranging their coals in accordance with their own interpretation of the Act's provisions.

As the task of developing minimum price schedules progressed, the price-fixing agencies found it necessary "for practical purposes and to simplify consideration of their meaning," to classify the Act's standards into the following three groups:

—"Standards relating to realization" which served "the ultimate end that the minimum prices yield a return per net ton approximating the weighted average cost per ton of each minimum price area."

—"General and basic standards of fairness and reasonableness against which the minimum prices must be judged." Under this designation were included the criteria that were to be utilized in developing coordinated minimum prices which would (a) be determined "upon a fair competitive basis," (b) "be fair and equitable as among producers and districts," (c) "not permit dumping," (d) "have due regard for the interests of the consuming public," (e) "preserve, as nearly as may be, existing fair competitive opportunities," and (f) "reflect, as nearly as possible, the relative market value of the various kinds, qualities and sizes of coal."

—"Specific factors" which were to be "weighed in fixing minimum prices conforming to the general standards." These factors which were set out by Congress, without limitation, included "the requirement that there be taken into account values as to uses; seasonal demand; transportation methods and charges 'and their effect upon a reasonable opportunity to compete on a fair basis'; and competitive relationships between coal and other forms of fuel and energy."⁶⁸

The Director of the Bituminous Coal Division recognized that "all of the standards set out above" had to "be applied" and that "they must be construed as a whole" but evidently concluded that in applying these standards, which were obviously overlapping, some fundamental principle must be employed. He concluded that "in the last analysis the judgments which must be made turn upon the statute itself, . . . and its direction that the prices must be fair

⁶⁷ See the discussion in Chapter VII.

⁶⁸ *Findings of Fact . . . and Order of the Director . . .*, pp. 13-14.

and just; that they must, so far as possible, maintain and reflect existing relationships among the various coals unless those relationships are not 'fair.'” The established prices were “effected upon the basis of methods” which carried out “this dominant, fundamental direction.”⁶⁹

The Coal Division was severely criticized for the emphasis it placed upon existing competitive relationships. Eugene V. Rostow contended that the Coal Division “construed the phrase ‘existing fair competitive opportunities’ as if it were written ‘existing competitive opportunities.’” He pointed out that this criterion was but “one of a dozen standards enumerated in the statute with equal emphasis,” yet the Division “made it the touchstone of propriety in every phase of its control, overriding all others in case of conflict. . . .” Using the distribution of coal that existed in 1937 as a guide, the Division, he claimed, “has proved anxious, over and over again, not to deny a producer access to any market in which he has been selling coal; conversely,” it was “reluctant to allow a producer to increase his share of any market, if competing producers” protested. He added:

“This emphasis is the more remarkable in view of one of the few changes in the 1935 Act made at the time the 1937 Act was enacted. Section 4-IIb of the 1935 Act provided that minimum prices should be coordinated with reference to the several standards now included in the subsection—the kind, quality and size of coal, the relative market values of coal at points of delivery, the absence of prejudice or preference among districts—to the end of affording the producers in the several districts substantially the same opportunity to dispose of their coals upon a fair competitive basis as has heretofore existed.’ 49 Stat. 991,997 (1935). In the 1937 Act, this language was abandoned for the formula: ‘and shall preserve as nearly as may be existing fair competitive opportunities.’ Section 4-IIb.”⁷⁰

Undoubtedly, the Coal Division did attach considerable importance to the “existing fair competitive opportunities” standard. In his testimony before the Committee on Ways and Means of the House of Representatives concerning the extension of the Act, H. A. Gray, Director of the Division, admitted that “the historic flow of coal has not been disturbed” and pointed out: “. . . I did not think that I had a mandate from Congress to tear the coal business into 15,000 pieces and then try to put it together again upon some

⁶⁹ *Ibid.*, pp. 13 and 15.

⁷⁰ *Op.cit.*, p. 578, text and note 88.

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theory which had never been tried before. I figured that we had a mandate from Congress to raise the level of prices in the coal business to its average cost, an average cost with no profit . . . and to maintain the flow of coal so that the various price areas and the various districts got that cost back in money realization. They could not get back the money realization if we disturbed the amount of coal that they sold."⁷¹

In his *Findings of Fact, . . . and Order*, the Director was more precise in his statement of the guiding policy of the Division in the application of the Act's standards. There he stated:

"Congress was interested in preserving for producers their existing fair competitive opportunities. However, it did not intend to perpetuate exactly the same state of affairs which existed under free and open competition. The administrative agency was not instructed, and it has not attempted, to remake the industry anew, or to set prices upon its conception of industry efficiency or the advantages of a planned economy. Certain large inequalities in prices have characterized the industry under free competition as a general and fairly constant matter—distinctions in f.o.b. mine prices according to use; seasonal demand; remoteness of markets and meeting of additional competition therein; etc.—and likewise characterize the pattern of the established minimum prices."⁷²

The role of clearly stated objectives and definite criteria in minimum price legislation is not agreed upon by all students of the Bituminous Coal Act of 1937. Roger Quirk expressed the view that "it might be wiser to lay down much less specific criteria," and also stated that "it is obviously impossible to frame all-embracing and completely unambiguous words which will give a completely clear lead to a central price-fixing authority. The most practical course is surely to frame somewhat general words, perhaps more general than those in the Act, and leave it to the Commission to interpret them wisely."⁷³

The writers, on the other hand, believe that because the objectives and standards set forth in the Act were neither clear nor consistent the administering agencies were reluctant to lay down pricing policies and standard procedures or to make changes in the existing price structure. In our opinion, the history of minimum price fixing under the Act of 1937 shows that the goals were not clearly stated and the criteria set forth were decidedly inadequate.

⁷¹ *Extension of Bituminous Coal Act of 1937, Hearings on H. J. Res. 101, Revised, U.S. House Committee on Ways and Means, 77th Cong., 1st sess., March 1941, p. 599.*

⁷² P. 15.

⁷³ *Op.cit.*, p. 162 and Historical Appendix, p. 98.

d. *Determination of costs.* Since minimum prices were to be related to costs, it is pertinent to ask—How valid were the “determined costs” used by the Commission and its successor? The Act provided that these prices were to be based on cost data for 1936 adjusted “as may be necessary to give effect to any changes in wage rates, hours of employment, or other factors substantially affecting costs, exclusive of seasonal changes, so as to reflect as accurately as possible any change” subsequent to January 1, 1937. (Sec. 4-IIa.) Did the adjustments that were made take into account all factors “substantially affecting costs,” that is, the forces that operated to reduce as well as those working to increase costs? Here we are concerned only with the second cost determination begun in the spring of 1938—the costs used in the determination of the minimum prices that were made effective on October 1, 1940.

1) *Collection and compilation of cost data.* The determined costs were based on data secured from coal operators concerning the costs of production, preparation, sale, and distribution of bituminous coal for 1936, which were adjusted by the district boards for subsequent changes—primarily basic adjustments in 1937. The cost data for 1936 (and later years also) were reported to the statistical bureaus of the Commission on forms and in accordance with instructions prescribed by the Commission. The Bureau of Research and Statistics, a department of the Commission, checked the 1936 cost data for mathematical errors; it then reviewed the costs of particular producers, comparing them with those of other producers whose mining operations in the same districts were similar. The 1936 cost data were then returned, together with cost data for the last nine months of 1937, to the district boards. The Commission made a test audit of all cost items, and ordered inconsistencies and inadmissible entries to be removed. The data were made available to the Consumers’ Counsel for critical examination. After further revisions, the costs were sent to the district boards to replace the tentative data that had been sent earlier. The Commission computed—independently of the work of the various boards—weighted average costs of the ascertainable tonnage of coal produced in each district. The district-adjusted costs, later revised following the cost hearings, were used by the Commission to compute the “determined” weighted average costs for the nine minimum-price areas.

2) *Comparison of reported and determined costs.* The Commission was in a very good position to see that reported costs were accurate and its “determined costs” reasonably reliable. It prescribed

the forms and prepared the accompanying instructions. It had at its disposal cost data for the last nine months of 1937, showing the actual changes that had occurred in that year. Finally, the year 1938 was free of basic changes in wages, hours, and conditions of employment, but not, as we shall see, of changes in volume of production, mechanization, and mining methods.

Table 81 presents the reported costs for 1937, 1938, 1939, and 1940, and the determined costs announced in July and August 1938 and those announced in May and June 1939. The 1939 determined costs were used in the establishment of minimum prices. The determined costs are the revised adjusted district costs arrived at by the district boards and modified on the basis of evidence submitted at cost hearings. The reported costs are those compiled by the district boards from cost data submitted to them by the Commission and used by them to compute the adjusted costs. It was the determined costs, and not the reported costs, that were used in establishing minimum price schedules.

As instructed by the Commission, the district boards submitted their adjusted costs in late April of 1938. The Commission held cost hearings in July and August and, on the basis of evidence submitted at the hearings, ordered disallowances and made revisions. A legal dispute over the right of the Commission to disclose the cost data of individual producers prevented these costs from being used in this phase of minimum price determination.

After the Supreme Court upheld the Commission's right, within limits, to publish individual cost records, new hearings were held in February, March, and April 1939; at that time the July-August determined costs were reviewed in the light of new evidence presented at these hearings. The revised determined costs published in May and June 1939 were somewhat lower than those published in July-August 1938, primarily because of a shift in the basis used in computation. In determining its costs in 1938, the Commission had divided the production and administrative costs by the total ascertainable tonnage and the selling costs by the tonnage produced by commercial mines only. In 1939, for reasons to be discussed later, it divided all costs—selling as well as production and administrative costs—by the total ascertainable tonnage, that is, for captive as well as commercial tonnage.

It will be noted (Table 82) that for the country as a whole the May-June 1939 determined costs were \$.026 a ton below the July-August 1938 determined costs. The greatest change occurred in Minimum Price Area 9 where costs were reduced \$.105 a ton.

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TABLE 81

Reported Costs and Determined Costs of Bituminous Coal, by Producing District and Minimum Price Area, 1937-1940
(dollars per net ton, f.o.b. mine)

	Reported Costs				Determined Costs	
	1937 ^a	1938	1939	1940	July and	May and
					August 1938	June 1939
District						
1	2.34	2.31	2.20	2.14	2.3921	2.3887
2	2.17	2.26	2.08	1.98	2.2619	2.2140
3	1.82	1.78	1.72	1.65	1.8546	1.8366
4	1.92	1.90	1.76	1.71	1.9473	1.9356
5	4.01	3.90	3.84	3.90	3.6605	3.6543
6	1.96	1.86	1.66	1.64	1.9989	1.9775
7	2.17	2.23	2.08	2.04	2.2103	2.1940
8	2.01	2.04	1.95	1.90	2.0517	2.0301
MINIMUM PRICE						
AREA 1	2.10	2.13	2.00	1.94	2.1574	2.1284
District						
9	1.57	1.48	1.41	1.42	1.5830	1.5805
10	1.74	1.72	1.62	1.59	1.7707	1.7561
11	1.63	1.58	1.44	1.44	1.6544	1.6525
12	2.79	2.63	2.47	2.42	2.7734	2.7636
MINIMUM PRICE						
AREA 2	1.74	1.70	1.58	1.57	1.7723	1.7622
MPA 3 (District 13)	2.48	2.42	2.35	2.31	2.4740	2.4382
MPA 4 (District 14)	3.73	3.41	3.33	3.26	3.6166	3.6080
MPA 5 (District 15)	2.03	1.94	1.86	1.89	2.0489	2.0392
District						
16	2.61	2.54	2.54	2.36	2.5647	2.5559
17	2.74	2.76	2.60	2.50	2.7937	2.7664
18	3.14	3.13	3.29	3.32	3.1608	3.1519
MINIMUM PRICE						
AREA 6	2.75	2.72	2.63	2.51	2.7579	2.7389
District						
19	2.05	1.90	1.87	1.82	2.0660	1.9917
20	2.44	2.20	1.98	2.02	2.4940	2.4691
MINIMUM PRICE						
AREA 7	2.19	2.01	1.91	1.90	2.2347	2.1691
MPA 9 (District 22)	1.48	1.49	1.36	1.37	1.5899	1.4851
MPA 10 (District 23)	3.21	3.17	3.05	3.07	3.2656	3.2247
TOTAL UNITED STATES	2.07	2.06	1.94	1.90	2.1142	2.0884

^a April through September.

Source: The reported costs were published in *Extension of Bituminous Coal Act of 1937, Hearings on H.R. 356, H.R. 1454, and H.R. 2296, U.S. House Committee on Ways and Means, 78th Cong., 1st sess., June-July 1943, p. 21.* The determined costs for July and August, 1938 were obtained from the *Second Annual Report of the National Bituminous Coal Commission, Fiscal Year Ended June 30, 1938, with additional activities to November 15, 1938, p. 28,* and those for May and June 1939, from the *Annual Report of the Secretary of the Interior, Fiscal Year Ended June 30, 1941, p. 205-6.*

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The only other adjustment exceeding \$.050 a ton occurred in Minimum Price Area 7, and there costs were reduced, on the average, \$.066.

A comparison of the 1939 determined costs with the 1938 reported costs (see Table 82) shows that, taking the country as a

TABLE 82
Differences between Determined and Reported Costs of Bituminous Coal,
by Producing District and Minimum Price Area, 1937-1940
(dollars per net ton, f.o.b. mine)

	<i>1939 Determined Costs over 1938 Determined Costs</i>	<i>1938 Determined Costs over 1937 Reported Costs</i>	<i>1939 Determined Costs over 1938 Reported Costs</i>	<i>1940 Reported Costs over 1939 Determined Costs</i>
District				
1	-.003	+.052	+.079	-.249
2	-.048	+.092	-.046	-.234
3	-.018	+.035	+.057	-.187
4	-.012	+.027	+.036	-.226
5	-.006	-.350	-.246	+.246
6	-.021	+.039	+.118	-.338
7	-.016	+.040	-.036	-.154
8	-.022	+.042	-.010	-.130
MINIMUM PRICE AREA 1	-.029	+.057	-.002	-.188
District				
9	-.003	+.013	+.101	-.161
10	-.015	+.031	+.036	-.166
11	-.002	+.024	+.073	-.213
12	-.010	-.017	+.134	-.344
MINIMUM PRICE AREA 2	-.010	+.032	+.062	-.192
MPA 3 (District 13)	-.036	-.006	+.018	-.128
MPA 4 (District 14)	-.009	-.113	+.198	-.348
MPA 5 (District 15)	-.010	+.019	+.099	-.149
District				
16	-.009	-.045	+.016	-.196
17	-.027	+.054	+.006	-.266
18	-.009	+.021	+.022	+.168
MINIMUM PRICE AREA 6	-.019	+.008	+.019	-.229
District				
19	-.074	+.016	+.092	-.172
20	-.025	+.054	+.269	-.449
MINIMUM PRICE AREA 7	-.066	+.045	+.159	-.269
MPA 9 (District 22)	-.105	+.110	-.005	-.115
MPA 10 (District 23)	-.041	+.056	+.055	-.155
TOTAL UNITED STATES	-.026	+.044	+.028	-.188

Source: Computed from Table 81.

whole, "determined costs" were \$.028 a ton higher than the reported costs. This figure, however, conceals important differences. There was a spread in costs amounting to \$.198 a ton in Minimum Price Area 4, and another of \$.159 in Minimum Price Area 7. A study of the cost adjustments in the districts also shows substantial differences, notably in districts 5, 6, 9, 12, and 20.

Of particular interest are differences between the May-June 1939 determined costs and the reported costs for 1940, which was the year in which minimum price schedules were made effective (October 1, 1940). The determined costs for the United States as a whole were almost \$.19 a ton above the 1940 reported costs. In certain minimum price areas the spread in costs was even greater. Thus, the determined costs were approximately \$.35 a ton higher than the reported costs in Minimum Price Area 4, \$.27 higher in Area 7, and \$.23 higher in Area 6.

A differential of \$.19 a ton between determined and reported costs is a very substantial one for an industry in which, for the period 1933 to 1940 inclusive, the operators reported that income exceeded cost in only one year. Even that "plus margin" was not a net income, because interest on investment, certain taxes, and miscellaneous expenses had not been included in the costs.

It should not be assumed that the coal operators actually received margins which averaged \$.19 a ton. As a matter of fact, strong competitive forces were at work throughout much of 1940, which drove sales income per ton to lower levels. Moreover minimum prices did not go into effect until October 1 of that year. Actually, the Appalachian Region reported that costs per ton exceeded sales realization per ton by only \$.02. For the industry as a whole realization exceeded cost by only \$.01 per ton. The comparison of 1939 determined costs with 1940 actual costs has been made in Table 82 to show what would have happened if price schedules based on determined costs had been in effect throughout that year.

3) *Basic factors affecting costs.* How may such a marked difference between the 1939 determined costs and the 1940 actual costs be explained? The determined costs were based in very large part on the known 1937 actual costs which, for the country as a whole, were fairly comparable to those reported by operators in 1938. The differences between the 1939 determined costs and the 1940 costs must be explained by the fact that the determined costs did not take—and could not take—cognizance of the fundamental changes that had occurred, during 1939 and 1940, in the cost structure of the coal industry. As the Director of the Bituminous

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Coal Division has pointed out, "operating and competitive conditions within this industry are constantly changing. New developments of both scientific and economic nature are frequent."⁷⁴ The Coal Division had no choice but to disregard these basic changes in the industry, and to establish minimum price schedules on its 1939 determined costs, recognizing that revision might have to be undertaken shortly after their establishment. Any other procedure would have led to extensive revisions and further prolonged the cost hearings, which in turn would have again postponed the already much-delayed final determination of prices.

This experience with price fixing, however, should make it clear that, in cost determination, the use of a base year plus adjustments has definite limitations. It is particularly important to recognize that cost changes are not confined to adjustments in wages, hours, and other terms of the collective bargaining contract. A glance at Table 81 discloses a drop in the reported costs for the United States as a whole of \$.12 in 1939 and \$.04 in 1940. The total decrease of \$.16 was not due to changes in the wage contract—there were none—but was due primarily to technological developments. The percentage of underground production loaded by machine increased from 20.2 in 1937 to 35.4 in 1940—an increase of over 75 per cent. Substantial increases were also made in the proportion of coal produced by strip or surface mining which, primarily because of gigantic mechanical shovels and dragline excavators, also reduced production costs.

There is another factor which materially affects production costs, namely, the number of tippie starts or days worked by the mine. Chart 14 has been constructed to show how changes in the number of days worked by mines affect the cost of producing bituminous coal. Thus 709 underground, commercial mines of Division I⁷⁵ operated 17.3 days⁷⁶ in May 1934 and in that month produced 12,982,000 net tons of coal at a cost of \$1.70 per ton. It is estimated that the cost would have fallen to \$1.65 if the mines had operated for 20 days; but if only 10 days had been worked, the cost would have risen to \$1.93 per ton.

It should be noted that this projection of cost is hypothetical since it reduces the actual reported costs of these mines for 17.3

⁷⁴ *Annual Report of the Secretary of the Interior, . . . June 30, 1941*, p. 199.

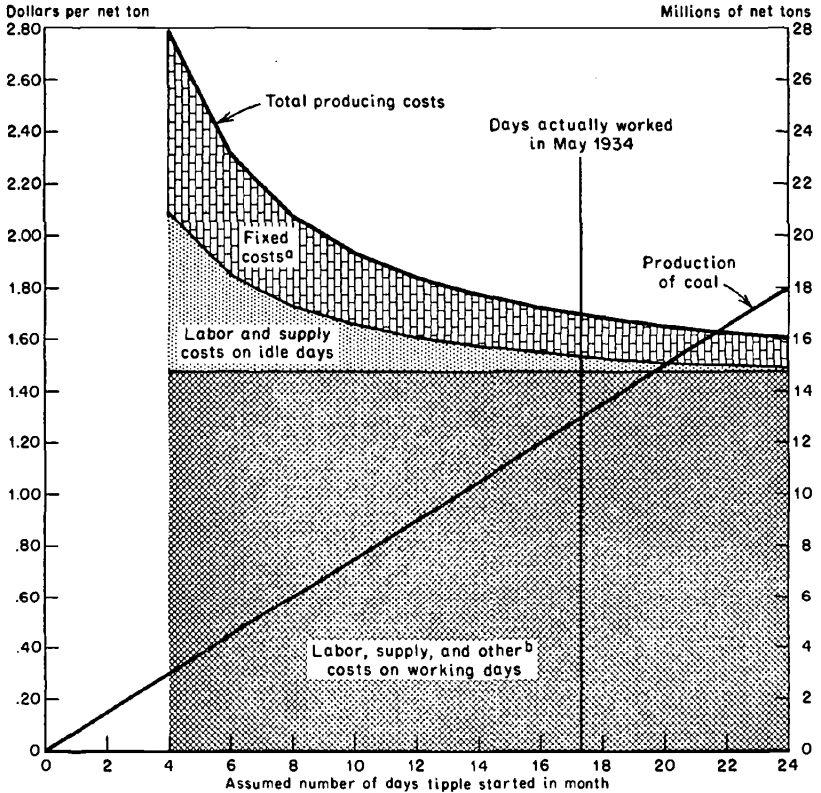
⁷⁵ Under the NRA Bituminous Coal Code, Division I embraced all soft coal fields to the north of central Tennessee; and included Michigan, Ohio, and Kentucky, and all fields to the east thereof.

⁷⁶ The mines were idle 9.2 weekdays and 4.5 Sundays and holidays in that month.

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days to a one-day basis and then projects the various cost items to the basis of assumed number of days that the mine tipples may have started in a given month. It is believed that this hypothetical basis approximates what would happen under actual operating conditions.⁷⁷ A more accurate estimate would have resulted if it had not been necessary to assume constant returns to labor.

CHART 14
Producing Costs of Bituminous Coal Mines Projected for Various Rates of Operation



^a Charges usually on a fixed-lump-sum basis.

^b Charges usually on a per-ton basis.

Source: Based on costs reported for May 1934 for underground commercial mines in Division I, National Recovery Administration. See Appendix D for the method of calculation.

⁷⁷ The projected costs were computed by the authors from basic data on page 14 (column 1) of the volume entitled "Bituminous Coal Code Statistics for the period April, May, and June 1934," prepared in the Division of Research and Planning of the National Recovery Administration. A brief explanation of the method used in compiling these data is set forth in Appendix D.

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It is evident that the per ton producing costs of coal rise at a steadily increasing rate as the number of tipples starts (number of days worked by the mine) approaches zero. It follows, therefore, that the years in which the average number of days worked is relatively low, unit production costs—other factors remaining constant—would be much higher than in years characterized by approximately full-time production. The following data are pertinent to this discussion:⁷⁸

Year	<i>Reported Cost Per Ton for All Mines</i>	<i>Average Days Worked by Mines</i>	<i>Per Cent of Coal Loaded Mechanically by Underground Mines</i>	<i>Net Tons per Man per Day—All Mines</i>	<i>Per Cent of Coal Mined by Stripping</i>
1937	\$2.07 ^a	193	20.2	4.69	7.1
1938	2.06	162	26.7	4.89	8.7
1939	1.94	178	31.0	5.25	9.6
1940	1.90	202	35.4	5.19	9.4

^a April through September 1937.

We would expect the costs to have risen sharply in 1938 because days worked dropped to 162. A substantial increase in mechanization and surface mining seems to have offset most of the expected increase. In the following year, increases in days worked, mechanical loading, and surface mining brought about a very substantial decline in costs. In 1940, the appreciable increase in days worked, as well as a 4.4 point rise in the percentage of coal mechanically loaded, should have resulted in a marked decrease in cost. The actual decline was only four cents a ton. This relatively small decrease may be explained in part by a drop, instead of an increase, in output per man-day, and no further gains in surface mining.

4) *Criticisms of cost data.* The adequacy and accuracy of the cost data have both been challenged. At the cost hearings, the Carter Coal Company "contended that the cost form questionnaires were inadequately prepared, and improperly checked and verified. . . ."⁷⁹ It should be noted, however, that the cost schedules "were an outgrowth of earlier cost forms, and closely resemble those prepared by the first Coal Commission under the 1935 Act, which in turn were very much like the forms in use by the National Recovery Administration, 1933 to 1935."⁸⁰ These forms

⁷⁸ Cost data are those published in *Extension of Bituminous Coal Act of 1937*, Hearings on H.R. 356, H.R. 1454, and H.R. 2296, U.S. House Committee on Ways and Means, 78th Cong., 1st sess., June-July 1943, p. 21. Other data are taken from the annual reports of the U.S. Bureau of Mines.

⁷⁹ Rostow, *op.cit.*, note 73, p. 573.

⁸⁰ Gordon and Webb, *op.cit.*, p. 281.

were the product of the expert knowledge and judgment of cost accountants and operators from the industry and the cost experts and other representatives of the government.

As pointed out earlier, the cost information supplied by the operators was rendered under oath on forms and in accordance with instructions prescribed by the Commission. The cost data were compiled by the Commission's statistical bureaus and then checked for mathematical accuracy and reviewed for consistency with the experience of other producers operating like mines in the district under consideration by the Commission's Bureau of Research and Statistics. The data were rechecked in a limited "test audit" and subjected to further revision. Moreover, the Office of the Consumers' Counsel, on the initial investigation, made spot checks "to satisfy itself on behalf of the consumers that the weighted average costs as computed" were "statistically accurate and fairly represented average costs. The Consumers' Counsel found that the posting and mathematical work of the statistical bureaus was generally accurate. Such errors in posting or computations as were found were comparatively few and of no consequence in their effect on the district totals."⁸¹

It has been charged that the "test audits" were too few and that as a result the reported costs in many cases were probably the actual expenditures as shown on the books of the company and not the costs as defined in the Act. It was contended that many operators might have inadvertently reported improper costs, particularly for such items as selling commissions, depletion, depreciation, royalties, and salaries of officers.

A member of the staff of the Consumers' Counsel with the assistance of two accountants undertook an investigation in the fall of 1938 which throws light on the validity of this claim. In a bank examination type of audit, typical cost reports of a number of producers for early months of 1938 were checked to their books and reports. This investigation revealed ". . . that the audit did not, in these cases, disclose careless inaccuracies in transcription from the books, deliberate inclusion of inadmissible items, or attempts to misrepresent. On the contrary, there was every evidence of sincere effort to fill out the report accurately according to instructions, and in the case of these examinations the reports did agree with the books in all substantial particulars. There were enough transpositions of items into the wrong cost form item; inadvertent inclusion of certain expenses, sometimes taxes or insurance on company

⁸¹ Quoted by Gordon and Webb, *op.cit.*, p. 283.

houses or stores or other property, not properly chargeable to producing costs; and enough instances of other minor errors to point to the necessity for a definite standard classification of accounts."⁸²

The cost provisions of the Act obviously could have been strengthened by requiring that cost reports be audited back to the books and records of companies by a systematic and adequate spot checking procedure. Such a practice would materially have assisted the price-fixing agency in the detection of possible "hidden costs," particularly sales commissions of operators selling to financially affiliated companies, royalties paid to affiliated land-owning companies, salaries of officers, and inflated depletion and depreciation. It would also have helped to detect the inadvertent inclusion of items not chargeable to costs under the Act as well as the insertion of expenses in the wrong classification.

5) *Inclusion of wholesalers' discounts in cost.* The ruling of the Commission that discounts to wholesalers should be included in the costs has been criticized on the ground that such discounts are a reduction of income rather than a cost. The Commission stated that "a large part of the national supply is sold through independent wholesalers or jobbers" and pointed out that "if expenses attached to this method of selling are excluded from consideration . . . the costs will be fragmentary and incomplete. . . . Such compensation to the wholesaler is a legitimate charge to the producer's cost, accompanied by a corresponding credit to his realization. The Commission, therefore, finds that discounts allowed by producers to wholesalers should be included in the cost wherever known."⁸³

Messrs. Gordon and Webb stated that "to do otherwise would produce selling cost averages including the sales expenses of direct-selling producers and the commissions paid by producers who sell through sales agents, but inconsistently excluding allowances or discounts made by producers to wholesale distributors who perform the sales function and act as a sales department for them."⁸⁴

6) *Method used to calculate selling cost per ton.* The Commission found the calculation of selling cost per ton a troublesome problem. It was confronted with the question—should the tonnage of captive mines (which have no selling costs and merely charge their affiliated companies a book value) be included in the "tonnage divisor" to be used in computing "selling costs per ton," or should the divisor be restricted to the output of commercial mines only. In the 1938 cost determination the Commission used commercial tonnage only,

⁸² *Ibid.*, p. 290.

⁸³ Quoted by Gordon and Webb, *op.cit.*, p. 286.

⁸⁴ *Loc.cit.*

and this method was vigorously attacked by the Consumers' Counsel. In the cost determination of 1939 the Commission substituted total ascertainable tonnage as the divisor. This solution eliminated the fictitious selling cost of the captive mines, but it understated the actual selling costs of commercial mines. The Commission's difficulty arose out of the requirement in the Act that the average cost to be used in price fixing was the "weighted average of the total costs of the ascertainable tonnage produced." The Commission held that the divisor for total dollar cost must in all instances be the "total ascertainable tonnage." It is unfortunate that the Act itself did not eliminate the captive tonnage from the divisor for the purpose of determining selling cost, since its inclusion necessarily resulted in prices based on a per ton selling cost which was too low and was, therefore, unfair to the commercial producers.

7) *Determination of selling costs.* Considerable criticism was leveled at the Commission for its acceptance of "the judgment of marketing experts that the actual costs of selling, as reported, are the best indication of the reasonable costs of selling."⁸⁵ Selling costs were the only costs specified in the Act that were qualified by the adjective "reasonable." Since the Commission was authorized to scrutinize these costs, the Consumers' Counsel urged that it establish criteria of reasonableness for the purpose of enabling the Commission to reject selling costs which were unwarranted. This suggestion was rejected on the grounds that the factors which affected selling costs were too numerous to permit the successful use of such criteria. The Commission, however, held that items not properly chargeable to selling costs should be disallowed, and such disallowances were in fact made in several districts.⁸⁶

It was pointed out at the cost hearings that selling costs should be carefully scrutinized. Attention was called to the fact that commissions reported paid by operators selling through financially affiliated agencies or distributors would include an unknown element of profit. In this connection Messrs. Gordon and Webb wrote: "Affiliations between producers and their selling companies are common. In many instances, the selling company is a child of the producer's membership in a 'marketing agency,' which requires the subagent to do the actual selling; while the marketing agency acts more as a price-and-market-stabilizing and promoting agency for

⁸⁵ *Hearing Re Determination of Weighted Average of the Total Costs of the Tonnage Produced Within Minimum Price Area 1* (General Docket No. 15), National Bituminous Coal Commission, 1938, p. 16.

⁸⁶ *Ibid.* For a list of possible criteria for judging the probable validity of reported selling costs, see Chapter VI.

the coals of its members. Undoubtedly, the commissions paid to affiliated selling companies often represent an element of profit."⁸⁷

These writers also pointed out that "many expenses have crept into selling cost through the years, some of which are taken for granted as necessary, but many of which are not really necessary—and others have not been proper 'costs' at all." In this category they place such charges as contributions and donations to charity and entertainment.⁸⁸

The Consumers' Counsel stated that he "has opposed" the acceptance by the Commission of the "actual cost of selling" and "will continue to oppose it." He added that: "The office has submitted testimony to show that the 'cost of selling' as reported by many producers exceeded the costs reported by and recommended by most efficient producers. Also the office has recommended to the Commission that distributors affiliated with producers shall be required to make a report in greater detail to the Commission so that if there is any hidden 'profit' included in the 'cost' it will be exposed. Further study will be necessary before a decision can be made as to how the problem can be attacked most successfully."⁸⁹

We must conclude that the use of actual selling costs is a questionable practice unless such costs are carefully scrutinized in detail to ensure that only items properly chargeable to such costs are included. To assist the operators, criteria of reasonableness might well have been set. The use of actual selling costs would seem to be an invitation to increase selling expenditures which in turn would be reflected in average costs and ultimately in higher prices.

8) *Disclosure of cost data of individual producers.* The Commission has also been severely criticized for having included on the cost form the statement—"This report is required under the provisions of the Bituminous Coal Act and is therefore confidential," inasmuch as the data of individual producers were later submitted as evidence in subsequent cost hearings. It was unfortunate that the promise not to disclose individual cost data was made. The coordination of specific prices depended upon such individual data and of necessity had to be made public if the Commission's policy was to be understood and accepted by those affected by its rulings.

9) *Changes in cost structure of bituminous coal.* It is not possible to measure the effect of the promulgated minimum prices upon the cost structure of the industry. In the first place, there is no

⁸⁷ *Op.cit.*, p. 286. ⁸⁸ *Loc.cit.*

⁸⁹ *Annual Report, Fiscal Year 1938*, Consumers' Counsel, National Bituminous Coal Commission, pp. 12-13.

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"normal" structure of costs for bituminous coal. The structure is continually undergoing change because of the impact of a great number of factors, most of which have been discussed in earlier sections of this appraisal. Secondly, World War II had materially affected the domestic demand for and the exports of bituminous coal in both 1940, the year minimum price schedules were made effective, and 1941, the first full year in which such prices were in effect. Finally, because detailed cost data were available only on an annual basis and minimum prices were established on October 1, the immediate impact could not be measured.

It may be useful, however, to examine the structure of costs in 1936, the base for computing "determined costs," and in 1941, when minimum prices first were in full effect. Chart 15 presents the total reported costs for producing districts east of the Mississippi River except for District 5, Michigan, for which complete data were lacking. All of the districts fall in Minimum Price Areas 1, 2, and 3. Unfortunately data for areas smaller than producing districts were not made available to the public.

It will be noted that reported costs were higher in 1941 in all districts, notwithstanding an increase of 178.7 per cent in the coal loaded by machine in underground mines and an increase of 95.8 per cent in the coal produced by strip or surface mines. In addition, the number of days worked rose from 199 to 216 or 8.5 per cent. During this period sales realization per ton for the industry as a whole increased 19.7 per cent.

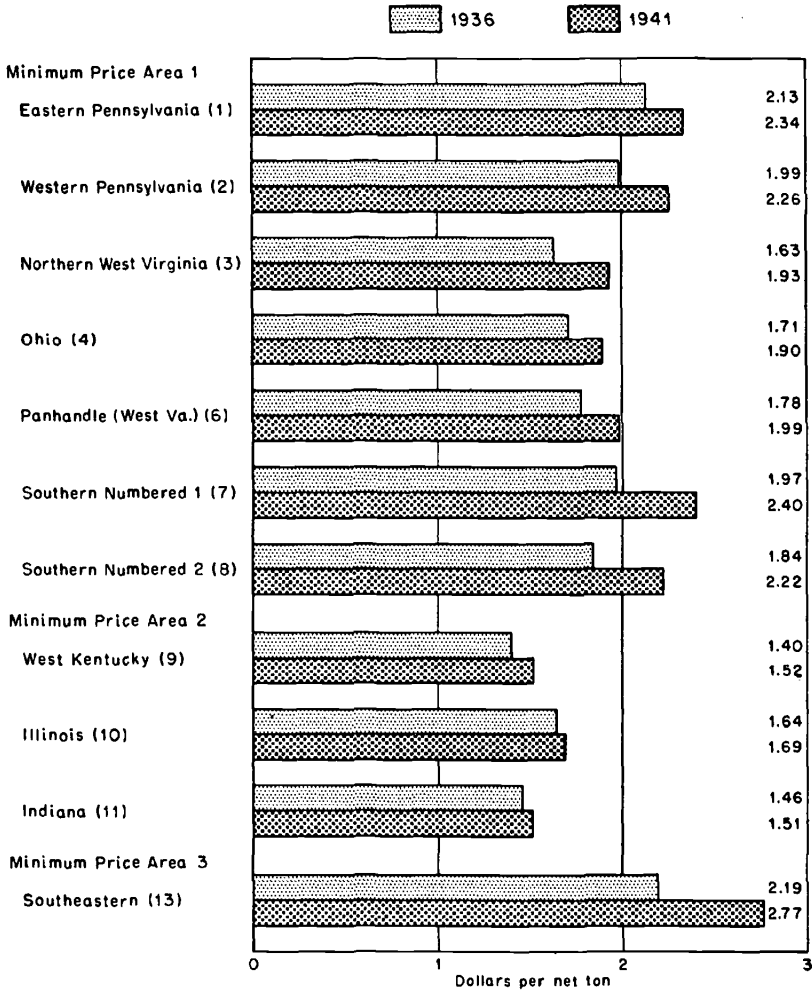
Chart 15 discloses that the increases in total reported costs were small (\$.05-.12 a ton) in the three Districts 9, 10, and 11 of Minimum Price Area 2; that they were moderate (\$.19-.30 a ton) in the first five districts of Minimum Price Area 1, and more substantial (\$.38-.58 a ton) in Districts 7, 8, and 13. It is clear that the cost structure of 1941 was decidedly different from that which existed in 1936.⁹⁰

⁹⁰ It will be noticed that the weighted average total reported costs presented in Chart 15 are not identical with comparable data shown in Tables 79 and 81 of this chapter and similar tables in Chapter VI. The differences are caused by different methods of computation. The costs shown in Chart 15 were taken from the original tabulations which excluded the tonnage of "captive" mines from the calculation of selling costs. The costs shown in Tables 79 and 81 and in Chapter VI are slightly lower than those in this chart because they were derived from later tabulations in which the Bituminous Coal Division had divided all costs by the "total ascertainable tonnage." It was necessary to use the original cost data in this analysis because later data did not provide the necessary breakdown of costs.

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CHART 15

Total Reported Costs in Eleven Producing Districts by Minimum Price Area, East of the Mississippi River, 1936 and 1941



Source: See note 90.

The proportions of total reported costs that went for labor in the two years are shown in Table 83. It was to be expected that the marked increase in mechanization which characterized these years would occur at different rates in the various producing districts, as Table 83 clearly shows. The percentage importance of labor costs remained about the same in Districts 1, 7, and 13. It decreased

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from about 2 to 5 points in Districts 2, 8, and 10 and decreased from 5 to about 10 points in Districts 3, 4, 6, 9, and 11.

Because interest on investment was not a reported cost, it is impossible to measure accurately the offsetting cost increases that were due to mechanization. It is obvious from Table 84, however, that the percentage which the cost of supplies comprised of the total reported costs increased in all but one district and that the

TABLE 83
Labor Costs in Commercial and Captive Mines in Eleven
Producing Districts East of the Mississippi River, 1936 and 1941
(per cent of total reported cost)

<i>Minimum Price Area and Producing District</i>	1936 ^a	1941 ^b	<i>Difference</i>
MINIMUM PRICE AREA 1			
1 Eastern Pennsylvania	65.6	65.9	+0.3
2 Western Pennsylvania	63.5	61.8	-1.7
3 Northern West Virginia	64.5	57.6	-6.9
4 Ohio	67.6	57.4	-10.2
6 Panhandle (West Virginia)	68.4	62.1	-6.3
7 Southern Numbered 1	62.1	61.7	-0.4
8 Southern Numbered 2	62.4	60.7	-1.7
MINIMUM PRICE AREA 2			
9 West Kentucky ^c	63.6	54.7	-8.9
10 Illinois	54.9	50.1	-4.8
11 Indiana	48.6	42.8	-5.8
MINIMUM PRICE AREA 3			
13 Southeastern	63.2	62.9	-0.3

^a Returns on cost form 1 of the National Bituminous Coal Commission.

^b "Preliminary Survey, Producing, Administrative, and Selling Costs," Bituminous Coal Division, 1942.

^c Not including "captive mines."

increases were more pronounced in those districts in which the percentage importance of labor costs was substantially reduced.

Table 84 also shows what happened to the percentages for the cost-group designated as "other operating charges."⁹¹ The percentage importance of the combined items in this cost group all rose, but the increases varied from .7 points in Alabama, Southern Ten-

⁹¹ Under this designation are included taxes on mine property and equipment; corporate privilege and severance taxes and sales taxes not paid by consumers; social security, old age benefit tax; unemployment tax; tax levied under the Bituminous Coal Act of 1937; compensation insurance; vocational disease insurance; insurance (other); royalties; depletion (income-tax basis); depreciation (income-tax basis); Operators' Association dues and assessments; and District Board expense—including assessments.

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nessee, and Georgia (District 13) to 3.4 points in Ohio (District 4). It will be observed that the districts in which the percentage cost rose most are the same districts that reported the greatest drop in the percentage importance of their labor costs.

Data on royalties, depreciation, and depletion are not available for 1941. Some idea of what happened to these cost items in commercial mines during these years may be ascertained from a com-

TABLE 84

Supplies Cost and "Other Operating Charges" in Commercial and Captive Mines in Eleven Producing Districts East of the Mississippi River, 1936 and 1941 (per cent of total reported cost)

<i>Minimum Price Area and Producing District</i>	<i>Mine Supplies, Including Power and Fuel</i>			<i>"Other Operating Charges"^a</i>		
	<i>1936^b</i>	<i>1941^c</i>	<i>Difference</i>	<i>1936^b</i>	<i>1941^c</i>	<i>Difference</i>
MINIMUM PRICE AREA 1						
1 Eastern Pennsylvania	13.1	13.1	0.0	11.5	12.7	+1.2
2 Western Pennsylvania	12.9	13.4	+0.5	16.4	17.7	+1.3
3 Northern West Virginia	12.5	16.1	+3.6	11.4	14.2	+2.8
4 Ohio	12.6	17.0	+4.4	12.4	15.8	+3.4
6 Panhandle (West Virginia)	11.7	15.6	+3.9	11.9	14.4	+2.5
7 Southern Numbered 1	13.1	13.5	+0.4	13.9	15.1	+1.2
8 Southern Numbered 2	12.6	13.5	+0.9	13.7	14.9	+1.2
MINIMUM PRICE AREA 2						
9 West Kentucky ^d	15.2	18.5	+3.3	11.4	14.5	+3.1
10 Illinois	18.8	21.5	+2.7	14.7	17.5	+2.8
11 Indiana	21.7	25.5	+3.8	17.5	20.0	+2.5
MINIMUM PRICE AREA 3						
13 Southeastern	16.2	17.2	+1.0	11.8	12.5	+0.7

^a For contents, see note 91 of the text.

^b Returns on cost form 1 of the National Bituminous Coal Commission.

^c "Preliminary Survey, Producing, Administrative, and Selling Costs," Bituminous Coal Division, 1942.

^d Not including "captive mines."

parison of 1936 and 1940. (See Table 85.) Royalties ranged from \$.032-.089 a ton in 1936 and \$.031-.075 in 1940. Seven of the eleven districts in 1936 and three in 1940 paid less than \$.05 a ton. As percentages of total reported costs, royalties ranged from 1.9 to about 4.0 per cent in both 1936 and 1940. In four districts royalties as percentages of total costs were lower in 1940 than in 1936; in one district the percentage remained the same, in five districts the increases amounted to less than 1 point, and in one district it equaled 1.2 points.

TABLE 85
Royalties, Depreciation, and Depletion of Commercial Mines in Eleven Producing Districts
East of the Mississippi River, 1936 and 1940

Producing District	(dollars per net ton)						(per cent of total reported cost)					
	Royalties ^a		Depreciation ^a		Depletion ^a		Royalties		Depreciation		Depletion	
	1936	1940	1936	1940	1936	1940	1936	1940	1936	1940	1936	1940
MINIMUM PRICE AREA 1												
1 Eastern Pennsylvania	.055	.054	.076	.060	.018	.020	2.55	2.49	3.52	2.76	0.84	0.92
2 Western Pennsylvania	.039	.052	.079	.072	.086	.083	1.99	2.69	4.03	3.76	4.41	4.32
3 Northern West Virginia	.040	.050	.061	.065	.026	.024	2.43	3.02	3.72	3.89	1.61	1.46
4 Ohio	.036	.055	.053	.072	.036	.034	2.07	3.25	3.06	4.25	2.08	2.01
6 Panhandle (West Virginia)	.042	.054	.051	.041	.046	.041	2.35	3.22	2.84	2.49	2.56	2.46
7 Southern Numbered 1	.075	.072	.089	.075	.031	.029	3.73	3.42	4.45	3.57	1.54	1.39
8 Southern Numbered 2	.075	.075	.075	.069	.023	.019	4.14	3.95	4.18	3.63	1.28	1.02
MINIMUM PRICE AREA 2												
9 West Kentucky	.034	.046	.060	.051	.012	.018	2.45	3.24	4.33	3.58	0.83	1.28
10 Illinois	.032	.031	.095	.108	.050	.041	1.93	1.93	5.73	6.76	3.04	2.58
11 Indiana ^b	.042	.043	.096	.091	.045	.046	2.86	2.98	6.58	6.32	3.11	3.20
MINIMUM PRICE AREA 3												
13 Southeastern	.089	.073	.083	.086	.033	.025	3.86	3.11	3.58	3.68	1.45	1.06

^a For these three items the costs in captive mines differed widely from those in commercial mines. It is believed that a clearer picture will be gained from this table, which presents data for commercial mines only.

^b Commercial and captive mines (separate data were not available for 1936).

Source: 1936—Returns on cost form 1 of the National Bituminous Commission, 1940—"Revised Detail of Producing, Administrative, and Selling Costs for the Calendar Year 1940," Bituminous Coal Division, 1941.

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Depreciation charges in dollars per ton were somewhat higher than royalties, ranging from \$.05-.10 a ton in 1936 and \$.04-.11 a ton in 1940. In seven of the eleven fields the 1940 depreciation was somewhat lower than in 1936. The decreases varied from a low of \$.005 to a high of \$.016 a ton and the increases from \$.003-.019. Depreciation in 1940 constituted from 2.5 to 6.8 per cent of the total reported costs, and in no instance did the upward or downward adjustments in these years amount to more than 1.2 points.

Depletion charges as a rule were not as high as either royalties or depreciation. In 1936 they ranged from \$.012-.086 per ton and in 1940 from \$.018-.083. In the latter year, six districts reported less than \$.03 a ton, one district between \$.03 and \$.04, and four districts \$.04 or more. The adjustments in these years did not exceed \$.01 a ton, and in eight of the eleven districts were \$.005 a ton or less. Eight of the districts reported decreases. In 1940, depletion constituted from .9 per cent to 4.3 per cent of the total reported cost. In all but two of the districts the depletion reported amounted to less than 2.6 per cent of the total reported costs.

This comparison of cost items for the years 1936 and 1941 (1940 for royalties, depreciation, and depletion) discloses substantial changes in the cost structure. The increases in total costs in the eleven districts showed wide variations, ranging from \$.05 a ton in Illinois and Indiana to \$.58 a ton in Alabama, Southern Tennessee, and Georgia. In three fields the percentage that labor costs constituted of the total reported costs remained virtually unchanged, in three fields it dropped from 2 to 5 points, and in five fields from 5 to 10 points. The percentage of supply costs increased in all but one district, but by varying amounts which ranged from .4 to 4.4 points. "Other operating charges" all showed increases, but not at the same rate. Royalties, depreciation, and depletion showed diverse trends which added to the changing pattern of costs.

An analysis of the cost data of 1940 and 1941 shows the same behavior pattern but on a more limited scale. Total reported costs for the industry as a whole increased \$.22 a ton. In the eleven districts east of the Mississippi River, the increases ranged from \$.07-.42. Three districts reported increases of less than \$.10 a ton, two districts of between \$.15 and \$.20, three districts between \$.25 and \$.30, two districts between \$.30 and \$.35, and one district of \$.42 a ton. These increases ranged between a low of 5 per cent and a high of 20 per cent.⁹²

⁹² The cost data for 1940 are presented in Appendix E.

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The increases in labor costs also varied widely. In Indiana they amounted to only 1 cent a ton and in Alabama, Southern Tennessee, and Georgia to \$.28 a ton. Three districts showed increases of less than \$.10, another three districts of \$.10-.15, two districts of \$.15-.20, two districts of \$.20-.25, and one of \$.28 a ton. Expressed in percentages these increases in labor costs ranged from 1.6 per cent to 22.8 per cent. In seven districts they increased the percentage that labor costs constituted of the total costs by .2 to 1.3 points, and in four districts they reduced this percentage by .5 to 1.6 points.

Supply costs increased between \$.02 and \$.10 a ton, but the general pattern was between \$.03 and \$.04. "Other operating charges" also increased in all but one district; for the most part they amounted to \$.02 or \$.03 a ton. The effects of these increases in supply costs and "other operating costs" were to raise the percentage of these costs to total reported costs in some districts and lower them in others. Such changes seldom amounted to more than one percentage point.

As noted earlier, the changing pattern of costs in the years under consideration reflected the many forces at work in the period. There is no way to isolate the impact of minimum price schedules from that of the total field of forces.

e. Determination of coal classifications and uncoordinated prices. Since neither the Act nor the administrative agencies had specified guiding principles or a standard procedure for classifying and pricing district coals, the boards were left to perform these functions in accordance with their own interpretations of the Act.

Four types of procedures were advocated.⁹³ These may be briefly described as follows:

Over-all Ranking, which groups coals into broad classes by comparing coals with each other without separate, formal analysis of the essential qualities (the physical, chemical, and market characteristics) of each coal.

Factor Ranking Based on Coal-to-Coal Comparisons, with respect to each of certain selected characteristics, such as heat content, ash content, consumer acceptance, market history, etc. The ranking would be made separately for each factor—one factor at a time. The resulting categories for each of the factors would then be used by the boards to formulate their proposed coal classifications and uncoordinated prices.

⁹³ For a fuller description of these procedures see Chapter VII.

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Factor Ranking in Terms of Predetermined Grades and Standards, pertaining to heat content, ash content, sulphur content, Btu., etc., such as those prepared by the American Society for Testing Materials.

Rating in Terms of Definite Units of Measurement, which classifies coals by (1) assigning weights to each of the factors used in the evaluation and (2) giving numerical values to each of a number of gradations for each factor. For example, the values assigned for various gradations in sulphur content might be:

- No allowance up to and including 1.6 per cent of sulphur content.
- One per cent per ton for each 0.3 per cent of sulphur above 1.6 per cent up to 4 per cent.
- No additional allowance for sulphur content above 4 per cent.

The sum of the point values assigned to a given coal for each of the characteristics used in the evaluation would then be translated into a price. The end result would provide a structure of relative prices for each district.

Each of these systems has its advocates. Only one district, Illinois, adopted a rating procedure. All of the remaining districts used a factor ranking method. However, in three districts the treatment of the individual factors apparently was so casual that the authors considered including these districts under the over-all ranking method instead of the factor-ranking method.

Many operators, and especially sales executives, contend that it was impossible to apply uniform "yardsticks" of value to the many intrinsic qualities and market characteristics of coal. They argue that the significance of most factors in a coal analysis as well as the importance and accuracy of sizing vary with the use which is to be made of the coal, and, therefore, that the suitability of a coal for a given establishment should be regarded as an individual matter. They insisted that any pricing procedure must, in a large measure, reflect the judgment of those who have had a long experience in the industry and an intimate knowledge of the coals produced and of the price relationships prevailing in the district.

The Consumers' Counsel, at the hearings on the classification of coal, recommended that the Commission adopt the standard specifications for coal developed by the American Society for Testing Materials and require code members to describe their coals

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(1) by rank and its position in the scale of rank, (2) by grade (calorific value, ash content, etc.), (3) by tolerance and size consist, and (4) by sizes. He argued that such specifications should be used "for the purpose of protecting both producers and consumers by assuring the utilization of a uniform and standard description of coal in the valuation of coals (and, at some future date, in standards for the classification of coals)."⁹⁴

The Coal Division recognized that proximate analyses and reports of physical characteristics of coal as well as formulae (such as the Bement formula for the mathematical measurement of the relative efficiency of different coals based on Btu content and proximate analyses) were "extremely useful in making general judgments as to the relative values of different coals" but held that mathematical formulae could not "serve as a simple rule for determining exact price relationships between coals." It took the position that the determination of quality "depends upon a judgment as to all the factors which make coals desirable to consumers" and that such judgment must be based on "analyses and reports of physical attributes . . . and the judgments of experts," including those of "the Division's experts; of consumers actually buying coals; and of persons producing and selling coals, including particularly the judgments of the district boards. . . ."⁹⁵

An examination of the coal classifications submitted by the 22 district boards shows wide variations. All of the districts established size specification. Nine of these specifications, however, included special size groups for coals when sold to certain users, five for coals subjected to additional treatment or preparation, and one for coals shot off the solid. Some of the remaining districts used various other devices to attain the same ends. The size specifications varied greatly in number and content. For example, two districts reported fewer than eight size groups, seven districts between 8 and 14, ten between 15 and 21, and three 22 and over. It is said that some of the size groups did not reflect real variations in commercial utility but served as a selling device to increase the district's volume of sales at the expense of competitors. A similar lack of standardization characterized the content of the size groups reported to the Commission, notwithstanding the fact that such standardization would be more easily understood and would facilitate price comparisons. For example, the 8" x 3" size was classified as "egg" in

⁹⁴ *How Much Heat in Bituminous Coal*, Consumer Ideas No. 1, Consumers' Counsel of the National Bituminous Coal Commission, 1937, p. 24.

⁹⁵ *Findings of Fact, . . . and Order of the Director, . . .* p. 22.

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one district, "grate" in a second, "stove" in a third, and "furnace" in a fourth district. An examination of price schedules submitted to the Commission shows that they not only classified sizes differently from district to district, but even classified "them differently within the same district, depending upon the consuming market, or the use classification, or the transportation method, or the preparation given at the mine (whether raw, washed, cleaned, etc.)."⁹⁶

The district classifications of coals for kind and quality also showed marked differences. Eleven different factors or characteristics were used in evaluating coals. Of the 19 districts reporting quality classifications, only 13 made use of coal analyses.⁹⁷ Fifteen of the 22 districts took into account physical factors, and 11, characteristics of performance. All districts made use of market considerations (in one form or another) and special treatment of coal (primarily to establish special price differentials). Nineteen districts took "values as to uses" into account. Seasonal demand and competitive fuel and energy were used by three districts. Three of the 22 district boards utilized two factors in evaluating their coals, three boards required four factors, seven boards used either five or six factors, five needed seven or eight factors, and four required nine factors.

An analysis of the classifications of coal submitted by the various boards discloses little uniformity in the terminology used, the size groups proposed, the factors considered in appraising coals, the quality classes recommended, or even the letters used to indicate the various grades of coals to be included in interdistrict comparisons.

Much as we should like to have seen a structure of minimum prices based upon some scientific formula or formulae, we must conclude that rating in terms of definite units of measurement or even factor ranking in terms of predetermined grades and standards was not possible under the conditions which confronted the Commission. The value of coal to consumers is the resultant of a large number of factors of which only a limited number can be measured accurately. Unfortunately for price-fixing purposes, the different factors as well as the importance of size vary with dif-

⁹⁶ *Brief for Consumers' Counsel Division, In the Matter of the Establishment of Minimum Prices for the Coals Produced in Districts Nos. 1 to 20, Inclusive, 22 and 23 (General Docket No. 15), Bituminous Coal Division, February 14, 1940, p. 164.*

⁹⁷ Four districts reported that they did not use quality classifications; three because their coals showed little or no variations and one because its coals were lignitic.

ferent uses of coal. As long as combustion engineers and salesmen cannot agree upon the weights to be given to the basic characteristics which determine the kind and quality of coal, general acceptance of yardsticks for price-fixing purposes is unlikely. Scientific classification of coal was also precluded by the Act, in that the Commission was required to relate its minimum price schedules to the level of specified costs of production in a manner which would preserve the "relative market values" of the different kinds of coal as well as "existing fair competitive opportunities."

Granted that scientific classification of bituminous coals was not possible at the time, it does not follow that the various district boards should have been left to develop their own procedures for classifying the coals falling within their jurisdiction. The Commission could have specified and defined the factors to be considered and insisted that the boards (1) obtain proximate analyses and reports of physical characteristics and (2) use, to the extent possible, the grades and standards prepared by the American Society for Testing Material and known mathematical formulae such as the Bement Formula. These data and formulae would have greatly increased the likelihood that the establishment of coal classifications would have been based upon an analysis of all applicable factors and available information and would have minimized the sphere of empirical judgment. Moreover, the supporting data would have been of considerable value to the administrative agencies in coordinating the minimum prices of coals in common consuming markets.

f. Coordination of district prices in common consuming markets. The third major task in the determination of minimum prices was the coordination of the proposed district minimum prices in common consuming markets in a manner which would reflect the criteria prescribed by Congress. This function was assigned to the district boards, but when most of them were unable to complete the task, the Commission, pursuant to the Act's provisions, took over the assignment.

The mechanics of coordination are illustrated by the procedure used in the case of all-rail coal.⁹⁸ The Commission found it necessary:

—To determine the size and location of the common consuming market areas (determined in large part by the system of freight rates governing the shipments of coal).

⁹⁸ See Chapter VIII for explanation of coordination procedure.

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—To ascertain for each size, kind and quality, and use class (1) the tonnage of competing coals entering each market area and (2) the amounts carried by each of the various forms of transportation (obtained by means of a survey of distribution for the year 1937).

—To select a representative destination, i.e., one typical of the competitive situation in the market area involved.

—To select a base coal—one that was well known, widely distributed, and shipped in large tonnages.

—To ascertain a destination minimum price for the base coal of the district shipping the largest tonnage to the market area.

—To coordinate the various coals on a destination minimum price basis taking into account the factors and criteria specified in the Act.

—To ascertain coordinated minimum prices, f.o.b. mine, by subtracting the applicable freight rates from the destination prices.

—To check and adjust where necessary the estimated realization against the weighted average costs of the minimum price area involved.

—To hold public hearings, review, and revise prices when conditions necessitated adjustments.

The process was “essentially one of selecting f.o.b. mine prices for each coal which, when added to the transportation charges applicable to that coal,” would “yield such delivered prices that the various base coals” competing in a particular market “were properly related, size for size and class for class” and reflected “fair existing competitive opportunities. . . .” After the base coals were satisfactorily related, the other coals of each competing district were then “tied in” with the prices of the base coals. The prices thus obtained were “weighed and modified as necessary to take proper account of competition from competitive fuels, special uses, the interests of the consuming public, etc.”⁹⁹ This procedure made it necessary to set minimum mine prices in all cases in which two or more coals produced at different points competed in a particular market.

⁹⁹ *Findings of Fact, . . . and Order of the Director, . . .* p. 14.

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The magnitude of the task is revealed by available statistics bearing on the process of coordination. In preparation for the actual coordination of minimum prices, the Commission or its successor found it necessary to compile, classify, and index for immediate reference more than 1,000,000 individual "freight rates for coal moving from every origin rate group to all destinations served by rail in the United States or in the Canadian Provinces served by American coal." To ensure "that the new proposed prices" would "meet the requirement of yielding a realization equal to the weighted average cost for each minimum price area," it "had to ascertain the total tonnage of each grade and size of coal which moves into each market." The data made available for the year 1937 by every producer for "each kind, quality and size shipped to each destination" were "transferred to 400,000 machine tabulation cards, each of which" represented "the movement of a particular grade and size of coal into a particular market."¹⁰⁰

The hearing on the proposed coordinated minimum prices established by the Division was "probably one of the most extensive administrative proceedings ever undertaken by any governmental agency."¹⁰¹ The record of these proceedings contained "over 26,000 pages of testimony and oral argument, about 2,000 exhibits, about 700 written protests and 112 briefs." It is estimated that "more than 300 producers, consumers, and other interested persons were represented at the hearing."¹⁰² In addition to the attorneys of the Coal Division and the Office of the Consumers' Counsel there were "80 attorneys representing district boards, individual producers and consumers. . . ." The complexity of the testimony is evidenced by the varied subject matter dealt with at the hearing. An incomplete listing includes:

- The geographical boundaries of market areas
- Transportation methods and charges
- Location of rail-connected mines by origin groups
- Analytical study to determine the average analytical value of coals produced in the respective districts on a seam, quality, and size basis
- Analytical study of the chemical and physical characteristics

¹⁰⁰ *Second Annual Report of the National Bituminous Coal Commission, Fiscal Year Ended June 30, 1938, with additional activities to November 15, 1938*, p. 14.

¹⁰¹ *Third Annual Report under the Bituminous Coal Act of 1937, . . . June 30, 1939*, p. 17.

¹⁰² *Annual Report of the Secretary of the Interior, . . . June 30, 1940*, p. 462.

on a conversion basis of coals produced in the several districts
 —The history and movement of the price of railroad locomotive fuel

—Distribution of coal through tidewater ports and the purpose for which such coal is used

—History and movement of coal by river from origin to destination

—Study of the distribution of coal moving all-rail into all common consuming markets for all uses

—Distribution of coal from mine to destination by truck or wagon, and the competitive factors involved

—Study of the base coals of the several districts and the relative market values of such coals at points of delivery in common consuming markets¹⁰³

In carrying out the basic steps involved in coordination, the price-fixing agencies did not make use of any formulae or yardsticks. The minimum price schedules were based largely on judgment in which negotiation and compromise played an important role. Given the criteria set forth in the Act, the many variable factors affecting the price of coal, and the rigorous competition prevailing within the industry, this approach seems to have been inevitable.

A schedule of prices acceptable to one mine or district was almost certain to be unsatisfactory to some other mine or district, since the goal of all producers was to get a minimum price for each of their coals which would be just low enough to permit them to undersell their competitors. The many fundamental conflicts of interests among competing producers and between producers and large consumers precluded the use of formulae for the coordination of coals competing in common markets. Moreover, their use would have resulted in a minimum price structure that would have disturbed existing economic relationships and would have been challenged by producers.

g. Relation of estimated realization to determined costs. Inasmuch as minimum prices were to be fixed so that the average price per ton in each designated minimum price area would approximate the weighted average "determined costs," it may be of interest to see what relationship actually did prevail between determined costs and the estimated realization based on the minimum price schedules established by the Coal Division. Chart 16 presents these

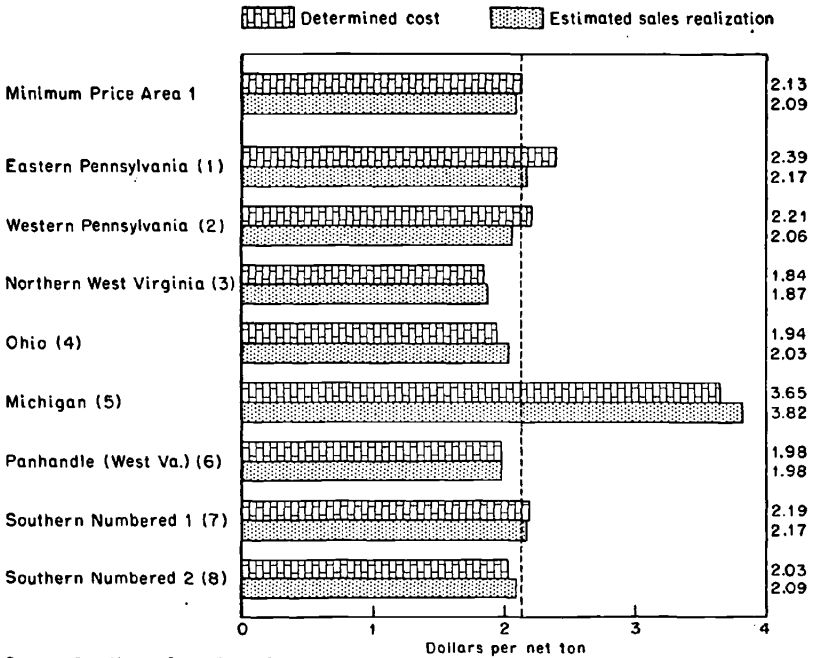
¹⁰³ *Third Annual Report under the Bituminous Coal Act of 1937*, . . . June 30, 1939, pp. 17 and 18.

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data for Minimum Price Area 1 and the eight districts that compose it.

It will be noted that for the Minimum Price Area as a whole the spread between average "determined cost" and estimated sales realization per ton was \$.04. An examination of the two sets of data in each of the districts shows that only in District 6 (Panhandle,

CHART 16
Determined Cost and Estimated Sales Realization in Minimum Price Area 1 and Its Producing Districts



Source: See Chart 10 and Table 12.

West Va.) did average costs equal estimated sales income. In Districts 3 and 7 the spread between per ton cost and sales income did not exceed \$.03; in District 8 it amounted to \$.06; in District 4 to \$.09; in District 2 to \$.15; in District 5 to \$.17; and in District 1 to \$.22. It is apparent that in certain districts estimated sales realization did deviate substantially from the cost standard.

A comparison of district estimated realization with the weighted average "determined costs" of the Minimum Price Area as a whole also shows considerable variation. In five districts, sales realization stood below and in three districts above the average "determined

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costs" of the Minimum Price Area. In Districts 2, 3, 4, 6, and 8 the average "determined cost" of the Area exceeded sales income by \$.07, \$.26, \$.10, \$.15, and \$.04 respectively, and in Districts 1, 5, and 7 sales income surpassed average costs by \$.04, \$1.69, and \$.04 respectively. Even if District 5 (Michigan) is eliminated, the difference between the highest and lowest sales realization per ton was \$.30.¹⁰⁴

The departures of district costs from that of the minimum price area appear to reflect an historical economic pattern which the Bituminous Coal Division did not see fit to modify. Consequently the setting of minimum prices on the basis of costs for the whole minimum price area carried out a major requirement of the Act regarding costs and at the same time permitted districts whose costs were far from uniform to compete with one another. The Trial Examiners have pointed out that "the Act nowhere establishes the standard that return per net ton for each district must equal its weighted average cost."¹⁰⁵

h. *Impact of minimum price determination on price structure.* The multiplicity of prices paid at any one time by the many consumers of coal creates an amazingly intricate pattern of prices. We have seen that the price-fixing experiment applied to 12,000 code members producing bituminous coal in more than 30 states and to tens of thousands of car-lot buyers and to millions of retail consumers. Moreover, the many kinds of coals have values that vary with their intrinsic and physical characteristics, with the sizes produced, the uses to which they are put, and often the equipment in which they are burned. Under these conditions differential pricing becomes a necessity.

The pricing process was hemmed in (1) by a wage structure arrived at through collective bargaining and held constant during the life of the wage contract, and (2) by an intricate freight rate structure under which the rate per car mile varies with the length of the haul, the territory served, and other considerations. Price fixing was further complicated by the transportation methods utilized in moving these coals from the mines to the market, including rail,

¹⁰⁴ It should be noted that the production of coal in District 5 (Michigan) is relatively small, and that, consequently, the high cost assigned to the district does not greatly affect the general level of cost for Minimum Price Area 1.

¹⁰⁵ *Report, Proposed Findings of Fact, Conclusions and Recommendations of Trial Examiners*, as revised (General Docket No. 15), Bituminous Coal Division, April 1940, p. R-59.

truck, and water-shipments, and the competition of different forms of energy. Because "most mines sell several sizes and several qualities, and often more than one kind of coal, and each mine sells each of its products in several, perhaps many, markets, it is readily appreciated that altogether several hundred thousand prices must be fixed."¹⁰⁶

But the price structure of bituminous coal is not only intricate; it is dynamic. As the Director of the Bituminous Coal Division pointed out, the industry "is a relatively chaotic, fluctuating industry, which is characterized not by settled, standard conditions, but at most by general trends, including diverse and even contradictory specific trends."¹⁰⁷ In this industry, then, we find nothing that can be described as a normal or typical price structure. At any one time there is a pattern of price relationships, but it is obscure, fluid, and apparently irrational.

It would be interesting to know what impact the determination of minimum prices did have upon the existing pattern of prices, particularly in the light of the statement of the Director of the Coal Division that in establishing minimum price schedules "the historic flow of coal has not been disturbed."¹⁰⁸ Data on mine prices and production (needed for weighting purposes) prior to price regulation are not available for comparison with the minimum prices established by the Coal Division. Even if such data were available, the immensity of the task would have precluded such an analysis.

Although a comparative study of hundreds of thousands of coal prices cannot be undertaken, it is possible to contrast the realization based on the minimum price schedules established by the Bituminous Coal Division and the actual sales realization in 1940 and in the first quarter of 1941. Such a comparison has limited value, since the available data on actual sales realization for 1940 were on an annual basis and minimum price schedules were established in October 1 of that year. Their usefulness is further impaired by the very substantial increase in the demand for bituminous coal occasioned by World War II.¹⁰⁹

¹⁰⁶ Wallace, *op.cit.*, p. 488.

¹⁰⁷ *Findings of Fact, . . . and Order of the Director . . .*, p. 11.

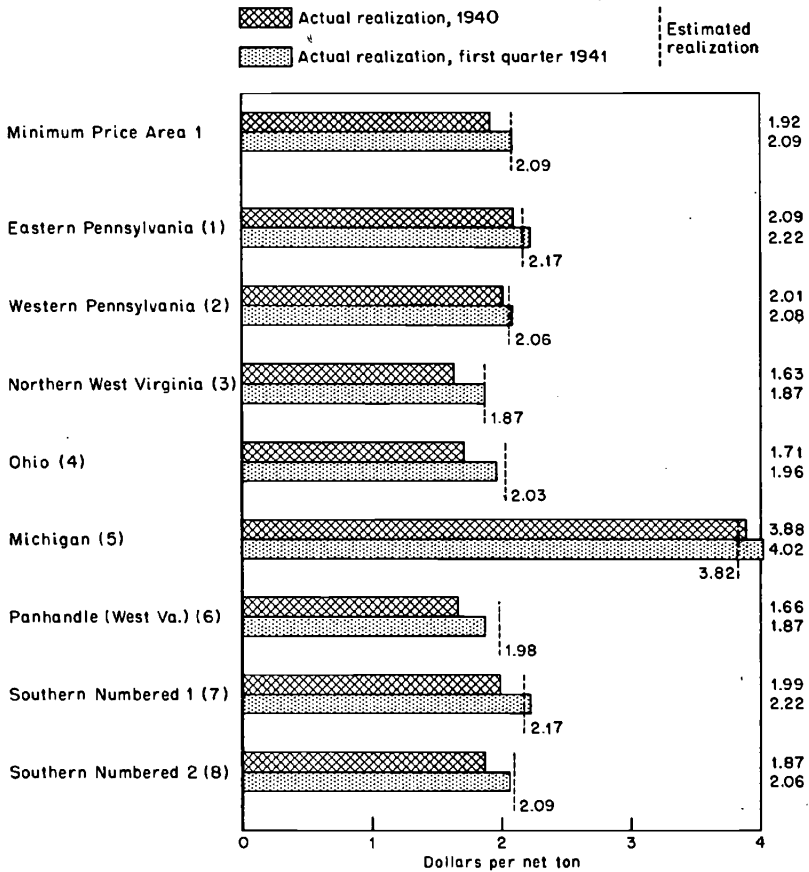
¹⁰⁸ *Extension of Bituminous Coal Act of 1937*, Hearings on H.J. Res. 101, Revised, U.S. House Committee on Ways and Means, 77th Cong., 1st sess., March 1941, p. 599.

¹⁰⁹ The impact of World War II is shown by data on the production of bituminous coal in the United States. In 1939 total production amounted to 395 million tons, in 1940 to 461 million, and in 1941 to 514 million tons. (*Minerals Yearbook, 1942*, U.S. Bureau of Mines, p. 848.)

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Chart 17 compares the estimated realization based on minimum prices with the actual sales realization for 1940 and the first quarter of 1941. A study of the 1940 actual realization (hatched bars)

CHART 17
 Estimated Sales Realization Based on Minimum Price Schedules and Actual Sales Realization in Eight Producing Districts of Minimum Price Area 1, 1940 and First Quarter of 1941



Source: Table 13 and data supplied by the Bituminous Coal Division.

with the estimated realization (vertical broken lines) discloses that in all districts except Michigan (No. 5) the 1940 sales realization figures were below their respective estimated realizations based on the minimum price schedules. For Minimum Price Area 1 the difference amounted to \$.17 a ton. In District 5 actual realization was \$.06 a ton above estimated realization. Of the remaining seven

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districts, estimated sales realization exceeded actual realization by \$.05 in District 2, by \$.08 in District 1, by \$.18 in District 7, between \$.20 and \$.25 in Districts 3 and 8, and by \$.32 in Districts 4 and 6.

During the first quarter of 1941 the spread between the actual and estimated sales realizations was greatly reduced as compared with the 1940 pattern and the impact upon the several districts was more diverse than that in 1940. For Minimum Price Area 1 as a whole the actual and estimated sales realizations were the same. This was also true of District 3. The estimated realizations of three districts, 8, 4, and 6, were as much as \$.03, \$.07, and \$.11 higher respectively while those of four districts, 2, 1, 7, and 5, were below the actual realizations by a range of \$.02-.20.

These comparisons of sales realization data would suggest that the minimum price schedules did materially affect the pattern of prices that prevailed prior to October 1, 1940. The behavior of prices and therefore actual sales realization, however, was undoubtedly influenced by the impact of World War II on the demand for bituminous coal. The importance of this factor in the changing pattern of sales realization cannot be measured.

i. *Problems growing out of price determination.* The attempt to establish price schedules gave rise to four additional problems, two of which had not been anticipated by the framers of the Act. In this group fall distressed coal, distributors' discounts, averaging of strip and deep mine costs, and price fixing for coal shipped and sold on company-owned facilities.

1) *Distress coal.* When coal is screened into a variety of sizes, such as stove, nut, egg, etc., a resultant, known as slack or screenings, remains. Unfortunately, the demand for the larger sizes used by domestic consumers and that for slack coal used by industrial buyers do not always occur at the same time and are subject to wide variations. As a result, when large sizes are in strong demand the operators may have a surplus of slack coal, and when slack coal is temporarily in strong demand, the supply of domestic sizes may be excessive. Under a competitive price structure, the operators try to move their surpluses by cutting prices. This practice, which had long been a disrupting factor in the industry, could no longer be permitted under minimum price schedules.

Some relief was afforded by the substitution rule which, under certain circumstances, allowed operators to fill contracts for coal at a given price with coal that would ordinarily have to be sold at a higher price in conformity with the published schedules. Where

this kind of substitution was possible, there was no need for the operators to get permission to sell the coal at a higher price. Substitution, however, did not always provide an answer to the problem of distress coal especially when small sizes were to be substituted for large. Householders did not ordinarily have the burning equipment to permit them to use small sizes in place of the larger ones. In addition, operators were able to deal with a surplus of large sizes by crushing them into cheaper smaller sizes, but this practice required expensive equipment which gave the larger companies a competitive advantage.

Section 4-II(d) of the Act permitted the Coal Division to make specific modifications of minimum prices where adjustments were necessary. Such modifications, however, could only be granted after notice and hearings and the filing of an examiner's report and findings of fact—all of which were time-consuming. Meanwhile the unbalanced demand for coal caused railroad sidings to be filled with carloads of unsold coal.

Whether the procedure established by the Act could have dealt with this problem cannot be known. In his Annual Report for the fiscal year ending in June 1941 the Director intimated that the problem was under control and stated that such coal was "now being eased into the market under such conditions that its effect upon market prices is insignificant."¹¹⁰

2) *Distributors' discounts.* The Act requires the Commission to "prescribe due and reasonable maximum discounts or price allowances that may be made by code members to . . . 'distributors,' who purchase coal for resale and resell it in not less than cargo or railroad carload lots"; and to "require the maintenance and observance by

¹¹⁰ *Annual Report of the Secretary of the Interior, . . . June 30, 1941*, p. 189. Roger N. Quirk in commenting upon experience with "substitution" and crushing under the first price-fixing effort under the Act said: "As regards the former, the original price schedules forbade the substitution on any order of a grade or size taking a higher minimum price than that to which the order referred. (See, for instance, Order 89). There were immediate protests from the operators and within a very short time the Commission had to waive this rule and permit substitution 'where reasonably necessary as an emergency measure in order to continue operation of the mine' and only after obtaining a permit from the Commission (i.e. the local statistical bureau) (Order 127, Dec. 14, 1937). As regards crushing under the original price orders, crushed coal was to be charged for at 5 cents per ton above the minimum price of the original size, which would in effect make the practice of crushing prohibitive. Again the Commission had to back down and in the revised price orders this crushing rule was deleted (see Order 126)." (*Op.cit.*, p. 147, n. 1. See also his General Appendix, pp. 60-62.)

such persons, . . . of the prices and marketing rules and regulations established under this section." (Sec. 4-IIh.)

Differences of opinion developed as to the meaning of this provision. For example, was the Commission justified in interpreting the Act to mean that price discounts were to be established for wholesalers and not retailers? What was the status of "sales agents," that is, persons or organizations that handle all or most of the coal of a given producer, and what action should be taken to preclude price evasion by these agents? How should "farmers' cooperatives" be regulated when they perform both the function of wholesaler and that of retailer? Obviously they would hold a competitive advantage over private distributors if allowed both the wholesaler's discount and the retailer's margin. How should intermediaries (forwarders and transshippers) engaged in transferring coal to tidewater and the lake trade by rail and boat be compensated? Lastly, how should discounts be computed—as a percentage of the mine price as requested by wholesalers, in cents per ton as recommended by many operators, or on some other basis?¹¹¹

The Coal Division undertook research to determine prevailing wholesale discounts, sales agency commissions, selling costs and related items; conducted hearings; and finally prescribed maximum discounts as well as rules and regulations for distributors it believed to be subject to the Act. Experience under the Act, however, clearly indicates that Section 4-IIh stood in need of revision.

3) *Averaging of strip and deep mine costs.* Messrs. Gordon and Webb pointed out that "the averaging of deep mine costs with the relatively low costs of strip mines" was "one of the most perplexing price problems" that confronted the Commission.¹¹² Because strip or surface mining is limited to coal veins lying near the surface, its use can be expected to vary from district to district. That this is so is substantiated by the statistics on surface mining for the year 1940. (See Table 86.) Southern No. 1 and Southern No. 2 (Districts 7 and 8) produced no coal by this method. In Eastern Pennsylvania, Western Pennsylvania, Northern West Virginia and in Alabama, Tennessee, and Georgia, surface mining contributed less than 2.5 per cent of the total production of bituminous coal. In Panhandle (West Virginia) the strip mines produced 9.7 per cent, in Western Kentucky 11.3, in Ohio 19.5, in Illinois 26.5, and in Indiana 53.6 per cent.

Because the producing costs of strip mines are much lower than those of deep mines, the averaging of these two sets of costs in

¹¹¹ See discussion by Quirk, *op.cit.*, pp. 139-44.

¹¹² *Op.cit.*, p. 305.

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districts which produce a substantial tonnage of strip coal gives an average cost figure which is in fact representative of neither type of mining. Table 86 shows in addition to the percentage of coal mined by stripping, the producing costs of strip and deep mines, and the producing costs of all commercial and captive mines in the districts, other than District 5 (Michigan), east of the Mississippi River. It will be seen that the districts which used

TABLE 86
Per Cent of Bituminous Coal Produced by Strip Mining, and Producing Costs of Deep and Strip Mines in Eleven Producing Districts East of the Mississippi River, 1940

Minimum Price Area and Producing District	Output of Strip Mining ^a (per cent of total)	Producing Costs ^b (dollars per net ton)		
		Deep	Strip	All Mines ^c
MINIMUM PRICE AREA 1				
1 Eastern Pennsylvania	1.6	2.0422	1.1133	2.0278
2 Western Pennsylvania	2.2	1.9243	1.3440	1.9115
3 Northern West Virginia	0.6	1.5316	1.2538	1.5300
4 Ohio	19.5	1.6665	1.1978	1.5753
6 Panhandle (West Virginia)	9.7	1.6143	.9385	1.5490
7 Southern Numbered 1	0.0	1.8919		1.8919
8 Southern Numbered 2	0.0	1.7511		1.7511
MINIMUM PRICE AREA 2				
9 West Kentucky	11.3	1.2911	.9841	1.2564
10 Illinois	26.5	1.5245	1.2104	1.4411
11 Indiana	53.6	1.4484	1.1421	1.2842
MINIMUM PRICE AREA 3				
13 Southeastern	0.2	2.2069	2.1354	2.2067

^a "Bituminous and Lignite Coal Tables, 1939, 1940, and 1941," Bituminous Coal Division, 1943.

^b "Revised Detail of Producing, Administrative, and Selling Costs for the Calendar Year 1940," Bituminous Coal Division, 1941.

^c The data are for both captive and commercial mines.

surface mining extensively reported considerably lower average producing costs for all mines combined than did the districts with small proportions of surface mining. It might be argued that these differences in costs should prevail and be passed on to consumers. In the event, however, that a system of minimum prices is to be introduced, particularly one embodying the criteria established in the 1937 Act, the authors believe that substantial differences in costs growing out of methods of production will have to be taken into account. Failure to do so will give the owners of surface mines

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a competitive advantage that will enable them to encroach on the markets of deep-mine operators and thereby add to the instability of the industry.

4) *Failure to provide for coal shipped and sold on company-owned facilities.* The price-fixing procedure was inadequate in that it permitted the determination only of mine prices. Where coal shipped by rail to a given market was sold on a delivered basis, any violation of the established minimum price could be determined by subtracting the published freight rate from the delivered price. This procedure was not applicable to those companies which shipped coal on their own barges and received it and sold it from their own docks in New England or the lake ports. These companies could evade the Act by selling on a delivered basis, and as a result some of them were able to obtain a competitive advantage over producers who did not have such facilities.

Since the Act failed to provide for such operations, the Coal Division fell back on Section 4-IIg which prohibited evasion or violation of the price provision "by or through the use of docks or other storage facilities or transportation facilities, or by or through the use of subsidiaries . . . or other . . . instrumentalities. . . ." On the basis of these prohibitions, the Coal Division issued price instructions to each district which required each producer selling "on a delivered basis to add to the applicable f.o.b. mine price the actual transportation and delivery costs incident to the delivery of the coal."¹¹³ This literal application of Section 4-IIg to the situation has been characterized as "one of the most amazing rules ever promulgated by a governmental body."¹¹⁴ The comments of the Coal Committee of the American Bar Association with respect to this problem are pertinent.¹¹⁵ The Committee felt that the literal application of this provision of the Act "would probably be unconstitutional and certainly economically unfair" unless delivery costs of the companies involved were identical. If these costs varied for two firms selling in the same market and they were required to add these different costs to the same f.o.b. mine price, the company with higher costs would be forced out of business. The Committee noted two procedures which had been suggested for meeting this problem. Under the first of these, the Commission would set "different f.o.b. mine prices for similar coals, depending on the means of delivery adopted in reaching the market." The other suggested solution would be to establish as the minimum price one obtained by adding to the f.o.b. mine price the lowest delivery

¹¹³ Michie, *op.cit.*, p. 33.

¹¹⁴ *Loc.cit.*

¹¹⁵ *Ibid.*, pp. 33-34.

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costs reported by any company owning its own shipping and dock facilities. The Committee pointed out, however, that this practice might force independent wholesalers out of business unless their costs were about as low as the lowest-cost producer that owned its own delivery facilities.

It is obvious that the Act of 1937 failed to make adequate provision for the pricing of coals shipped on company barges and sold from company-owned docks.

j. *Enforcement of minimum prices.* It will be recalled that the Act provided for the issuance of cease-and-desist orders which were enforceable in the courts and for the revocation of code membership of willful violators of the coal code or regulations prescribed under it. (Secs. 5b and 6c.) A violating producer, moreover, was subject to a 19½ per cent tax on all coal sold by him as a non-member (Sec. 3b) and was required to pay twice the tax on coal sold in violation of the Act as a condition of reinstatement as a code member. (Sec. 5c.) In addition, the Coal Commission was empowered to withdraw approval of a marketing agency should it fail to comply with the Commission's regulations. (Sec. 12.) Finally, the Coal Commission was authorized to take action against distributors who violated the marketing rules and regulations or resold coal at a price lower than the established minimum. In such instances it could, after notice and hearing, suspend or revoke the certificate of registration of the distributor, thus depriving him of his discount when purchasing coal from producers.¹¹⁶

To ascertain the extent to which producers and distributors were complying with the prices and marketing rules, the Coal Commission instructed Code members to file copies of (1) all contracts and spot orders beginning June 1937, and (2) invoices and credit memoranda beginning January 1938. In addition, wholesalers were required to file copies of their invoices.

The magnitude of the task of checking compliance was pointed out by the Commission in its *Second Annual Report* to Congress:

"The number of spot orders received annually runs into the hundreds of thousands. The number of invoices runs into the millions. . . . The total number of these documents of sale to be received, checked against the price schedules, and analyzed runs between 4,000,000 and 5,000,000 a year.

"The only feasible way to handle so large a mass of detail is to utilize modern tabulating machinery. The original invoices (or spot orders) are abstracted and coded in the district statistical bureaus.

¹¹⁶ *Federal Register*, March 28, 1939, pp. 1348-49.

. . . The data are then transferred to punch cards, which are mailed to the Commission's central machine tabulating unit in Washington. . . .

"It has . . . been necessary to develop entirely new manuals for the coding of destinations by market areas. The Commission's city code manual now provides numerical codes for every railroad station and every other town or village listed in the United States or Canada, in all over 150,000 destination points."¹¹⁷

The largest percentage of violation cases involved the sale of coal by producers at prices below the effective minimum. Data compiled by the authors from Orders published in the *Federal Register*, since no official tabulation is available, indicate that the Coal Division issued 198 separate cease-and-desist orders and 139 membership revocations, some of which included cease-and-desist orders issued simultaneously with revocation orders. Altogether 337 cease-and-desist or revocation orders were issued during the three-year period in which minimum prices were in effect. The total number of complaints was greater because some complaints were dismissed and some were never acted upon prior to the expiration of the Coal Act in August 1943.

Of the 139 producers whose membership in the Code had been revoked, 69 were restored to membership upon the payment of fines which amounted to \$107,990.44. No information is available as to what happened to the 70 producers who failed to pay fines totaling \$43,775.87. Many undoubtedly went out of business; some may have paid the 19½ per cent tax as the cost of operating.

In the case of distributors, the Coal Division was empowered to make complaints on its own initiative. During the three years of minimum price regulation, it took action against 57 distributors. The violators constituted 2.9 per cent of the total number of distributors handling coal on June 30, 1941. The action taken by the Division included three cease-and-desist orders and 54 suspensions, revocations, or cancellations, of which 28, or 52 per cent were reinstated.¹¹⁸

It is important to note that the 394 penalties referred to above do not indicate the extent of the enforcement problem. At the end of 1941, 15 months after the enforcement machinery had been installed, 1,840 violation cases had been filed with the Coal Division. Of this number, 642, or about one-third, had been "termi-

¹¹⁷ Pp. 15 and 16.

¹¹⁸ For a more complete discussion of action taken against violators of the Coal Code and of enforcement procedures, see Chapter IX.

nated" by the Compliance Coordinator; 562 had been referred to the General Counsel's Office, 449 were being investigated, and 187 were awaiting action by district boards.¹¹⁹ At the end of 1940, the percentage of the total number of compliance cases filed with the Division which had been terminated by the Compliance Coordinator was 20 and the figure at the close of 1941 was 35 per cent.¹²⁰ Part of this improvement must be accounted for by the decreasing rate of new cases undoubtedly reflecting the higher prices occasioned by World War II. The above data are confined to the evasions which came to the attention of the Coal Division. The extent of noncompliance cannot be determined.

It is the belief of the authors that the compliance machinery established by the Coal Division, notwithstanding much overtime work on the part of the staff responsible for its operation, was not very effective in dealing with the known violations of producers and distributors. The Director of the Division, D. H. Wheeler, was more optimistic. It was his opinion that:

"A review of the numerous checks leads to the conclusion that the pledges of compliance have been kept faithfully by the preponderance of the industry and that the disastrous marketing conditions and practices which the Congress desired to prevent have been eliminated. . . .

"The general conclusion, that for the most part, compliance pledges were kept faithfully is not meant to indicate a condition approaching total absence of violations. Despite the upward trend of prices generally, great quantities of bituminous coal have competed on the market at prices approximating the minimum. As might be expected, this has been particularly true of low grade coals. Such competition also results from the inability of the mine operator to produce particular sizes of coal in a volume proportionate to the market demand for those sizes without also producing residual sizes for which at times there is no corresponding demand. The compliance staff, with the cooperation of the District Boards, has uncovered many instances of violation as a result of these conditions and the sanctions provided in the Act and the regulations have been imposed on the violators."¹²¹

¹¹⁹ *The Interior Department Appropriation Bill for 1943*, Hearings before U.S. House subcommittee of the Committee on Appropriations, 77th Cong., 2d sess., 1942, Part I, p. 829.

¹²⁰ *Loc.cit.*

¹²¹ *Annual Report of the Secretary of the Interior*, . . . June 30, 1942; p. 114.

At the Hearings on the Interior Appropriation Bill for 1943, he stated that "the noncompliance was greater during the early period of the act. I think that it can be said now that compliance with the provisions of the act is generally considered very good."¹²²

At the same Hearings, the Division pointed out, however, that: "There is a particular need for special emphasis to be given to violations of the Marketing Rules and Regulations, including the unfair methods of competition established by Section 4-IIi of the act. In large measure, proper enforcement of these regulations has had to be deferred to date because of the necessity of employing all available personnel for the enforcement of price schedules. Even the enforcement of price schedules has been maintained at less than a desirable level since compliance agents who have conducted investigations must appear as witnesses in the prosecutions of those cases, thereby being unavailable for further investigations of reported violations or for independent investigations on their own initiative."¹²³

It would seem that the compliance division was definitely handicapped by the small staff assigned to it, by delays that resulted from the fact that the Coal Division itself could not make formal complaints against producers on its own initiative, and by lack of authority to obtain all the evidence because Congress did not give it the power to get evidence other than through the records it compiled, e.g. sales invoices, contracts, and spot orders.

As the reader will appreciate, the enforcement task was greatly simplified by a strong demand for coal in the early forties which sent average prices above the established minimum prices. As a result the temptation to violate the minimum price schedules was in large part removed. Whether the Coal Division could have maintained its minimum price schedules in a highly competitive market such as prevailed in the 1930's in the face of strong opposition from large, powerful buyers and the general consuming public is problematical. Unquestionably, persons whose livelihood is dependent upon the production and sale of coal have a greater incentive to cut prices, directly or indirectly, and undersell their competitors when coal markets are shrinking. The adequacy of enforcement machinery cannot be judged when the demand for coal is especially strong. It was the Commission's opinion that "ample means" were

¹²² *The Interior Department Appropriation Bill for 1943*, Hearings before U.S. House subcommittee of the Committee on Appropriations, 77th Cong., 2d sess., 1942, Part 1, p. 843.

¹²³ *Ibid.*, pp. 825-26.

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"afforded by the Act to the Commission to enforce the regulatory measures."¹²⁴

k. *Revision of minimum price schedules.* The provisions of the Act with respect to the revision of minimum price schedules and their limitations were presented in an earlier section. This discussion will be limited to the procedure followed by the Bituminous Coal Division in its 1942 revision.

The revised minimum prices which became effective on October 1, 1942, were arrived at by means of a procedure designed to carry out the Act's requirement that the Division establish new minimum prices whenever the reported costs departed by more than \$.02 a ton from the cost basis of the prevailing minimum price schedules.

In carrying out the revision, the Coal Division conducted proceedings to determine the new weighted average costs. It then opened hearings on price revision at which all interested parties were afforded an opportunity to appear and present evidence. After the Examiner had filed his report, the Acting Director heard oral arguments, entered his Findings of Fact, Conclusions of Law and Opinion, and announced the new prices. The prices as announced were affirmed, after due consideration and review, by the Secretary of the Interior. The procedure followed by the Coal Division is referred to as Docket No. 21.

The Act did not specifically prescribe the method to be used in revising minimum prices. The Coal Division, in dealing with all-rail coals, chose to express the price changes in terms of large groups of market areas, combining into nine large groups the 193 market areas on the basis of their economic likeness and their pattern of coal distribution. A general description of the area groups and the increases in minimum prices granted to each are presented in Table 87.¹²⁵ It will be noted that increases ranged from \$.05-.30. For the industry as a whole, they averaged \$.15 a ton.¹²⁶

The Coal Division pointed out that the increases needed to equalize costs and average realization based on minimum prices varied from one minimum price area to another and that the appli-

¹²⁴ *Second Annual Report of the National Bituminous Coal Commission*, . . . November 15, 1938, p. 14.

¹²⁵ The price increases were announced in the Order of August 28, 1942, published in the *Federal Register*, September 3, 1942, pp. 6943-48, and the description of the areas is based on that reported in *Coal Age*, October, 1942, p. 63. For a more complete description of these areas see Chapter IX.

¹²⁶ For reasons stated in Chapter IX, District 14, Arkansas-Oklahoma, was not included in the grouping of market areas.

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cation of varying amounts to the minimum prices of different minimum price areas would affect the established coordination of such prices between competing districts.

In order to resolve this problem, the Coal Division applied what it called the "weighted average adjustment method."¹²⁷ Under this method, coals moving into selected groups of consuming market areas were given uniform price adjustments. The amount of the

TABLE 87
Increases in Prices for All-Rail Coals, by Market Area Group,
Effective October 1, 1942
(dollars per net ton, f.o.b. mine)

	<i>Market Area Group</i>	<i>Increase^a</i>
A	The eastern seaboard	.20
B	Alabama, eastern Tennessee, eastern Mississippi, Florida, and part of Georgia	.30
C	Chicago, Louisville, western Tennessee, western Mississippi, Arkansas, Louisiana, most of Missouri, most of Indiana, and western Kentucky	.10
D	Iowa, Illinois (except Chicago), part of Indiana, and part of Missouri	.05
E	Montana, Wisconsin, Minnesota, North Dakota, most of South Dakota, and the upper Michigan peninsula	.15
F	Nebraska, Kansas, Oklahoma, and most of Texas	.10
G	Colorado, Arizona, New Mexico, and part of Texas	.15
H	Wyoming, Utah, Idaho, Oregon, Nevada, California, and part of South Dakota	.05
I	Washington, Alaska, and western Canada	.25

^a Not applicable to coals from District 14. Increases to be added to minimum price schedules, effective October 1, 1940.

Source: *Coal Age*, October 1942, p. 63.

weighted average increase was determined "by weighting the realization increases needed by the combined tonnages of the coal sold in selected groups of consuming areas."

The combining of minimum price areas and the "weighted average adjustment method" appear not to have been necessary in revising the minimum prices for railroad and vessel fuels or for coal shipped by truck. The increases, while they varied from one minimum price area to another, were uniform within a given minimum price area. For railroad fuel they ranged from \$.00-.40, for vessel fuel from \$.20-.30, and for truck shipments from \$.05-.30.

In revising minimum price schedules the Bituminous Coal Division could choose among several possibilities. It could have estab-

¹²⁷ *Annual Report of the Secretary of the Interior*, . . . June 30, 1943, p. 103.

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lished new minimum prices for each minimum price area or group of areas (1) that merely reflected the changes in costs as determined under Docket 21, (2) that preserved the price relationships between competing coals in common markets that were established in the initial coordination process, or (3) that constituted some compromise of these two courses of action.

The Consumers' Counsel urged that the first course of action be taken on a minimum price area basis. He argued that the second arrangement would fail to encourage efficiency and cost reduction, and called attention to the need for a minimum price structure that would permit producing fields "the same opportunity to expand their markets that they would have had under free competition when their relative costs of production declined."¹²⁸ He warned that any attempt to preserve the price relationships established by the initial coordination process "would freeze a distribution pattern now five years old by permitting wide variations in f.o.b. mine prices so that delivered [price] relationships would not be altered."¹²⁹

The producers' boards, on the other hand, insisted that the destination price relationships between coals from different price areas in common markets remain the same. Such an arrangement, while it penalized the more efficient operations, served to protect the competitive position of the producing fields.

The producers' position was adopted by the Coal Division. From the administrative point of view, the second approach is preferable, in that the existence of competition in a given market area can be established by an appeal to statistics of coal shipments to the area from particular fields; and this evidence carries much weight in the hearing room and in the courtroom. To base coordination upon fair competitive opportunities that have not yet been realized, as the Consumers' Counsel advocated, is to invite considerable opposition which might delay the administrative process unduly or lead to an adverse decision by the court.¹³⁰

The use of the method adopted by the Coal Division, as pointed out by the Consumers' Counsel, led to many increases "in the minimum prices for the midwest producing field, even though no significant net increase in production costs had occurred there. On the

¹²⁸ *Annual Report, United States Office of the Bituminous Coal Consumers' Counsel*, . . . December 31, 1942, p. 11.

¹²⁹ *Coal Age*, September 1942, p. 42.

¹³⁰ On October 27, 1942, Associated Industries of New York petitioned the U.S. Court of Appeals for the Second Circuit for a review of the orders that established the new minimum prices. The Coal Act expired before a legal decision was reached in this case. (*Coal Age*, December 1942, p. 135.)

other hand, the prices of the eastern coals were increased by a lesser figure, in many markets, than they would have been by a straight application of the cost increases."¹³¹

The controversy over the method to be used in revising minimum prices was heightened by the following statement of the Director of the Coal Division: "By applying these techniques [weighted average adjustment method] in future general price' revision proceedings it would have been possible to have made a general revision of minimum prices generally subject almost to mathematical determination."¹³²

Some persons objected to the use of this procedure on the grounds that it apparently did not take existing inequities into account. They also feared that all future adjustments might be made by the same method.

Presumably, however, a much more limited use of the method was contemplated. The Secretary of the Interior, Harold L. Ickes, on approving the new minimum prices, acknowledged that the Consumers' Counsel had raised "grave questions of policy." In setting forth the reasons for approving the method used in Docket 21, he said:

"Approval of its use in this proceeding is not, as the Director's opinion itself indicates, an approval of its use as a permanent petrification of the marketing arrangements reflected in General Docket No. 15.

"The Acting Director has had a difficult task to perform. As far as I can see, he has performed it wisely and with due regard to orderly procedure. There was no need for him to make it more complicated than it already was by undertaking a general inquiry under section 4-IIb which might have grown into the proportions reached by Docket 15. To have done so might well have slowed down all revision of minimum prices by months. The Acting Director has, in his opinion, issued an invitation to the parties to this proceeding to undertake 4-IIc proceedings wherever necessary. The invitation will, I hope, be accepted shortly. If it is not, the Division may wish itself to initiate general or particularized proceedings under section 4-IIb."¹³³

The implications of this statement appear to be (1) that the problem created by the freezing of a pattern of coal distribution

¹³¹ *Annual Report United States Office of the Bituminous Coal Consumers' Counsel*, . . . December 31, 1942, pp. 10-11.

¹³² *Annual Report of the Secretary of the Interior*, . . . June 30, 1943, p. 104.

¹³³ *Federal Register*, October 3, 1942, pp. 7861-62.

had not become very serious in the autumn of 1942, but that it might become serious at a later time, and (2) that inequities resulting from weighted average adjustment method in Docket 21 proceedings could be effectively dealt with through hearings provided for under Section 4-II d of the Act.

The reader will see that in this first revision of minimum prices, the Bituminous Coal Division, seeking conscientiously to make the Act function, decided to choose a course somewhere between two extremes: a hasty decision on the one hand, and a protracted undertaking that would unduly delay the setting of new minimum prices. In this proceeding the Division used a kind of short-cut method, but immediately set about to correct inequities in the minimum price schedules by calling for 4-II d hearings at which all persons who were dissatisfied with the new prices could state their objections and, where these proved justified, obtain relief.

The source of the conflict between the positions of the Consumers' Counsel and the Bituminous Coal Division appears to be centered in the requirement of the Act (Sec. 4-II b) that the coordination of minimum prices "shall preserve as nearly as may be existing fair competitive opportunities."

The Coal Division consistently emphasized the maintenance of *existing* competitive relationships. The adjustment of minimum price schedules for each minimum price area by a method which merely reflected changes in costs would have disrupted the minimum price relationships which presumably prevailed at the time of the initial minimum price determination. This, the Coal Division apparently was unwilling to do.

The Consumers' Counsel, on the other hand, said that a distribution pattern in effect five years earlier should not be frozen; that the Coal Division instead should preserve *fair* competitive conditions so that efficient operations would have an opportunity to expand their markets at the expense of less efficient producers.

The issue raised by the Consumers' Counsel is a serious one not dealt with adequately in the Bituminous Coal Act of 1937. It may be argued that the Act was designed to operate for only four years and that, therefore, the preservation of pre-existing patterns of competition was not a serious matter. Legislation of this kind is frequently extended to cover a much longer period. Perhaps the legislators should have faced the problem boldly by providing an adequate arrangement which would authorize the administrative agency to establish patterns of minimum prices to take into con-

sideration and reflect changing competitive conditions and clearly established trends.

In appraising the work of the administering agencies as distinct from the provisions of the Act, it is important to recognize the tremendous difficulties confronting the agencies because of the nature of the industry and product, the limitations of the Act, the delaying tactics of some producers and consumers, and the limited supply of competent personnel.

The Commission may be criticized for failure to engage in any preliminary education of producers and consumers regarding the nature and purpose of minimum price fixing, the fundamental requirements of the Act, and some of the problems and procedures involved in attaining its objectives. The criticism is especially applicable to the second attempt to fix prices at which time the Commission was very cautious in specifying procedures for classification and in its application of standards. The Coal Division (1) hesitated to specify standard policies and procedures, (2) was unwilling to make basic changes in the existing price structure, and (3) laid considerable stress upon the maintenance of existing fair competitive opportunities. Such action may be explained, at least in part, by the ambiguity and conflict of the criteria and standards established in the Act.

This experiment in minimum price fixing has shown that the use of a base cost, plus adjustments, in price fixing has definite limitations. Because of the difficulty of estimating the impact of technological developments and current economic forces, other than wages, hours, and related contract provisions, on present and future costs, substantial differences developed in certain fields between determined costs and actual costs as later reported. The result was that minimum prices did not always reflect with great realism the average cost level.

Experience under the Act has demonstrated a need for a standard classification of accounts and a systematic and adequate spot checking procedure for auditing cost reports to the companies' records. It also has shown that the method adopted by the Commission of using total ascertainable tonnage as the divisor in computing selling cost per ton was inadequate, since it understated the selling costs of commercial mines. Unfortunately, the price-fixing agencies had no alternative in view of the wording of the Act. The use of actual selling costs as the best indication of "reasonable" selling cost would seem to be unwise unless these costs are carefully ex-

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amined to ensure inclusion only of items properly charged to selling. Because this practice invites higher selling expenditures and consequently higher minimum prices, the price-fixing agencies should have developed criteria of reasonableness for the guidance of the operator and established adequate checking procedures to see that they were followed.

It is to be regretted that the Act did not provide clear and workable criteria and that the administrative agency failed to establish standards and general procedures to guide district boards in classifying and pricing their coals. As a result there were wide divergences in the procedures used, and the final classifications exhibited little uniformity in terminology, size groups, factors considered in appraising coals, or quality classes recommended. The fact that a completely scientific classification was not feasible did not justify the failure by the Commission (1) to specify and define the factors to be considered in determining uncoordinated minimum prices and (2) to require that use be made of analyses of physical characteristics and other available standards.

The coordinating process did not make use of formulae or standards yardsticks, but was based on judgment, negotiation, and compromise. This approach was probably inevitable in the light of the many factors influencing coal prices, the rigorous competition in the industry and the resulting conflicts of interest, and the likelihood that application of any systematic procedure would have led to prices that would disturb competitive relationships.

Our analysis of costs per ton and estimated realizations per ton reveals that district realizations departed in varying degrees from average "determined" costs for the minimum price area as a whole and in some districts deviated considerably from their own determined costs. It is not surprising, therefore, that an analysis of limited available data suggests that minimum price schedules had a rather substantial influence upon the existing pattern of prices.

Although the Coal Division was of the opinion that the Act's provision for modifying minimum prices to handle the problem of distress coal was adequate, there is some doubt as to whether the procedure could have dealt effectively with the problem over an extended period of time. Experience under the Act also disclosed a need for clarification and amplification of the provision relative to distributors' discounts, for taking account in cost determination of the substantial variations in the costs of surface and deep mining, and for the pricing of coals shipped on company barges and sold from company-owned docks.

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The authors have definite reservations concerning the adequacy of the enforcement powers provided by the Act. It is doubtful whether the compliance machinery established by the Division was very effective in dealing with violations when the market for coal was strong. The task would have been much more difficult in a falling market. The Coal Division would have been in a more advantageous position had Congress authorized it to make formal complaints against producers on its own initiative and granted it authority to obtain the necessary evidence.

Finally, because the Act failed to specify the method to be used in revising minimum prices when cost changes occurred, the choice of the method to be used was left to the price-fixing agency. Such an arrangement is unsatisfactory, as it might have tempted those responsible for price revision to select a method that was administratively simple and easy to justify. A better course of action would have been for Congress to provide a procedure for revision which would ensure price patterns that reflected changing competitive conditions and established trends.

It would be unfair to conclude this appraisal of the policies and procedures used in establishing, enforcing, and revising minimum prices without emphasizing the fact that the administrators and their staff were confronted with many exceedingly complex problems and that these problems had to be dealt with within the framework of an Act which we have seen had definite limitations. The establishment and enforcement of these price schedules under the circumstances was a notable accomplishment and stands as a tribute to outstanding competence, persistence, and public service.

3. MINIMUM PRICE FIXING AS A MECHANISM FOR ATTAINING STABILIZATION, EFFICIENCY, AND EQUITIES

The long-run objective of Congress in enacting the Coal Act was a stabilized industry. It wanted to minimize as far as possible recurring overdevelopment, intensive competition, successive price wars, and disturbed industrial relations. Assuming adequate legislation and wise and competent administration, could this goal be attained?

The Director of the Bituminous Coal Division believed not only that it could be done but that it had been done: "The establishment of minimum prices and marketing rules . . . has brought . . . stability to the coal industry and order to the Nation's coal markets for the first time in nearly 20 years."¹³⁴ Others were less optimistic.

¹³⁴ *Annual Report of the Secretary of the Interior, . . . June 30, 1941*, p. 177.

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What may be said of the claims of those who believed the Act to be an effective instrument for stabilization and the counter claims of others who viewed with scepticism the contention that this goal can be attained through the machinery of minimum prices?

a. *Conditions essential for stabilization, efficiency, and equities.* Before examining the arguments advanced for and against minimum price fixing it may be helpful to examine the conditions that should be met if the industry is to be stabilized and operated not only efficiently but equitably with respect to the benefits to be obtained by those associated with the industry. In the authors' opinion they are:

—A relationship between the capacity to produce and the demand for bituminous coal that will more nearly approximate full-time operation and still afford the flexibility in output required by the economy.

—Price schedules that will minimize the intensive competition and excessive price cutting that have characterized this industry for long periods of time.

—Fair labor standards, that is, compensation, hours of work, working conditions, fringe benefits, and employment opportunity comparable to those prevailing in other basic industries.

—Cost-price relationships that will afford investors the opportunity to make profits commensurate with those in other industries faced with similar risks.

—Protection of consumers against (1) excessive coal prices, (2) wasteful methods of coal mining, (3) uneconomic distribution and consumption of coal, and (4) frequent and prolonged work stoppages which impair the functioning of the economy.

This statement of conditions essential to stability supplies a framework into which to fit the arguments of the proponents and opponents of minimum price fixing.

b. *Impact of minimum price fixing on overdevelopment.* We have seen that rigorous competition and in the opinion of most students of bituminous coal, overdevelopment have plagued this industry throughout much of its history, particularly from 1924 until the outbreak of World War II.¹³⁵ It is recognized, of course, that some excess capacity is necessary in an extractive and highly seasonal industry such as bituminous coal, but it would be difficult to jus-

¹³⁵ See discussion of overdevelopment in Chapter I. See also statements of government officials quoted in this chapter, section B2.

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tify an overdevelopment which allowed coal mines to operate, on an average, only 188 days a year in the decade of the twenties, 175 days in the thirties, and 229 days in the forties.¹³⁶ A full-time working year (50 five-day weeks) would equal 250 days. This standard the industry could not approximate even in the decade of the forties, except in the years 1943 to 1945 inclusive when the nation's industries were straining to meet the requirements of World War II. The highest figure for any one of these years was 278, with the average for the three years 268 or 18 days above a full-time working year of 50 five-day weeks.

The following analysis will concentrate on the basic, persistent factors and conditions affecting (1) the capacity to produce and (2) the demand for bituminous coal.

1) *Analysis of factors affecting mine capacity.* The factors and conditions affecting mine capacity are:

- (a) The abundance of coal deposits and the relative ease with which mines may be opened or reopened.
- (b) The urge to open or expand coal mines in the face of recurring taxes, interest on money invested in coal lands, and high prices.
- (c) The difficulty of ridding the industry of submarginal mines because of the practice of reopening such mines under new management at greatly reduced capital values as the result of bankruptcy proceedings.
- (d) The diffusion of ownership and wide geographic distribution of producing units which preclude voluntary action by operators to control capacity.
- (e) The specialized nature of the fixed capital invested in bituminous coal mining which deprives operators of the possibility of using it for other purposes or selling it in hard times for any reasonable price, and leaves only the possibility of operating the mine to produce an income which may amount to little more than out-of-pocket costs.
- (f) The long period of time (three years or more) required to open up a new mine, which frequently brings new capacity into operation after the demand that led to its inception has disappeared.
- (g) Low ton-mile freight rates for long hauls, which encourage the owners of coal lands in outlying areas to open up and to compete in the markets of older fields.

¹³⁶ *Bituminous Coal and Lignite in 1949*, Mineral Market Report, No. 1923, U.S. Bureau of Mines, pp. 20-21.

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- (h) New technological developments and improved mine management.
- (i) Periodic prolonged labor disturbances, which cut off the supply of coal, conceal excess capacity, and prevent needed adjustments.

What impact will minimum price fixing have upon these nine factors and conditions that influence capacity? It is apparent, of course, that minimum price fixing means higher prices of coal than would otherwise prevail in normal or depressed years. There would be no purpose to such price fixing unless it did so. The question, therefore, to be examined is what bearing if any would prices of coal have upon these nine factors?

Obviously a higher price can have no substantial effect upon (a) the abundance of coal deposits or the ease with which they may be developed since these deposits are plentiful and well known, (c) the difficulty of ridding the industry of submarginal mines which reopen at lower capital values as the result of bankruptcy proceedings, (e) the specialized nature of fixed capital in bituminous coal mining which has no other utility and requires operation, often at less than total cost, to recover investment, (f) the long period of time required by technical considerations to bring a new mine into full operation, and (g) lower ton-mile freight rates for long hauls. What about the four remaining factors? Will minimum price fixing serve to lessen their impact upon capacity and keep it in better balance with effective demand?

a) *Effect of higher prices on retention of high-cost mines and development of new mines.* The urge to open up new mines or to expand existing mining properties is always present. Many people who hold coal lands want income from such land, and recurring taxes and interest on money tied up in them serve as an additional incentive to utilize them. The rate at which such properties are opened and closed depends upon the price of coal. During the years 1923 to 1932, when the average value of a ton of coal dropped from \$2.68 to \$1.31, the number of mines producing 1,000 or more tons of coal a year fell by 3,904 (from 9,331 to 5,427), and in the period 1938 to 1948 when the average value rose from \$1.95 to \$4.99, the number of mines increased by 3,302 (from 5,777 to 9,079).¹⁸⁷

¹⁸⁷ *Loc.cit.* The number of underground mines grew from 5,283 in 1939 to 7,108 in 1948. Strip mines, although fewer, increased at a faster rate, from 537 at the beginning of the period to 1,971 at the end.

Critics of the Act warned the public that minimum price regulation would protect existing high-cost mines and bring in new mines, many of which would be marginal; as a consequence excess capacity would be increased and running time reduced. The Act's proponents, however, contended that this need not be so in the long run, and argued that because minimum prices were related to average costs and because producers would be obliged to cut their costs through mechanization and better mine management in order to continue to hold their share of the market and to make a profit, minimum prices would be revised downward and marginal mines will gradually be forced out of the industry.¹³⁸ This reasoning overlooked two important factors. First, it disregarded the strong pressures at work to raise prices, namely, that of the operators to minimize their losses and maximize profits, as well as the insistent demand of a powerful union for higher wages, shorter hours, and greater fringe benefits—demands which are easier to obtain when operators know that they can pass their cost on in higher prices. Secondly, it failed to recognize the impact that a decline in coal consumption, growing out of (1) more efficient coal utilization and (2) the inroads of competing fuels because of higher prices, would have on costs. As running time and output decline, costs and therefore prices rise.

Critics warned the public that the Act exempted from its regulatory provisions mines whose output was almost entirely consumed by the owner and that this exemption would encourage large consumers to open up captive mines, thereby adding to the prevailing overdevelopment. In commenting upon the request of the Ohio District Board for a revision of recommended prices because of the need to discourage the opening of captive mines in Ohio, the Director of the Bituminous Coal Division pointed out that "the evidence that captive mining will inevitably follow the establishment of the recommended level of prices . . . is speculative and not persuasive."¹³⁹ Actually, the effect of an increase in the number of captive mines upon capacity would depend upon whether these mines were new mines or purchased from other producers. If the former, they would add to excess capacity. If the latter, the transaction might take out of competition more unused capacity than the average prevailing in the industry, depending upon

¹³⁸ See the discussion of the argument as set forth by Frank G. Smith: "The Attempted Stabilization of the Bituminous Coal Industry," *Harvard Business Review*, 1939, pp. 177-88, and Ralph Hillis Baker, *The National Bituminous Coal Commission* (The Johns Hopkins Press, 1941), p. 296.

¹³⁹ *Findings of Fact, . . . and Order of the Director, . . .* p. A-120.

whether the captive mine had a very steady demand for coal and could be operated at full capacity or whether the mine was subject to substantial fluctuations growing out of changes in business conditions.¹⁴⁰ In the judgment of Donald H. Wallace, "increasing purchase or leasing of coal mines by large consumers such as electric companies, in order to avoid the anticipated higher prices, will probably exercise little, if any, influence on weighted average cost as long as the regulatory agency continues to interpret the act to call for computation of the average cost of all coal produced by both commercial and 'captive mines.'" ¹⁴¹

It is impossible to determine what the impact of the 1937 Act was upon the acquisition of captive mines. Even if data were available, they would have limited value. The period in which minimum price schedules were in effect was very short. Moreover, prices higher than the minimum prevailed throughout much of this period. Finally, there was no assurance that the Act would be extended.

It is the authors' opinion that minimum prices would not reduce but would add to excess capacity by keeping high-cost mines in operation and by bringing new coal lands into production at a rate faster than that which would otherwise prevail.

b) *Effect of higher prices on decentralization of ownership.* It was sometimes asserted that "with regulated prices, the big companies in the industry will have a tremendous advantage over the small companies and will gradually absorb all of the potential business and force the small companies to close down."¹⁴² Among the claimed advantages of the large companies are a variety of connections with big consumers, reciprocal purchasing agreements, larger expenditures on advertising, intensive selling effort, and the greater feeling of security that they afford buyers because of their size. It was maintained that smaller companies would no longer be able to offset these advantages by cutting their prices.

This criticism assumes that small mines are in a position to undercut the prices of their low-cost competitors. A study made in 1929¹⁴³ of the operating performance of large and small companies showed that, except for the largest class of companies (1,000,000 tons and over), the average output per man per day and the average number of days worked increased while the average sales realization

¹⁴⁰ See the discussion of Michie, *op.cit.*, p. 35.

¹⁴¹ *Op.cit.*, p. 470.

¹⁴² Michie, *op.cit.*, p. 35.

¹⁴³ *Mineral Resources of the United States, 1929*, U.S. Bureau of Mines, Part II, p. 720.

decreased with the size of the company. For example, companies producing from 500,000 to 1,000,000 tons a year reported an average output per man-day of 5.3 tons and an average working time of 230 days while the reported average output per man-day of mines producing 10,000 to 50,000 was only 3.4 tons and the average days worked 163. Moreover, the average sales realization of this group of larger companies was \$1.66 and that of the smaller companies \$1.92. How can small companies with less efficient management, far less mechanization, and higher idle-day costs undercut the prices of the larger low-cost companies? Moreover, would it be possible for small companies to exist if they did not, as in 1929, have a higher average sales realization? Is it not more likely that the closing of 3,904 mines during the years 1923 to 1932 was the result of the price cutting on the part of companies in a relatively favorable competitive position? If this reasoning is correct, then minimum price regulation does set a price floor which protects existing high-cost mines and encourages the opening up of others.

Finally, there can be little danger of monopoly for many years in an industry (1) in which in 1951 the largest commercial corporate organization did not account for "5 per cent of the total output," (2) in which there were "only 13 groups of companies under single managements that 'produced' as much as 1 per cent each," and (3) in which 8,000 mines were operated by upwards of 5,000 companies.¹⁴⁴

c) *Effect of price fixing on mechanization and management.* Messrs. Gordon and Webb wrote: "It is our belief that the incentive to reduce producing costs will be stronger under the minimum price regulation of this act than under free competition. The incentive under free competition was to minimize losses as far as possible while meeting destructive price competition; there was little chance for profit. Under price regulation, the incentive will be to increase the margin of individual mine realization above individual mine cost. It would seem that once this margin is established, it should last longer than it would under open competition. Under the act of 1937 the minimum prices are to be reduced only after a showing of a reduction of weighted average cost in a price area. Under open

¹⁴⁴ 1951 *Bituminous Coal Annual*, Bituminous Coal Institute, p. 13. According to *Mineral Resources of the United States, 1929*, as cited (p. 718) the first 17 largest companies produced about 20 per cent of the country's commercial tonnage; the next 70 companies produced approximately 23 per cent; and the next 131 companies 17 per cent. Thus, about 60 per cent of the annual output was produced by 218 companies in 1929.

competition prices can be reduced by the action of relatively few firms."¹⁴⁵

Proponents of the Act point out that mechanization and improvement in mine management are not confined to years when operations are making a profit. It is just as important to cut costs when prices are falling as when they are rising or stationary. The urge to survive is a powerful incentive.

An examination of technological trends in this industry establishes the fact that mechanization takes place in both good and bad years. The pertinent question is—what happens to the rate of mechanization in prosperous and depressed periods. A study of the percentage increase in mechanical loading in periods of falling and rising prices should throw some light on this question. During 1923 to 1931 inclusive, when prices dropped on an average about \$.14 a year, the percentage of mechanically loaded coal increased at an annual rate of 1.6 points. In the period 1939 to 1948, when prices rose on the average \$.35 a year, the percentage of mechanically loaded coal increased at a rate of approximately 3.7 points. A similar comparison between mechanization and profits and losses shows that in the period 1928 to 1939 inclusive, when the industry suffered losses (after federal taxes) that on the average equaled \$26.2 millions annually, the percentage of mechanically loaded coal increased at the annual rate of 2.4 points, while in the period 1940 to 1947 inclusive, when annual profits (after federal taxes) averaged about \$51.4 millions, the percentage of mechanically loaded coal increased at an annual rate of 3.6 points.¹⁴⁶

The two sets of data substantiate the contention of those who argue that established minimum prices will tend to increase mechanization. To the extent that they do they will undoubtedly increase mine capacity.

d) *Effect of higher prices on labor disputes.* Prolonged labor disputes tend to conceal the disparity between consumption and capacity and, insofar as they do, preclude adjustments which, in all likelihood, would otherwise be made. They are, therefore, an aggravating factor but hardly a major cause of overdevelopment.

Congress presumably expected the 1937 Act to minimize labor

¹⁴⁵ *Op.cit.*, p. 314. See also Wallace, *op.cit.*, p. 470, and Michie, *op.cit.*, p. 27.

¹⁴⁶ This analysis is based on price and mechanization data published by the U.S. Bureau of Mines in *Bituminous Coal and Lignite in 1949*, pp. 20-21; and on tax data of the U.S. Bureau of Internal Revenue, *Statistics of Income*, Part 2, reprinted in *1950 Bituminous Coal Annual*, Bituminous Coal Institute, p. 188.

strife. In fact, one of the stated reasons for its refusal to extend the Act was that it failed to prevent labor disputes in the industry.

Undoubtedly, established minimum prices would prevent one type of strike—that which is called because of price and wage slashing. Other types of strikes, however, might not be affected or might even be encouraged by the Act. A later section will develop the point that minimum price fixing improves the bargaining position of the union and weakens the resistance of the operators to union demands. We might expect, therefore, fewer labor disputes under established minimum prices. It is interesting to note that during the period 1923 to 1931 inclusive, when prices fell about \$.14 a year, the number of days lost per man on strike averaged 52 per year, while during 1939 to 1948 inclusive, when prices rose about \$.35 a year, the days lost per man on strike averaged only 15 per year.¹⁴⁷ When the war years are omitted, the average number of days lost per man rose to 19 as compared with 52 during the years of falling prices. The much lower rate in the period of rising prices may be explained in part by the fact that union recognition had been achieved throughout most of the industry by 1934, removing thereby one of the major causes of industrial disputes.¹⁴⁸ This factor presumably did not fully account for the very substantial differences. It should be noted, however, that while the public may benefit from fewer or less severe work stoppages under minimum price fixing, this benefit would be paid for in higher coal prices as the result of higher wages passed on, at least in part, to the consumers of coal.

2) *Analysis of factors influencing demand.* Our concern with the demand for bituminous coal at this time is limited to the impact of guaranteed minimum prices on the basic factors which determine that demand. In this category fall:

- Shifts to other forms of energy
- More effective utilization of coal

¹⁴⁷ This analysis is based on U.S. Bureau of Mines data, *Bituminous Coal and Lignite in 1949*, pp. 20-21.

¹⁴⁸ A study of man-days lost on account of labor disputes as a per cent of man-days worked in this industry for the years 1899 to 1927 disclosed that the rate of days lost in the three important states of Illinois, Indiana, and Ohio which together with Western Pennsylvania comprised the highly unionized Central Competitive Field was 12.7 while the comparable figure for all other areas, many of which were unorganized, was 4.2. (Based on data compiled by the U.S. Bureau of Mines and published in its annual reports. The man-days worked were obtained by multiplying the average number of men employed by the average number of days worked by the mines.)

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—Alternating periods of depression and prosperity, especially national emergencies

—The nature of the demand for coal

—Growth or decline of important coal-consuming industries

—The dumping of "distress coal"

—Pronounced seasonal variations

a) *Effect of higher prices on inroads by competitive fuels.* Because minimum price fixing undertakes to raise the prices of coal above those prevailing in normal or depressed years, opponents of the Act contended that these higher prices would cause coal consumers to turn to other fuels, notably oil and gas and to a lesser extent to hydroelectric power. The reduced demand for coal, they maintained, would give rise to higher costs which would necessitate still higher prices—a never ending spiral. Those who supported the Act argued that the spiral would be downward because the average reported cost formula would drive out the high-cost mines which would lead to lower prices followed by lower costs and then again by lower prices and so on until some reasonable balance between capacity and demand would have been achieved. The limitations of this assertion have been presented in the analysis of factors affecting mine capacity.

Still others believed, as pointed out by Walton H. Hamilton, that "the demand for coal is of a secondary character; sales depend, not upon price, but upon the general vitality of business activity."¹⁴⁹ In explanation of his position Mr. Hamilton wrote:

"It does not follow . . . that if a decrease in coal prices does not stimulate demand, an increase in prices results in a shift to competitive fuels. One must differentiate between short and longtime results. An essential in determining the character of the fuel used—irrespective of price—is burning equipment. Only a relatively few plants in the country, largely the utilities, have pulverizer equipment and can shift instantaneously from coal to oil or gas. Competition among fuels is sharp when replacements are to be made in equipment, but this is of course only occasional. Then decisions are made on the basis of guesswork about longtime trends in price. A temporary drop in price would be irrelevant."

No one disputes the fact that bituminous coal has suffered sharp competition from oil and gas in numerous centers of production for many years. A casual examination of available data disclosed that these competing fuels have encroached upon coal in years of both excellent and depressed business activity. Our concern is—

¹⁴⁹ *Op.cit.*, p. 597, note 2.

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what impact do price changes have upon the rate at which consumers shift to the use of competing fuel?

An analysis of data on the consumption of bituminous coal and of competing petroleum products and natural gas over a period of years throws some light on this problem. The data studied exclude gasoline, diesel oils used in trucks, tractors, etc., oil applied to road maintenance and lubricants, as well as natural gas consumed in the manufacture of carbon black.¹⁵⁰ The upper section of Table 88 shows the average annual percentage change in the proportion of the total fuel supplied by bituminous coal, petroleum products, and natural gas during the period 1923 to 1931 inclusive when bituminous coal prices fell on an average about \$.14 a year and

TABLE 88
Average Annual Percentage Change in Relative Consumption of
Competing Fuels during Periods of Rising and Falling Prices

<i>Fuel</i>	<i>Period of Falling Prices^a</i>	<i>Period of Rising Prices^a</i>
A. Average Annual Percentage Change in the Proportion Each Fuel Contributed to Total Consumption ^b		
Bituminous coal	-1.3	-0.1
Petroleum products	+4.8	+2.2
Natural gas	+9.4	+3.5
B. Average Annual Percentage Change in the Proportion Each Fuel Contributed to Total Railway Locomotive Fuel ^c		
Bituminous coal	-0.5	-1.8
Fuel oil	+3.8	+1.1
C. Average Annual Percentage Change in the Proportion Each Fuel Contributed to Consumption by the Cement Industry ^c		
Bituminous coal	-1.4	-0.3
Fuel oil	-7.0	+3.7
Natural gas	+19.8	+0.7

^a The period of falling prices was 1923 to 1931 for Sections A and B and 1927 to 1931 for Section C. The period of rising prices was 1939 to 1948 for Section A and 1939 to 1946 for Sections B and C.

^b Based on data in *1951 Bituminous Coal Annual*, Bituminous Coal Institute, p. 94. These in turn are based upon published data of the U.S. Bureau of Mines and the Federal Power Commission, and should not be confused with the U.S. Bureau of Mines figures on annual supply of energy from mineral fuel and water power in the United States. The latter data include the omissions listed in the text and, therefore, oil and gas not in direct competition with bituminous coal.

^c Based on data compiled by the Interstate Commerce Commission and the U.S. Bureau of Mines and published in *Bituminous Coal—Facts and Figures, 1948 Edition*, Bituminous Coal Institute, pp. 71 and 74. Railway locomotive data are for Class I Line-Haul.

¹⁵⁰ *1951 Bituminous Coal Annual*, as cited, p. 95.

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the period 1939 to 1948 inclusive when they rose approximately \$.35 a year. It will be observed that the percentage contributed by bituminous coal fell less in the period of rising prices than it did in the period of falling prices. The consumption of both oil and gas increased more rapidly in the period when coal prices were falling.

A study of the changes in the consumption of bituminous coal and selected competing fuels for particular uses (see middle and lower sections of Table 88) shows conflicting trends.¹⁵¹ Certainly it is difficult to discover any consistent relationship between price movements and changes in the relative contribution of bituminous coal to consumption for these industrial uses. Only one fact becomes clear, the percentage of the total fuel supplied by bituminous coal in these competitive situations declined in both periods.

We must conclude that forces other than the price of bituminous coal are more important in determining the rate at which the various types of energy are utilized by consumers. We would expect the prices of competing fuels to be well up on the list of such factors and conditions. To ascertain their impact upon each other, data have been brought together on prices and consumption of gas, fuel oil, and bituminous coal used for heating purposes. The upper section of Chart 18 presents for the period 1932 to 1951 inclusive the index numbers of retail prices (on a 1935-39 base) of natural gas for range use (10.6 Therms), fuel oil No. 2, and all sizes of bituminous coal sold at retail. The lower section gives the trends, on the same base, for natural gas utility sales for residential use, distillate fuel oil consumed, and retail deliveries of bituminous coal for residential and commercial purposes.

A study of this chart discloses that the prices of bituminous coal and fuel oil No. 2 moved together through 1948. Thereafter, coal forged upward and oil after a slight decline rose at a slower pace. The price of natural gas, however, except for a small rise in 1939, moved to a decidedly lower level during the whole period. The consumption of coal, which was falling in the years 1934 to 1938,

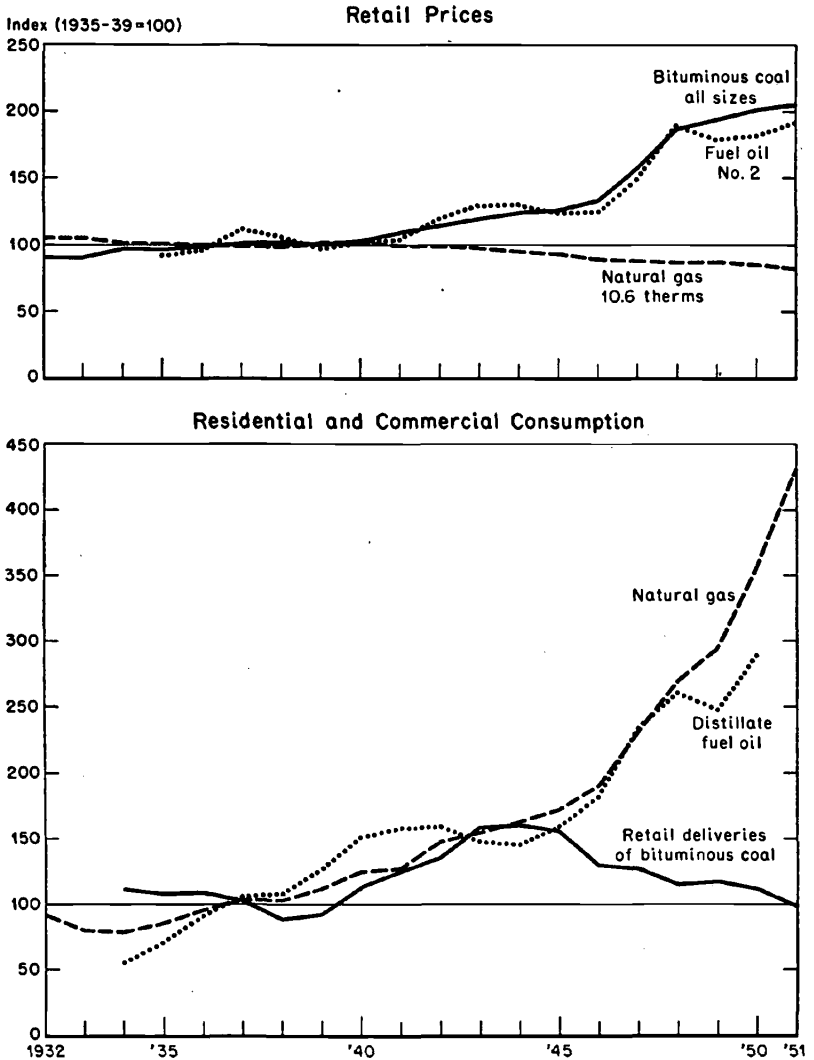
¹⁵¹ The periods for which the comparisons were made and the average annual price changes in bituminous coal are:

<i>Industry</i>	<i>Period of Falling Prices</i>		<i>Period of Rising Prices</i>	
	<i>Years</i>	<i>Annual Average Change (dollars)</i>	<i>Years</i>	<i>Annual Average Change (dollars)</i>
Locomotive fuel	1923-1931	-.14	1939-1946	+.23
Cement industry	1927-1931	-.11	1939-1946	+.23

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rose sharply through 1944 and then, as its price continued to rise, fell almost as rapidly. Distillate fuel oil consumption rose through 1942, moved to slightly lower levels during 1943 and 1944, and began a substantial upward climb after 1944 despite increasing

CHART 18
Retail Prices and Consumption of Competing Fuels Used for Residential and Commercial Purposes, 1932-1951



Source: Appendix F.

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prices. The consumption of natural gas for residential use dropped in 1933 and 1934 but surged upward thereafter with increasing momentum as its price decreased.

Table 89 compresses the annual changes in prices and consumption shown in Chart 18 into three averages representing the prewar, war, and postwar years. From 1935 to 1939, when the average annual percentage change in the prices of all three fuels was insignificant, the change in consumption varied noticeably, coal declining and gas and oil rising.

TABLE 89
Average Annual Percentage Change in Consumption and Price of
Bituminous Coal, Fuel Oil, and Natural Gas during Three Periods,
1935-1950

<i>Item</i>	1935-1939	1940-1945	1946-1950
Consumption			
Bituminous coal retail deliveries	-3.6	+7.0	-3.6
Total distillate fuel oil	+16.4	+1.1	+12.8
Natural gas, residential ^a	+7.2	+6.7	+17.2
Price			
Bituminous coal, all sizes, retail	+1.0	+4.3	+11.2
Distillate fuel oil #2, retail	+1.6	+4.3	+10.6
Natural gas, retail, 10.6 therms	+0.3	-1.8	-1.2

^a Does not include the volume of natural gas consumed in the form of "mixed gas."

Source: Compiled from Appendix F.

During the war years the prices of bituminous coal and distillate fuel oil rose at an average annual rate of about 4.3 per cent while that for natural gas declined at the rate of 1.8 per cent. Distillate fuel oil, subjected to rationing, did not show any perceptible increase in consumption. Retail deliveries of bituminous coal increased at the rate of 7.0 per cent and consumption of natural gas 6.7 per cent.

From 1946 through 1950, the prices of oil and coal rose sharply, at average annual rates of 10.6 and 11.2 per cent, respectively, but that of natural gas moved to still lower levels. The rate of annual increase in the consumption of natural gas averaged 17.2 per cent, that of distillate fuel oil 12.8, while retail deliveries of bituminous coal declined at the rate of 3.6 per cent.

If the prices and consumption data of these competing fuels in 1950 are compared with their respective averages in the base period, 1935 to 1939 inclusive, we find that the retail prices of bituminous coal had risen 100.2 per cent and consumption only 11.5

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per cent. The prices of natural gas for residential use, on the other hand, declined 15.4 per cent while consumption rose 255.2 per cent. Fuel oil No. 2 prices rose 80.7 per cent and consumption of distillate fuel oil 101.9 per cent.

Levels of average prices and average volume of consumption are shown in Table 90 for all three fuels for both the war years and the postwar period. It is apparent that during the war years the consumption of all three fuels increased considerably, fuel oil

TABLE 90
Percentage Change in Average Consumption and Average Price
from the Prewar Period, 1935-1950
(Base, 1935 to 1939 incl.)

Item	War Period 1940-1945 (percentage change from base period)	Postwar Period 1946-1950	
		(percentage change from base period)	(percentage change from 1940-1945)
Consumption			
Bituminous coal retail deliveries	+41.5	+20.1	-15.1
Total distillate fuel oil	+52.7	+142.0	+58.5
Natural gas, residential ^a	+48.0	+167.4	+80.7
Prices			
Bituminous coal, all sizes, retail	+15.3	+73.7	+50.7
Distillate fuel oil #2, retail	+17.4	+64.1	+39.8
Natural gas, retail, 10.6 therms	-9.7	-10.8	-1.2

^a Does not include the volume of natural gas that is consumed in the form of "mixed gas."

Source: Compiled from Appendix F.

showing the greatest improvement despite the largest percentage rise in price. In the postwar years, natural gas, with declining prices, made the greatest inroads into the residential fuel markets. In the face of mounting coal prices and the discontinuance of rationing of fuel oil, the consumption of bituminous coal declined sharply but not to the level of the base period. Notwithstanding price increases which were not far below those reported for coal, fuel oil consumption rose very substantially.

It is very doubtful whether for residential uses bituminous coal can compete on a price basis with fuel oil and natural gas. This would be especially true during a price war. Both of these competing fuels have been relatively free from prolonged stoppages which shut off supply. Both have advantages in house heating

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such as cleanliness, ease of firing and control, absence of ashes, etc. which coal cannot meet. Moreover, the producers of fuel oil and natural gas have greater opportunities to adjust the prices of their products to meet competitive conditions. The proportions of labor costs to total costs in oil and gas are very low, which gives these employers a decided advantage over coal with its very much higher labor costs. It was probably the recognition of these shortcomings of bituminous coal that led Secretary of Interior Ickes to observe that the objectives of the Coal Act cannot be attained without Federal regulation of oil and gas prices.¹⁵²

A second factor that affects shifts in consumption is the period of time covered by changes in the prices of competing fuels. Temporary price changes in bituminous coal apparently have little impact on shifts in consumer demand to other fuels. Power and heat are items in consumption that cannot be dispensed with, and shifts to substitute fuels take time. Equipment used to burn coal is too costly to discard, and in many instances the expense of adapting it to the use of other sources of energy is considerable. In addition, because mine prices constitute roughly 60 per cent of the delivered prices to large industrial consumers and less than 30 per cent of the retail price, only substantial adjustments in mine prices materially modify delivered prices. Sooner or later, however, equipment must be changed. Relatively higher coal prices over an extended period of time may cause a loss of business to competing sources of fuel at a faster rate than might otherwise occur.

A third factor to be considered is the advantage of fuel oil and natural gas in relation to the smoke-control ordinances of some cities. Although bituminous coal can be burned without producing much smoke, good burning equipment and close control of combustion are imperative.

b) *Effect of higher prices on better utilization of coal by consumers.* Increasing efficiency in the use of coal has been one of the major causes of a decline in its demand. More heat and power per pound of coal can be obtained by paying attention to small economies and the general application of improved practices in fuel utilization—insulation, more efficient radiation, automatic heat controls, improved standards of furnace construction, and more efficient firing methods. Critics of the Coal Act asserted that consumers of coal would offset higher prices by economies in the use of coal. Is there any support for this contention?

¹⁵² Address before the National Coal Association on October 25, 1939, *The Black Diamond*, November 4, 1939, p. 11.

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Table 91, showing efficiency in the utilization of fuel per ton of coal for specified uses during periods of falling and rising prices, does not substantiate this claim. On the contrary, it would appear that improvement in coal utilization increases in periods of falling prices and decreases or increases at a slower rate in periods of rising prices. Of the five uses for which data are presented, in only one, by-product coke, did efficiency in coal utilization occur at a faster rate in the period of rising prices. It is possible that wartime

TABLE 91
Efficiency in Utilization of Fuel in Four Industries during Periods of Falling and Rising Prices
(per net ton of coal)

Year	Railways ^a		By-product coke (pounds produced)	Pig Iron and Ferro-Alloys (pounds produced)	Electric Power (kilowatt hours produced)
	(gross ton-miles of freight)	(passenger train car-miles)			
A. Period of Falling Prices, 1923-1931					
1923	12,452	111	b	1,348	834
1924	13,402	118	b	1,379	910
1925	14,292	124	1,398	1,433	1,000
1926	14,649	126	1,394	1,470	1,052
1927	15,321	130	1,388	1,448	1,098
1928	15,787	133	1,378	1,467	1,156
1929	16,007	136	1,392	1,502	1,204
1930	16,497	139	1,380	1,504	1,250
1931	16,740	138	1,382	1,532	1,316
Average Annual Percentage Change	+3.8	+2.8	-0.2	+1.6	+5.9
B. Period of Rising Prices, 1939-1947					
1939	17,774	135	1,402	1,570	1,450
1940	17,839	133	1,410	1,574	1,492
1941	18,085	133	1,416	1,584	1,492
1942	18,069	133	1,416	1,536	1,538
1943	17,574	133	1,416	1,527	1,538
1944	17,469	135	1,420	1,528	1,550
1945	17,219	134	1,418	1,506	1,538
1946	17,298	133	1,412	1,478	1,550
1947	17,505	125	b	b	1,530
Average Annual Percentage Change	-0.2	-0.9	+0.1	-0.8	+0.7

^a Includes locomotives and tenders.

^b Data not available.

Source: Based on data compiled by the Interstate Commerce Commission, Federal Power Commission, and the U.S. Bureau of Mines and published in *Bituminous Coal—Facts and Figures*, 1948 edition, Bituminous Coal Institute, p. 76.

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conditions interfered with the continued introduction of economies in the use of fuel, and that the period subsequent to 1939 is a poor choice for our purposes.

The authors are inclined to believe that the price of coal is only one factor influencing the rate of change in coal utilization. In addition to national emergencies, mention may be made of the relatively small proportion that coal constitutes of the consumer's total expenses, the highly specialized nature of coal-burning equipment and its length of life, the availability of equipment needed for better utilization, the development of new methods and equipment for economizing coal which effect substantial savings in costs, and the extent to which currently known practices and equipment have already been introduced by consumers.

The importance of the last two factors is illustrated by the very rapid shift on the railroads from coal-burning steam locomotives to the diesel-electric type. In 1941 diesel locomotives hauled less than one per cent of the freight service and 8 per cent of the passenger service. In 1949 they accounted for 35 per cent of the former and 49 per cent of the latter.¹⁵³ How much of this conversion was due to higher prices is not known. It is an established fact, however, that substantial savings in total operating costs are effected by diesel locomotives. Under the circumstances the widespread introduction of the diesel engine might well have occurred even at a considerably lower level of coal prices because savings in costs would warrant such action.

c) *Impact of established minimum prices on demand when business conditions change substantially.* It is contended that established minimum prices will interfere with the ability of the industry to adjust itself to changes in demand growing out of major fluctuations in business and as a result will restrict still further the existing markets for bituminous coal.¹⁵⁴

Under minimum price-fixing arrangements which relate minimum prices to costs of production, there tends to be a lag between changes in demand for coal and the revision of prices to meet such changes. Because overhead costs fall with increased output, total reported costs should decline in periods of active business. Undoubtedly, the failure to adjust minimum prices pending the determination of new costs could cause consumers as a whole a substantial money loss. How much of a loss would depend upon off-

¹⁵³ *Business Bulletin*, The Cleveland Trust Company, June 15, 1950, p. 4.

¹⁵⁴ This problem was discussed in relation to the provisions of the 1937 Coal Act in the section on the revision of minimum price schedules (pp. 335-38 of this chapter).

setting factors. One would expect that any substantial and sustained increase in demand would send coal prices above the minimum. Moreover, on the basis of past experience, much saving in costs would in all likelihood be passed on to the workers in higher wages and improved conditions of employment unless union policies and practices changed drastically.

Much more important, however, is the probable impact of established minimum prices upon the demand for coal in a prolonged industrial depression. With a decline in coal production—the industry being highly sensitive to changes in business activity—mines would operate fewer days per year than before, with the result that operating costs per ton would increase unless wages or the costs of the other items fell drastically—unlikely eventualities. Higher costs would necessitate higher prices. If this condition prevailed for a considerable period of time and the prices of competing fuels remained stationary—particularly if they were reduced—consumers might be encouraged (1) to shift to other fuels or (2) to resort to additional economies in the use of coal. Incidentally, higher minimum prices and the possibility of additional increases might well lead to the reentry of idle high-cost mines and the opening up of new mines. Moreover, higher minimum prices in the face of a declining demand would increase the temptation, for some operators, to evade the law.

It would be possible, of course, to develop a minimum price-fixing mechanism which would provide for flexibility in the establishment of minimum prices during periods of declining demand and thus to minimize the upward spiral of costs and prices which many believe will arise when minimum prices are tied to production costs. Such a mechanism was not provided for, however, in the Coal Act of 1937.

Donald H. Wallace pointed out that coal consumption may not be much affected by price increases during a short depression or during the first two or three years of a long depression. In a long cyclical depression or in a secular depression, however, "consumption may become much more responsive to current and previous price increases, with the result that total consumer expenditure on coal would become smaller at higher prices than it would be if coal prices had not been raised." From the standpoint of employment of the resources of the economy as a whole, there would be "little adverse effect" to the extent that expenditure would be "merely shifted from coal to oil or gas." If, on the other hand, because of a relatively inelastic demand, coal consumption were

not to fall off as the result of price increases in an extended depression, "consumers as a whole will spend larger sums per year on coal, and have less to spend on all other things, than if coal prices remained stable or were reduced." This reduction in consumer expenditures and the consequent lowering of the "level of use of resources in the whole economy" could be avoided only if (1) the additional funds spent on coal would not otherwise have been put to use or (2) the coal industry spent, out of funds which would not otherwise have been put to use, amounts equal to the extra expenditures on coal. Mr. Wallace doubted that the first possibility would apply to all industrial consumers of coal or many domestic consumers, and he discounted the second possibility in the event of a long depression.¹⁵⁵

It may be concluded that a price-fixing mechanism which results in price rises in the face of declining demand poses grave problems with respect to (1) future demand conditions for the industry and (2) economy in the use of resources in general.

d) *Established minimum prices and inelastic demand for coal.* It is sometimes asserted that the maintenance of a floor for coal prices would not have any important bearing on the demand for bituminous coal because the demand is definitely inelastic. The factors making for inelasticity of demand have been described in an earlier analysis.

Undoubtedly, the demand for bituminous coal in the short run is not likely to be substantially modified by price changes. Over a period of years, however, equipment must be replaced. Prolonged high prices, especially when accompanied by periodic strikes, may well cause shifts to other fuels, encourage greater care in firing, improvements in the design of fuel-burning equipment, and other economies in the use of coal. These may alter appreciably the demand for coal. Developments in this industry over the last 30 years have demonstrated that the demand for coal in the long run is surprisingly elastic.

e) *Effect of higher prices on decline in rate of growth of important coal-consuming industries.* Some changes in the demand for coal have been largely independent of price changes. As F. G. Tryon pointed out, 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 have definitely retarded the growth of virgin pig iron con-

¹⁵⁵ *Op.cit.*, pp. 505-6.

sumption.¹⁵⁶ As the iron and steel industry has been the second largest single consumer of bituminous coal, these changes helped to check the growth in demand that characterized the industry prior to 1919. The substitution of fuel oil for coal as a source of energy on steamships has been another large loss to coal.

It is questionable whether established minimum prices would affect materially the decline in coal consumption due to the falling of the rate of growth of major coal-consuming industries. It is quite possible, however, depending upon the prices of other fuels and their suitability for the uses to which they are to be applied, that pegged minimum prices might have an impact upon the demand for bituminous coal in new centers of production now being created by great regional shifts in industry and population and in new industries in which coal could be utilized as a raw material, namely, nylon, gasoline, and rubber.

f) *Effect of higher prices on seasonality.* Coal production and shipments show substantial fluctuations from month to month. For the industry as a whole, production drops materially in April and continues at a level considerably below the average of the year until September. The extent of seasonal fluctuations is disclosed by the behavior of monthly production in 1936, 1938, and 1940, three years in which coal operations were not seriously interrupted by labor disputes. The average January output was 13 per cent above the average monthly production in these three years, while the average output in April, May, and June was only about 83 per cent of the average monthly production. On the other hand, the average production in December was 21 per cent above the average monthly production for the three years. Seasonal fluctuations vary from field to field and in some fields are rather wide. In Arkansas and Oklahoma, for example, the January production was 83 per cent above and April and May 77 and 76 per cent below the average of the three years.¹⁵⁷

Since bituminous coal does not readily lend itself to storage, productive capacity tends to approach the volume needed to meet the peak demand. It is difficult to see how established minimum prices in themselves would alter the relation between seasonality and capacity. Any material reduction in seasonal fluctuations must be accomplished by other measures, such as improved storage practices

¹⁵⁶ *The Trend of Coal Demand* (Ohio State University Press, 1929), pp. 6 and 7, and *Carter v. Carter*, in Equity No. 59374. In the Supreme Court of the District of Columbia, December 10, 1935, pp. 36 and 37.

¹⁵⁷ *Annual Report of the Secretary of the Interior*, . . . June 30, 1942, pp. 110-11.

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and facilities, a change in the buying habits of consumers, or the development of new uses for bituminous coal in the off season. Established minimum prices supplemented, where necessary, with a realistic schedule of seasonal discounts, however, should help to prevent the price slashing which has been so common throughout the life of this industry.

How may we summarize this analysis of the impact of established minimum prices upon the factors and conditions affecting both capacity to produce and the demand for bituminous coal?

Our findings lead us to conclude that minimum price fixing might be a factor in discouraging prolonged strikes, particularly those growing out of price cutting, and, to the extent that it did, it would be a force working for less overdevelopment. This tendency, however, would most likely be offset many times by the adverse influence of minimum prices on (1) the retention of high-cost mines, (2) the opening up of new marginal mines, and (3) increased mechanization and better mine management.

As far as demand is concerned, it would appear that such a pricing arrangement would not have an appreciable effect in the short run. Certainly there is no evidence to justify the claim that higher coal prices would materially affect the rate at which competing fuels would encroach upon the markets for coal. The demand for coal is quite inelastic; an increase in price does not immediately reduce the quantity purchased. Moreover, factors other than prices seem to be far more important in bringing about better utilization of coal by consumers.

Over an extended period of time, especially during prolonged depressions, higher prices resulting from the upward spiral of coal costs and prices might well encourage the consumers of coal to shift to other fuels or to speed up economy in its use. These consumer practices, it would seem, could alter appreciably the demand for coal.

We see then that minimum price fixing would not materially affect short-run demand but would tend to increase short-run supply. This being so, the establishment of minimum prices would, in a relatively short time, begin to modify substantially any pre-existing state of equilibrium. Over the long pull, for the reasons stated above, that equilibrium, unless countervailing factors were at work, would undoubtedly be drastically altered.

c. Impact of minimum price fixing on level of coal prices. One of the benefits claimed for established minimum prices is that they pre-

vent price and wage slashing. When general business undergoes a substantial decline, coal producers keep their mines running as many days as possible, since producing costs of coal rise at a steadily increasing rate as the number of days worked by the mine approaches zero (see Chart 14). Overhead costs remain about the same regardless of how much coal is mined. To keep their mines in operation, producers generally will cut coal prices and, when conditions permit, the wages of the miners. These practices are engaged in as long as the operators can minimize their losses and there is any hope that they can outlast the prevailing emergency.

A floor under prices would halt the downward spiral of prices and therefore wages in periods when the markets of coal are seriously curtailed provided, of course, that the price schedules could be maintained. The difficulty of enforcing prices and marketing rules and regulations, however, should not be underestimated. Experience under the NRA Coal Code disclosed the seriousness of this problem. On the other hand, severe penalties should serve as a positive restraint to persons seriously considering violation.

As pointed out above, although minimum price fixing might preclude the slashing of prices and wages in the short run, this gain could be offset by a reduction in consumer spending on other goods necessitated by the relatively higher prices that must be paid for coal under this arrangement. Also, there is a considerable likelihood that in any prolonged cyclical or secular depression, such a policy would adversely affect the demand for coal and the effective utilization of human and probably of other resources unless the expenditures for coal are merely shifted to oil or gas and no additional expenditures on equipment are required.

d. *Effect of minimum price fixing on labor standards.* The term labor standards as here used includes compensation, hours of work, working conditions, fringe benefits, and employment opportunity. What would the impact of established minimum prices be upon such standards? Would pegged minimum prices serve to maintain them at a level comparable to those prevailing in other basic industries or would they undermine them?

We have seen that under unregulated competition price slashing has been a common practice. Under such pricing conditions labor standards are hard to maintain unless the prevailing system of collective bargaining is, for practical purposes, industry-wide in scope. Undoubtedly, the pressure to reduce hours and rates of pay, ignore working conditions, or refuse fringe benefits that are granted to workers in less competitive industries would be greatly diminished

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by established minimum prices. Whether this price-fixing arrangement would provide equally high annual earnings or comparable employment opportunity is another matter.

Minimum price fixing strengthens the bargaining position of the union, because under it the cost of union demands can be more easily passed on to the public. Competition with substitute products and economies in the use of fuel, of course, would be restraining factors, but their impact is not immediate and their influence is minimized at the bargaining table by short-run considerations which are always more pressing. Unless the terms and conditions of employment are closely supervised by the federal government, minimum price fixing places a heavy responsibility upon the representatives of labor and management. If both parties assume their responsibilities to each other and the public, relate their demands to the realities of economic life, and share the gains of progress not only among themselves but with consumers, minimum price fixing might well protect and could gradually improve labor standards. If the employers lack the courage to resist uneconomic and unreasonable demands of the union, then the system would operate at the expense of the consumers and ultimately of both workers and the employers. If labor leaders insist upon getting all the traffic will bear and disregard the needs and rights of the employers and the consumers, including the right to share in scientific discoveries and technological improvements, minimum price fixing would not function in the interest of society as a whole, and the workers would temporarily gain at the expense of the public and probably the employers. The resulting higher costs and prices, sooner or later, would bring compensating forces into play—greatly intensified mechanization, product substitution, and better utilization of coal—which would exact their toll in the form of a reduction in demand, fewer jobs, and reduced working time.

Since the minimum price schedules influenced the actual prices of bituminous coal for only a very brief period of time owing to the strong demand for coal occasioned by World War II, it is impossible to measure directly the impact of the schedules on labor standards. The data in Table 92, however, on wages, employment, mechanization, and related factors may throw some light on this problem.

The table shows changes that occurred between 1932 and 1951, the latest year for which some of the data were available. The year 1932 was selected because it was the last year in which prices and wages were left to the determination of the free play of market

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forces in this industry. In that year production was lower than in any year since 1905. The once-powerful United Mine Workers had become a mere skeleton of its former self. Its wage contracts could not have covered much more than 20 per cent of the total soft coal production. Price regulation appeared the following year with passage of the National Industrial Recovery Act. The coal code established under this Act provided for minimum prices. It also guaranteed collective bargaining rights to the miners and served as the impetus to an organizing drive which, in a surprisingly short time, brought the great majority of mine workers in the industry into the union.

As a result of the membership strength of the union and the importance of labor in the industry's costs, coal prices have to a considerable extent been regulated through collective bargaining in the past 20 years.

In the years subsequent to 1932, from 60 to 65 per cent of the per ton cost of coal and from 55 to 65 per cent of the per ton sales realization have been determined through collective bargaining. Collective bargaining has set a floor for wage rates, and because labor costs constitute so large a proportion of total costs, they have served in turn as a floor for prices. Because of the powerful bargaining position of the mine workers' union, the wage-cost floor rose from \$.63 per ton in May 1933 (data for 1932 are not available) to \$1.76 in 1945, the last year for which per ton costs were compiled for this industry.

A comparison, then, of labor standards in 1932 with those existing after two decades of regulatory influences exerted by government and a strong union seems pertinent to a discussion of probable effects of price fixing on labor.

The experience with collective bargaining since 1932 does not provide any grounds for optimism that decisions with respect to labor standards under minimum price fixing would be based on economic statesmanship. Having brought the great majority of the miners into their union, its leaders pressed union demands presumably to satisfy the current goals of the miners as well as those of the leaders and the union as an institution. Apparently little consideration was given to the cost of these demands to the consumers or their long-run impact upon the industry or even the employees. Table 92 seems to substantiate this observation. The data show that the coal miners made very substantial gains in compensation, for hourly earnings rose 325 per cent and annual earnings 431 per cent. In 1951 the hourly earnings of miners averaged \$2.21 and

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the annual earnings per full-time employee \$3,841. Comparable figures for manufacturing industries as a whole were \$1.59 and \$3,611. The annual earnings of the miners surpassed those of manufacturing employees notwithstanding the fact that coal mines

TABLE 92
Wages; Mechanization; Productivity, Costs, and Prices; and Employment
in the Bituminous Coal Industry, 1932 and 1951

<i>Item</i>	<i>1932</i>	<i>1951</i>	<i>Percentage Change</i>
Wages			
Hourly earnings (dollars)	.52	2.21	+325
Annual earnings (dollars)	723.00	3,841.00	+431
Mechanization			
Mechanical loading, deep mines (millions of tons)	35.8	304.3	+750
Mechanical cleaning, deep and strip ^a (millions of tons)	30.3	240.0	+692
Surface mining (millions of tons)	19.6	117.6	+500
Productivity, Costs, and Prices			
Output per man per day (tons)	5.2	7.0	+34
Output per man hour (tons)	.571	.866	+52
Unit labor costs (index: 1932=100)	100.0	350.6	+251
Retail prices ^b (dollars)	7.71	16.87	+119
Wholesale prices (freight included) ^c			
Prepared sizes (dollars)	3.68	9.59	+161
Mine run (dollars)	3.64	8.93	+145
Screenings (dollars)	2.90	7.54	+160
Average value per ton, f.o.b. mine ^d (dollars)	1.31	4.92	+276
Employment			
Average days worked by mine	146	203	+39
No. of wage earners (thousands)	406	400	-2
No. of wage earners (thousands) per million tons produced	1.31	.70	-47
No. of man days (thousands) per million tons produced	191.6	141.8	-26

^a Not separately available for 1932.

^b The average price paid by domestic consumers to retailers in 21 cities.

^c Includes transportation charges. These prices are the averages paid to wholesalers by retailers and consumers purchasing directly from wholesalers.

^d The average per ton received by mine operators for all coal used or sold at the mine.

Source: Hourly earnings and retail and wholesale prices are published by the Bureau of Labor Statistics and annual earnings of full-time employees by the Department of Commerce. Data on employment, mechanization, production, and output per man day were taken from the annual reports of the U.S. Bureau of Mines. The index of unit labor costs was obtained by dividing an index of the payrolls of wage earners by an index of production. The weekly average payroll for 1932 was published by the Bureau of Labor Statistics and that for 1951 was computed by multiplying the number of wage earners employed in coal mines by average weekly earnings. Manhour productivity data are from *1952 Bituminous Coal Annual*, Bituminous Coal Institute, p. 155.

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operated only 203 days, the equivalent of about 41 forty-hour weeks. In November 1952, the miners earned \$2.43 per hour and \$86.16 for a work week of 35.4 hours.

The miners have enhanced their economic status in other ways. Union contracts have given them greater protection on the job, improved their working conditions, and provided them with paid vacations and greater safety. In addition, they have a pension and health fund supported by a royalty of \$.40 on every ton of coal produced under union contracts. These are truly impressive gains.

Faced with rising labor costs—the unit labor cost increased 251 per cent—the operators made heavy investments in mechanized mining equipment even in years when the industry as a whole after paying income taxes showed a deficit.¹⁵⁸ Mechanical loading in deep mines increased more than sevenfold, mechanical cleaning in deep and strip mines almost sevenfold, and surface mining fivefold. As a result output per man per hour increased 52 per cent and output per man per day 34 per cent. The industry as a whole began to report profits in 1940, and, except during 1944 and 1945, their volume increased steadily until 1949. In 1932, the average loss per corporation reporting income and taxes to the Bureau of Internal Revenue was \$27,867. In 1950, the last year for which data are available, such corporations reported a profit after federal taxes that averaged about \$47,165 per reporting corporation.¹⁵⁹ Thus the economic position of the operators improved slowly if somewhat irregularly until 1939; thereafter, through 1950, the industry as a whole reported profits after taxes in each year.

But the gains of the mine workers and operators were not obtained without a price. Notwithstanding extraordinary technological changes in mining and preparation techniques, the prices of bituminous coal rose substantially. The average value per ton increased 276 per cent, wholesale prices for mine-run and sized coal from 145 to 161 per cent, and retail prices 119 per cent. The mine workers also felt the impact of increased mechanization, more effective utilization of coal, and the inroads of competing fuels. Employment opportunity was substantially impaired. Notwithstanding an increase in annual production of about 72 per cent, the number of men employed declined 1.5 per cent. Moreover, the number of workers per million tons of coal produced declined 47 per cent

¹⁵⁸ See Fisher, *op.cit.*, pp. 31-36.

¹⁵⁹ The profit data are those published in *Statistics of Income*, Part 2, U.S. Bureau of Internal Revenue; those for years prior to 1948 were reprinted in the *1950 Bituminous Coal Annual*, as cited, p. 188.

and the number of man-days per millions of tons produced 26 per cent.

It should be noted that this analysis covers a period in the industry's history in which the union represented the great majority of the wage earners engaged in mining. Through its control of the supply of labor, the union's aggressive leadership was in a position not only to prevent wage slashing but to exert a dominant influence on labor costs. Throughout most of this period, the producers—presumably anxious to exploit a strong demand for bituminous coal—showed little willingness to resist steadily mounting union demands. It would seem that a strong union in control of the labor supply can protect its members without the assistance of minimum price schedules.

e. Effect of minimum price fixing on profits. It would be difficult to determine whether cost-price relationships under minimum prices would permit investors to make profits commensurate with those earned in other industries faced with similar risks. It is to be expected, however, that the margin between costs and sales per ton would be higher under minimum price fixing than under unregulated prices in periods of declining business. A floor under prices would presumably preclude successive price reductions that would send average value per ton to unprofitable levels.

Table 93 presents for periods of falling and rising prices data on (1) average value per ton, f.o.b. mines, (2) the percentage that income was of sales, (3) profit or loss after Federal taxes per corporation reporting such data to the Bureau of Internal Revenue, and (4) corporate income after taxes as per cent of corporate sales.

For the period of falling prices, 1923 to 1932 inclusive, average value per ton declined in every year except 1926 when it increased \$.02 a ton. The average annual percentage decline was 7.5. For the years 1923 to 1928, the figures showing the percentage relationship of income to sales moved irregularly. In 1924, the percentage dropped to 8.2, about 53 per cent of the 1923 level. It moved to higher levels, but not to that of 1923, in the next two years and then dropped to about 11 and 10 per cent in 1927 and 1928, respectively. While the percentages of income to sales fluctuated, the trend was downward. The average annual percentage decline for this six-year period was 3.1. For the years for which data are available, losses per corporation after federal taxes increased each year except in 1929. The average annual percentage increase in losses for the years 1928 to 1932 was 52.5. Corporate income after taxes amounted to one per cent of corporate sales in

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TABLE 93

Average Value per Ton, Ratio of Income to Sales, and Profit or Loss per Corporation in the Bituminous Coal Industry in Periods of Falling and Rising Prices

Year	Average Value ^a (dollars per net ton)	Ratio of Income to Sales ^b (per cent)	Average Profit or Loss per Corporation ^c (dollars)	Ratio of Corpo- rate Income to Corpo- rate Sales ^d (per cent)
A. Period of Falling Prices, 1923-1932				
1923	2.68	15.5	e	e
1924	2.20	8.2	e	e
1925	2.04	11.4	-7,365	e
1926	2.06	13.4	e	e
1927	1.99	10.8	e	e
1928	1.86	10.2	-10,333	e
1929	1.78	e	-6,408	1.0
1930	1.70	e	-19,968	1.8 ^f
1931	1.54	e	-23,286	5.1 ^f
1932	1.31	e	-27,867	7.9 ^f
B. Period of Rising Prices, 1939-1948				
1939	1.84	e	-4,952	.6
1940	1.91	e	4,444	3.2
1941	2.19	e	13,697	4.6
1942	2.36	e	19,646	5.2
1943	2.69	e	28,905	6.1
1944	2.92	e	27,658	5.9
1945	3.06	e	23,109	5.0
1946	3.44	e	30,830	5.3
1947	4.16	e	91,690	9.7
1948	4.99	e	90,887 ^g	10.3

^a *Bituminous Coal and Lignite in 1949*, Mineral Market Report, No. 1923, U.S. Bureau of Mines, p. 20.

^b Data are for 33 large identical corporations. From Ralph C. Epstein, *Industrial Profits in the United States* (National Bureau of Economic Research, 1934), p. 333.

^c After federal taxes. Computed from *Statistics of Income*, Part 2, U.S. Bureau of Internal Revenue; data through 1947 are reproduced in *1950 Bituminous Coal Annual*, Bituminous Coal Institute, p. 188; those for 1948 were in a preliminary report of *Statistics of Income*. In computing these data, the profit or loss was divided by the total number of corporations reporting net income or no net income, rather than by the total number of returns (which includes inactive corporations).

^d After federal taxes. Computed from *National Income 1951 Edition*, a supplement to *Survey of Current Business*, U.S. Department of Commerce, pp. 170-71 and 190-91. For national income tax purposes, depletion charges are not deducted in arriving at corporate income.

^e Data not available.

^f Loss as per cent of sales.

^g Preliminary.

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1929. Thereafter, corporate losses exceeded income; these losses were substantial in both 1931 and 1932.

What happened in a period of rising prices—such as 1939 to 1948? In these years the average annual percentage increase in value per ton was 11.9. Losses per corporation after federal taxes occurred only in 1939. Corporation profits increased sharply during the first four years of the forties, declined somewhat in 1944 and 1945, and advanced substantially in 1946 and drastically in the final two years. The average annual percentage increase during the forties was 63.5. Corporate profits, after taxes, as a per cent of sales rose from .6 to 6.1 during the period 1939 to 1943. They declined somewhat during 1944 and 1945 and thereafter began to rise again. In 1948 these profits were 10.3 per cent of corporate sales as compared with .6 in 1939. The average annual percentage increase for the 10-year period was 64.9.

What impact did minimum price schedules have upon the profit position of the industry? Unfortunately, data are not available for individual companies. Comparisons, however, can be made for producing districts. Such comparisons have limited value; first, because the cost and sales realization data are on an annual basis and price schedules were established on October 1, 1940, and second, because of the substantial increase in the demand for bituminous coal caused by World War II which sent prices above the established minima. The following discussion should be read in the light of these limitations.

Table 94 shows that for Minimum Price Area 1 as a whole, margins changed from a loss of \$.09 a ton in 1939 to a loss of

TABLE 94
Profit and Loss Margins, by Producing District, Minimum Price Area 1,
1939-1941
(dollars per net ton, f.o.b. mine)

<i>Producing District</i>	<i>1939</i>	<i>1940</i>	<i>1941</i>
1 Eastern Pennsylvania	-.10	-.05	+.02
2 Western Pennsylvania	-.05	+.03	+.03
3 Northern West Virginia	-.14	-.02	+.07
4 Ohio	-.07	.00	+.10
5 Michigan	-.07	-.02	+.25
6 Panhandle (West Virginia)	+.04	+.02	.00
7 Southern Numbered 1	-.12	-.05	+.06
8 Southern Numbered 2	-.10	-.03	+.07
Total Minimum Price Area	-.09	-.02	+.05

Source: Derived from Tables 11 and 13.

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\$.02 in 1940 and a profit of \$.05 in 1941. The upward tendency thus revealed for the area is also characteristic of all the component districts except No. 6, for which a decline was reported. The seven districts that showed improvement after 1939 did not improve their positions at the same rate or to the same extent. Thus District 2 moved from a \$.05 loss in 1939 to a \$.03 profit in 1940 but showed no improvement the next year. District 5, on the contrary, showed a small improvement between 1939 and 1940 and a much greater improvement the following year. The other districts shifted their positions between 1939 and 1941, although less spectacularly than the three discussed above. Thus District 3, which had made the poorest showing in 1939, outranked all but three districts in profitability in 1941. District 7 changed its rank from the penultimate in 1939 to fifth place in 1941.

Since the changes reflect in large part the growing demand for coal that followed the outbreak of war in Europe, it is not possible, on the basis of this experience, to say whether the setting of minimum prices in other circumstances would produce a similar pattern of margins between sales realization and reported costs.

This analysis supports the contention that, unless offsetting factors are present, profits in this industry have a definite tendency to decrease as the price of coal declines. A floor under prices, therefore, should tend to minimize losses. With higher and relatively stable prices for their coal, operators would have an increased incentive to mechanize and improve efficiency. The better-managed and more profitable companies would strive to increase their sales and to improve their competitive position in the industry. Reduced costs would give these operators differential gains since their lower costs would not reduce district costs proportionately.

There is also a possibility that the price-fixing agency would be liberal in its concepts of costs. By allowing excessive depreciation, depletion, and royalties and inflated sales commissions and salaries of executives, it would be approving costs with an appreciable hidden profit. Moreover, estimating the weighted average costs by taking the costs of a given year and adjusting them for changes that have occurred involves the making of many judgments. It would be human for those who make those judgments to err on the side of overstating rather than understating the average production costs of the minimum prices area or areas.

f. *Impact of minimum price fixing on consumers of coal.* What effect would established minimum prices have upon the consumers of coal? Would the cost of this experiment be passed on to them

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in the form of (1) excessive coal prices, (2) wasteful methods of coal mining, (3) uneconomic consumption and distribution of coal, and (4) frequent and prolonged work stoppages? Any appraisal of minimum price fixing must examine these aspects of the over-all problem.

1) *Coal prices to consumers.* It is generally acknowledged that any minimum price-fixing arrangement would increase prices beyond those that would otherwise prevail except in periods of marked business activity. A difference of opinion exists, however, as to the extent of the increase and the burden it would place upon the consumer.

How much did the introduction of minimum price schedules in 1940 add to prevailing prices? The answer to this question does not throw much light on our problem because the minimum prices were put into effect at a time when the demand for coal was strong enough to send coal prices on many markets above the established minima. Obviously the amount that minimum price schedules would add to prevailing prices would depend upon prevailing market conditions and the relationship of prices to costs at the time. This observation is borne out by the data in Table 95, which shows for 1938 to 1940 inclusive the increases that would have been necessary to equalize average sales realization per ton and actual average costs per ton in the various minimum price areas.¹⁶⁰

TABLE 95

Increases Necessary to Have Raised Average Realizations to Reported
Costs as Defined in Bituminous Coal Act of 1937,
by Minimum Price Area, 1938-1940
(dollars per net ton, f.o.b. mine)

<i>Minimum Price Area</i>	1938	1939	1940
1 Pennsylvania, Maryland, Ohio, Virginia, West Virginia, and eastern Kentucky	.17	.09	.02
2 Western Kentucky, Indiana, Illinois, and Iowa	.01	.00	.00
3 Alabama, Tennessee, and Georgia	.00	.00	.00
4 Arkansas and Oklahoma	.27	.06	.04
5 Kansas, Texas, and Missouri	.00	.00	.00
6 Colorado, New Mexico, Arizona, and California	.06	.06	.00
7 Wyoming and Utah	.00	.00	.00
9 Montana	.00	.00	.00
10 Washington, Oregon, and Alaska	.00	.00	.00

Source: Derived from Tables 11 and 13.

¹⁶⁰ The table has been prepared from the actual cost and realization data published by the Bituminous Coal Division. In those years and areas in which realization was below the recorded cost the difference has been shown as the amount by which prices would have been raised. Where realization exceeded cost no increase in prices would have occurred as a result of minimum price fixing.

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It will be observed that if minimum prices had been established in 1938 on the basis of actual per ton realization and costs per ton at the mine for that year, increases which ranged from \$.01-.27 would have been made in four of the minimum price areas. In Minimum Price Area 4, the increase of \$.27 a ton would have raised the average realization per ton from \$3.14 to \$3.41 f.o.b. mine or 8.6 per cent, and in Minimum Price Area 1 the addition of \$.17 a ton would have increased the per ton realization from \$1.96 to \$2.13 or 8.7 per cent. In 1939 increases would have been necessary in only three minimum price areas and would have ranged from \$.06-.09. In 1940, the year that minimum prices were actually established, increases would have been required in only two minimum price areas, and they would not have exceeded \$.04 a ton.

In the last two years of this three-year period, the markets for coal improved materially and the deficit margins between sales realization per ton and average costs per ton declined or disappeared. By 1940 per ton sales realization exceeded average cost per ton by something over \$.005 per ton for the industry as a whole. The increases required to equalize costs and sales realization in the bottom of a major depression, such as in the early thirties, would undoubtedly have been far greater.

But this analysis does not give a true picture of what happens under actual conditions. The price-fixing agency cannot have the actual cost and realization data at its disposal. It must estimate the average costs of production. Under the 1937 Act those computing determined costs were required to take the 1936 costs and adjust them for changes that had taken place in subsequent years. What these changes were and how much they added in dollars per ton involved the making of many judgments. As a result, the determined costs for a given year tended to differ substantially from the actual costs. For example, the estimated determined cost announced by the Coal Division in the summer of 1938 for Minimum Price Area 4 was \$3.6166 per net ton, while the actual weighted costs were later found to be \$3.41. Comparable figures for 1939 were \$3.608 and \$3.33 respectively. If minimum prices had been established on these cost estimates the increase in prices to consumers of coal produced in Arkansas and Oklahoma would have amounted to 15 per cent in 1938 and 10 per cent in 1939. Although subsequent corrections would undoubtedly have been made by the Coal Division, the consumers would not have received refunds in the amount of the error. It should be pointed out that the "determined costs" were closer to the actual average costs in most of the ten minimum

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price areas and that these increases in dollars per ton were expressed as percentages of the f.o.b. mine price and not of the much higher retail price.

It is apparent that the initial increase in the cost of coal to the consumers as the result of the Coal Act of 1937 would not have increased actual average realization per ton at the mine by more than 10 per cent, and these increases would have constituted a much lower percentage of the wholesale and retail prices of coal.

It may be useful to point out that in the history of this industry under unregulated competition consumers have benefited at the expense of both the miners and operators during periods in which competition was unduly severe and that they were required to foot the bill in years when the demand for coal exceeded the supply, or when labor unions were in a very favorable bargaining position. If we take the period 1922 to 1932 inclusive, years characterized by sharp competition especially between union and non-union operations, we find that the consumers of coal were the beneficiaries. Average value per ton at the mine dropped almost steadily from \$3.02 in 1922 to \$1.31 in 1932. During these years average hourly earnings of coal miners fell from a high of \$.845 in 1923 to \$.52 in 1932. The operators' profit position was also greatly impaired. In fact, the industry as a whole reported deficits in 1925, 1928, and subsequent years. Data for 1924, 1926, and 1927 are not available. The 1922 margin of \$.36 per ton presumably was replaced in 1925 by a deficit margin. The data for 1928 and later years show that, except for 1929, this deficit increased in size each year until 1932.

In the period 1933 to 1945 inclusive, the consumers were given little consideration. The forces of recovery, unionization of most of the coal fields, and later World War II changed the entire picture. Average value per ton at the mine rose from \$1.34 to \$3.06 and average retail prices in 21 cities (unweighted average) from \$7.65 to \$10.49. The economic position of the operators showed some improvement in the earlier years, but the industry as a whole continued to report deficits to the Bureau of Internal Revenue and on their cost forms to other government agencies until 1940. During World War II, the industry moved out of the red and reported substantial profits. Compared with 1922 and World War I, however, the industry was in a decidedly less profitable position. As shown in an earlier section, the mine workers made a remarkable advance in their standard of living during these years. This advance was especially notable during the war years because of full employment.

The effect of minimum price fixing on the consumers' coal bill cannot be measured by the initial increase in prices alone. What happens in subsequent years, particularly in years of severe depression when the cost-price spiral referred to earlier becomes operative, has an important bearing on this issue. The presence of a powerful union whose membership is practically industry wide in scope and whose bargaining power would be enhanced by minimum price fixing cannot be ignored. Consideration must also be given to the fact that the will to resist union demands on the part of the operators is weakened under such an arrangement, since increased costs can more easily be passed on to the public. The impact of these factors on consumer prices cannot be measured.

2) *Wasteful methods of mining.* The practice of mining the better and more accessible coals and of leaving poor-quality and high-cost coals for second and third mining when conditions make such mining profitable has long been a problem in this industry. The United States Coal Commission of 1922 estimated that in 1921 avoidable wastes were almost 20 per cent of the potentially marketable bituminous coal underground.¹⁶¹ The report of the Energy Resources Committee to the National Resources Committee stated that "progress since that time, because of depressed conditions in the industry, appears to be slight, if not actually negative."¹⁶² In 1938, the office of the Consumers' Counsel stated in its annual report that "price competition has resulted according to estimates in the waste of one ton of coal for every two tons of coal produced."¹⁶³

Although the Coal Act of 1937 directed the Coal Commission to study the problem, it did not set up any price standards with respect to conservation. Better mining methods under the Act would have had to come by indirection. It is sometimes argued that minimum prices insofar as they would raise the rate of return to capital would encourage operators to use better mining methods. Donald H. Wallace stated "in general, it is true that the lower the prices the more coal is left in the mines, because prices fail to cover the out-of-pocket costs of getting it out." He added that "it is highly doubtful that price fixing alone can aid much in conservation of coal" and points out that "prices high enough to increase the amount of extraction from most mines would be above the level of prices appropriate to maximum economic consumption . . . and much above prices that would eliminate unemployment among coal min-

¹⁶¹ *Report of the United States Coal Commission, 1925, Part 1, p. 188.*

¹⁶² *Energy Resources and National Policy, 1939, p. 10.*

¹⁶³ *Op.cit.*, p. 8.

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ers."¹⁶⁴ Eleanor Poland took the position that there is "no reason to believe that a rise in coal prices will have any effect on the advantages of mining the best veins first. The choice of veins to be mined is a matter of the alternative prospects of gain in the use of capital within the coal industry, and this is not affected by the absolute level of coal prices."¹⁶⁵ Eugene V. Rostow also rejected the assumption that higher prices and presumably profits will encourage better mining methods. "Higher profits," he maintained, "mean higher managerial salaries and, perhaps, higher dividends; they make no obvious contribution to the conservation problem."¹⁶⁶

Miss Poland argued that "in any case, the conservation argument for special regulation of bituminous coal at this time appears to be of dubious merit . . . the known reserves have an estimated life of a minimum of hundreds of years, even if the upward trend of consumption is resumed. In these circumstances, there appears little justification for requiring methods of recovery more expensive than those which are dictated by the self-interest of owners."¹⁶⁷ The case for restricting the output of coal appears all the weaker when it is realized that this is likely to increase the consumption of other fuels (particularly oil), the known supplies of which are far more limited."¹⁶⁸

It would seem that if better mining practices are deemed advisable in order to conserve a nonrenewable natural resource, a more direct approach would yield better results. Mr. Rostow suggested that the Federal Government "prescribe and enforce appropriate mining regulations." Others have suggested subsidies or allocation of mine output.

3) *Uneconomic consumption and distribution.* What impact did established minimum prices have upon the consumption and distribution of bituminous coal? Were higher prices for coal offset by more economic consumption and distribution?

The factors and problems involved in maximizing economic con-

¹⁶⁴ *Op.cit.*, p. 510. ¹⁶⁵ *Op.cit.*, p. 985. ¹⁶⁶ *Op.cit.*, p. 588.

¹⁶⁷ The authors would like to point out that the Mineral Policy Planning Committee reported in 1934 (1) that the famous smokeless beds in southern West Virginia would probably not last longer than 85 years at the 1929 rate of production, (2) that the highest grade gas and metallurgical coals in Kentucky were 11 per cent exhausted, and those in West Virginia and Virginia about 22 per cent exhausted and (3) that the life of the Pittsburgh bed in Pennsylvania would not exceed 100 years. These coals, the Committee reminded us, "are the foundation of the American steel industry and their depletion will handicap not only steel itself but all industries depending on steel." (*Annual Report of the Secretary of the Interior, . . . June 30, 1940*, pp. 455-56.)

¹⁶⁸ *Op.cit.*, p. 985.

sumption and the possibility of attaining it under the Coal Act have been discussed earlier in this appraisal and need no elaboration. Neither the Act nor its administration would warrant optimism that more economic consumption would result from minimum price fixing. The distribution of coal was not a major concern of the framers of the Act. There was nothing in the Act that dealt directly with the reduction of crosshauls or other wasteful practices in distribution. The Act did enumerate 13 unfair methods of competition which it declared constituted violations of the Coal Code, and some of these methods affected distribution indirectly. It also exempted from the antitrust laws marketing or centralized selling agencies similar to the Appalachian Coals Corporation which was organized in the Southern high-volatile field prior to NIRA, provided that they were certified by the Commission. Such agencies place the responsibility of controlling minimum prices upon the operators. These marketing arrangements are easier to administer and enforce and since they would probably lead to less rigidity of price relationships than a system of minimum price control, they might make for more economic distribution and consumption.

There seems to be little support for the contention that established minimum prices as required under the Act of 1937 would maximize the consumption or distribution of coal. Relating minimum prices to average production costs would undoubtedly lead to higher prices when the consumption of coal declined. Over a period of years, higher prices would probably provoke a further drop in coal consumption and this decline would increase costs and lead to still higher prices. Presumably there would be no limit to this "bootstrapping process." In the meantime, an increasing number of coal consumers would turn to oil and gas and raise the rate of consumption of these fuels. From the standpoint of over-all fuel consumption, the enhanced depletion of these more limited sources of energy would not be in the interest of the nation.

Moreover, because the price-fixing agencies, in the absence of more specific instructions, deemed it advisable to make the preservation of existing competitive opportunities their primary criterion, emphasis upon the maintenance of existing relationships between prices for various kinds, qualities, and sizes of coal was logical. Such a policy, however, tends to eliminate price competition between producers and may encourage operators who desire to improve their market position to divert available funds to advertising and increased sales efforts. These practices would not make for economic distribution or consumption.

Lastly, the "status quo" with respect to competitive opportunities or price relationships is not a satisfactory basis for industrial policy. It ignores the constantly changing forces at work in the industry and the nation. To obtain economic distribution and consumption the price structure must reflect new and cheaper methods of mining and transportation, improved types of mining and burning equipment, alterations in the wage structure, important regional shifts in production and population, new industries and new uses for coal, and basic changes in the competitive fuel situation.

Even if the Act had provided for definite standards for establishing minimum price schedules in terms of relative mine efficiency and economic consumption and distribution, there are grave doubts as to whether the Commission could have applied them. The notion of preserving fair competitive opportunities is deeply rooted in American business thinking and any agency that disregarded this concept would meet such resistance that the task of enforcement in this multi-unit and widely decentralized industry would be exceedingly difficult, if not impossible.

4) *Frequent and prolonged strikes.* The impact of higher prices upon labor disputes and the bearing of these disputes upon mine capacity were discussed earlier in this appraisal of the Act. We are now concerned with the effect of minimum price fixing on the consumer and are examining the bearing of such prices upon the incidence of work stoppages. Do minimum price schedules encourage or discourage frequent and prolonged labor disputes?

Our earlier analysis disclosed that work stoppages in this industry were much less pronounced during the years 1939 to 1948 inclusive, when prices rose sharply, than they were in the period 1923 to 1931 inclusive, when prices fell substantially. A lower incidence of strikes was true of the period of rising prices even when the war years are omitted. Obviously pegged prices in periods of falling demand would eliminate strikes that would otherwise be called to halt wage slashing. Because the bargaining position of the mine workers is improved and that of the operators is weakened under minimum price schedules, the consumers would likely be less subject to labor disputes.

To summarize, in appraising minimum price fixing as a mechanism for attaining stabilization—the long-run objective of Congress—we must consider its impact on (1) the overdevelopment that has characterized this industry for many years and the consequent maladjustment between productive capacity and demand for coal, (2)

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the equally characteristic practice of drastic price cutting, (3) labor standards, (4) profits, and (5) the interests of consumers.

It is the opinion of the authors that minimum price fixing would, in general, tend to:

- widen the gap between capacity and demand;
- protect consumers (1) by reducing the number of prolonged labor disputes, particularly those resulting from threatened wage cuts and (2) by providing them with a better grade of coal, but these advantages would be offset by higher prices especially in periods of prolonged depressions;
- diminish the practice of price cutting and maintain higher wages, shorter hours and, in some instances, better working conditions than would prevail under competitive pricing, but in doing so it would aggravate forces and conditions inherent in the industry that would, in the long run, lead to instability;
- improve the profit position of investors in the industry.

The conclusion with respect to the maladjustment of capacity to demand is based on the probable effects of price regulation on both the capacity to produce and the demand for coal. It seems unlikely that higher prices existing under minimum price fixing would have very substantial effects on demand in the short run. Available data show no tendency for the demand for coal to respond appreciably to changes in its price, and the classic result of substitution among competing fuels is not clear-cut even from a consideration of relative movements of their prices. It would appear that, even with low prices, bituminous coal could not compete with other fuels which have more desirable characteristics and more flexible prices. There is evidence moreover that high prices in the short run constitute a relatively minor spur, if any, to improved utilization of coal by consumers, being only one of a number of factors affecting the introduction of economies. On the other hand, high prices may well prevent the use of coal in new production centers and industries, and demand for coal (although inelastic in the short run) has proven to be elastic over long periods, during which substitution of other fuels and economies in the use of coal become practicable. The impact of minimum prices on demand would be particularly great in an extended depression, when reduced operation of mines would result in higher costs and so in still higher prices.

At the same time that it is exerting its adverse influences on demand for coal over long periods, the guarantee of minimum prices

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would likely be stimulating further overdevelopment of mine capacity. It would seem that price regulation would protect existing high-cost mines and encourage the opening of new marginal mines, without any counterbalancing tendency to concentrate mine ownership to enable operators to control capacity voluntarily. Available data, moreover, suggest that mechanization is stimulated by higher prices, so that price fixing might be expected to encourage mechanization and thereby increase mine capacity. Minimum price fixing would tend to discourage those prolonged strikes that have accompanied price and wage slashing and to reduce the incentive for stoppages because operators' resistance to union demands would be weaker. This effect would operate in the direction of decreased overdevelopment, since prolonged strikes in the past have tended to conceal the gap between demand and capacity and so have prevented adjustment. This offsetting fortunate influence on excess capacity, however, would be far outweighed by factors stimulating overdevelopment.

It would appear then that established minimum prices would have little impact upon short-run demand but would materially increase short-run supply. In the long run, unless offsetting factors were present, they would substantially decrease the demand for coal and increase the capacity of the industry to produce it.

It is difficult to estimate what protection would be afforded the consumer's interest in reasonable prices. Analysis of costs and prices suggests that the initial increase in price to consumers as a result of the Act could not have been particularly burdensome, but effects could be more substantial over a period of time in view of the strengthened bargaining position of the union, weakened resistance of employers to union demands, and probable higher prices during depressions. The consumer could expect little in the way of less wasteful methods of mining or more economic consumption and distribution of coal. In fact, the "bootstrapping process" would tend to encourage further use of fuels which are in more limited supply, and the preservation of existing competitive opportunities would disregard the dynamic forces in the industry and might encourage operators to increase their share of the market through advertising instead of through more efficient mining and selling. Minimum price fixing would, however, tend to relieve the consumer of the burden of those frequent and prolonged strikes that grow out of attempts to reduce wages.

If enforced rigidly, minimum price fixing would probably prevent drastic price cutting. As has been pointed out, however, higher

prices over a long period may result in reduced demand for coal, and in a long depression they may well result in less effective utilization of the resources of the economy.

With the union in a stronger bargaining position under regulated prices, labor can be expected to improve still further its terms and conditions of employment, although there is considerable evidence that gains can be substantial even in the absence of minimum price legislation when a strong union is in control of the labor supply. The danger presented by this method of improving labor standards is that the union might exploit its bargaining advantage, and the employers fail to resist, with the result that consumers would have to pay higher and higher prices. The end result would be lessened demand and reduced employment opportunity. The events of the last two decades suggest that this is a very real danger.

It cannot be said whether cost-price relationships under minimum price fixing would be such as to enable investors to make profits equivalent to those in other industries of like risks. It is clear, however, that in depressed periods margins will be greater under regulated prices than they would otherwise have been particularly in the light of a likely tendency for costs to be overestimated in setting prices.

In the authors' opinion, established minimum price schedules would not further the long-range objective sought by Congress in enacting such legislation. It is true that price fixing tends to diminish price cutting, bolster profits and labor standards, and reduce labor disturbances that result from wage reductions. These gains, however, are likely to be illusory over the long run because price regulation may well aggravate basic causes of instability. Most important in this respect is the probability that it will encourage even further overdevelopment while it reduces long-run demand for coal. The adverse effect on demand could become more serious if operators, cushioned by ability to pass on rising costs in higher prices, failed to resist any unreasonable demands a union might make.

We have pointed out the tremendous difficulties confronting those who determine and enforce minimum prices—difficulties growing out of the nature of the industry and its product, the limitations of any legislation no matter how carefully designed, conflicts of interests between producers and consumers, and the innumerable variables that affect, and must be dealt with in price determination. But the difficulties do not end there. Adjusting minimum prices to changes over time in a continuous dynamic

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economy is an even more difficult task. How does one take into account in an orderly and timely fashion (1) new and cheaper methods of mining and transportation, (2) changes in demand resulting from fluctuations in business activities, the encroachment of competing fuels on the markets of coal, economies in the utilization of coal, and the development of new production centers and industries, and (3) changes in competitive relationships among producers? The above are illustrative of the host of changes that occur in the working out of supply and demand in an economy. Is there any likelihood that any price-fixing agency could adjust minimum prices to future changes in a way that would encourage economic distribution and consumption of bituminous coal and ensure that our limited fuel resources would be wisely used? This experiment in price fixing does not provide a basis for optimism.

Unfortunately, some of the forces and conditions that made for instability in this industry during the thirties have reappeared since 1951. Coal sales have fallen away and production and employment have been sharply curtailed. The intensified competition among coal producers has brought down prices, even though wages and fringe benefits have been increased—a development made possible by the utilization of more efficient machinery. Domestic oil and gas continue to make inroads in the coal markets. More recently, imports of foreign residual oil have aggravated the situation. Even as we conclude this appraisal, government data for 1952 show that production has fallen about 13 per cent and number of production workers employed 11 per cent below their respective 1951 figures. One hundred and thirty-three mines have shut down, coal is said to be selling below cost of production in the majority of commercial mines, and oil has replaced coal as the nation's chief fuel. In addition, 20 per cent of the soft coal is produced by mines not under union contract.¹⁶⁹

It is possible, of course, that the union can obtain and enforce adequate labor standards even in the face of forces encouraging a return to price slashing. The union's task of maintaining control over labor standards will be made more difficult by the fact that even in a period of prosperity employment opportunities in the industry are falling, so that a cyclical decline will be superimposed on a secular decline in labor needs. Should the union be unable to

¹⁶⁹ Data on production of coal and the competitive position of coal and oil are from weekly reports of the U.S. Bureau of Mines. Data are preliminary. The number of production workers employed is from the Bureau of Labor Statistics. Other data in the paragraph are from an article by A. H. Raskin in the *New York Times*, July 19, 1953, p. 48.

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withstand downward pressures on labor standards, undoubtedly minimum price fixing will again suggest itself as a remedy. In view of the long-run unstabilizing influence of this procedure, it would be wise to consider carefully other emergency measures to deal with any downward spiral of prices and wages. Otherwise Congress might place itself in the position of curing the symptoms while weakening the patient's ability to rally from his fundamental disease.