

INDUSTRIAL PRICE POLICIES AND ECONOMIC PROGRESS

BY

EDWIN G. NOURSE AND HORACE B. DRURY

**Can business men reduce prices
and maintain profits?**

**What factors complicate the
price-maker's decision?**

**Where are large corporations
helpful?**

**What does free business enter-
prise involve?**

76

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DIRECTOR'S PREFACE

As explained at some length in the introductory chapter, this book proceeds from the general analysis developed in a former Brookings Institution publication, *Income and Economic Progress*, by a process of "getting down to cases." On the basis of a comprehensive view of the actual complexities amidst which the business man works, it seeks to discern the constructive implications of what is already being done by pace-makers in this field and to envision the results to be expected if these constructive lines of business practice were widely followed.

This approach looks toward inductive development of a positive theory of the pricing process in the real and dynamic world evolving about us. The authors believe that this will have more practical usefulness than destructive criticism of current price mechanisms on the ground that they depart widely from the principles of competitive price which were developed out of the conditions of older and simpler economies.

The fact that the authors are receptive to these newer developments of our price economy by no means implies that they are blind to the great imperfections by which it is still beset, nor complacent about the continuance of these defects. Their treatment of the problem does, however, imply a certain strategy for the attack on social problems. It puts major emphasis on discovering and pushing forward those dynamic elements out of which progress may be made, with secondary emphasis on the eradication of retarding or destructive features, many of which are normally left behind in the process of vigorous growth. It is believed that such a course leads to more rapid progress than would come from concentration on

the elimination of specific abuses from a system conceived as essentially static.

At the present time, no doubt, most readers tend to think of any price discussion as focused on the immediate problem of depression and recovery. This study, however, like the former series on the distribution of income in relation to economic progress, is not directly concerned with the present depression or with depression causes or cures. Whatever its immediate applications, its analysis of price policies is concerned with economic hygiene rather than emergency treatment of acute illness.

The committee of the Institute which cooperated with the authors in the preparation of this volume consisted of Harold G. Moulton and Harold B. Rowe. Acknowledgment is here made to Spurgeon Bell in connection with Chapter II and to Leverett S. Lyon in connection with the NRA section in Chapter X and "Legal and Administrative Influences" in Chapter VII. The authors also express their appreciation of the information furnished and counsel given by numerous business men and government officials. Special mention is made of Professor Gorton James who, before his untimely death, served on our staff during the early stages of work on this project.

The study upon which this report is based was made possible by funds granted by The Maurice and Laura Falk Foundation of Pittsburgh. However, the Falk Foundation is not the author, publisher, or proprietor of this publication and is not to be understood as approving or disapproving by virtue of its grant any of the statements and views expressed herein.

EDWIN G. NOURSE

Director

Institute of Economics
June 1938

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APPENDIXES

APPENDIX A

SOME SHORTCOMINGS OF THE PRICE DATA

Price *quotations*, even those reported by the most reliable agencies, by no means tell a full and accurate story as to prices *actually paid* by buyers. Any contract for the sale of goods (we are speaking, of course, of wholesale transactions, and especially of those in which the seller is an industrial producer) is commonly the result of a deal. If conditions have created a "buyers' market," the seller's official price may amount to little more than a starting point for negotiation.¹

Even where every sale is handled in strict compliance with some published schedule, as was prescribed by many NRA codes, the price quotation that is selected and made the basis of some generally accepted price series ordinarily represents only one, or at best a few, of a considerable group of commodities, which may be of quite unequal and ever-changing importance. Any quoted price, moreover, is necessarily paid by a specified class of customers, although there may be many classes of customers and a given customer or transaction may sometimes be classified in one way and sometimes in another. Beyond this, the complexity of terms of sale—which commonly involve discounts, allowances, and services on the one hand, and extra charges on the other—may create a situation which is so intricate and shifting as to make it hard to tell what prices are being charged to a single customer, and even more difficult to determine how

¹ A good illustration of a price series which does not reflect the actual market situation is afforded by sulphuric acid. Quoted sulphuric acid prices are for "spot" delivery, and stand at an arbitrary figure which is seldom changed. But most sulphuric acid is sold on contract. In the negotiation of these contracts there is the keenest competition, and the prices arrived at are sensitive to every market factor.

representative a given price series may be for the trade as a whole.

How confused a price structure may become is well illustrated by *A Study of Open Price Filing in the Electrical Manufacturing Industry*,² probably the most comprehensive analysis ever undertaken of the prices which have actually been in effect in an industry. The seventeen branches of electrical manufacturing, including such unlike activities as the making of flash-light batteries, welding apparatus, radio tubes, fuse-plugs, building wire, and potato peeling machinery, were found to exemplify not one but many price patterns, each of which was in turn compounded not of one, but of many elements.

We can not here review the prices and changes in prices, the terms and changes in terms, and the classifications and changes in classifications which marked the course of electrical prices during the few months (under NRA) when a full record of their course was kept. However, the following quotations from the concluding chapter of the report will give a fair idea of some of the difficulties involved in analyzing the data:

There is hardly a price-call in the electrical industry [notification to the manufacturers to list prices] which related to a simple product without variation in size, grade, design or technical specifications. . . . In many instances, although the number of basic products is small, the presence of a small number of universal variables plus a great many variations in size and grade, result in so many possible combinations and permutations as to involve thousands of different prices, applying to particular specifications, as is the case in the rubber-covered building wire group. In still other cases, the actual products themselves are numerous, as in domestic heating appliances. To add further confusion to this picture the products do not necessarily maintain a quality continuity. There are the cases where the products

² By Willard L. Thorp and A. H. Caesar with the assistance of F. W. Powell (National Recovery Administration, Division of Review, *Work Materials No. 78*).

are continually changed in design or structure, or where old products are dropped and new products appear as in the domestic heating appliance group. In the battery group, the problem of defining the product is further complicated by the provision for different prices according to the nature of the label—the standard brand label carrying higher prices than special labels although the actual merchandise involved may be identical. In several groups, the problem of packaging appears. The product is usually not purchased in bulk so prices must take into account the form in which it is purchased. In the wire groups, this raises problems of spools, reels and factory lengths; in products such as sockets, of standard packages, cartons and broken cartons. One might expect that price changes in a line such as building wire or sockets would move uniformly, and that consequently one or two typical items would provide a base from which all other prices would maintain regular differentials. Unfortunately, such is by no means the case. To be sure, there are occasional broadside price changes affecting the entire list, but in addition there are continual sharp-shooting revisions in the list price of one or another single item.

While the mass of detail and even the conclusions with reference to freight, credit, customer classifications, quantity discounts, and allowances are too complicated to be included here, the following observation is so challenging, if not positively devastating (in its bearing on the validity of price series), as to merit quotation:

The result of this complicated marketing situation is the frequent use of a list price which serves no purpose except as a basis from which various differential discounts may be computed. Rather than vary the list price, price changes may be made by changing some or all of the discount rates. . . . In most of the groups studied, these customer discounts are the heart of the price structure. They create wide differences in price to different customers. The most significant changes in price occur by means of their revision, reflecting the efforts to attract those operating in one or another channel of distribution or use.

It might be thought that a basic commodity like steel

would have a definite, universally known price; and, in fact, the published quotations for steel have been widely regarded not only as an index of conditions and policies in the steel industry, but, to some degree, of industrial trends generally. The more critical observation of recent years has made note of the fact, however, that, overlying the base quotations for steel, there are charges for extras, and charges or allowances for ancillary services, credit terms, and transportation costs, which cause the base quotation to be only a part of the total price picture, even where the quoted price is adhered to as a base. How universal and important is the charge for extras (which never enter into the price series) will be evident when it is pointed out that very little, if any, of the steel sold is steel of the formless, undifferentiated type which the statistical series posit. Thus Stratton, in *The Economics of the Iron and Steel Industry*, points out that even in the manufacture of tonnage products there are many different grades and qualities, it being necessary to vary either the chemical composition or type of heat treatment or finishing processes to meet special requirements. One large steel producer, he states, has testified to making more than 600 different grades of steel in one year. In addition to metallurgical differentiations, there is also a wide range of shapes and sizes which must be produced to meet varied customer requirements.³

That dependence on mere market quotations may, in fact, give a seriously erroneous impression of what has happened to prices actually paid for steel is shown by an analysis made a few years ago by one of the independent manufacturers of agricultural machinery. In checking back their records they found that the trend since 1913 in the actual cost to them of steel differed by 50 per cent

³ C. R. Daugherty, M. G. de Chazeau, and S. S. Stratton, *The Economics of the Iron and Steel Industry* (Bureau of Business Research, University of Pittsburgh), Vol. I, p. 13.

from the trend as indicated by the government-published price series.⁴

It is to be hoped that price series are on the whole more representative of actual prices than these illustrations would suggest. However, since the deviation of actual prices from published prices is in some instances so material, it is obvious that one must be very cautious about drawing fine conclusions from available price indexes. These shortcomings are in addition to the difficulties raised by changes in quality such as are discussed in Chapter III.

⁴ A broader check, though over only a short time, on the accuracy of price series is afforded by a tabulation by PWA of the prices actually paid by various cities for ten important building materials. Here it has been found that the actual prices have been running about 10 per cent under the quoted prices. But it is not believed that there tends to be a fixed percentage. During periods of active demand, actual prices come closer to quoted prices; whereas during depression, they swing farther away from this base.

That the inadequacies of price data extend far into the past is suggested by a check-up made by America's largest typewriter manufacturer about 1922. Between 1900 and 1922 there had been no change in the list price of this company's typewriters. But the prices actually received were, upon examination, found to have gradually advanced within this period (the war years being disregarded) by 15 or 20 per cent. Consultation between this concern and other typewriter companies indicated that much this same situation had prevailed elsewhere in typewriter selling during these years.

APPENDIX B

STATISTICAL TABLES

1. INDEXES OF WEEKLY WAGES AND OF WHOLESALE PRICES
OF MANUFACTURED PRODUCTS, 1870-1937
(1936=100)

Year	Weekly Wages ^a	Prices of Manufactured Products ^b	Wage Index Divided by Price Index	Year	Weekly Wages ^a	Prices of Manufactured Products ^b	Wage Index Divided by Price Index
1870...	42.8	116.8	36.6	1890...	39.7	73.3	54.2
1871...	42.8	112.2	38.1	1891...	40.0	72.4	55.2
1872...	43.1	116.2	37.1	1892...	40.4	69.0	58.6
1873...	43.3	118.4	36.6	1893...	38.0	70.4	54.0
1874...	42.8	111.3	38.5	1894...	34.9	61.2	57.0
1875...	41.4	104.6	39.6	1895...	37.6	61.3	61.3
1876...	39.4	96.3	40.9	1896...	36.7	59.3	61.9
1877...	37.5	89.5	41.9	1897...	36.9	60.2	61.3
1878...	35.7	81.8	43.6	1898...	37.3	62.3	59.9
1879...	35.0	79.4	44.1	1899...	38.6	66.5	58.0
1880...	35.7	88.7	40.2	1900...	39.4	70.2	56.1
1881...	36.7	86.6	42.4	1901...	41.3	69.0	59.9
1882...	37.9	88.4	42.9	1902...	42.8	73.5	58.2
1883...	38.7	85.7	45.2	1903...	44.0	72.7	60.5
1884...	39.0	80.1	48.7	1904...	43.2	72.9	59.3
1885...	38.4	75.6	50.8	1905...	44.7	74.9	59.7
1886...	38.1	74.9	50.9	1906...	45.8	74.0	61.9
1887...	38.9	74.3	52.4	1907...	47.2	79.8	59.1
1888...	39.0	74.6	52.3	1908...	43.0	78.5	54.8
1889...	39.3	74.0	53.1	1909...	46.9	82.8	56.6

^a Index 1870 to 1889 based on estimates of Ralph G. Hurlin, Department of Statistics, Russel Sage Foundation (for earnings of artisans and laborers); 1890 to 1918, on Paul Douglas, *Real Wages in the United States*, p. 246; 1919 to 1937, on The Brookings Institution, *The Recovery Problem in the United States*, p. 632, brought up to date on basis of revised Bureau of Labor Statistics index and of 1935 Census of Manufactures.

^b From 1870 to 1889, based on a simple average of 125 manufactured articles as published in 52 Cong. 2 sess., S. rep. 1394, Pt. I, pp. 30-52; from 1890 to 1912 on 70 manufactured commodities, U. S. Bureau of Labor Statistics, *Wholesale Prices 1890 to 1921* (Bulletin No. 32), p. 44; from 1913 to 1937 on index of 582 finished products as currently published by U. S. Bureau of Labor Statistics. Each of the series has been adjusted to 1936 as a base.

STATISTICAL TABLES

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INDEXES OF WEEKLY WAGES AND OF WHOLESALE PRICES
OF MANUFACTURED PRODUCTS, 1870-1937

—Continued

Year	Weekly Wages ^a	Prices of Manufactured Products ^b	Wage Index Divided by Price Index	Year	Weekly Wages ^a	Prices of Manufactured Products ^b	Wage Index Divided by Price Index
1910...	50.5	85.9	58.8	1925...	115.8	122.7	94.4
1911...	48.6	78.7	61.8	1926...	117.2	122.0	96.1
1912...	49.8	84.4	59.0	1927...	117.6	115.9	101.5
1913...	52.3	84.6	61.8	1928...	118.7	117.0	101.5
1914...	52.5	82.7	63.5	1929...	119.1	115.2	103.4
1915...	51.4	84.0	61.2	1930...	110.8	107.3	103.3
1916...	58.9	100.4	58.7	1931...	99.7	93.9	106.2
1917...	70.0	133.2	52.6	1932...	81.0	85.7	94.5
1918...	88.7	152.1	58.3	1933...	78.6	86.0	91.4
1919...	104.7	159.3	65.7	1934...	87.3	95.4	91.5
1920...	124.6	182.7	68.2	1935...	92.5	100.2	92.3
1921...	106.9	126.0	84.8	1936...	100.0	100.0	100.0
1922...	103.2	117.7	87.7	1937...	110.4	106.3	103.9
1923...	113.5	121.0	93.8				
1924...	113.8	117.4	96.9				

2. INDEXES OF WEEKLY WAGES AND OF WHOLESALE PRICES OF
RAW MATERIALS AND MANUFACTURED PRODUCTS
1890-1913
(1913=100)

Year	Weekly Wages ^a	Wholesale Prices ^b			
		Raw Commodities ^c		Manufactured Commodities ^d	
		Index Numbers	Wage Index Divided by Price Index	Index Numbers	Wage Index Divided by Price Index
1890.....	76.0	69.3	109.7	86.6	87.8
1891.....	76.5	68.3	112.0	85.6	89.4
1892.....	77.2	62.0	124.5	81.5	94.7
1893.....	72.7	64.2	113.2	83.2	87.4
1894.....	66.8	56.8	117.6	72.4	92.3
1895.....	72.0	60.5	119.0	72.5	99.3
1896.....	70.2	56.2	124.9	70.1	100.1
1897.....	70.6	57.2	123.4	71.2	99.2
1898.....	71.3	61.2	116.5	73.6	96.9
1899.....	73.7	67.4	109.3	78.5	93.9
1900.....	75.3	72.8	103.4	83.0	90.7
1901.....	78.9	72.2	109.3	81.5	96.8
1902.....	81.8	77.1	106.1	86.9	94.1
1903.....	84.1	76.5	109.9	85.9	97.9
1904.....	82.5	79.1	104.3	86.2	95.7
1905.....	85.5	78.2	109.3	88.5	96.6
1906.....	87.5	81.3	107.6	87.5	100.0
1907.....	90.3	86.6	104.3	94.2	95.9
1908.....	82.2	83.7	98.2	92.8	88.6
1909.....	89.6	91.1	98.4	97.8	91.6
1910.....	96.5	95.4	101.2	101.4	95.2
1911.....	92.9	86.3	107.6	92.9	100.0
1912.....	95.2	95.1	100.1	99.7	95.5
1913.....	100.0	100.0	100.0	100.0	100.0

^a Based on Paul Douglas, *Real Wages in the United States*, p. 246. See note a, table 1.

^b U. S. Bureau of Labor Statistics, *Wholesale Prices, 1890-1926* (Bulletin No. 440), p. 29.

^c 27 price series.

^d 70 price series.

STATISTICAL TABLES

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INDEXES OF WEEKLY WAGES AND OF WHOLESALE PRICES OF RAW MATERIALS AND MANUFACTURED PRODUCTS—Continued
1913-37
(1936=100)

Year	Weekly Wages	Wholesale Prices*			
		Raw Materials†		Finished Products‡	
		Index Numbers	Wage Index Divided by Price Index	Index Numbers	Wage Index Divided by Price Index
1913.....	52.3	86.1	60.7	84.6	61.8
1914.....	52.5	84.6	62.1	82.7	63.5
1915.....	51.4	84.1	61.1	84.0	61.2
1916.....	58.9	103.4	57.0	100.4	58.7
1917.....	70.0	153.4	45.6	133.2	52.6
1918.....	88.7	170.0	52.2	152.1	58.3
1919.....	104.7	182.6	57.3	159.3	65.7
1920.....	124.6	190.0	65.6	182.7	68.2
1921.....	106.9	110.5	96.7	126.0	84.8
1922.....	103.2	120.2	85.9	117.7	87.7
1923.....	113.5	123.3	92.1	121.0	93.8
1924.....	113.8	122.2	93.1	117.4	96.9
1925.....	115.8	133.5	86.7	122.7	94.4
1926.....	117.2	125.2	93.6	122.0	96.1
1927.....	117.6	120.8	97.4	115.9	101.5
1928.....	118.7	124.0	95.7	117.0	101.5
1929.....	119.1	122.0	97.6	115.2	103.4
1930.....	110.8	105.5	105.0	107.3	103.3
1931.....	99.7	82.1	121.4	93.9	106.2
1932.....	81.0	69.0	117.4	85.7	94.5
1933.....	78.6	70.7	111.2	86.0	91.4
1934.....	87.3	85.9	101.6	95.4	91.5
1935.....	92.5	96.5	95.9	100.2	92.3
1936.....	100.0	100.0	100.0	100.0	100.0
1937.....	110.4	106.1	104.1	106.3	103.9

* U. S. Bureau of Labor Statistics, *Wholesale Prices*, monthly bulletins.
† 109 quotations.
‡ 582 quotations.

3. INDEXES OF WEEKLY WAGES AND OF WHOLESALE PRICES OF WINDOW
GLASS AND PRINT CLOTH, 1870-1937
(1936=100)

Year	Weekly Wages ^a	Window Glass ^b			Print Cloth ^b		
		Price per 50 Square Feet		Wage Index Divided by Price Index	Price per Yard		Wage Index Divided by Price Index
		Dollars	Index Numbers		Dollars	Index Numbers	
1870...	42.8	2.790	97.9	43.7	.066	153.5	27.9
1871...	42.8	2.960	103.9	41.2	.068	158.1	27.1
1872...	43.1	4.670	163.9	26.3	.072	167.4	25.7
1873...	43.3	3.890	136.5	31.7	.063	146.5	29.6
1874...	42.8	3.950	138.6	30.9	.052	120.9	35.4
1875...	41.4	3.190	112.0	37.0	.050	116.3	35.6
1876...	39.4	3.530	123.9	31.8	.037	86.0	45.8
1877...	37.5	2.940	103.2	36.3	.039	90.7	41.3
1878...	35.7	2.500	87.8	40.7	.031	72.1	49.5
1879...	35.0	2.490	87.4	40.0	.034	79.1	44.2
1880...	35.7	2.780	97.6	36.6	.043	100.0	35.7
1881...	36.7	2.740	96.2	38.1	.036	83.7	43.8
1882...	37.9	2.910	102.1	37.1	.035	81.4	46.6
1883...	38.7	2.830	99.3	39.0	.033	76.7	50.5
1884...	39.0	3.190	112.0	34.8	.031	72.1	54.1
1885...	38.4	3.620	127.1	30.2	.028	65.1	59.0
1886...	38.1	3.620	127.1	30.0	.030	69.8	54.6
1887...	38.9	1.930	67.7	57.5	.031	72.1	54.0
1888...	39.0	2.010	70.6	55.2	.034	79.1	49.3
1889...	39.3	1.750	61.4	64.0	.036	83.7	47.0
1890...	39.7	1.786	62.7	63.3	.031	72.1	55.1
1891...	40.0	1.770	62.1	64.4	.027	62.8	63.7
1892...	40.4	1.595	56.0	72.1	.031	72.1	56.0
1893...	38.0	1.710	60.0	63.3	.030	69.8	54.4
1894...	34.9	1.633	57.3	60.9	.026	60.5	57.7
1895...	37.6	1.392	48.9	76.9	.027	62.8	59.9
1896...	36.7	1.600	56.2	65.3	.024	55.8	65.8
1897...	36.9	1.963	68.9	53.6	.023	53.5	69.0
1898...	37.3	2.343	82.2	45.4	.019	44.2	84.4
1899...	38.6	2.399	84.2	45.8	.025	58.1	66.4
1900...	39.4	2.319	81.4	48.4	.029	67.4	58.5
1901...	41.3	3.282	115.2	35.9	.026	60.5	68.3
1902...	42.8	2.565	90.0	47.6	.029	67.4	63.5
1903...	44.0	2.160	75.8	58.0	.030	69.8	63.0
1904...	43.2	2.328	81.7	52.9	.031	72.1	59.9

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 INDEXES OF WEEKLY WAGES AND OF WHOLESALE PRICES OF WINDOW
 GLASS AND PRINT CLOTH, 1870-1937—Continued

Year	Weekly Wages ^a	Window Glass ^b			Print Cloth ^b		
		Price per 50 Square Feet		Wage Index Divided by Price Index	Price per Yard		Wage Index Divided by Price Index
		Dollars	Index Numbers		Dollars	Index Numbers	
1905...	44.7	2.137	75.0	59.6	.029	67.4	66.3
1906...	45.8	2.256	79.2	57.8	.033	76.7	59.7
1907...	47.2	2.242	78.7	60.0	.044	102.3	46.1
1908...	43.0	1.881	66.0	65.2	.031	72.1	59.6
1909...	46.9	1.849	64.9	72.3	.033	76.7	61.1
1910...	50.5	2.338	82.1	61.5	.036	83.7	60.3
1911...	48.6	1.796	63.0	77.1	.032	74.4	65.3
1912...	49.8	1.785	62.7	79.4	.035	81.4	61.2
1913...	52.3	2.221	78.0	67.1	.035	81.4	64.3
1914...	52.5	2.168	76.1	69.0	.030	69.8	75.2
1915...	51.4	2.423	85.0	60.5	.029	67.4	76.3
1916...	58.9	2.494	87.5	67.3	.042	97.7	60.3
1917...	70.0	3.325	116.7	60.0	.066	153.5	45.6
1918...	88.7	5.689	199.7	44.4	.113	262.8	33.8
1919...	104.7	6.226	218.5	47.9	.099	230.2	45.5
1920...	124.6	6.555	230.1	54.2	.126	293.0	42.5
1921...	106.9	5.614	197.1	54.2	.051	118.6	90.1
1922...	103.2	3.523	123.7	83.4	.066	153.5	67.2
1923...	113.5	3.612	126.8	89.5	.075	174.4	65.1
1924...	113.8	3.459	121.4	93.7	.068	158.1	72.0
1925...	115.8	3.095	108.6	106.6	.066	153.5	75.4
1926...	117.2	3.110	109.2	107.3	.052	120.9	96.9
1927...	117.6	2.980	104.6	112.4	.055	127.9	91.9
1928...	118.7	3.080	108.1	109.8	.058	134.9	88.0
1929...	119.1	3.420	120.0	99.3	.052	120.9	98.5
1930...	110.8	3.420	120.0	92.3	.042	97.7	113.4
1931...	99.7	2.068	72.6	137.3	.033	76.7	130.0
1932...	81.0	2.146	75.3	107.6	.026	60.5	133.9
1933...	78.6	2.300	80.7	97.4	.038	88.4	88.9
1934...	87.3	2.165	76.0	114.9	.048	111.6	78.2
1935...	92.5	2.433	85.4	108.3	.049	114.0	81.1
1936...	100.0	2.849	100.0	100.0	.043	100.0	100.0
1937...	110.4	2.887	101.3	109.0	.048	111.6	98.9

^a See note a, table 1.

^b 1870-89: 52 Cong. 2 sess., S. rep. 1394 (Report by Mr. Aldrich from the Committee on Finance), Pt. II, pp. 152, 241-42. 1890-1937: Bureau of Labor Statistics. Owing to changes in the type of product for which the price quotations have been made, it has been necessary to adjust the dollar values in earlier years in such a way as to make the series comparable.

4. INDEXES OF COMMODITY PRICES AND OF INCOME OF MANUFACTURING
CORPORATIONS, 1918-35
(1929=100)

Year	Wholesale Prices of Finished Products ^a	Gross Income of Manufacturing Corporations ^b	Net Income of Manufacturing Corporations ^b
1918.....	132.0	61.2	102.9
1919.....	138.2	72.5	110.1
1920.....	158.5	78.5	74.5
1921.....	109.3	53.3	- 2.7
1922.....	102.1	61.9	59.9
1923.....	105.0	77.9	81.0
1924.....	101.9	74.7	62.7
1925.....	106.5	84.3	84.0
1926.....	105.8	86.6	84.2
1927.....	100.5	88.3	70.1
1928.....	101.5	93.3	88.7
1929.....	100.0	100.0	100.0
1930.....	93.1	84.4	25.4
1931.....	81.5	61.0	-18.7
1932.....	74.4	44.3	-41.0
1933.....	74.6	48.7	4.6
1934.....	82.8	56.9	22.2
1935.....	87.0	66.1	40.9

^a Bureau of Labor Statistics, converted from 1926 base.

^b Computed from dollar figures of gross income and net income contained in the annual *Statistics of Income* of the Internal Revenue Bureau.

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5. INDEXES OF WHOLESALE PRICES OF FINISHED PRODUCTS AND OF NET INCOME OF ALL CORPORATIONS, 1909-35, AND OF NET INCOME OF MANUFACTURING CORPORATIONS, 1918-35 (1929=100)

Year	Wholesale Prices of Finished Products ^a	Net Income of All Corporations ^b	Net Income of Manufacturing Corporations ^c
1909.....	71.9	40.0	...
1910.....	74.5	43.0	...
1911.....	68.3	40.1	...
1912.....	73.2	47.5	...
1913.....	73.4	53.9	...
1914.....	71.7	45.1	...
1915.....	72.9	60.8	...
1916.....	87.1	92.8	...
1917.....	115.6	115.6	...
1918.....	132.0	87.8	102.9
1919.....	138.2	96.3	110.1
1920.....	158.5	67.2	74.5
1921.....	109.3	5.2	- 2.7
1922.....	102.1	54.6	59.9
1923.....	105.0	72.2	81.0
1924.....	101.9	61.4	62.7
1925.....	106.5	87.2	84.0
1926.....	105.8	85.9	84.2
1927.....	100.5	74.5	70.1
1928.....	101.5	94.1	88.7
1929.....	100.0	100.0	100.0
1930.....	93.1	17.7	25.4
1931.....	81.5	-37.6	-18.7
1932.....	74.4	-64.6	-41.0
1933.....	74.6	-29.1	4.6
1934.....	82.8	1.1	22.2
1935.....	87.0	19.4	40.9

^a See note *b*, table 1.

^b Computed from dollar figures contained in *Statistics of Income* of the Bureau of Internal Revenue. The figures for the years 1909-15 do not subtract the deficits of corporations reporting no net income, and are therefore not comparable with the later figures.

^c Computed from dollar figures contained in *Statistics of Income* of the Bureau of Internal Revenue.

APPENDIX C

INDUSTRIAL CONSOLIDATIONS, 1898-1902^a
(With capitalization of 5 million dollars or over)

Year	Company	Capitalization (in thousands)	Year	Company	Capitalization (in thousands)	
1898	American Fisheries	\$10,000	1899	(cont.)		
	American Linseed	33,500		Mount Vernon-Woodberry Cotton Duck	9,500	
	American Steel and Wire	24,000		National Carbon	10,000	
	American Thread	12,000		National Casket	6,000	
	American Tin Plate	50,000		National Enameling and Stamping	30,000	
	Atlantic Snuff	10,000		National Salt	12,000	
	Continental Tobacco	75,000		National Screw	10,000	
	Federal Steel	100,000		National Steel	59,000	
	International Paper	45,000		National Straw Board	6,000	
	International Silver	20,000		National Tube	80,000	
	National Biscuit	55,000		New England Cotton Yarn	10,000	
	Otis Elevator	11,000		Niles-Bement-Pond	8,000	
	Union Carbide	6,000		Pacific American Fisheries	5,000	
	Westinghouse Air Brake	11,000		Pullman	74,000	
	1899	Amalgamated Copper		75,000	Republic Iron and Steel	55,000
		American Agricultural Chemical		40,000	Royal Baking Powder	20,000
		American Bicycle		30,000	Rubber Goods Manufacturing	50,000
American Car and Foundry		60,000	Standard Metal	5,200		
American Chiclé		9,000	Standard Sanitary Manufacturing	5,000		
American Felt		5,000	Union Bag and Paper	27,000		
American Grass Twine		15,000	United Fruit	20,000		
American Hide and Leather		35,000	United Shoe Machinery	25,000		
American Ice		60,000	United States Cast Iron Pipe and Foundry	30,000		
American Malting		30,000	United States Dyewood and Extract	10,000		
American Plumbing Supply and Lead		35,000	United States Flour Milling	25,000		
American Pneumatic Service		15,000	United States Glue	35,000		
American Radiator		10,000	United States Varnish	36,000		
American Railway Equipment		22,000	United States Worsted	36,000		
American School Furniture		10,000	United Zinc and Lead	6,000		
American Shipbuilding		0,000	1900	American Brass	10,000	
American Smelting and Refining		65,000		American Bridge	70,000	
American Steel Hoop		33,000		American Clay Manufacturing	10,000	
American Steel and Wire		90,000		American Rice Growers' Distributing	15,000	
American Switch		11,000		American Sheet Steel	52,000	
American Vinegar		11,000		Consolidated Ry. Electric Car Lighting and Equipment	16,000	
American Window Glass		17,000		Crucible Steel Company of America	50,000	
American Woolen		65,000		International Fire Engine	9,000	
American Writing Paper		25,000		National Roofing and Corrugating	5,000	
Asphalt Company of America		30,000		National Starch	9,500	
Borax Consolidated, Ltd.		6,750		Shelby Steel Tube	15,000	
Central Foundry		14,000		United Metals Selling	5,000	
Consolidated Rubber Tire		10,000		1901	Allis-Chalmers	50,000
Consolidated Street Car		18,000			Amalgamated Copper	155,000
Continental Cotton Oil		6,000			American Can	88,000
Diamond Match		15,000				
Distilling Company of America		85,000				
Federal Printing Ink		20,000				
Federal Sewer Pipe		25,000				
General Ariato		5,000				
General Chemical		25,000				
Great Lakes Towing		5,000				
International Car Wheel	15,000					
International Steam Pump	27,500					

^a From list compiled by Myron W. Watkins, *Industrial Combinations and Public Policy*, pp. 310-23.

INDUSTRIAL CONSOLIDATIONS

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INDUSTRIAL CONSOLIDATIONS, 1898-1902—Continued

Year	Company	Capitalization (in thousands)	Year	Company	Capitalization (in thousands)
1901	(cont.)		1902	American Barrel and Package..	20,000
	American Laundry Machinery			American Hominy.....	5,000
	Mfg.	16,000		American Steel Foundries.....	40,000
	American Locomotive Works...	50,000		Butterick.....	12,000
	American Smelting and Refining	100,000		Consolidated Naval Stores.....	13,000
	American Steel Castings	15,000		Corn Products.....	80,000
	American Stove.....	5,000		E. I. du Pont de Nemours.....	20,000
	Chicago Pneumatic Tool.....	5,000		Harbinson-Walker Refractories.	22,250
	Consolidated Railway Light and			International Harvester.....	120,000
	Refrigerating	22,000		International Mercantile Ma-	
	Consolidated Tobacco	30,000		rine.....	120,000
	Eastman Kodak.....	35,000		International Nickel.....	24,000
	International Salt.....	30,000		National Candy.....	9,000
	United States Cotton Duck Cor-			National Fireproofing.....	12,500
	poration.....	50,000		Railway Steel Spring.....	20,000
United States Steel Corporation	950,000	United States Gypsum.....	7,500		
		United States Shipbuilding....	45,000		

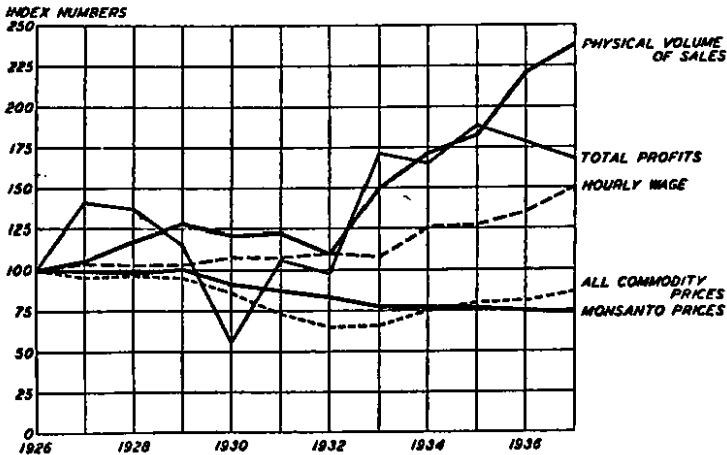
APPENDIX D

FOUR ILLUSTRATIVE CASES

In general, the analysis developed in this book lends itself to qualitative rather than quantitative treatment. However, it has seemed worth while to select four cases representing several concrete situations in which business concerns have made available the data showing lowered prices and increasing volume in graphic form.

CHEMICALS

On page 263 we have quoted the views of the president of the Monsanto Chemical Company as to their policy of lowering prices as far as costs permit as a means of expanding sales and enlarging the purchasing power of consumers. In the annual report of the company for 1937 (page 7), the results of this policy are presented graphically in a chart entitled, "Sales Volume, Price, and Wage Trends." This chart is reproduced below, redrawn to conform to our style of presentation. The index numbers on which it was based have kindly been supplied by



Year	Physical Volume of Sales	Monsanto Prices	All Commodity Prices	Total Profits ^a	Hourly Wage
1926.....	100.0	100.0	100.0	100.0	100.0
1927.....	105.6	99.5	95.4	141.4	103.6
1928.....	117.4	98.3	96.7	137.4	102.9
1929.....	127.3	100.6	95.3	115.6	103.2
1930.....	120.9	91.5	86.4	56.2	107.8
1931.....	122.5	87.5	73.0	106.0	107.4
1932.....	109.4	83.3	64.8	97.6	109.9
1933.....	149.4	77.3	65.9	171.4	108.0
1934.....	171.1	76.9	74.9	164.9	125.9
1935.....	181.9	76.3	80.0	188.1	126.9
1936.....	221.2	74.7	80.9	177.9	134.8
1937.....	237.9	73.7	86.4	168.4	150.9

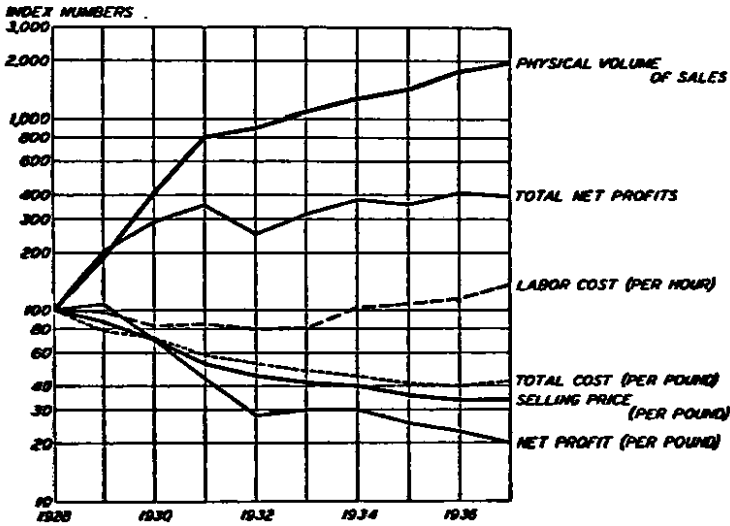
^a Ratio of gross income (net profit on company's operations plus other income) to total assets.

the company and are given in the accompanying table. One line is added to show total profits as reported in the annual earnings statements of the company.

A PACKAGING MATERIAL

Our second illustration also concerns a chemical company but relates to a single commodity (discussed on page 115) rather than to its whole line of products. While this company has patents covering certain relatively recent improvements in the manufacture of this commodity, the process is licensed by them to the manufacturers of other analogous products. They have no monopoly of the market, but compete with innumerable older products in the same general field and with a large number of cheaper alternatives or substitutes. In fact, it may be pointed out that the work done by this company in raising standards in the display and protection of merchandise has tended to enlarge the business even of competing producers and products. Likewise, they are developing new uses for their products in fields far removed from that of the packaging of goods.

One of the most interesting phases of this expansion has been in the wrapping of separate units of dry goods. Wrapping such goods in a transparent film not only



Year	Physical Volume of Sales	Net Average Selling Price Per Pound	Total Cost Per Pound	Net Profit Per Pound	Total Net Profits	Labor Cost Per Hour
1928.....	100	100	100	100	100	100
1929.....	189	88	78	107	202	98
1930.....	409	71	72	71	289	83
1931.....	809	53	58	44	354	85
1932.....	896	46	55	28	252	79
1933.....	1,072	42	48	30	321	80
1934.....	1,268	40	45	30	381	103
1935.....	1,408	36	41	26	360	108
1936.....	1,780	34	40	23	410	115
1937.....	1,959	34	42	20	394	136

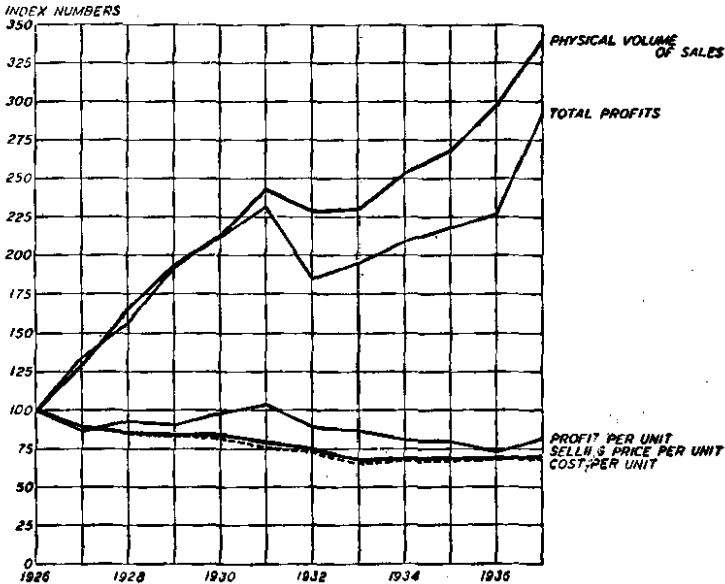
improves their appearance but avoids substantial loss from soiling. This waste is not serious in the higher class shops with glass-enclosed shelves and a clientele who

would be unlikely to soil the merchandise. Even if an occasional shirt or suit of pajamas has to be relaundersed or sold at a marked-down price, the loss is not severe on high-priced lines. But where the lowest priced goods are displayed on open counters and pawed over by many hands, the loss is both rapid and severe as a percentage of the value of the article. Hence there has been a quick response of sales in the lowest price market as the price of the commodity was cut in half during a five-year period.

The figures for cost, volume, price, and related matters as furnished by the company are presented in the table on the opposite page, together with a chart showing them graphically.

PRODUCT "X"

Third, we present below and on page 298 a chart and table covering one of the products which has been dis-



Year	Physical Volume of Sales	Selling Price Per Unit	Cost Per Unit	Profit Per Unit	Total Profits
1926.....	100.0	100.0	100.0	100.0	100.0
1927.....	129.3	89.2	89.6	86.1	133.6
1928.....	165.7	85.3	84.3	92.7	156.3
1929.....	193.5	83.8	82.9	90.3	191.8
1930.....	212.7	83.8	81.8	98.2	211.8
1931.....	242.9	78.8	75.5	103.6	231.5
1932.....	228.6	74.7	72.7	89.1	184.4
1933.....	230.3	67.8	65.2	86.7	194.8
1934.....	253.3	68.6	67.0	80.6	209.2
1935.....	268.4	68.6	67.1	79.4	218.2
1936.....	297.1	68.6	68.0	72.7	226.7
1937.....	339.2	70.0	68.5	81.2	292.1

cussed earlier in the book, but which must here remain anonymous. The figures as to unit cost, selling price, and volume of sales relate to several of the most representative brands manufactured by this company.

The index numbers of cost and selling price are to be considered in the light of three facts: first, over the period shown by the chart there have been numerous substantial improvements in the quality of the product; second, there have also been substantial increases in the rates of workers' wages; third, the company calls attention to the fact that the cost figures do not include federal and state taxes, which have shown numerous increases during these years.

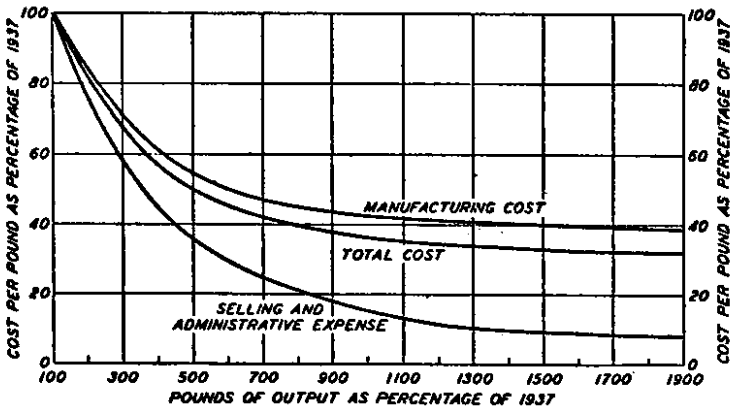
COOKING UTENSILS

Our fourth case differs considerably in form and circumstances from the other three. Whereas they present actual experience with a varied line of products over the past dozen or fifteen years, this case has to do with a single minor product and relates to the future. The company in considering price and production policy reviews the following facts.

Some years ago, in connection with its research work, this company discovered that it could use for kitchen

utensils a material which had not previously been so employed. This material presented distinct advantages in terms of appearance, cleanliness, and efficiency, but was very expensive as compared with conventional utensils. It was sold in hardware and department stores, with one of the simpler articles priced at about \$1.00. The new line was reasonably profitable to the company but did not develop sufficient volume of output at this level of prices to permit the economies of continuous machine runs. Over a period of years, the quality of the article was further perfected and the company decided to reduce prices drastically. The dollar article was cut to 45 cents. To this reduction, there was a satisfactory response in sales, enlarging them about two and a half times.

Recently, the company has been considering the possibility of another and still more drastic reduction to bring the price to a level comparable with that of lower-priced competitive materials. Varying trade answers were found as to probable expansion if the price of the specimen article were again cut in half. Some of these estimates were as high as a six-fold or a ten-fold increase. Turning then to their production department, the officials ascertained that with such an increase, it would be possible to



Pounds of Output	Manufacturing Cost	Selling and Administrative Expense	Total Cost
100.....	100	100	100
380.....	63	50	60
750.....	46	22	40
1,080.....	42	13	35
1,900.....	39	8	32

build up this line of production into a specialized department with continuous machine runs and other economies of mass production. Such operating economy, together with the pronounced fall in overhead, would in their judgment make it profitable on the reduced price basis.

The company has kindly furnished us with the chart and accompanying figures which their production and accounting departments developed as a basis of analyzing the proposed change in price policy.

APPENDIX E

FORTUNE LOOKS AT STEEL PRICES¹

. . . Lower prices have never been a part of steel ideology, which may seem odd considering that price is the only important consideration in most steel buying. But steel men have always been afraid of cut-throat competition. Furthermore, they have never agreed with that school of economic thought, traditionally exemplified by Henry Ford . . . which insists that the soundest way to get more sales is to reduce prices. Steel men have always held that steel is so small a part of the cost of the finished articles made from it that a cut in steel prices would stimulate demand very little. The steel used in a small automobile, for instance, costs only \$31.41, or 4.6 per cent of the total cost. A 25 per cent cut in steel prices would mean only a 1.15 per cent cut in automobile costs. The demand for steel, therefore, fluctuates with general business conditions and is little affected by prices. This is a perfectly good theory but it remains a theory. The steel industry has never tested it out on a large scale.

Instead, steel men have geared their industry to the philosophy of high prices and restricted production. Steel prices are set at a level high enough to yield a profit when plants are running at around 40 per cent of capacity. At 60 per cent of capacity profits become sizable, at 85 per cent they are fabulous. The "prince or pauper" nature of the steel business is largely due to this price policy. The industry apparently is quite satisfied with an operating rate of 60 per cent of capacity. A steel executive explained the industry's failure to raise prices last fall: "We weren't sure. If we could have seen our way clear

¹ Excerpt from "U. S. Steel II: Prices," *Fortune*, April 1936, pp. 130-32, 134, 136.

to higher price levels at 60 per cent, we would have jumped prices in a minute." . . .

A rolling mill is an inflexible contraption. Once it is set to turn out a product of one size, it costs a great deal of time and money to adjust the rolls for a new order with different dimensions. In the old days steel mills used to hold up small orders until they accumulated into a "rolling" big enough to be profitable. But the modern steel customer is a hand-to-mouth buyer and he can't wait on the steel mill's convenience. Hence the mills are confronted with a Hobson's choice: they can either roll small orders as they come in or they can pile up large and costly inventories of stock sizes. "Under such conditions," recently complained Myron Taylor, "manufacturing is expensive."

It seems strange that, in an industry where the bigger an order is, the cheaper it can be rolled, it has never been customary to give *specified* discounts for quantity orders. Cold-rolled bars are the only type of steel sold this way. Last fall quantity discounts were experimentally extended to hot-rolled bars as well. If this works out, such discounts will be applied to other products, probably first to sheet and strip steel. The great difficulty is that what would be a big order to a small mill might be a small order to Gary or Homestead. Discounts could be graduated according to the size of the mill of course, but this would penalize the big mills. And it would break into bits the united front on price that has been built up under the basing-point system.

But while quantity discounts can't be given officially, in practice they are given, and given frequently. Economic pressure for them is too strong to be curbed by any artificial price system. . . . There are, in effect, two price systems in steel. One is open, public, unyielding. This is the bleak prospect that the average consumer faces. But the big consumers buy their steel under another system, an unofficial and undercover business of concessions from

the published basing-point prices. Under this system the base price is merely a mark to be shot at, and the only question is how much it will be shaded. These more fortunate buyers are those who possess some form of bargaining power: reciprocal buying, strong financial connections, personal influence, and, most important of all, the ability to place big orders. How much steel is sold at shaded prices is a question—since secrecy is the essence of the whole business. Undoubtedly the practice is widespread.

The whole picture is one of ambiguity and perplexity. The words of President Grace of Bethlehem come to mind: "The selling of steel in 1932 and for the years preceding had all the confusion of the selling of rugs in a Turkish street fair." The published base prices stay at the same levels for long periods of time. But every day individual bargains are struck that nullify these prices. Two buyers may buy the same amount of the same kind of steel from the same mill at widely different prices, and no one except the seller will be any the wiser. (This is an ironic commentary, by the way, on the industry's claim that under the basing-point system every buyer of steel knows just what his competitors are paying for their steel.) This kind of undercover price cutting leaves the industry on the horns of a dilemma. Only by violating its published price system can the industry allow for the natural play of economic forces. And yet such furtive price competition leads to all kinds of discrimination and confusion.

The history of steel prices since 1929 is instructive. It can be divided into three periods: pre-NRA, NRA, post-NRA. In the pre-NRA period two schools of thought were struggling within the steel industry. The orthodox school, which did all the talking, was led by the Corporation. It believed that maintaining and even increasing prices was the way to meet the drastically falling demand. At the end of 1930 it raised prices \$1 a ton in the

face of slackening demand. The financial writers forecast a speedy return of prosperity on this news. But things got worse and worse. The other school, led by . . . [the] heretical "independents," made no announcements or speeches but went out and quietly cut prices. They cut so deep that in the spring of 1931 President Farrell of the Steel Corporation was moved to give before the American Iron and Steel Institute one of the most remarkable speeches that body ever heard. For half an hour he violently denounced the price cutting that had been going on in the industry. Excerpts: "We are no longer sellers of steel; the large industries tell us what they will pay. Our commodities are sold at too low a price . . . this constant pressure on the part of buyers to ruin our business . . . this diabolical business—that is the word—the most diabolical situation that ever was perpetrated . . . it is not honest for us to go on and sell our goods below the cost of production. . . ."

President Farrell's strong language had some effect, but it was the New Deal that came to the rescue of the Corporation and its orthodox followers. Washington brought considerable pressure to get the steel industry, as a major employer of labor, to join up early under NRA. By that time President Farrell had given way to Myron Taylor, no high-price enthusiast. But the Corporation's policy could hardly be changed overnight, and besides, Mr. Taylor needed a "breathing spell" to get his leviathan into better competitive shape. He was quick to see the opportunity offered by NRA and its price-maintenance policy. Steel was one of the first major industries to rush through a code. Under the Steel Code for the first time the industry was able to enforce legally—or at least quasi-legally—a far-reaching ban on price cutting. Under the code, any producer who wanted to sell his steel below the published base price had to report his new price at once to the code authorities, who immediately published it. Violations carried a penalty of

\$10 a ton. To rob price cutting of its remaining charms, the code furthermore provided that a cut could not be put into effect until ten days after it was publicly announced and that any producer who cut his price in consideration of a customer's promise to give him a specific order after the ten-day period elapsed was also guilty of a code violation, at \$10 a ton. "With the Steel Code came a unity such as the industry never before knew," mused the editor of *Daily Metal Trade*. And Charles Schwab declared that for the first time in his half century of experience he had seen a year "when the business of the industry could be conducted on a common-sense basis."

By the time the Schechter brothers won their famous victory, the steel industry had lost its enthusiasm for the code. The ranks were closed up, the orthodox school had apparently triumphed over the price-cutting heretics, and the industry had been successfully saved from destruction. . . .

It is more than a coincidence that the revolutionary forces among steel consumers should be led by the nation's booming, successful, low-price, big-volume industry. And that the railroads, disciples of the same reactionary high-price philosophy as the steel industry, should be consistent (if somewhat reluctant at times) supporters of steel's price system. The story of rail prices . . . is the story of the most dramatic example of price rigidity in all steel history. The automobile makers, on the other hand, have long been impatient with the basing-point and open price system in steel. They have consistently and successfully pressed for lower prices. They have diverted orders from big steel companies to smaller, and presumably more amenable, producers. They have threatened to build their own steel plants. Several years ago General Motors threw the industry into a panic by dickering (unsuccessfully) for Corrigan, McKinney Steel Co. In 1933 pressure from automobile

makers forced the industry to adopt its famous Commercial Resolution No. 21, whereby steel mills shipping into Detroit (no basing point then or today) absorbed a modest amount of the freight. This cut did not apply to Toledo consumers, who have been vigorously protesting that steel moves from Pittsburgh through Toledo to be sold in Detroit at a delivered price 70 cents a ton less than the Toledo price. There are, unfortunately, no big automobile factories in Toledo.

The leader of the automobile makers in their campaign against steel prices has been Henry Ford. His head-on collision with steel was as dramatically significant as his clash with the big city bankers. It was low prices *vs.* high prices, progressive industrialism *vs.* financial conservatism. Unable to get the price concessions he wanted and anxious to have a yardstick for measuring steel prices, Ford has built himself at Dearborn a steel plant that ranks eleventh among the country's producers. Latest addition was a \$10,000,000 continuous strip rolling mill in 1935. Though Ford has his own iron mines at Iron Mountain, he buys a good deal of his ore in the market. Rigidity in steel prices is nothing compared to the rigidity in ore prices. Unabashed, Ford several years ago made a valiant attempt to break ore prices. But Mesabi ore, Ford or no Ford, has been sold at precisely \$4.50 a ton from 1929 right up to the time of writing.

Last year [1935] no other types of steel advanced so triumphantly as sheet and strip on the production front, and no other types of steel retreated so disastrously on the price front. These facts take on meaning when one considers that sheet and strip are the great automobile steels. Toward the end of last year a \$3-a-ton concession was made in sheet and strip, the first major break in steel prices in many months. It was at first limited to automobile orders, but the infection rapidly spread to other users of sheet and strip, threatens currently to prove contagious in all types of steel. This extraordinary

pressure against sheet prices is not due only to the strong bargaining position of the automobile makers. A major technological change has exerted at least as powerful a leverage.

Perhaps the most important technological advance in steel during the 20th century is the four-high continuous strip rolling mill that Naugle and Townsend worked out and sold to American Rolling Mill Co., some ten years ago. On old-style mills the sheets are rolled separately, passing back and forth between the rolls, a laborious process that requires constant reheating and much skilled labor. The continuous mill is straight-line production: an unbroken ribbon of steel passes through one stand of rolls after another, getting squeezed out thinner and longer on each successive set of rolls. The whole series of rolls must be perfectly synchronized. If a roll goes too fast it pulls the steel out too thin and eventually snaps it: if it goes too slow the ribbon of steel bunches and buckles.

A continuous strip mill is an expensive toy. It costs from \$8,000,000 to \$12,000,000 to build, rolls some 600,000 tons of steel a year, reduces costs \$6 to \$8 a ton. Labor is practically eliminated, being cut down 97 per cent. With a working force of 125 men a continuous mill can average 2,000 tons a day. To produce this on old-style sheet mills, it is estimated, would require a force of 4,500 men. Observers see "revolutionary effects" on steel labor.

But the most important change worked by the continuous mill is its effect on the industry's price structure. Over the past ten years the average production of sheet, strip, and other flat-rolled steel was 10,400,000 tons a year. Without taking into account the great numbers of old-style sheet mills still in existence, there are already enough continuous mills *alone* to produce, at capacity, 8,450,000 tons a year (of which 1,575,000 is still under construction). And the end of building new ones is not yet [1936] in sight. Furthermore, the con-

tinuous mill must be run at close to capacity to produce its great economies. There is, therefore, and there will be increasingly in the future, tremendous pressure to reduce sheet-steel prices. True to their traditional expansionist policy, the steel masters have greatly overbuilt continuous-strip capacity. But this time the effects promise to be so violent that it is difficult to see how the present steel price structure, so patiently built up and so stubbornly defended for so many years, can escape being seriously damaged. Disaster to its price system, of course, may well not mean disaster to the steel industry. On the contrary. It is quite possible, and according to many observers quite probable, that lower prices will mean enormously wider markets—extensive highways laid on steel foundations are one possibility, for example—and that this will keep the mills running at so high a rate of capacity as to more than make up for lower prices. . . .

There is a serious need for an objective study by the steel industry of its price policies. The problem is admittedly a complex one. But steel men seem to have made little effort to meet it. Some of them oppose the NRA plan because, in the words of one executive, "When you add new basing points, you add new complications." Some of them feel that since the industry has grown up under its present price system, it would be unwise to tinker with so well-established an institution. Change is admittedly uncomfortable and "complications" are to be avoided by all sensible men, but the problems remain for all that. They must be faced and solved if the industry is to get on a solid foundation again. . . .

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