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ties, but the pressure, as judged by its consequences to date, was not as strong as between 1914 and 1919, or as pervasive. The more prompt and effective application of price controls in the markets for raw minerals and for durable manufactured goods was, of course, an important factor in this record. The recent movement has been selective inflation to a far greater degree than was the rise of 1914-19. In the second place, the initial impact of the latest rise was felt in commodity and labor markets and, to date, by far the greatest rise has been in these markets. There has been no such upward push of equity values as occurred in the 'twenties, nor was there a rise comparable to that of 1914-19.[27] Within the last year and a half, however, these laggard markets have been stimulated. Common stocks rose 53 per cent between April 1942 and June 1943. Average values per acre of farm land rose only 1 per cent from 1939 to 1941 (March 1 values). From March 1, 1941 to March 1, 1942 there was an advance of 7 per cent. During the next twelve months, to March 1, 1943, the largest annual increase since 1920 occurred—9 per cent.[28]

The story of the latest economic expansion is, of course, unfinished. How effective commodity price controls will be we do not know. Whether the inflationary forces that are still clearly present and powerful will be kept in check by rigorous taxation and more extensive investment in government bonds and, if they are not, where and how they will make themselves felt as the expansion runs its course are matters that are yet to be determined.

III Price Relations in 1943

The price shifts discussed in the preceding section have created a system of price relations differing materially from those of 1939 and those of 1914. The unit values of some goods and services have risen to new high levels; others have lagged, and have lost in relative worth. These shifts affect the economic status of producing and consuming groups. The relations between physical outgo and physical income are altered. The relative attractiveness of occupations is modified. Stimulus to productive activity is enhanced or retarded. The relations now existing, after the stresses and upheavals of three and

[27] Perhaps equally significant are the contrasts among the records of volume of trading in the three periods. As compared with increases in number of shares sold of some 300 per cent in 1914-19, and 500 per cent in 1921-29, there was an advance of only 57 per cent between 1939 and March 1943.

[28] Estimates of the Bureau of Agricultural Economics.

one-half years of war, are of special interest. On April 8, 1943 President Roosevelt issued an Executive Order stabilizing prices and wages in terms more definite than those employed in earlier orders. Continuing pressures still make for change, but the present price structure is supported in a quite exceptional way by strong arms of the central government. If stabilization efforts are successful this system in its main features will define economic relations for the period of the emergency.

In summary, now, we attempt to define certain of these relations. The summary will rest, in the main, on materials presented in preceding pages, and on Appendix tables giving a detailed picture of the price structure existing in 1943. In noting shifts that have brought about the relations of 1943 it seems well to use two standards. Short-term changes can be reviewed against a 1938-39 base, long-term shifts against a 1912-14 base. Most of the statements that follow relate to the situation as of March 1943 the month to which the President's 'hold-the-line' order applied. Certain designated measurements are for 1942.

The Status of Farmers

CHANGES SINCE 1939

In the spring of 1943 farm prices were in a position of strong advantage. No other major producing group had gained so much since 1939 in the average unit value of its products or services. The increase in selling prices of farm products was materially greater than in the prices of goods bought by farmers; the improvement (46 per cent) in the farmer's terms of exchange was substantial.

	Percentage change Sept. 1938-Aug. 1939 to:	
	March 1943	*June 1943*
Farm prices	+98	+107
Prices paid by farmers	+36	+39
Average unit purchasing power of farm products	+46	+49

The advance in the total outgo (i.e., physical production) and income of farmers since 1939 is equally impressive. In 1942 farmers

	Percentage change 1939-1942
Physical output of farm products	+20
Average unit purchasing power of farm products[1]	+36
Aggregate purchasing power of farmers in terms of goods and services[2]	+63

[1] Purchasing power is measured in terms of goods bought by farmers for production and family maintenance.

[2] This entry measures the change in the aggregate quantity of goods (used for production and family maintenance) that farmers could buy with the money received from the sale of all farm products. Production and purchasing power figures relate to national aggregates. (Aggregate purchasing power, it should be noted, is not identical with net farm income.)

contributed 20 per cent more to total national production than in 1939. The volume of goods obtainable in exchange—the potential physical income or physical 'rewards' of farmers—increased 63 per cent.[29] The great advance of 36 per cent in unit terms of exchange from the calendar year 1939 to the calendar year 1942 accounts for the much more rapid advance in physical income.

CHANGES SINCE 1914

With reference to the situation prevailing prior to the first World War the price position of the farmer in 1943 is also favorable, but

	Percentage change 1912-14 to:	
	March 1943	*June 1943*
Farm prices	+81	+89
Prices paid by farmers	+62	+66
Average unit purchasing power of farm products	+12	+14

the margin of advantage is less than that opened up between 1939 and 1943. The gain in the unit purchasing power of farm products was 12 per cent between 1912-14 and March 1943.[30] The marked improvement in the farmer's terms of exchange since 1939 has been, in the main, a corrective of relatively unfavorable terms existing in 1939.[31]

During this longer period the increase in the aggregate purchasing power of farmers (i.e., in aggregate real income) paralleled very closely the increase in total farm output. There was a slight net

	Percentage change 1912-14 to 1942
Physical output of farm products	+51
Average unit purchasing power of farm products	+3
Aggregate purchasing power of farmers in terms of goods and services	+56

increase in unit purchasing power and the gain in estimated real income exceeded slightly the gain in estimated output. There was an

[29] This figure relates to the physical equivalent of aggregate cash income, at prevailing prices paid by farmers. It does not follow that all cash income was spent on physical goods.

[30] On the usual parity base, 1909-14, the standings are as follows:

	1909-14	*March 1943*	*June 1943*
Farm prices	100	182	190
Prices paid by farmers	100	163	167
Average unit purchasing power of farm products	100	112	114

[31] Price and purchasing power changes since 1914 were not, of course, uniform among farm products. Animal products gained more, on the average, than farm crops. No major group of products was below the 1909-14 parity standard in March 1943, but a few important crops were still short of parity price relations. This was true of wheat (about 14 per cent below parity), corn and oats (9 per cent below), and hay (36 per cent below).

increase of some 50 per cent in both physical output and real income.[32] In a social accounting the increase in the aggregate contributions of farmers to the national real product was about equal to the increase in the aggregate real rewards of farmers.[33]

On a per capita basis the gains of farmers are greater, for farm population declined between 1912-14 and 1942.

PER CAPITA REAL INCOME	*Percentage change 1912-14 to 1942*
Gross income from operations[1]	+71
Gross income from operations plus government payments[1]	+78
Net farm income (including government payments)[2]	+89

[1] Deflated by index of goods farmers buy for living and production.

[2] Deflated by index of goods bought for family maintenance.

The Status of Other Primary Producers

CHANGES SINCE 1939

Among primary products of nonfarm origin only forest products came at all close to the record of price gains scored by farm products since 1939. Terms of exchange (i.e., worth in terms of all commodities at wholesale) improved, for an average unit of raw forest products, some 12 per cent. They declined for metals (about 18 per cent) and for nonmetallic minerals (about 15 per cent).[34] The sharp shifts

[32] The estimate of real farm income cited in the text is derived from farm production and the average unit worth of farm products. Farm gross income expressed in 'real' terms (i.e., money income deflated by an index of prices paid by farmers) increased 54 per cent from 1912-14 to 1942. This gain would be 60 per cent if government payments to farmers were added to gross income. The total would be reduced somewhat, as a measure of current physical income, if account were taken of increases in tax payments and in war bond purchases. This statement applies, of course, to all economic groups, though in varying degree.

[33] I am speaking here of the terminal years, 1914 and 1942. During most of the intervening years the 'rewards' of farmers, relative to 1914, were well below aggregate contributions.

[34] Following are the relevant wholesale price indexes:

	Sept. 1938-Aug. 1939	*March 1943*	*June 1943*
Raw forest products	100	154	156
Raw metals	100	112	112
Raw nonmetallic minerals	100	116	117
Anthracite coal	100	116	116
Bituminous coal	100	118	119
Crude petroleum	100	116	118
All commodities, wholesale	100	137	138

In default of quotations on prices actually paid by these primary producers unit terms of exchange are here estimated with reference to the index of prices of all commodities at wholesale. The index cited, that of the National Bureau of Economic

in supply and demand relations between 1939 and 1943 improved the relative status of organic products of forest and farm; these same shifts, plus pressures of relatively prompt price control, brought losses in average relative worth, per unit, to metal products and to other minerals.

Annual changes in aggregate output and in estimated aggregate real income are set forth below for certain nonfarm producers.[35] For

	Percentage change 1939-1942
Metals	
Physical output	+32
Average unit purchasing power, in wholesale markets	−17
Aggregate purchasing power, in wholesale markets	+10
Anthracite coal	
Physical output	+16
Average unit purchasing power, in wholesale markets	−13
Aggregate purchasing power, in wholesale markets	+1
Bituminous coal	
Physical output	+46
Average unit purchasing power, in wholesale markets	−13
Aggregate purchasing power, in wholesale markets	+27
Crude petroleum	
Physical output	+9
Average unit purchasing power, in wholesale markets	−11
Aggregate purchasing power, in wholesale markets	−3

these producers the gains in estimated real income between 1939 and 1942 fell somewhat below the gains in physical output. This results, of course, from the adverse movements of terms of exchange in wholesale markets.[36]

CHANGES SINCE 1914

Prices prevailing in 1943 reflected a considerable long-term improvement in the relative status of raw forest products (unit purchasing power in wholesale markets up some 48 per cent from 1912-14) and a smaller gain (about 12 per cent) for nonmetallic minerals. For raw metals the decline in unit purchasing power amounted to about 18

Research, shows a somewhat greater advance (37 per cent) from Sept. 1938-Aug. 1939 to March 1943 than does the wholesale price index of the Bureau of Labor Statistics (35 per cent).

[35] The conversion of money values to 'real' terms in deriving the measures of change in aggregate purchasing power is not, for these producers, a very accurate process. The index of wholesale prices is a rough instrument for this purpose. But it is worth while to indicate, even roughly, the relation of changes in unit prices to aggregate production and to aggregate physical income.

[36] Each measure given above relates to a composite group of 'producers'—owners, managers, salaried workers, and wage earners. It does not define changes in the profitability of operations.

per cent.[37] The gain for nonmetallic minerals is due, primarily, to an increase in the price of bituminous coal. In long-term perspective, therefore, prevailing terms of exchange are favorable for forest products and for bituminous coal, less favorable for raw metals, crude petroleum, and anthracite coal.

Terms of exchange based on unit price relations indicate shifts in what the economy at large must give for specified products. They do not of themselves reveal changes in profit margins or in relative well-being. Cost shifts may lie behind them, and great changes may have occurred in the volume of operations. On the latter point we have some information. Relative changes in aggregate output and roughly estimated changes in aggregate purchasing power, in real terms, are shown in the accompanying table. The measures relate to annual averages and annual aggregates.

	Percentage change 1912-14 to 1942
Metals	
Physical output	+62
Average unit purchasing power, in wholesale markets	−15
Aggregate purchasing power, in wholesale markets	+38
Anthracite coal	
Physical output	−33
Average unit purchasing power, in wholesale markets	−7
Aggregate purchasing power, in wholesale markets	−38
Bituminous coal	
Physical output	+33
Average unit purchasing power, in wholesale markets	+91
Aggregate purchasing power, in wholesale markets	+154
Crude petroleum	
Physical output	+435
Average unit purchasing power, in wholesale markets	−5
Aggregate purchasing power, in wholesale markets	+408

In the account books of the economy as a whole the gain of 62 per cent in the physical contribution of producers of raw metals was paralleled by an advance of some 38 per cent in their aggregate purchasing power in wholesale markets.[38] In the crude petroleum group

[37] Indexes of wholesale prices for these products, with the corresponding index for all commodities, at wholesale, follow:

	1912-14	*March 1943*	*June 1943*
Raw forest products	100	242	245
Raw metals	100	133	133
Raw nonmetallic minerals	100	182	183
Anthracite coal	100	152	152
Bituminous coal	100	313	316
Crude petroleum	100	148	151
All commodities, at wholesale	100	163	164

The all-commodities index is that of the National Bureau of Economic Research.

the physical gains in both outgo and income were very much greater, amounting to more than 400 per cent. Anthracite and bituminous coal were marked by sharply divergent tendencies; anthracite declined in the volume and worth of its output, bituminous gained in both respects.

In general, unit terms of exchange in 1943 were less advantageous for raw minerals than in 1914 but aggregate purchasing power was distinctly higher. In this longer perspective the current position of producers of raw minerals is more favorable than it is when viewed against a 1939 standard. For these commodities, typically, gains in physical output have made possible substantial gains in aggregate real income, although unit terms of exchange have in general moved against mineral products.

The Status of Manufacturing Wage Earners

CHANGES SINCE 1939

In manufacturing occupations compensated on a time basis the unit of service sold by a wage earner is one hour of labor. Changes between two dates in the average value of this unit may reflect the interaction of several factors: changes in the standard rate of pay, changes in overtime rates, changes in the proportion of total working time that consists of overtime work. If the average relates to several occupations or industries in which hourly wage rates differ, a change in it may reflect shifts in the distribution of the total working force among these components, with no change in the rates prevailing in individual occupations or industries.[89] Separation of these factors is desirable, but impossible because of the nature of the currently available records of employment and wages. In the compilations of the United States Bureau of Labor Statistics average hourly earnings are derived from aggregate payrolls and aggregate man-hours worked, and represent the resultant of changes in all the factors influencing wage rates. The following summary statements relate, in the main, to average hourly earnings.

In March 1943 the value of an hour of manufacturing labor, in current dollars, was some 48 per cent higher than in the months immediately preceding the outbreak of the war in Europe. In real

[88] I would repeat the cautions previously voiced concerning the limitations of this measure. It is valid to the degree that the index of wholesale prices measures changes in the prices of goods and services bought by producers of raw metals.

[89] Appendix Table 7, see footnote 1.

hourly earnings (i.e., purchasing power in terms of goods and services bought by wage earners) the average gain for all workers in manufacturing industries amounted to about 19 per cent.[40] The gain in real hourly earnings was greater among durable goods industries.[41] There was considerable variation among individual industries. Of 19 industries 17 recorded, during this period, advances in real hourly earnings ranging from 2 per cent to 19 per cent. Real hourly earnings declined in 2 industries, products of petroleum and coal (by 2 per cent) and printing and publishing (by 8 per cent). With few exceptions, rates of pay for the services of manufacturing wage earners kept ahead or well abreast of the rising tide of values between 1939 and 1943.[42]

The figures cited relate to the money value and the purchasing power of one hour of manufacturing labor. We turn to the record of changes in aggregates, that is, in total hours worked and in total

	Percentage change	
MANUFACTURING INDUSTRIES	*1939 to 1942*	*Jan.-Aug. 1939 to March 1943*
Employment in terms of total man-hours worked[1]	+73 to +80	+108 to +118
Average purchasing power of one man-hour of labor[2]	+15	+19
Aggregate purchasing power of labor[1]	+99 to +107	+148 to +160

[1] Because independent estimates of employment and aggregrate purchasing power are not completely consistent, measures of percentage increase for these two quantities are given as ranges. The actual gains probably fall within the limits indicated.

The measure of aggregate purchasing power of manufacturing labor is an estimate of the purchasing power of total payrolls in terms of the goods and services included in the Bureau of Labor Statistics index of living costs.

[2] The purchasing power of average hourly earnings in terms of the goods and services included in the index of living costs.

[40] The index numbers here employed are those of the United States Bureau of Labor Statistics.

	Jan.-Aug. 1939	*March 1943*	*June 1943*
Average hourly earnings, mfg. labor	100	148	152
Cost of living	100	124	126
Average real hourly earnings	100	119	121

The base is January-August 1939 because this series of index numbers, as recently revised by the Bureau of Labor Statistics, has been carried back only to January 1939.

[41] Part of the advance in the general average represents the movement of workers to the durable goods industries, in which rates are somewhat higher than in industries producing nondurable goods. An advance of this sort can occur without any change in the wage rates prevailing in the industries in question.

[42] For comparison with other prices and rates, the average hourly rate is here used as the best available measure of the worth of a unit of labor. We have noted that average weekly earnings rose at a rate greater than that for hourly earnings, for the work week has lengthened since 1939. Per capita weekly earnings, in dollars, were 85 per cent higher in March 1943 than in the base period: Jan.-Aug. 1939. In real terms (purchasing power for goods and services) they were 49 per cent higher. (Per capita earn-

income. The physical contribution of manufacturing labor to the national effort, measured by man-hours worked, more than doubled between the first eight months in 1939 and March 1943. With the purchasing power of each man-hour of labor up 19 per cent, this meant a total gain of about 150 per cent in the aggregate purchasing power of this group of workers.

When 1942 is compared with 1939 the increases are all smaller, because the average rate of production in 1942 was well below the rate prevailing in March 1943. Aggregate purchasing power was about doubled from 1939 to 1942. This increase for manufacturing wage earners takes on significance when compared with the corresponding gain of 63 per cent for farmers. For both groups aggregate real income increased greatly during the three years 1939-42.[43] The percentage gain for manufacturing workers was about two-thirds again as great as for farmers. The aggregrate real income of manufacturing workers was shared, of course, among a much larger number of persons in 1942 than in 1939. Real income per capita increased about 36 per cent, on the average, for members of this group between 1939 and 1942. (The per capita increase between Jan.-Aug. 1939 and March 1943 was 49 per cent.) The per capita gain for farm workers, family workers and hired workers combined, from 1939 to 1942 was about 68 per cent.

CHANGES SINCE 1914

In seeking to compare wage rates in 1943 and 1914 we do not have figures as detailed or as accurate as those available for the study of recent changes. The longer comparison must run in more general terms and rest on somewhat less satisfactory evidence. But the broad movements of this period may be followed.

In 1939 the earnings of labor were relatively high by earlier standards. The advance from 1939 to 1943 thus started from a relatively high level. The standing of wage earners in 1943 reflects the cumulation of sharp war-time advances and the preceding slower gains won during a quarter of a century. A three hundred per cent increase in dollar earnings, per hour, was in part offset by an advance in living costs. Correcting for this, we find that real hourly earnings in the

ings are here derived by dividing weekly payrolls by numbers employed. The figure thus derived is somewhat greater than the increase shown by the index of average weekly earnings published by the Bureau of Labor Statistics. This index shows an increase of 78 per cent from the first eight months in 1939 to March 1943.)

[43] Of course the increased cash income did not all go into physical goods and services for either group.

spring of 1943 were 136 per cent higher than in 1914. This final figure may understate or overstate the actual gain, but the movement

	Percentage change 1912-14 to:	
	March 1943	*June 1943*
Average hourly earnings, mfg. wage earners*	+311	+322
Cost of living	+74	+77
Average real hourly earnings	+136	+138

*Average hourly earnings in manufacturing industries were approximately 22.7 cents during 1912-14, almost one dollar (93.4 cents) in March 1943. These figures are based on compilations of P. H. Douglas and the Bureau of Labor Statistics. Records of the National Industrial Conference Board show average earnings in a selected group of manufacturing industries to be 24.7 cents in July 1914 and 98.7 cents in March 1943.

for the period as a whole is of the general magnitude indicated. The purchasing power of an hour of manufacturing labor, in terms of the goods and services that enter into the average family budget, was more than twice that of 1914.[44]

The Status of Nonmanufacturing Wage Earners

CHANGES SINCE 1939

The gains of wage earners in nonmanufacturing industries between 1939 and 1943 lagged behind those of manufacturing workers. Table 15 shows the standing of workers in 15 industries in the spring of 1943. In 9 industries real hourly earnings increased. Mining (except anthracite) and building construction led the advance, but all were behind the average for manufacturing industries. Anthracite coal mining, retail trade, and three groups of public utilities were at the bottom of the list. It is somewhat difficult to interpret these results as they stand, because each average hourly figure is the resultant of changes in at least three factors—the standard rate of pay, the length of the work week, and rate of pay for overtime. Part of the reason for the lag of the public utilities, and for the general lag of nonmanufacturing industries behind manufacturing industries, is found in differing changes in the length of the working week since 1939.[45]

[44] The measurement of changes in living costs over 30 years is necessarily inexact. Because the pattern of family consumption changes materially, the index relates to different composites of goods and services for the initial and terminal years. It should not be interpreted, therefore, as a measure of price changes alone. This is one reason for the reservation implied in the statement that the final figure may understate or overstate the actual gain.

TABLE 15

Nonmanufacturing Industries
Changes in Average Hourly Earnings
September 1938-August 1939 to March 1943

	INDEX OF DOLLAR EARNINGS			INDEX OF REAL EARNINGS		
	Sept. 1938-Aug. 1939	*March 1943*	*June 1943*	*Sept. 1938-Aug. 1939*	*March 1943*	*June 1943*
Mining						
Anthracite coal	100	115	113	100	93	90
Bituminous coal	100	127	127	100	103	102
Metalliferous mining	100	138	143	100	112	114
Quarrying & nonmetallic mining	100	140	142	100	114	114
Petroleum producing	100	124	127	100	101	102
Public Utilities						
Telephone & telegraph	100	106	108	100	86	86
Electric light & power	100	118	120	100	96	96
Street railways & busses	100	120	124	100	98	99
Trade						
Wholesale	100	128	130	100	104	104
Retail	100	121	126	100	98	101
Services						
Hotels, year-round	100	135	141	100	110	113
Laundries	100	126	131	100	102	105
Dyeing & cleaning	100	127	134	100	103	107
Building construction	100	134	133	100	109	106

Data in this table are in process of revision by the Bureau of Labor Statistics.

CHANGES SINCE 1914

The record is less complete for the stretch of years back to 1914, but the changes we can trace are worthy of note (Table 16). In March

[45] The average length of the work week in August 1939 and in March 1943 in each of these industries is shown below:

	AVERAGE HOURS WORKED PER WEEK	
	*Aug. 1939**	*March 1943*
Mining		
Anthracite coal	24.2	41.3
Bituminous coal	27.4	38.6
Metalliferous mining	39.5	43.7
Quarrying & nonmetallic mining	40.5	43.8
Petroleum producing	38.8	40.8
Public Utilities		
Telephone & telegraph	39.1	41.1
Electric light & power	40.0	40.8
Street railways & busses	46.0	49.4
Trade		
Wholesale	41.9	41.7
Retail	43.1	41.1
Services		
Hotels, year-round	47.1	44.7
Laundries	42.9	43.8
Dyeing & cleaning	41.6	43.5

* The data in this column are in process of revision by the Bureau of Labor Statistics.

These changes are to be contrasted with an increase in the length of the average work week in manufacturing industries from 38.1 hours in August 1939 to 44.7 hours in March 1943.

TABLE 16

Selected Nonmanufacturing Industries
Changes in Average Hourly Earnings, 1914-1943

	CONSTRUCTION WAGE RATES		MINING AND EXTRACTIVE INDUSTRIES			
	Common labor	Skilled labor	Anthracite	Bituminous	Metal mining	Quarrying & nonmetallic mining
	A AVERAGE HOURLY EARNINGS IN DOLLARS					
1914	.177	.570	.264	.313	.251	.320
March 1943	.842	1.610	1.060	1.119	.949	.766
June 1943	.863	1.610	1.045	1.124	.983	.778
	B AVERAGE HOURLY EARNINGS AS RELATIVES ON 1914 BASE					
1914	100	100	100	100	100	100
March 1943	476	282	402	358	378	239
June 1943	488	282	396	359	392	243
	C AVERAGE REAL HOURLY EARNINGS					
1914	100	100	100	100	100	100
March 1943	278	165	235	209	221	140
June 1943	280	162	228	206	225	140

Sources: Construction wage rates are from the *Engineering-News Record.*

Hourly earnings in mining and extractive industries are from the Bureau of Labor Statistics, with comparable 1914 figures computed by Leo Wolman from wage data of Paul H. Douglas, Bureau of Labor Statistics, and Bureau of Mines.

Real hourly earnings are measured in terms of the cost of living of industrial workers.

1943 hourly earnings for these groups ranged from $.77 in quarrying and nonmetallic mining to $1.61 for skilled construction workers. Bituminous miners stood second, with an average wage of $1.12 an hour, anthracite miners third, with $1.06. These three groups topped manufacturing industries, in which the average was $.93.

For four of the six groups real hourly earnings were more than doubled between 1914 and 1943. The greatest relative gain was scored by the group with the lowest earnings in 1914, common labor in the construction industries. The smallest increase, both absolutely and relatively, was in quarrying and nonmetallic mining, which gained about one-third in the real wages received for an hour of labor.

For an over-all picture of the status of wage earners and salaried workers in the economy we turn to national income totals. In this we must content ourselves with a composite view, for the two forms of compensation are lumped in available records. The accompanying percentages show the portion of national income going to wages and salaries.[46] The percentage for 1942 is derived from an estimated

	PER CENT
1912-14	52.6
1939	62.5
1942	67.0

[46] The figure for 1912-14 is derived from estimates of W. I. King as adjusted by Simon Kuznets to improve comparability with estimates for later years. The other entries are

national income of $119,791 million, of which $80,293 million was paid out as wages and salaries. This component had in 29 years increased from slightly over half to two-thirds of the national income —an economic movement of deep significance.

The Status of Manufacturing Industries

CHANGES SINCE 1939

In reviewing changes in the average unit prices of raw materials and in the average unit values of the services of wage earners we found diversity of fortune but, in both, average unit values in 1943 stood well above those of 1939. The terms of exchange had shifted, to the general advantage of primary producers and wage earners. We turn now to manufactured goods, which embody primary materials, used-up capital, and the labor of manufacturing wage earners. Relevant measures bearing on the terms of exchange affecting manufacturing operations in 1943 are given in Table 17.

TABLE 17

Price Movements of Raw and Manufactured Goods, 1939-1943

	Sept. 1938-Aug. 1939	*March 1943*	*June 1943*
A Raw materials	100	157	160
Producer goods, raw	100	153	152
Manufactured goods	100	126	126
B American farm products			
Raw	100	184	188
Processed	100	141	140
C Commodities not originating on American farms			
Raw	100	128	129
Processed	100	114	114

These are indexes of the National Bureau of Economic Research. The Bureau of Labor Statistics constructs measurements for goods in three categories:

	Sept. 1938-Aug. 1939	*March 1943*	*June 1943*
Raw materials	100	161	164
Semimanufactured goods	100	124	124
Manufactured goods	100	125	125

Manufactured goods advanced in price 26 per cent from 1939 to March 1943. This was materially less than the rise of 57 per cent in all raw materials, and well below the rise of 53 per cent in the raw materials of industry. The differential was of the same general character for goods of farm origin and for nonfarm goods, but farm products, in both raw and processed form, rose much more in price than nonfarm products.

from estimates of the Department of Commerce (*Survey of Current Business,* March 1943).

This evidence, bearing on just one aspect of manufacturing operations, indicates that the materials of industry have risen in price more rapidly since 1939 than the finished products of industry.[47] Comprehensive and accurate information on other elements of costs is lacking, in the absence of Census returns for years since 1939. Between 1939 and 1943 payrolls in manufacturing industries increased more rapidly than physical output, a fact that points to an advance in labor costs per unit of manufactured product. But the composition of the product of manufacturing industries has changed so greatly in the last four years that no over-all measure of labor costs can have clear significance. There can be no doubt, however, that, on the average, unit labor costs as well as unit costs of materials have crept up on the selling prices of manufactured goods since 1939 (see footnote 22).

The conclusions we can draw concerning the present status of manufacturing producers are somewhat less definite than the generalizations possible in respect of farmers. Since 1939 manufacturers have faced rising material costs, costs that rose more rapidly than the selling prices of manufactured products. Hourly rates of pay have advanced. Taxes have mounted. Productivity has perhaps been held constant. Labor costs per unit of product have increased. Aggregate production was advancing rapidly, however, and with rapidly expanding output cost problems that might be overwhelming under less favorable circumstances may be met and overcome. The unit burden of fixed costs drops, of course, with rising volume.

The net effects of these various movements appear in the records of industrial profits and dividend payments. These are incomplete, but the general nature of the changes during this period is indicated by the entries in Table 18. In setting the Federal Reserve production index numbers against the estimates of corporate profits and dividend payments we are comparing measurements based upon independent estimates by two governmental agencies. If the production and finan-

[47] One important exception may be noted in the following summary:

	Percentage change in price Sept. 1938-Aug. 1939 to March 1943	
	Raw materials	Manufactured goods
Crops	+101	+39
Animal products	+72	+41
Metals	+12	+12
Nonmetallic minerals	+16	+6

For metals alone has the advance in the selling prices of manufactured goods kept pace with that in raw material prices. But the record here, especially for highly fabricated products, is far from adequate.

TABLE 18

Manufacturing Corporations

Production, Net Profits, and Dividend Payments, 1939-1943[1]

	1939	1942	First Quarter 1943
A PROFITS AND PRODUCTION			
Estimated profits, after taxes[2]	100	172	181
Production[3]	100	176	194
Net profits, after taxes, per unit of product (derived)	100	98	93
B DIVIDEND PAYMENTS AND PRODUCTION			
Estimated dividend payments[4]	100	96	
Production[3]	100	176	
Dividend payments per unit of product (derived)	100	55	

[1] The estimates given here, those of the Department of Commerce, "are designed to correspond conceptually with corporate profits as reported to the Bureau of Internal Revenue, after deduction from the latter of dividends received from domestic corporations." See Recent Trends in Corporate Profits by Tynan Smith and Robert Sherman, *Survey of Current Business,* June 1943, for detailed notes on sources and methods used in making these estimates.

[2] These relatives are based on the following estimates, in millions of dollars.

1939	1942	First Quarter 1943
2579	4428	1166

In deriving the relative for the first quarter, in Table 18, quarterly profits have been put on an annual basis.

[3] Index of Board of Governors, Federal Reserve System.

[4] This is a net figure. Dividends received by corporations have been deducted from dividends paid. The relatives are based on the following estimates, in millions of dollars:

1939	1942
1842	1760

cial measurements are acceptable estimates of the magnitudes in question, the comparisons indicate the general direction of movement of profits and dividends per unit of product. It should not be assumed that they do more than this. Production indexes and figures on corporate profits for 1942 are both subject to not inconsiderable errors of estimate.

The Department of Commerce figures show an advance of 72 per cent in aggregate corporate profits in manufacturing industries between 1939 and 1942.[48] This fell slightly below the increase in total

[48] This gain is greater than that shown by tabulation of profits for specific corporate groups. A Federal Reserve Board sample of 555 industrial corporations gained 21 per cent in aggregate net profits, after taxes, from 1939 to 1942. Chained measures derived from National City Bank compilations covering from 1300 to 1500 corporations indicate a gain of 30 per cent over the same period. The discrepancies between the Department of Commerce estimates and those of the Federal Reserve Board and the National City Bank reflect differences in industrial classification and differences in corporate coverage,

output. These estimates indicate a drop of two per cent in profits per unit of product. From 1939 to the first quarter of 1943 the decline in profits per unit of product was seven per cent. Dividend disbursements do not follow the course of profits. There appears to have been an absolute decline of four per cent from 1939 to 1942 in total dividend payments, and a drop of 45 per cent in such payments per unit of product. (The differences between changes in profits and dividend disbursements are due in good part to the building up of contingency reserves.)

For industrial corporations the heart of the present situation is found in the volume figures. Industrial activity, as measured in aggregate output, is at a level never before approached in our history. In the first quarter of 1943 manufacturing production was 94 per cent above 1939 (110 per cent above the average of the twelve months Sept. 1938-Aug. 1939), and 71 per cent above the previous highest quarter (April-June 1937). This extraordinary expansion was, in part, at the expense of nonmanufacturing activities. In 1939 the manufacturing industries contributed 24 per cent of total national income, in 1942, 31 per cent.[49] (The percentage in 1929 was 25.) This expansion has a direct bearing on the cost increases we have noted. The great advances in material costs and in hourly wage rates in manufacturing industries since 1939 could be met with expanding volume. In effect, during the all-out industrial effort of the last three years we have developed something approaching an equilibrium condition in manufacturing industries, in which high wage rates and (by recent standards) high material costs could be met and selling prices maintained at levels appreciably below those reached by commodities in

as well as differences arising out of adjustments made by the Department of Commerce. The Department figures here employed are estimates of profits for all manufacturing corporations; the Federal Reserve Board and the National City Bank figures are the actual sums of profits for the corporations whose reports are recorded. In estimating profits for all manufacturing corporations the Department of Commerce eliminates capital gains and losses and adds back contingency and post-war reserve charges and other reserve charges not allowed for tax purposes. The Department of Commerce estimates are intended to be approximations to the figures reported or to be reported by corporations to the Bureau of Internal Revenue.

Director's Note: I question whether the comparison of profits between 1939 and 1943 should be put on the same basis as the comparison of prices or rates of wages. First of all, prices in 1939 were about typical of previous years, whereas this is not so of profits. Furthermore, profits are not a rate. Profits are an accounting formula resting on assumptions, many of which are contrary to fact. Losses of foreign investments and of the vagaries of taxes, including carry-over, strongly influence reported figures on profits for 1942 and 1943. OSWALD W. KNAUTH

[49] *Survey of Current Business,* March 1943, p. 15.

general in the advances of the present war period.[50] Large volume is essential to the maintenance of this equilibrium. If the existing volume of industrial output should be materially reduced the downward pressure on both wage rates and prices of materials would be strong. For industry at large, how to maintain volume is not a problem as long as the war lasts. (For individual industries and plants, of course, it may be a very grave problem.) With the coming of peace the maintenance of volume of output will be the key to the post-war industrial situation.

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On a price basis, manufactured goods and raw materials were in 1943 substantially on the same footing with reference to a 1912-14 base.[51] Both were some 60 per cent above the level of the early base period. But the picture is not so simple if we break the two main categories into their components. The articles in the raw and processed groups,

	Percentage change in price 1912-14 to March 1943	
	Raw Materials	Manufactured Goods
Crops	+55	+56
Animal products	+65	+84
Metals	+33	+81
Nonmetallic minerals	+82	+35

although not identical, are generally representative of the commodities in question. For three of the four groups shown, 1943 price relations represent fabricational margins wider than those of 1912-14. For crops and animal products the differences are real enough, though not strikingly large. But for metal products there is a notable difference. In March 1943 manufactured metal products were 81 per cent higher in price than in 1912-14; raw metals were only 33 per cent higher. Quality changes in manufactured goods account for part of the change, but a major factor is an increase in the various charges, including taxes, that constitute the cost of fabrication.

For nonmetallic minerals the situation is reversed. Manufactured

[50] This statement is based on available price quotations, which relate to goods for the civilian economy, similar goods (e.g., foods) used by the armed forces, and semimanufactured goods intended for military use. We do not have records of prices paid by government for finished munitions.

[51] The following index numbers are derived from wholesale prices.

	1912-14	*March 1943*	*June 1943*
Raw materials	100	164	166
Producer goods, raw	100	159	159
Manufactured goods	100	160	160

goods have risen far less in price than raw materials. The reason has already been suggested. Bituminous coal, up 213 per cent in price from 1912-14 to 1943, was the major factor in the rise of raw nonmetallic minerals. The cost effects of this rise on industries employing bituminous coal as fuel have been offset in part, perhaps in good part, by increased efficiency in the use of coal.

This detailed record provides a more illuminating picture of raw-processed price relations than do the over-all index numbers. The recent extraordinary advances in the prices of raw crops and raw animal products do not wipe out the wide fabricational margins existing in 1939. In metal products the margin persists, with little change in the last four years. More elaborate processing has something to do with this. The growth of advertising and other distributional expenses contributes to the widening of margins. The increase in wage rates noted in the preceding section helps to account for the expansion. Higher taxes are an important component. But whatever its diversified causes, this persisting divergence has been a notable feature of our economic development in the last 30 years. Although partly obscured by recent sharp advances in certain primary products, it remains a major characteristic of the 1943 economic situation in important areas of economic activity. Despite great productivity gains, fabrication and distribution are expensive processes, in the economy of 1943.

The Status of Consumers

CHANGES SINCE 1939

Consumer expenditures have been heavy under the conditions of wartime prosperity. From a 1939 total of $62 billion there was an increase to $82 billion in 1942. In March 1943 consumer expenditures were at an annual rate of $88 billion, an all-time high. The prices of consumer goods may have been high by previous standards, but consumer incomes were higher still. Rationing restricted the channels of purchasing but the pressure of buying power was felt in all markets where goods were to be had.[52]

[52] From 1941 to 1942 expenditures for automobiles were down 84 per cent, for gasoline and oil 19 per cent, for furniture, furnishings and household equipment 5 per cent.

The Department of Commerce (*Survey of Current Business,* April 1943, p. 7) reports the following percentage changes in total retail sales from 1941 to 1942:

Clothing and related products	+25
Food	+24
Recreation	+18

Since retail clothing prices and retail food prices both advanced 17 per cent, the recorded sales increases were largely due to price increases.

Our chief immediate concern is with the unit prices of goods ready for final use by consumers, in relation to the unit worth of other goods (Table 19). During the steady rise in commodity prices in the last three and one-half years the prices of consumer goods have kept pace with all commodities. That is, goods ready for consumption and unfinished goods sold to producers for manufacture (i.e., producer goods) have risen by equal amounts. The price lag in consumer goods that marked the recovery of 1933-37 has no counterpart here.

TABLE 19
Price Changes in Consumer Goods and Related Series, 1939-1943

	Sept. 1938-Aug. 1939	*March 1943*	*June 1943*
All commodities, wholesale[1]	100	137	138
Consumer goods, wholesale[1]	100	137	140
Raw	100	171	188
Processed	100	130	130
Goods intended for human consumption, wholesale[1]	100	148	149
All other than human consumption goods, wholesale[1]	100	114	114
Producer goods intended for human consumption, wholesale[1]	100	164	163
Foods at the farm[2]	100	198	203
Foods at wholesale[1]	100	160	162
Foods at retail[2]	100	144	149
Raw cotton at the farm[2]	100	228	229
Raw wool at the farm[2]	100	196	200
Clothing at wholesale[3]	100	131	131
Clothing at retail[3]	100	127	127
Cost of living, industrial workers[3]	100	123	125
Prices paid by farmers for family maintenance[2]	100	139	142

[1] Computed by National Bureau of Economic Research.
[2] Computed by Bureau of Agricultural Economics.
[3] Computed by Bureau of Labor Statistics.

Consumer goods include all commodities ready for consumption. If with such goods we lump commodities that will constitute consumer goods after fabrication, we obtain a more comprehensive group 'all goods intended for human consumption'. This group and one comprehending 'all other goods' (capital equipment, building materials, and producer fuels) constitute the next pair of entries in Table 19. The contrast is marked. The rise in commodity prices from 1939 to 1943 was largely concentrated in the goods intended for human consumption. These increased 48 per cent, on the average, against a rise of only 14 per cent in all other goods. The impact of the price advance of the last three and one-half years has fallen, in the main, on the consumption segment of the economy.[53]

[53] There is today a great gap in our price information in the field of governmental purchases, particularly purchases of munitions and other military supplies produced by

It is clear that the average price of consumer goods, relatively high though it is, is lower than the index for goods to be consumed but not yet completely processed. For this class (producer goods intended for human consumption) the March 1943 index was 64 per cent above the level of September 1938-August 1939. Price rises for consumption goods at the early productive stages have not yet been equaled by price advances at the final stages. This fact is clearly revealed by the two sets of entries in Table 19 for foods and clothing at different productive and distributive stages. A 98 per cent rise in the prices of foods at the farm has been paralleled by a gain of 60 per cent in the average prices of foods at wholesale and one of 44 per cent in their average price at retail. Still greater are the clothing differentials. Raw cotton and wool at the farm have risen 128 and 96 per cent, respectively; clothing at retail has advanced only 27 per cent.[54] Differences in the degree of price change at successive stages of production and distribution are to be expected in a period of general advance, but the present differentials are of exceptional magnitude.

Two final measurements of the burden of the price advance on consumers are given in Table 19. The general index of living costs to industrial wage earners shows a rise of 23 per cent from September 1938-August 1939 to March 1943. The corresponding index for farmers, measuring changes in prices paid for goods used in family maintenance, has risen 39 per cent.[55] These are considerable increases, but they are less than the advances in many of the elements of labor,

the heavy industries. Prices in this field at the raw and semifabricated stage for which quotations are available have remained relatively low. Prices for highly fabricated goods of this type may have been high relatively, during the early stages of transition to a war economy. Subsequent movements have probably been downward, as mass production developed. But this must remain conjecture until the price record is made available.

Advances in wages, profits and prices in this sector of the economy serve, of course, to expand the dollar value of the national product at a rate more rapid than that at which the real national product is growing. The degree of inflation attributable to such advances cannot be known to us because of the inadequacy of the record of prices paid by government.

[54] An earlier note on limitations of present price indexes applies with special force to clothing quotations. In this field price lines are often maintained without change, though the goods marketed at fixed price levels may be substantially modified in quality. The retail clothing index probably understates the price advance that would be recorded if the price equivalents of quality changes could be determined.

[55] Services are included in the cost of living index, excluded from the index of prices paid by farmers. The costs of services have not risen as much, on the average, as the prices of commodities.

material, and construction costs that enter into the prices paid by final consumers. Of course, not all the advances at earlier levels need be translated into corresponding increases at final consumption stages. But it is clear that fabricational and distributional margins, per unit of product, have been narrowed during the price movements of the last three and one-half years.[56] Such narrowing can be met; it is, indeed, customary when volume is being increased. Smaller unit returns may go with constant or increasing aggregate returns under these conditions. But over the entire area of consumption there has been no such increase in volume. The flow of goods to consumers, at the terminal stages of the marketing process, has been maintained in part by drawing on accumulated stocks. Already, however, there has been substantial reduction in the total movement and more is to be expected. Under these conditions there are steady upward pressures, from the cost side, on the final prices paid by consumers. Since these pressures are strongly supplemented by others from the demand side (where funds available for the purchase of consumer goods far exceed existing supplies, at present price levels) the price situation today can not be taken to represent a condition of equilibrium.

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The consumer was clearly better off in 1939 than 1912-14, in that the average real income of the population was higher. But this improvement fell far short of the advances potential in the extraordinary productivity gains of the preceding quarter century. The movements of relative prices from 1939 to 1943 did not alter this situation. Living costs in March 1943 were 74 per cent higher than in 1912-14, as against a rise of 63 per cent in the level of wholesale prices (as measured by index numbers of National Bureau of Economic Research). Consumer goods at wholesale were 72 per cent above their 1912-14 average. The varied costs of manufacturing and distribution are roughly measured by the difference between an index of 146 for producer goods intended for human consumption and an index of 169 for processed consumer goods (both on the 1912-14 base). Higher quality is, of course, one explanation of this increase, but when quality gains, productivity advances and prices are viewed in perspective, the advance in prices dominates the picture. The economy

[56] In interpreting these changes the reader will recall that these margins were relatively wide in 1939, and that the various elements entering into them (labor cost, overhead costs, and selling charges and profits) have been subject to conflicting influences since 1939.

of 1943, like that 1939, must be adjudged a high cost economy for consumer goods.

Cost, price, and wage relations in 1943 are the resultant of a variety of compulsions and trammels. Advancing material prices and wage rates, high labor turn-over, and the necessity of breaking in new workers, many of whom lack industrial experience, have pushed costs upward. Insistent needs of the war program and the swelling volume of purchasing power in the hands of consumers have reinforced one another, from the demand side, in pulling prices upward. On the other hand the extended use of assembly line methods has created some counter pressure toward lower costs and prices. Price controls, at first selective, later more comprehensive, have exerted restraints on the tide of advancing wages and prices. Shifting policy, varying coverage, and serious exemptions from such controls have made the working of these restraints uneven. The system of price relations and the terms of exchange discussed in the preceding pages are the products of these diverse pressures.

Pressures from the cost side have been insistent and will continue. This is inevitable when all available natural resources and manpower are being pushed to the limit in the war effort. So long as volume is being maintained, relatively high material and labor costs can be carried. The maintenance of today's cost, price and wage relations would present grave difficulties in the face of a substantial decline in output. How such a decline is to be avoided in the transition from war to peace is perhaps the major economic problem we shall face at the end of the war.

Present price relations are marked by relatively high prices to consumers. Living costs, especially food costs, have kept much closer to wholesale prices in the advance of 1939-43 than they did from 1914 to 1918. Moreover, within the system of wholesale prices goods intended for human consumption have led the recent price advance. In this area scarcities and war-time urgencies have combined to create one of the tightest of market situations. Further price advances are potential in the conditions now prevailing.

The price system of mid-1943 is under continuing inflationary pressures. Pushes from the cost side are strongly supplemented by the pressure of buying power in excess of the value (at present prices) of the consumer goods our productive system can turn out. The brief account we have given of existing terms of exchange may

turn out to be a cross-sectional view of a system still to experience major shifts. Or, with success in holding the main line, the relations now prevailing may persist with only minor modifications until the coming of peace releases strong new forces and drastically alters the conditions of economic equilibrium.

APPENDICES

The text of this monograph deals with selected aspects of the complex price movements of the last four years. For the benefit of those who may wish to study these movements in greater detail, or to trace changes not here discussed, various price and wage index numbers are brought together on a common base in Appendix Tables 1 to 8. Appendix Table 9 contains monthly index numbers of prices from 1927 to 1943 for the various groups entering into the commodity classifications of the National Bureau of Economic Research.