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IV DISTRIBUTION ACCORDING TO TYPE OF INCOME

1 MEANING OF CLASSIFICATION

THE allocations discussed in this section have already been suggested in describing the composition of the national product totals. Business and other enterprises engaged in the production of these totals distribute most of their share as payments to individuals in return for their services or the services of their property; or in the form of payments to individuals only remotely connected with the productive process (pensions, compensation for injuries, relief payments, etc.). The residue, either positive or negative, represents in gross national product, the gross savings; and in national income, the net savings of these enterprises. It is of obvious importance to study how the national product is apportioned between such savings and aggregate income payments to individuals; and how the latter are apportioned among various types of payment. Such allocations can be made for the national product only as measured in current market values (Table 6).

Wages, salaries, pensions, dividend and interest payments are familiar. Dividend payments as measured here cover disbursements to individuals, and thus exclude the intercorporate dividend flow; interest payments cover interest on long term debt alone, upon the assumption that all short term interest is paid to other business enterprises and that short term interest paid to individuals by banks represents an indirect flow of long term interest; the only allowance for all industries for intercorporate long term interest payments is interest on government securities.¹² Entrepreneurial withdrawals are the amounts that individual entrepreneurs withdraw from their business for consumption and investment elsewhere—an estimate necessarily highly tentative. Rents received by individuals comprise both actual monetary rental received, minus the expenses incurred, and net rental imputed to the individuals who own the houses in which they reside (excluding owned farm homes). While compensation for injuries covers small

amounts paid to individuals other than employees, it may be grouped with pensions, relief, wages and salaries as employees' compensation. Withdrawals by entrepreneurs and rents may be classified as entrepreneurial income payments, although there is some ground for classifying rent with property income. Dividends and interest receipts are individuals' property income.

Net savings of enterprises is a residual item of controlling importance, and should, in accordance with our definitions of national income, equal the difference between the current value of all commodities and services produced, less the current market value of commodities consumed in production, and total income payments to individuals. The entry on the income account of business enterprises that most closely corresponds to net savings as thus defined is net profit or loss, after deduction of dividends and taxes. But this item still differs from the desired measure of net savings in the following respects: (a) it includes gains and losses on the sale of capital assets; (b) it estimates the consumption of durable commodities, subject to depreciation and depletion, at their original cost, not at current reproduction cost; (c) it measures the consumption of current materials at original cost when prices are rising, or at cost or market whichever lower, when prices are declining, instead of evaluating them at the market price at the time of consumption.¹³ Thus, in order to arrive at a correct figure for net savings of enterprises, the item available from business accounting records must be adjusted for all these possible departures, an adjustment that can be made in varying degree for the various distortions noted. The measurement of gross savings of enterprises, as already indicated, does not call for adjustment (b) but it does demand adjustments (a) and (c).

Gains and losses on the sale of capital assets can be excluded only since 1929; and savings, and hence national product, whether gross or net, are uncorrected in this respect for all years before 1929. The magnitude of this item can be judged by its amount, 1.6 billion dollars for 1932, the year

¹² These various assumptions are made largely because we lack data upon which to base a more accurate measure of interest payments to individuals. For most of the public utilities (electric light and power, steam railroads, Pullman and express, pipe lines, street railways and communications) the available data permit the deduction of interest received on all investments in both government and industrial securities.

¹³ For a more detailed discussion of adjustments (b) and (c) see Parts Three and Four of *Studies in Income and Wealth*, Volume I, by the Conference on Research in National Income and Wealth (National Bureau of Economic Research, 1937); see also Appendix D below.

Table 6

DISTRIBUTION OF GROSS NATIONAL PRODUCT AND NATIONAL INCOME ACCORDING TO TYPE OF INCOME, 1919-1935

Part A. Absolute Figures
(millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
1 Wages and salaries ¹	36,821	45,750	36,705	39,124	45,183	45,420	47,651	50,362	50,570	52,196	55,191	50,332	42,943	33,894	32,432	35,785	38,755
2 Compensation for injuries, ² pensions and relief ³	476	636	720	730	755	779	723	718	749	768	809	851	953	976	1,920	2,764	2,876
3 Employees' compensation ⁴	39,297	46,387	37,424	39,854	45,938	46,199	48,373	51,080	51,319	52,964	56,000	51,182	43,896	34,870	34,353	38,549	41,631
4 Withdrawals by entrepreneurs ⁴	9,651	11,095	7,993	7,751	8,271	8,455	8,593	8,544	8,499	8,538	8,677	7,910	6,554	5,303	5,062	5,515	5,994
5 Rents	2,670	2,999	3,296	3,754	3,915	4,169	4,146	3,902	3,675	3,788	3,763	3,111	2,088	1,319	1,311	1,165	1,323
6 Entrepreneurial income payments	12,321	14,094	11,289	11,505	12,186	12,624	12,739	12,446	12,174	12,327	12,440	11,021	8,642	6,622	6,373	6,680	7,317
7 Dividends ⁵	2,812	3,123	2,848	2,920	3,714	3,655	4,237	4,601	4,892	5,209	5,807	5,708	4,270	2,679	2,147	2,497	2,845
8 Interest ⁵	3,041	3,410	3,546	3,676	3,922	4,156	4,418	4,586	4,864	5,174	5,409	5,507	5,474	5,362	4,837	4,566	4,445
9 Property income payments ⁶	5,882	6,576	6,463	6,682	7,730	7,940	8,808	9,297	9,888	10,532	11,367	11,417	10,028	8,293	7,154	7,156	7,339
10 Aggregate income payments to individuals	57,499	67,056	55,177	58,041	65,854	66,763	69,921	72,823	73,381	75,823	79,808	73,620	62,565	49,785	47,880	52,365	56,287
11 Net savings of business enter- prises ⁷	6,706	3,722	2,506	663	2,427	2,141	3,355	4,777	2,031	2,810	2,109	-1,656	-5,856	-8,751	-7,779	-3,355	-1,607
12 Net savings of government	-4,279	1,607	660	1,002	1,425	1,465	1,571	1,877	2,017	1,764	1,507	975	-700	-1,406	-818	-1,181	-1,645
13 Total net savings of enter- prises	2,427	5,330	3,166	1,665	3,853	3,606	4,926	6,654	4,048	4,574	3,616	-680	-6,556	-10,157	-8,596	-4,536	-3,252
14 National income	59,926	72,386	58,343	59,706	69,706	70,369	74,846	79,477	77,429	80,397	83,424	72,940	56,010	39,628	39,283	47,849	53,035
15 Gross savings of enterprises	11,251	15,780	10,971	9,145	12,361	12,028	13,493	15,957	13,397	14,230	13,832	9,103	2,186	-2,583	-1,341	3,360	4,956
16 Gross national product	68,750	82,836	66,148	67,186	78,214	78,791	83,413	88,780	86,778	90,053	93,640	82,723	64,751	47,202	46,538	55,765	61,243

¹Including withdrawals by entrepreneurs in service and miscellaneous.²Including payments by steam railroads, Pullman and express for compensation for injuries to persons other than employees.³Including payment by the government for direct relief and work relief in 1933, 1934 and 1935.⁴Excluding withdrawals by entrepreneurs in service and miscellaneous which are included with wages and salaries.⁵A small amount of dividends from corporations engaged in agriculture is included with interest payments.⁶Including net balance of international payments.⁷These net savings are adjusted throughout for the effects of changing inventory valuations and for the difference between depreciation and depletion at cost prices and at current reproduction prices. But the adjustment for gains and losses on the same of capital assets was possible only since 1929. The items for these years, the adjustment for which is already made in the table, are as follows (in millions of dollars):

	1929	1930	1931	1932	1933	1934	1935
	816	-377	1,500	1,621	1,500	1,776	1,577

	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
1 Wages and salaries	67.5	68.2	66.5	67.4	68.6	68.0	68.1	69.2	68.9	68.8	69.2	68.4	68.6	68.1	67.7	68.3	68.9
2 Compensation for injuries, pensions and relief	0.8	0.9	1.3	1.3	1.1	1.2	1.0	1.0	1.0	1.0	1.0	1.2	1.5	2.0	4.0	5.3	5.1
3 Employees' compensation	68.3	69.2	67.8	68.7	69.8	69.2	69.2	70.1	69.9	69.9	70.2	69.5	70.2	70.0	71.7	73.6	74.0
4 Withdrawals by entrepreneurs	16.8	16.5	14.5	13.4	12.6	12.7	12.3	11.7	11.6	11.3	10.9	10.7	10.5	10.7	10.6	10.5	10.6
5 Rents	4.6	4.5	6.0	6.5	5.9	6.2	5.9	5.4	5.0	5.0	4.7	4.2	3.3	2.6	2.7	2.2	2.4
6 Entrepreneurial income payments	21.4	21.0	20.5	19.8	18.5	18.9	18.2	17.1	16.6	16.3	15.6	15.0	13.8	13.3	13.3	12.8	13.0
7 Dividends	4.9	4.7	5.2	5.0	5.6	5.5	6.1	6.3	6.7	6.9	7.3	7.8	6.8	5.4	4.5	4.8	5.1
8 Interest	5.3	5.1	6.4	6.3	6.0	6.2	6.3	6.3	6.6	6.8	6.8	7.5	8.7	10.8	10.1	8.7	7.9
9 Property income payments	10.2	9.8	11.7	11.5	11.7	11.9	12.6	12.8	13.5	13.9	14.2	15.5	16.0	16.7	14.9	13.7	13.0
10 Aggregate income payments to individuals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
11 Total net savings of enterprises as percentage of aggregate income payments to individuals	4.2	7.9	5.7	2.9	5.9	5.4	7.0	9.1	5.5	6.0	4.5	-0.9	-10.5	-20.4	-18.0	-8.7	-5.8
12 Gross savings of enterprises as percentage of aggregate income payments to individuals	19.6	23.5	19.9	15.8	18.8	18.0	19.3	21.9	18.3	18.8	17.3	12.4	3.5	-5.2	-2.8	6.5	8.8

covered by data in which it was largest (Table 6, note 7, and Appendix Table III).

By utilizing the estimates prepared by Solomon Fabricant¹⁴ it was possible to correct for the difference between the depreciation and depletion deductions in reproduction and original cost prices for all the years in the period, but only for national income as a whole, not for its various industrial categories.

As shown in Part Four of *Studies in Income and Wealth*, Volume I, the disparity between the value of inventory commodities consumed at cost and at the market price can be estimated roughly by reducing the year-end inventories for each year to a common price level, obtaining the change in inventories, expressing this change in prices for the current year, and then establishing the disparity between this change and the difference in the year-end inventories in their changing current valuations. The adjustment of business savings for this disparity is tantamount to equating the cost of inventory commodities consumed to the sum of: (a) commodity volume of purchases during the year, multiplied by prices paid at the time of purchase, and (b) net change in the commodity volume of year-end inventories, multiplied by the average price prevailing during the year. But the theoretically correct cost of inventory commodity consumed would be equal to the commodity volume under (a), plus the commodity volume under (b), the sum multiplied by prices prevailing at the point of consumption, i.e., when the enterprise succeeds in realizing its share in the national income. It may thus be seen that adjustment for the disparity as described above eliminates from business savings the net profit or loss due to holding of inventories largely during the period elapsing between purchase and utilization, but not during the period of utilization itself; and, because of the use of average prices for the year, yields only approximate results even for that item. Nevertheless, it represents a substantial step towards a theoretically more consistent measurement of the national income produced, and has, therefore, been applied. It could be computed not only for the national product as a whole but also for most of the industrial branches distinguished. Appendix A contains all these adjustments as well as the net savings of business enterprises as they appear before they are adjusted.

¹⁴ His preliminary estimates were published in *Measures of Capital Consumption, 1919-1933, Bulletin 60*. In this report we have utilized his revised estimates which will appear in detail in a final report, *Capital Consumption*.

Finally, savings of government were computed directly, by comparing the net change in the basic fixed assets of government, i.e., buildings, roads, etc., with the net change in total governmental debt. The first item was obtained from estimates of total public construction, available in the capital formation study, reduced for each year by the depreciation on government fixed assets as estimated by Solomon Fabricant.¹⁵ The second item is easily derived from the data on total outstanding governmental debt. The resulting difference represents a crude estimate of net savings by all governmental agencies, i.e., the amount by which the net addition to fixed assets exceeded or fell short of the total change in debt outstanding.

Having commented upon the meaning of the various categories in Table 6, we may now note how gaps in the available data affected the allocations. First, absence of relevant data made it impossible to segregate wages and salaries from entrepreneurial withdrawals in service and miscellaneous industries before 1929. In 1929 total entrepreneurial withdrawals in these two industrial divisions amounted to about 5.1 billion dollars while salaries and wages were 8.5 billion; we decided therefore, to include the combined item with wages and salaries rather than with entrepreneurial withdrawals. Since total salaries and wages of all industries in 1929 were over 50 billion dollars, the addition of entrepreneurial withdrawals in service and miscellaneous industries could not greatly affect either the relative share or the changes in the relative importance of employees' compensation in the national aggregate of income payments. But the exclusion of this item from total entrepreneurial withdrawals may have affected the latter significantly. Second, as already indicated, net savings of business enterprises prior to 1929 could not be adjusted for gains and losses on the sale of capital assets, an omission that in view of substantial price changes, especially in the early years of the period, may well have affected this item considerably.

2 IMPORTANCE OF SAVINGS OF ENTERPRISES

Gross savings of enterprises represent the share of gross national product retained after all outlays on the costs of production (excluding current consumption of durable capital goods) and all income payments to individuals have been made. The item thus measures that part of the product the fina-

¹⁵ See below, Section VIII, Table 13.

disposition of which is in the hands of enterprises, and indicates the area in which the decisions of enterprises concerning replacement of capital goods or investment in new goods can be made without the restrictions usually connected with the necessity of obtaining outside funds. The portion of gross national product accounted for by these gross savings of enterprises is fairly substantial, averaging about 16 per cent before 1930, but declining drastically during the depression, and becoming negative in 1932 and 1933 (Table 6, Part B).

Net savings of enterprises are much smaller on the average than gross savings and are much more variable over time. The cumulative total of net savings of business enterprises over the period as a whole, including 1935, amounts to only 4.2 billion dollars; the inclusion of net savings of government raises it to 10.1 billion dollars. These totals average per year only 0.25 and 0.59 billion dollars, respectively, and constitute only 0.4 and 0.9 per cent of the average national income.

However, these averages conceal the extreme variations in net savings of enterprises, and their close conformity to fluctuations in general business conditions—two characteristics that make net savings of enterprises exceedingly important in determining changes in total national income and render its measurement useful in arriving at an understanding of economic fluctuations. The great variability of savings of enterprises is evident when we compare the algebraic average—only 0.59 billion dollars per year (including savings of government), and 0.25 billion dollars when confined to savings of business enterprises alone—with the corresponding averages when signs are disregarded: 4.6 and 3.7 billion dollars per year. The range of variation is quite striking. Total net savings of enterprises ranged from a peak of plus 6.7 billion dollars in 1926 to a trough of minus 10.2 billion dollars in 1932. Of the decline in total national income of 39.8 billion dollars between these two years, over 42 per cent is accounted for by the decline in net savings alone. Similarly, net savings of business enterprises (excluding savings by government) range from a peak of plus 6.7 billion dollars in 1919 to a trough of minus 8.8 billion dollars in 1932; and of the decline in national income of some 20 billion dollars between these two years, the drop in net savings of business enterprises alone accounts for over 15 billion dollars, or 76 per cent. Also the fluctuations in net savings, particularly in savings of business enterprises, follow closely the changes in general business conditions, showing very conspicuously the contractions of

1920–21, 1924, 1927 and 1930–32. It is surprising that both total savings of enterprises and savings of business enterprises declined from 1928 to 1929, but this may be due largely to the adjustment for gains on the sale of capital assets in the latter year but not in the former.

3 CHANGES IN DISTRIBUTION BY TYPE OF PAYMENT

In considering the various types of payment and grouping them in the broad categories of employees' compensation, entrepreneurial income payments and property income, we are concerned not only with the absolute quantities but also with the relative proportions accounted for by each. Changes in these proportions are especially important because these types of income represent largely the compensation of various groups in the economic system. Wages and the bulk of salaries constitute the main income of a large group in the population whose per capita income is relatively low; and changes in the relative share of wages and salaries indicate, though only approximately, changes in the relative share of the low income groups. Dividend and interest disbursements are received largely by those whose average income is relatively high; and a change in the proportion of income going out as dividends and interest is, with certain qualifying conditions, an index of the change in the share of income received by the high income groups. Entrepreneurial income payments occupy an intermediate position, and tend to vary greatly in average magnitude from one industrial branch to another. Dominated by agriculture and retail trade, they represent the main income of that large class of small entrepreneurs whose average income is fairly low and is subject to the vicissitudes of the competitive struggle.

The share of various types of payment is measured in percentages of aggregate income payments, not in percentages of national product, for savings of enterprises cannot be assigned as an income share to any specific group of income recipients. There is often an inclination to treat net savings as part of property income, on the ground that such savings or losses affect most conspicuously the value of securities held by the recipients of interest and dividend payments. But if incurring a net business loss or retaining net business savings by an enterprise does affect the fortunes of its security holders, the net savings as measured by us are hardly a measure of the effect. And it may reasonably be argued

that savings of enterprises in an industry are as important to the employees as to the owners, and have as much effect on their economic welfare. Upon this assumption, percentage allocation among the types of payment of national income would be identical with that of aggregate income payments to individuals.

Employees' compensation, including wages and salaries, pensions, relief and entrepreneurial withdrawals in service and miscellaneous industries, accounted on the average for about 70 per cent of the total flow of income payments to individuals; and this relative share remained fairly constant over the period (Table 6, Part B, and Chart 4). If the percentages are averaged for the two halves of the post-War period, the resulting means suggest a slight upward trend. This impression is confirmed when it is observed that before 1926 the percentage in the third line never went above 69.8, while beginning with 1926 it was at the level of 69.9 or higher in all years except one. But the differences are too small to indicate any definite rise in the share of employees' compensation; and the averages are considerably affected by the increased importance of relief in 1933, 1934 and 1935.

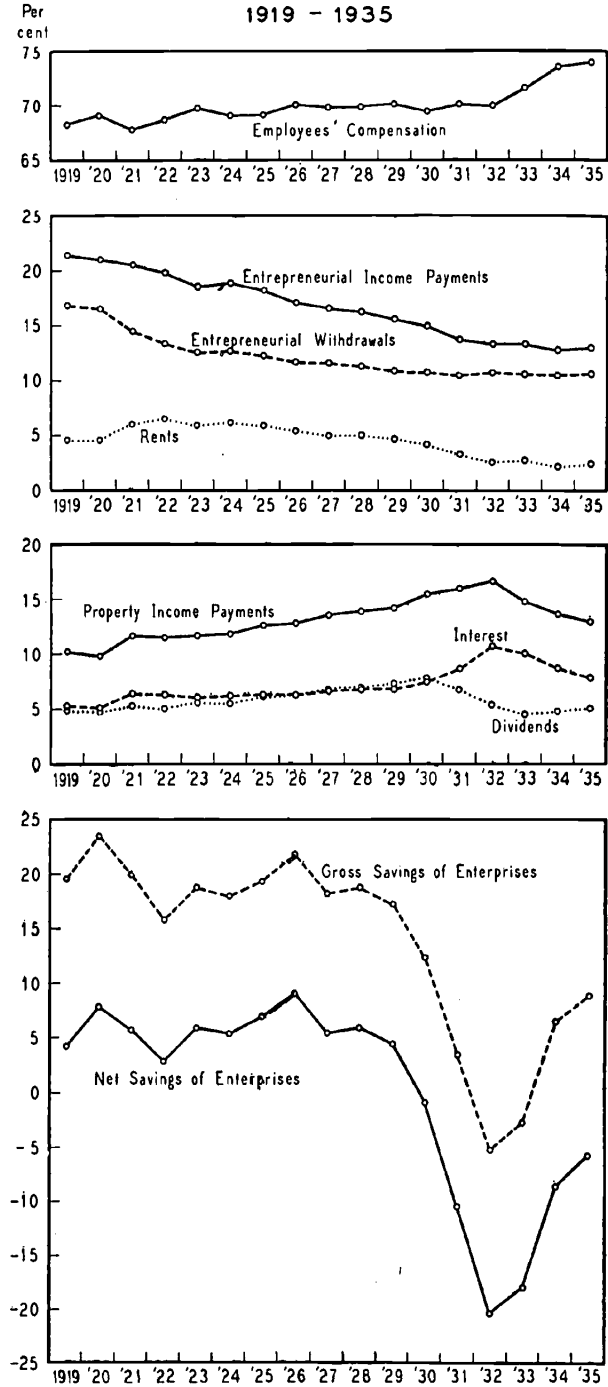
While no significant movement over the period as a whole can be observed in the relative share of employees' compensation, the other two major groups of payment both show distinct and significant trends. The share of entrepreneurial income payments declined continuously, owing largely to the decline in the relative share of entrepreneurial withdrawals. Indeed, prior to 1932, the percentage share of the latter declined each year except in 1924, and from a level of about one-sixth of total income payments in 1919 and 1920 it dropped to about one-tenth in 1933 and 1934.¹⁶ The relative share of the rent item showed at first a rise, associated with the decline in expenses and the high rent levels prevailing in the years before expansion

¹⁶ This downward tendency would undoubtedly persist even were entrepreneurial withdrawals in service and miscellaneous industries included with all other entrepreneurial withdrawals. If we assume that this item, now included with employees' compensation, doubled between 1919-20 and 1929, an assumption which tends to exaggerate any upward movement that may have existed in it, the inclusion would add slightly over 4 per cent in 1919-20 and slightly over 6 per cent in 1929 to the share of entrepreneurial income payments. This would still leave a decline in entrepreneurial withdrawals from about 21 per cent in 1919-20 to 17 in 1929.

On the other hand, the exclusion of this item from employees' compensation would remove completely any slight rise in its relative share; this, of course, on the improbable assumption that the increase in entrepreneurial withdrawals in service and miscellaneous industries attained the striking magnitude suggested above.

in the volume of construction exercised a moderating effect on rents; then a decline, which became especially precipitous after 1929. In contrast to entrepreneurial income payments, the relative share

Chart 4
VARIOUS TYPES OF PAYMENT AND SAVINGS OF ENTERPRISES IN PERCENTAGES OF AGGREGATE INCOME PAYMENTS 1919 - 1935



of property income rose distinctly over the period as a whole, accounting for one-tenth of total income payments in the early years of the period and about one-sixth in the later years. This upward tendency was manifest in both dividend and interest payments before 1929, but since then primarily

in the latter. If rents were added to dividend and interest payments to obtain a new total of property income, the share of the latter would still show a marked rise over the period.

The changes in the relative shares of various types of payment indicated in Table 6 are of considerable significance, and deserve further exploration, especially to ascertain whether both the changes over the period and the fluctuations that appear to be associated with business cycles persist when the dollar volumes are corrected for changes in the price level. But an adjustment for changes in the *general* price level would leave the percent-

age distribution of Table 6 undisturbed. To make the test significant, we need measures that would distinguish the prices of commodities and services purchased by salary and wage earners from the prices of commodities and services bought by recipients of entrepreneurial and property income payments. The absence of such price data postpones this inquiry.

The conclusions from Table 6 can be further elaborated by studying the distribution within the various industrial branches. We turn now to the cross-classification by type of payment and by industrial source.

V CROSS-CLASSIFICATION BY TYPE OF PAYMENT AND BY INDUSTRIAL SOURCE

IN CONSIDERING the combined classification by type of payment and by industrial source, we might pursue two lines of inquiry. We might determine whether the changes observed in the relative shares of various types of payment in the national total are also present within each industrial branch distinguished; and ascertain how the shift in the relative importance of various industrial branches contributed to the changes in the relative proportions of the various types of payment. We might study the changes observable in the relative share of various industrial branches within each type of payment; and see how the shift in the relative importance of various types of payment contributed to the changes in the relative share of the various industrial branches.

It would not be possible here, or generally profitable, to pursue both lines of inquiry. We confine the analysis to the effect of the change in the distribution by type of payment within each industrial branch, and of the shift in the relative share of the various industrial branches, on changes in the percentage share of the various types of payment in aggregate income payments. We thus make the changes in the distribution by type of payment the dependent variable, rather than the shifts in the relative share of various industrial divisions in the economic system: the growth and change of the various industries appear to us to be the independent factor that provides the framework within which changes in the percent-

age distribution by type of payment are to be understood.

The first question to be answered is whether shifts in the relative shares of various types of payment in the total also occur in each industrial branch. Do the slight upward movement in the share of employees' compensation, the downward movement in the share of entrepreneurial income payments, and the marked upward movement in the share of property income appear in the distribution of income payments originating in each industrial division? An answer to this question is provided in Table 7, which measures the movement over the period in the relative share of the various types of payment by the total change in the average percentage for two pairs of segments of the post-War period: 1919-26 and 1927-34, and 1922-26 and 1927-31. We have computed similar measures also for the two intervening sets of periods (omitted in the table); our conclusions are based on the consideration of all these measures.¹⁷

The relative share of employees' compensation, which for the country as a whole rose slightly, appears to have declined significantly in a majority of the industrial categories. Indeed, if we include the subdivisions of public utility and finance, it declined in nine of the fifteen industrial branches distinguished, and rose in only three (trade, government and real estate).

¹⁷ For a more extended table of this type, confined to nine industrial branches, see *Bulletin* 59, Table 6, p. 15; see also Table 8 below.