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Chapter Title: Cross-Classification by Type of Payment and by Industrial Source

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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.

Table 7

CHANGE IN PERCENTAGE SHARE OF VARIOUS TYPES OF PAYMENT WITHIN EACH INDUSTRIAL BRANCH

Industrial branches	Average volume of all income payments (millions of dollars) 1919-34	Compensation of Employees			Entrepreneurial Income Payments			Property Income Payments		
		Average percentage of all income payments for industry 1919-34	Total change in average percentage share from		Average percentage of all income payments for industry 1919-34	Total change in average percentage share from		Average percentage of all income payments for industry 1919-34	Total change in average percentage share from	
			1919-26 to 1927-34	1922-26 to 1927-31		1919-26 to 1927-34	1922-26 to 1927-31		1919-26 to 1927-34	1922-26 to 1927-31
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Agriculture	6,609	16.3	-1.8	0.0	77.7	+0.4	-0.1	6.0	+1.3	+0.1
2 Mining	1,780	84.1	-4.0	-3.4	1.4	-0.1	-0.2	14.5	+4.2	–
3 Manufacturing	13,960	83.9	-2.9	-3.0	2.3	-0.7	-0.5	13.7	+3.6	+3.6
4 Construction	2,133	80.6	-2.0	+2.9	17.1	+0.8	-3.8	2.3	+1.2	+0.9
5 Transportation and other public utilities	6,535	72.9	-10.5	-6.2	0.1	0.0	0.0	27.0	+10.6	+6.3
a Electric light and power and manufactured gas	981	42.5	-14.0	-8.9	0.3	-0.4	-0.2	57.2	+14.4	+9.1
b Steam railroads, Pullman	3,712	78.7	-5.6	-3.7	0.0	0.0	0.0	21.3	+5.6	+3.7
c Pipe lines, street railways and water transportation	1,154	80.2	-3.1	-1.4	0.4	-0.1	+0.1	19.4	+3.2	+1.3
d Communication	688	77.2	-6.5	-2.2	0.0	0.0	0.0	22.8	+6.5	+2.2
6 Trade	8,728	71.2	+1.9	+0.9	24.1	-2.1	-1.7	4.8	0.0	+0.7
7 Finance	7,157	31.6	+7.3	+5.1	42.3	-18.7	-14.1	26.1	+11.4	+9.0
a Banking	871	63.4	+2.8	-1.5	0.0	0.0	0.0	36.6	-2.8	+1.5
b Insurance	924	104.3	-1.4	-2.0	0.0	0.0	0.0	-4.3	+1.4	+2.0
c Real estate	5,362	13.7	+2.9	+3.3	56.1	-20.8	-15.7	30.2	+18.0	+12.5
8 Government	6,525	77.5	+3.5	+3.5	0.0	0.0	0.0	22.5	-3.5	-3.5
9 Service	8,259	98.4	-0.5	-0.5	1/	–	–	1.6	+0.5	+0.5
10 Miscellaneous	2,588	90.7	+0.4	-0.8	1/	–	–	9.3	-0.4	+0.8
11 Total	64,274	69.8	+1.6	+0.5	17.0	-4.8	-3.0	13.2	+3.3	+2.5

1/ Included with employees' compensation.

The share of entrepreneurial income payments declined distinctly, both as a percentage of aggregate income payments and within the various industrial divisions (Table 7). If we include the subdivisions there are eight industrial branches in which unincorporated enterprises are significant and in which entrepreneurial income payments can be segregated. Of these eight, there is a decline in the relative share of entrepreneurial income payments in five, and a distinct rise in none. However, in agriculture, the industry that constitutes the most important source of entrepreneurial withdrawals, their share in total income payments showed no definite decline; indeed, in three of the four sets of periods compared it rose. Obviously, for entrepreneurial income payments as for employees' compensation, the movement of the share has been considerably affected by the shift in the relative position of the various industrial branches.

The percentage share of property income rose in twelve of the fifteen industrial branches distinguished in Table 7. In two, banking and miscellaneous, the general direction of the movement is not quite clear; in only one, government, does it decline definitely over the period. This evidence of Table 7 does not necessarily mean that the shift in the relative importance of various industries has not contributed to the rising tendency observed in the share of property income. But it does indicate that this upward movement would have appeared even had the relative share of each industrial branch remained constant.

The analysis may be developed to the point of actual measurement of the extent to which the movements in the relative shares of various types of payment have been affected, on the one hand, by changes within the industrial branches (intra-industry shifts) and, on the other hand, by changes in the relative weight of the various industries (inter-industry shifts). The effect of intra-industry shifts can be isolated by deriving for each type of payment a series of percentages representing what its relative share in total income payments would have been in each year had the relative importance of each industrial branch remained constant over the period. This series can be computed by obtaining for each type of payment for each year a weighted average of its relative share in each industrial branch, the weights being the *average* volume for the period of the income payments originating in each industrial branch.

Similarly, the effect of inter-industry shifts can be isolated by deriving for each type of payment a series of percentages representing what its rela-

tive share in total income payments would have been in each year had the percentage distribution among the various types of payment remained constant for each industrial branch over the period. This series can be computed by obtaining weighted averages of the same type as those described above, except that here the percentages averaged are kept constant at their average value for the period, while the weights vary, representing, for each year, the actual volume of income payments originating in each industrial branch.

Chart 5
PERCENTAGE DISTRIBUTION OF AGGREGATE
INCOME PAYMENTS AMONG MAJOR TYPES
OF PAYMENT, 1919 - 1934
TOTAL AND RESULTING FROM INTRA- AND INTER-
INDUSTRY SHIFTS

——————— Total Effect
- - - - - - - Effect of Intra - Industry Shifts
·············· Effect of Inter - Industry Shifts
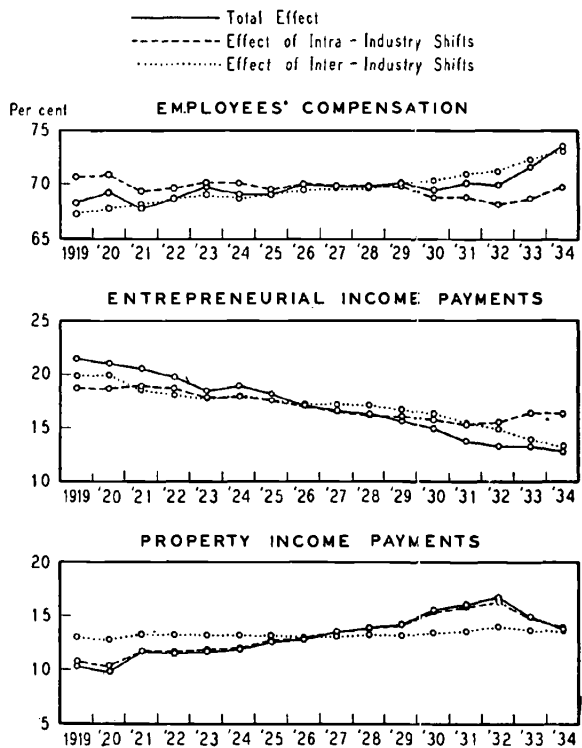
Such series have been computed and are presented graphically in Chart 5. For each we obtained measures of the movement over the period as a whole. These measures, together with those obtained for the percentage shown in Table 6, are brought together in Table 8. The measures are given for all the sets of periods compared, and include not only the total change, but also the same changes reduced to a per year basis.

Table 8 shows clearly the effects of the two sets of factors on the movements over the period in the relative share of various types of payment. The slight rise in the relative share of employees' compensation in the national total is due exclusively to the shift among various industries, i.e., to a net relative gain in the weight of these industrial di-

[31]

Table 8

CHANGE IN PERCENTAGE SHARE OF VARIOUS TYPES OF PAYMENT IN AGGREGATE INCOME PAYMENTS TO INDIVIDUALS,
TOTAL AND RESULTING FROM INTRA-INDUSTRY SHIFTS IN TYPES OF PAYMENT AND INTER-INDUSTRY SHIFTS IN TOTAL PAYMENTS

Type of payment	Average percentage share 1919-34	Total change in average percentage share from				Change per year in average percentage share from			
		1919-26 to 1927-34	1920-26 to 1927-33	1921-26 to 1927-32	1922-26 to 1927-31	1919-26 to 1927-34	1920-26 to 1927-33	1921-26 to 1927-32	1922-26 to 1927-31
Compensation of Employees									
Total (inter- and intra-industry change combined)	69.8	+1.5	+1.1	+0.9	+0.5	+0.2	+0.2	+0.2	+0.1
Due to intra-industry shifts only	69.7	-0.8	-0.8	-0.6	-0.5	-0.1	-0.1	-0.1	-0.1
Due to inter-industry shifts only	69.8	+2.4	+1.9	+1.5	+1.1	+0.3	+0.3	+0.2	+0.2
Entrepreneurial Income Payments									
Total (inter- and intra-industry change combined)	17.0	-4.8	-4.3	-3.7	-3.0	-0.6	-0.6	-0.6	-0.6
Due to intra-industry shifts only	17.1	-2.1	-2.1	-2.1	-1.8	-0.3	-0.3	-0.4	-0.4
Due to inter-industry shifts only	17.0	-2.7	-2.2	-1.6	-1.1	-0.3	-0.3	-0.3	-0.2
Property Income Payments									
Total (inter- and intra-industry change combined)	13.2	+3.3	+3.3	+3.0	+2.5	+0.4	+0.5	+0.5	+0.5
Due to intra-industry shifts only	13.2	+2.9	+2.9	+2.6	+2.2	+0.4	+0.4	+0.4	+0.4
Due to inter-industry shifts only	13.3	+0.4	+0.3	+0.2	+0.2	+0.0	+0.0	+0.0	+0.0

visions in which the share of employees' compensation is high. The intra-industrial shift in the relative share of employees' compensation is, on the contrary, distinctly downward. In the general contraction of the relative share of entrepreneurial income payments the inter and intra-industrial shifts both exercised effects in the same direction and were almost equally important. The rise in the relative share of property income is also due both to its rise within the various industries and to the shift among industries; but the inter-industrial shifts have in this case exercised less effect.

These conclusions, especially that concerning the movement of the share of employees' compensation, shed light on the changes during the post-War years in the functional and industrial structure of income in this country. The considerable shift in the distribution of employment and service income among groups attached to various industrial branches was concealed by its stability when expressed as a percentage of the national total. Obviously such a shift in the composition of employees' compensation, if accompanied by immobility of employment and income among the various industrial groups, might lead to serious problems of social adjustment.

The potential significance of this shift is revealed clearly in Table 9, in which the average percentage distribution of total employees' compensation among the various industrial branches is compared for the first and second halves of the post-War period. For comparative purposes, similar averages are provided for the industrial distribution of total income payments to individuals.

It is clear from Table 9 that, appreciable as was the shift in total income payments from the commodity producing to the service industries, the same shift in total employees' compensation was still more marked. The commodity producing industries and transportation plus other public utilities accounted during the first half of the period for 51 per cent of total employees' compensation; in the second half of the period for only 41 per cent. And of course during the recent depression this change became still more striking. If we assume that the wage levels in the two groups of industries move similarly, this change in the distribution of the wage bill means a shift from wage earning labor in basic industries to white collar, salaried labor and to such secondary labor supply as provides most of the man-power in trade and some of the service industries.

Also, in such industries as mining, manufacturing and steam railroads, in which a clear distinction between wages and salaries can be made, the share of wages declined over the period, while the share of salaries rose, with corresponding differences in the movement of per capita wages and salaries.[18] It thus appears that over the period as a whole the income of wage earners in the basic industries constituted a declining share of national income.

[18] See *Bulletin 59*, Table 7, p. 18.

Table 9

EMPLOYEES' COMPENSATION AND AGGREGATE INCOME PAYMENTS, PERCENTAGE DISTRIBUTION AMONG INDUSTRIAL BRANCHES

Averages for the Period and for the Two Halves of the Period

	AVERAGE PERCENTAGE DISTRIBUTION OF							
	COMPENSATION OF EMPLOYEES				AGGREGATE INCOME PAYMENTS			
INDUSTRIAL BRANCHES	AVERAGE 1919-34	AVERAGE 1919-26	AVERAGE 1927-34	CHANGE FROM 1919-26 TO 1927-34	AVERAGE 1919-34	AVERAGE 1919-26	AVERAGE 1927-34	CHANGE FROM 1919-26 TO 1927-34
1 Agriculture	2.4	2.9	1.9	−1.0	10.3	11.7	8.8	−2.9
2 Mining	3.3	4.1	2.5	−1.6	2.7	3.3	2.2	−1.1
3 Manufacturing	26.0	28.1	23.8	−4.3	21.5	22.7	20.4	−2.3
4 Construction	3.8	4.2	3.3	−0.9	3.2	3.5	2.9	−0.6
5 Transportation and other public utilities	10.7	11.7	9.6	−2.1	10.2	10.3	10.0	−0.3
6 Trade	13.8	13.9	13.8	−0.1	13.6	13.7	13.5	−0.2
7 Finance	5.0	4.4	5.5	+1.1	11.0	10.9	11.2	+0.3
8 Government	11.6	9.8	13.5	+3.7	10.5	8.9	12.0	+3.1
9 Service	18.2	16.2	20.1	+3.9	12.9	11.4	14.5	+3.1
10 Miscellaneous	5.2	4.7	5.8	+1.1	4.0	3.6	4.5	+0.9
11 Total	100.0	100.0	100.0		100.0	100.0	100.0	