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National Bureau of Economic Research

Volume Title: Income in the United States, Its Amount and Distribution
1909-1919, Volume II: Detailed Report

Volume Author/Editor: Wesley Clair Mitchell, editor

Volume Publisher: NBER

Volume ISBN: 0-87014-001-9

Volume URL: <http://www.nber.org/books/mitc22-1>

Publication Date: 1922

Chapter Title: American Income Tax Returns

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Chapter URL: <http://www.nber.org/chapters/c9426>

Chapter pages in book: (p. 401 - 414)

CHAPTER 30

AMERICAN INCOME TAX RETURNS

At the beginning of the preceding chapter attention was drawn to some reasons why income-tax returns cannot take the place of an adequate income census. Nevertheless tax returns are in many respects the most important single source of information we have for estimating the frequency distribution of incomes. Were there neither tax returns nor income censuses for any country, it is difficult to see how we could make even an interesting guess as to the distribution of income in the upper ranges.

American income-tax data go back to 1913. We have now at our disposal returns for the seven years, 1913 to 1919, inclusive.¹ However, the amount of information given in the official reports for the earlier years 1913, 1914 and 1915 is not great. Little is shown beyond the number of returns classified by large income intervals and the same returns classified by districts. The 1916 tax report is the most voluminous and in one respect the most adequate report which has yet appeared.² It contains a set of tables which we are sorry to miss in the later reports, showing the frequency distribution of incomes by separate occupations. Other features of this report which have been retained in later years are tables showing both number of returns and amount of net income for each income class for the country as a whole, and the same by States; tables showing the sources of the income returned in each income interval, that is the amount from wages, business, property; distribution tables arranged by sex and conjugal condition; amounts of tax collected from each income class, etc.

Changes in the Federal Income Tax Law during the period have not been such as greatly to affect any conclusions which we have drawn from the data. From the standpoint of this investigation, probably the most important changes in the law relate to *general deductions*, *professions*, and *minimum taxable income*.

In the 1916 returns all deductions were classified as *general deductions*.

¹ The *Annual Reports of the Commissioner of Internal Revenue* are the sources for American income-tax data for the years 1913 to 1915. Since 1915 the data have appeared annually as a separate Treasury Department publication entitled *Statistics of Income*.

² A peculiarity of the 1916 data is that the returns are tabulated as family rather than individual returns. "The net incomes reported on separate returns made by husband and wife in 1916 are combined and included as one return in the figures for the several classes." *Statistics of Income*, 1917, p. 22.

In the 1917 returns the types of deductions classified as *general deductions* were greatly reduced; not even *contributions* were included. In 1918 the category was enlarged; *contributions*, for example, were again placed in the *general deductions* class. Now these changes affect greatly the relations between *net* and *total* income from year to year. Reported *net* income was in 1916 only 75.43 per cent of reported *total* income, in 1917 it was 92.67 per cent, in 1918 89.74 per cent, and in 1919 88.51 per cent. As it is the *total* and not the *net* income which in the *Statistics of Income*, is divided up according to source, such fluctuations as the above interfere with comparisons of different years.

While income from *professions* was tabulated separately in 1916, in 1917 it was included in *wages and salaries*, and in 1918 and 1919 in *business*.

In the 1913 to 1916 returns exemptions were \$3,000 per annum for an unmarried person, or a married person not living with his wife (or her husband), and \$4,000 per annum aggregate exemption for married persons living together.¹ In the 1917 and later returns these minima were reduced to \$1,000 and \$2,000 respectively. However, the increase in usefulness for our purposes of the 1917 and later returns was even greater than the lowered minima would suggest. Not only was the *minimum taxable income* lowered from \$3,000 to \$1,000, but this reduction occurred in the face of a rapidly rising general level of incomes. With the rise in incomes, \$3,000 in 1918 or 1919 was relatively a much smaller income than \$3,000 in 1913. In other words, we might logically expect \$3,000 to be relatively further down the income distribution curve in 1918 than in 1916 or 1917.

The accuracy of the reporting is, of course, a matter of great importance for this investigation. Now, while it does not seem possible to measure directly from the data changes in accuracy of reporting during the period, the rapid expansion of the income-tax organization and its increasing attention to the investigation and checking of returns establish the presumption of greater statistical value in the reports for the later years. Offsetting this to an unknown degree is the apparently increasing amount of "legal evasion" in the higher income classes. The reporting for the years 1913, 1914, 1915 and 1916 appears to have been peculiarly bad in the lower income ranges. The distinct improvement in 1917 (compare the 1917 returns with those for earlier years in Tables 28B, 28C, 28D, 28E, and Charts 27 and 28 of Volume I) seems associated with the patriotic enthusiasm engendered by the war. Upon our entry into the war, not only did the Bureau of Internal Revenue make an increased effort to ob-

¹ As the returns for 1913 were for income received for the *ten months* March 1 to December 31, 1913, the actual minima used for reporting purposes were \$2,500 and \$3,333.33 (i. e., $\frac{1}{3}$ of \$3,000 and \$4,000 respectively).

tain correct returns but individuals, under the spur of patriotism, seem to have made less effort to evade.¹

The remainder of this chapter is concerned largely with a discussion of possible irregularities in the *distribution* of non-reporting and understatement in the later years. While the total amount of non-reporting and understatement was almost certainly greater in the returns for 1917 than in those for 1918 and 1919, are we sure that the non-reporting and understatement of these later years are not possibly more irregularly distributed along the frequency curve than was the case in 1917? Is it possible that the improvement in the accuracy of the published returns for 1918, as compared with those for 1917, was so much greater in the income intervals under \$5,000 that the resulting change in the shape of the frequency curve may amount to something almost akin to an "over-adjustment"?

Income returns by individuals are made on two types of blanks, a blank to be filled in by persons reporting incomes under \$5,000 and another blank to be filled in by persons reporting incomes over that figure. Now, while the returns of incomes under \$5,000 and made on "under \$5,000" blanks are examined, investigated and audited in the field soon after their receipt, the investigation and audit of the returns for incomes over \$5,000 are handled in Washington. If an individual has an actual income of \$8,000 but reports \$4,600 (on an "under \$5,000" blank), as soon as a Field Collector discovers this discrepancy, he passes the matter over to the Revenue Agent in charge of the District for Field Investigation. The return, accompanied by the Agent's report, is forwarded to Washington for final audit. Thus the Field Collectors audit only returns that are (a) made on "under \$5,000" blanks and (b) believed, *after investigation*, to be for incomes which are *actually* under \$5,000.

While the Field Audit of returns of these incomes is well under way before the preparation of the statistical tables in the *Statistics of Income* and hence appears in that tabulation to an unknown extent, the Washington audit of incomes over \$5,000 has hardly begun and hence the amended figures for these higher incomes do not appear in the *Statistics of Income*. It is impossible to say exactly how much of the "bulge"² which appears in the \$1,000 to \$5,000 interval on the double log charts of the 1918 and 1919 tax income distributions is caused by a difference in the accuracy of the published figures for returns of incomes under and over \$5,000. However, the Treasury Department states that "the *Statistics of Income*

¹ It must not, of course, be assumed that the increase in the number of returns in 1917 is traceable solely to increased goodness of reporting.

² Described in Chapter 28. At many points in the following discussion the reader should refer back to the presentation of the case for heterogeneity in the income-tax data contained in Chapter 28.

are compiled almost entirely from unaudited returns whether they be for 'under \$5,000' or 'over \$5,000.'" It seems probable therefore that the sudden change in slope of the 1918 curve (on a double log scale) at about \$5,000 can be explained only partially by a change in accuracy of the published returns at that point.

Moreover, a considerable amount of evidence, some of which has already been presented in Chapter 28, suggests that the "bulge" on the income curves for the later years corresponds to a reality on the actual income curves. While it may be somewhat over-accented in the published figures for 1918 and 1919, and while the figures for 1917 might have shown more of such a "bulge"¹ had the reporting been better, we must not assume that the published figures for either 1917 or 1918 give a radically incorrect picture of the facts merely because the income curves for the two years are so different. The dogma of the similarity of the income curve from year to year has little evidence to support it.

It is by no means certain that even the apparently definite and sharp angles on the curves in this \$4,000 to \$6,000 region give an unreal picture. While it is true that we find the same angles on the wages and salaries curve, that curve itself seems heterogeneous. An income distribution curve composed of wage and salary earners (in the ordinary sense of the terms) may well cut an income distribution curve composed of "salaried entrepreneurs," and business and financial experts somewhere in the lower income ranges. The angle on the composite curve may give a decidedly accurate picture of the facts.²

Let us see what light the data throw on some of these problems. Table 30A showing the number of returns for the lower income intervals in 1917, 1918, and 1919 and the percentage movements from year to year illustrates the great increase in the number of returns in the under-\$5,000 intervals between 1917 and the later years.

Chart No. 28 of Volume I, on which are drawn the frequency distributions for each year from 1916 to 1919 on a double log scale, shows the difference in the appearance of the income curves for the three years. Examining that chart we notice that the 1918 data-points, which in the upper income ranges run nearly as smoothly as the 1917 points, in the \$4,000 to \$5,000 interval move abruptly upwards and from there on into the lowest income ranges are well above the 1917 points, showing on the chart an irregular, plateau-like effect in these lowest income ranges. No such "plateau" is apparent on the 1917 line. The year 1919 presents in that chart a

¹ While the 1917 curve runs much more smoothly in the \$3,000 to \$6,000 range than either the 1918 or 1919 curves, it is not without the hint of a bulge beginning at about \$4,500. See p. 412.

² In constructing the complete income distribution curve for 1918, published in Volume I, the influence of changes in the accuracy of reporting around \$5,000 income was probably overestimated.

TABLE 30A

Income intervals	Number of returns			Percentage increases		
	1917	1918	1919	1918 over 1917	1919 over 1918	1919 over 1917
\$2,000-\$3,000.....	838,707	1,496,878	1,569,741	78.47	4.87	87.16
3,000- 4,000.....	374,958	610,095	742,334	62.71	21.68	97.93
4,000- 5,000.....	185,805	322,241	438,154	73.43	35.97	135.81
5,000- 6,000.....	105,988	126,554	167,005	19.40	31.96	57.57
6,000- 7,000.....	64,010	79,152	109,674	23.66	38.56	71.34
7,000- 8,000.....	44,363	51,381	73,719	15.82	43.48	66.17
8,000- 9,000.....	31,769	35,117	50,486*	10.54	43.77	58.92
9,000-10,000.....	24,536	27,152	37,967	10.66	39.83	54.74

similar appearance to 1918 though the absence of small intervals in the range immediately above \$5,000 disguises the characteristics of the curve materially.¹

The change in the contour of the lower range of the tax income frequency curve from 1917 to 1918 and 1919, is, as we have mentioned, associated with a large increase in the relative amount of income from wages and salaries in the lower intervals. Tables 30B and 30C are interesting in this connection.²

The 1916 figures in Table 30B are introduced simply because they are computable.³ However, too much weight must not be attached to them. The 1916 returns are undoubtedly extremely inadequate. The high percentages that year from \$3,000 income (the 1916 minimum) up to about \$10,000 may possibly be the result of the ease with which *salary* returns (as opposed to *wage*, *business*, or other returns) are obtainable. The \$4,000 to \$5,000 interval is the lowest comparable interval for the four years.⁴ In that interval the numbers of returns by years were:

1916- 72,027

1917-185,805

1918-322,241

1919-438,154

¹ When chart 28 was drawn for Volume I, only "preliminary" large interval data were available. Final small interval data show a "bulge" very similar to that seen in the 1918 line.

² The 1917 official *wages* figures include income from professions. The 1918 and 1919 *wages* figures do not. This makes the increase in the percentages in 1918 still more striking. Income from professions was tabulated separately in 1916, but was included in the *wages* figures for that year in order that 1916 and 1917 might be comparable.

³ No data are available from which corresponding figures for 1913, 1914 or 1915 might be calculated.

⁴ The \$3,000-\$4,000 interval did not in 1916, include married persons making a joint return.

TABLE 30B

PER CENT THAT INCOME FROM WAGES AND SALARIES IN EACH NET INCOME CLASS WAS OF TOTAL NET INCOME IN THAT CLASS

Income class	1916	1917	1918	1919
\$ 1,000-\$ 2,000			79.45	83.49
2,000- 3,000			69.75	74.53
3,000- 4,000	76.98		55.21	61.86
2,000- 4,000		46.32	(61.42)	(69.45)
4,000- 5,000	66.86	36.30	48.85	52.48
5,000- 10,000	53.31	35.16	33.53	43.24
10,000- 20,000	35.38	32.94	38.60	38.11
20,000- 40,000	24.60	26.82	33.16	33.38
40,000- 60,000	17.23	22.74	27.88	27.57
60,000- 80,000	16.20	19.67	25.36	24.01
80,000- 100,000	13.37	18.51	22.16	22.70
100,000- 150,000	13.34	15.75	18.44	18.75
150,000- 200,000	9.39	12.65	16.16	15.42
200,000- 250,000	9.14	12.30	13.07	13.62
250,000- 300,000	7.87	9.36	12.57	11.92
300,000- 500,000	6.59	10.17	11.27	10.18
500,000-1,000,000	5.21	6.39	5.42	6.80
1,000,000-1,500,000	4.84	2.83	7.54	1.60
1,500,000-2,000,000	3.23	3.76	2.21	10.00
2,000,000 and over51	2.39	.85	4.02

The amounts of income from wages and salaries and from other net income in the \$4,000-\$5,000 interval were year by year in millions of dollars:

	1916	1917	1918	1919
Wages and salaries ^a	216	301	703	1,029
Other net income	107	528	736	931

^a Income from professions is included in the 1916 and 1917 wages and salaries figures.

The percentage changes in these items from one year to the next were:

	<u>1917</u>	<u>1918</u>	<u>1919</u>
	1916	1917	1918
Wages and salaries	139.3	233.7	146.4
Other Net Income	493.0	139.4	126.6

It is plain that the great increase in the \$4,000-\$5,000 interval ¹ in 1917 was in income from other sources than wages and salaries.

Table 30C shows the wage and salary figures compared with *total* income instead of *net* income as in Table 30B. It was, of course, necessary to retain the *net* income intervals as the data are not classified in *total* income

¹ As may be seen from Tables 30B and 30C, the increase from 1916 to 1917 in income from other sources than wages and salaries was greater than the increase in income from wages and salaries not only in the \$4,000-\$5,000 interval but also in the \$5,000-\$10,000 interval.

intervals. Though the relations between years are different in this table from what they are in the net income table,¹ the distribution of the percentages in each individual year shows much the same characteristics in both tables.

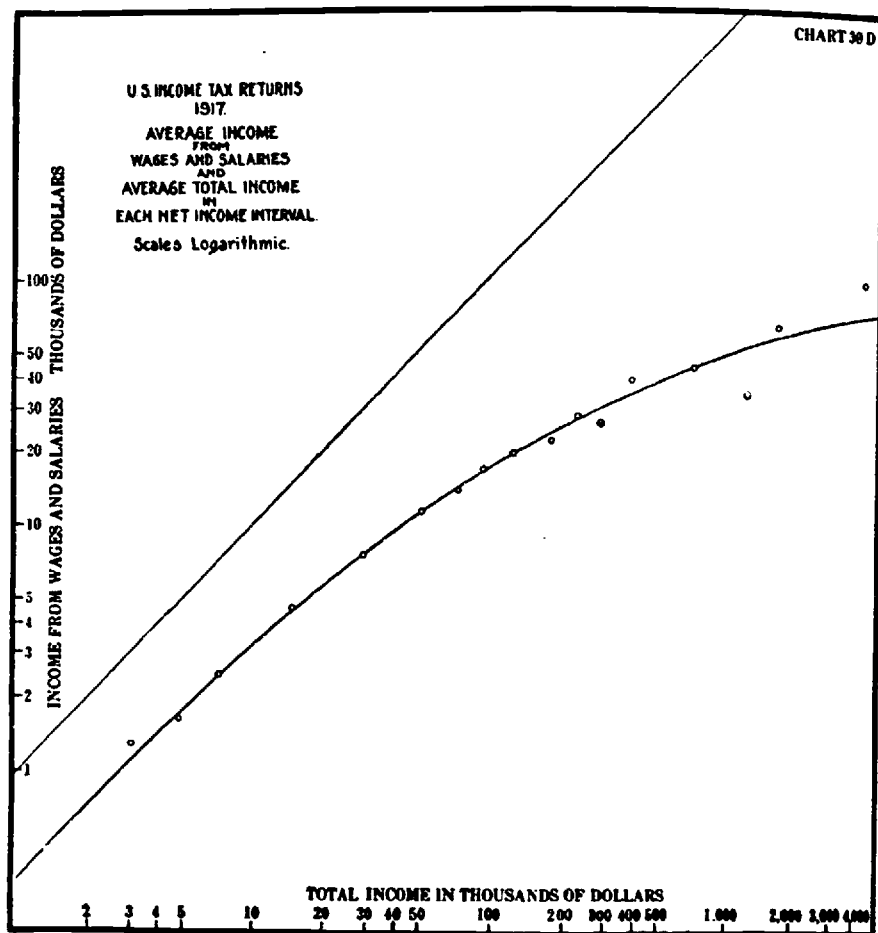
TABLE 30C

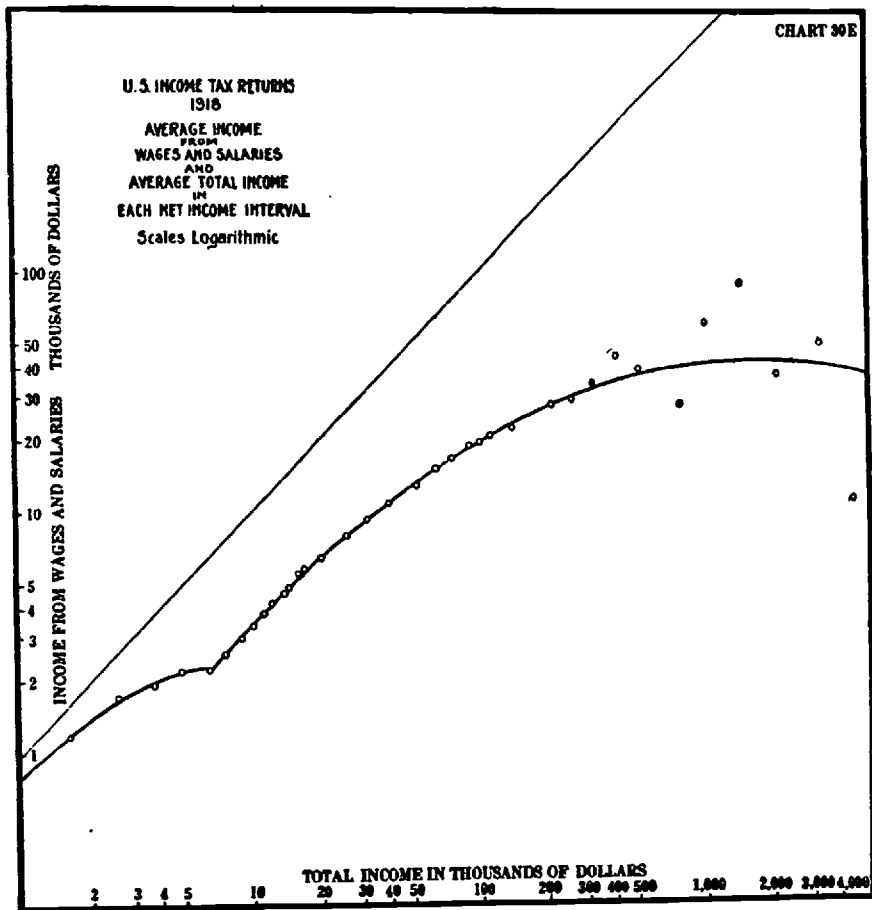
PER CENT THAT INCOME FROM WAGES AND SALARIES IN EACH NET INCOME CLASS WAS OF TOTAL INCOME IN THAT CLASS

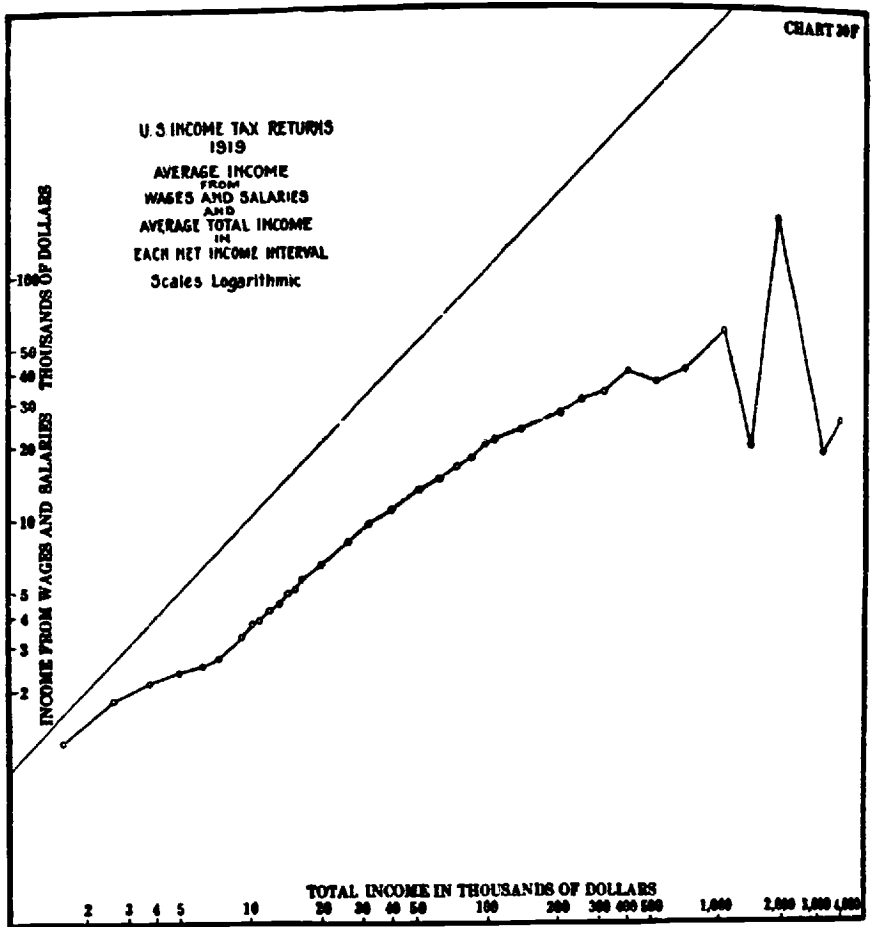
Income class (Net)	1916	1917	1918	1919
\$ 1,000- 2,000			74.67	77.25
2,000- 3,000			65.42	69.14
3,000- 4,000	47.74		51.14	56.71
2,000- 4,000		41.82	(60.15)	(64.12)
4,000- 5,000	45.96	33.60	44.82	47.12
5,000- 10,000	36.38	33.87	33.55	36.60
10,000- 20,000	25.76	30.89	33.10	32.70
20,000- 40,000	18.81	25.20	28.76	28.36
40,000- 60,000	13.75	21.23	23.79	23.39
60,000- 80,000	12.76	18.56	21.51	20.33
80,000- 100,000	10.74	17.61	19.00	19.25
100,000- 150,000	11.06	15.05	15.92	15.40
150,000- 200,000	7.68	12.01	13.10	12.41
200,000- 250,000	7.83	11.75	11.22	11.26
250,000- 300,000	6.64	8.71	10.73	9.80
300,000- 500,000	5.50	9.59	9.62	8.19
500,000-1,000,000	4.35	5.88	4.37	5.38
1,000,000-1,500,000	4.12	2.62	6.29	1.34
1,500,000-2,000,000	2.82	3.54	1.81	8.54
2,000,000 and over	.47	2.18	.63	.32

The percentages in Tables 30B and 30C show each year a sudden increase (as we approach the lower income intervals) somewhere in the \$4,000 to \$5,000 or the \$5,000 to \$10,000 interval. At *exactly* what point each year do these sudden increases seem to occur? Charts 30D, 30E and 30F present the material in a slightly different form. They illustrate the relationship between the average income from wages and salaries in each net income interval and the average total income in the same net income interval for the years 1917, 1918 and 1919 on a double log scale. The 1918 and 1919 charts immediately suggest the improbability of being able to describe the data by a single simple mathematical expression. To the 1918 data-points have been applied two distinct mathematical curves, which fit the data remarkably well and intersect at about \$6,700 total income. The curve fitted to the upper income ranges is a parabola, while that fitted to the lower income ranges is an hyperbola, one of whose asymptotes is the 45° line which divides the chart into a "possible" and an "im-

¹ Some reasons for the changes in relation of *net* to *total* income from year to year are mentioned on pages 401 and 402.







possible" area. The equations of the two (1918) curves on a double log scale are (I) $y + 3.92945 - 2.744 x + .22 x^2 = 0$ (parabola)

(II) $y^2 - 3.981909 y - .867246 xy + 3.981909 x - .132754 x^2 - .060262 = 0$ (hyperbola)

As it is difficult to estimate accurately by eye the goodness of fit of a curve to data when charted on a log scale, Table 30E is introduced:

TABLE 30E

WAGES AND INCOME IN THE 1918 INCOME TAX RETURNS

Net income intervals (1918)	Average total income	Average income from wages and salaries		Percentages that data are of mathematical curves
		Data	Mathematical curves	
\$ 1,000-\$ 2,000	\$ 1,566	\$ 1,169	\$ 1,178	99.2
2,000- 3,000	2,583	1,690	1,652	102.3
3,000- 4,000	3,710	1,897	1,955	97.0
4,000- 5,000	4,866	2,181	2,117	103.0
5,000- 6,000	6,388	2,192	2,216	98.9
6,000- 7,000	7,620	2,537	2,555	99.3
7,000- 8,000	8,952	2,963	3,012	98.4
8,000- 9,000	10,148	3,341	3,407	98.1
9,000- 10,000	11,214	3,747	3,760	99.7
10,000- 11,000	12,207	4,171	4,078	102.3
11,000- 12,000	13,707	4,555	4,542	100.3
12,000- 13,000	14,263	4,806	4,709	102.1
13,000- 14,000	15,922	5,529	5,204	106.2
14,000- 15,000	16,778	5,801	5,455	106.3
15,000- 20,000	20,167	6,375	6,400	99.6
20,000- 25,000	25,859	7,891	7,860	100.4
25,000- 30,000	31,704	9,196	9,211	99.8
30,000- 40,000	39,644	10,711	10,872	98.5
40,000- 50,000	52,319	12,639	13,192	95.8
50,000- 60,000	64,327	14,963	15,066	99.3
60,000- 70,000	74,848	16,576	16,539	100.2
70,000- 80,000	90,437	18,764	18,459	101.7
80,000- 90,000	98,379	19,273	19,351	99.6
90,000- 100,000	111,515	20,447	20,682	98.9
100,000- 150,000	139,520	22,212	23,163	95.9
150,000- 200,000	211,959	27,758	27,829	99.7
200,000- 250,000	259,487	29,107	30,068	96.8
250,000- 300,000	317,578	34,076	32,226	105.7
300,000- 400,000	409,756	44,393	34,786	127.6
400,000- 500,000	514,882	38,967	36,847	105.8
500,000- 750,000	765,905	27,582	39,765	69.4
750,000-1,000,000	1,013,846	61,183	41,229	148.4
1,000,000-1,500,000	1,426,182	89,710	42,199	212.6
1,500,000-2,000,000	2,084,715	37,118	42,199	88.0
2,000,000-3,000,000	3,263,673	50,178	40,729	123.2
3,000,000-4,000,000	4,515,732	11,013	38,753	28.4

The data of table 30E move rather erratically in the intervals above \$300,000 per annum income. This is natural in view of the small number

of cases in these upper intervals. There were only 627 returns reporting net incomes of over \$300,000 per annum; this is less than one seventieth of one per cent. of the total number of returns. In the 28 intervals under \$300,000 per annum 14 of the percentages show the data within one and one half per cent. of the mathematical values.

These mathematical curves have not been introduced as being in any sense the "law" of the data but merely to emphasize how smoothly the data curves run and yet how unmistakable a sensation they give us of two parts, one above about \$6,700 total income and one below that figure.¹ It would, of course, be quite impossible to get any sort of approximation to the lower range data by producing the parabola fitted to the upper income ranges. How impossible may be seen from Table 30EE.

TABLE 30EE

WAGES AND INCOME IN THE 1918 INCOME TAX RETURNS						
Net income intervals (1918)	Average total income	Average income from wages and salaries			Percentages that data are of	
		Data	Hyperbola	Parabola	Hyperbola	Parabola
\$4,000-\$5,000	\$4,866	\$2,181	\$2,117	\$1,574	103.0	138.6
3,000- 4,000	3,710	1,897	1,955	1,152	97.0	164.7
2,000- 3,000	2,583	1,690	1,652	745	102.3	226.8
1,000- 2,000	1,566	1,169	1,178	391	99.2	299.0

The 1919 data show the same two-curve appearance as the 1918 data. This may be clearly seen from chart 30F.² The intersection of the two curves would be at about \$7,100 instead of \$6,700 as on the 1918 chart. Is there any sign of such a change from one curve to another on the 1917 data? There seems to be. Chart 30D shows the 1917 data with a parabola fitted to the observations above the first interval. This curve and Table 30D give us a strong impression that the first interval cannot be described by any simple curve which describes the remainder of the data. The same two-curve characteristics as the 1918 and 1919 data are strongly suggested.

The equation of the 1917 parabola on a double log scale is $y + 1.8417 - 1.8346x + .124x^2 = 0$. The pooriness of the fit to the first interval and the comparative goodness of the fit to the remainder of the data as high as \$250,000 per annum may be seen from Table 30D. If the data were numerous enough to permit us fitting two curves they would probably intersect at about \$4,500.

¹ An alteration in the size of the intervals in which the data are quoted by the Income Tax Bureau would of course change the data curve to some extent. However, taking the intervals as they come and fitting the curves to them we get the unmistakable impression of great regularity. It seemed scarcely worth while to fit the curves to areas rather than points.

² The story told by Chart 30F is so plain it seemed hardly necessary to fit another set of curves.

TABLE 30D

WAGES AND INCOME IN THE 1917 INCOME TAX RETURNS

Net income intervals (1917)	Average total income	Average income from wages and salaries		Percentages that data are of mathematical curve
		Data	Mathematical curve	
\$ 2,000-\$ 4,000...	\$ 3,059	\$1,280	\$1,101	116.3
4,000- 5,000...	4,818	1,619	1,688	95.9
5,000- 10,000...	7,210	2,442	2,422	100.8
10,000- 20,000...	14,623	4,517	4,374	103.3
20,000- 40,000...	29,236	7,368	7,411	99.4
40,000- 60,000...	51,940	11,024	11,038	99.9
60,000- 80,000...	72,811	13,516	13,699	98.7
80,000- 100,000...	93,742	16,510	15,992	103.2
100,000- 150,000...	126,979	19,108	19,081	100.1
150,000- 200,000...	181,156	21,758	23,147	94.0
200,000- 250,000...	233,880	27,501	26,388	104.2
250,000- 300,000...	293,905	25,587	29,478	86.8
300,000- 500,000...	398,517	38,204	33,877	112.8
500,000-1,000,000...	740,769	43,558	43,632	99.8
1,000,000-1,500,000...	1,294,619	33,973	52,845	64.3
1,500,000-2,000,000...	1,812,388	64,201	58,358	110.0
2,000,000 and over...	4,551,718	99,132	71,945	137.8

Both the regularity of the data curves and the positions of the intersections of the mathematical curves¹ might suggest that heterogeneity of the wages and salaries data was the primary cause of the irregularity in the total income curve. The position of the points of intersection of the mathematical curves might seem inconsistent with a sudden change in accuracy of reporting at exactly \$5,000.

However this argument does not appear so conclusive when we examine the actual amount of wages in each income interval. The constitution of the reported income each year may be seen rather plainly in Charts 28T, 28U, 28V, 28W, 28X, 28Y, 28Z, and 28AA.² These charts show the number of dollars per dollar income interval reported in each income interval by sources for the years 1916 to 1919.³ They not only illustrate the fact that the constitution of the income curve changes radically as we move from small to large incomes but also picture the salient characteristics of these changes; each source curve, being charted on a double log scale, may be

¹ Particularly the 1919 intersection which is above the \$5,000 to \$6,000 net income interval.

² See pages 385 to 392.

³ The five lines representing wages, business, rents, interest, and dividends were found to interweave to such an extent when drawn on one chart that two charts were drawn for each year, one representing wages and business and the other incomes from property.

Wages includes "salaries, wages and commissions" and in 1916 and 1917 "professions and vocations."

Business includes "business," "partnerships, personal service corporations, estates, and trusts," and "profits from sales of real estate, stocks, bonds, etc.," and in 1918 and 1919 "professions."

Rents includes royalties.

Interest includes unclassified investment income.

seen at a glance in its entirety. We see from Charts 28X and 28Z that, though the ratio of the income from wages and salaries to total income may, when charted, show an angle above \$5,000, the entire "bulge" on the wages and salaries curve itself occurs in the under-\$5,000 intervals both in 1918 and 1919. Moreover, while "wages and salaries" is the largest item in these lowest income intervals, and hence is the controlling factor in determining the peculiar shape of the total curve in this region, it is not the only item showing irregularities and "bulges." Some of these movements are extremely difficult to explain. Why should a "bulge" appear on the lower income ranges of the "rent" curve in 1918 and by 1919 become pronounced? ¹ The appearance of a bulge on the *wage* curves in 1918 and 1919 seems quite explicable on the basis of heterogeneity within the wage and salary data themselves but one feels a shade less confidence in any explanation of why that curve moved in this peculiar manner if the explanation does not seem also clearly applicable to the rents curve which moved in an apparently similar manner.

¹ A mere increase in rents will not, of course, account for this *unevenness* in their distribution.