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Volume Two

Part IV

Derivation and Characteristics of the Estimates

Chapter 7

Coverage of Federal Income Tax Returns

1 *Tax Return Population*

A tax return may record the income of one or more persons or an income that is the source of support for one or more persons.[1] Since returns are not equivalent with respect to the number of income recipients or of dependents, they were converted to the number of persons dependent upon the income reported. Conversion was to dependents rather than to recipients because it seemed more useful to measure distribution of income by size among the persons assumed to share in that income than among recipients regardless of the number of dependents involved.[2]

The conversion is described in detail in Appendix 2. The general rule was to count two persons for each joint return and one for each return in other family status classes, then calculate the number of dependents proper from the credits claimed. In this way the total number of persons represented on all returns with statutory net income was approximated for each year for each income class up to $10,000 and for those of $10,000 and over treated as a single class.[3]

For comparison with the population to whom countrywide income payments flow, the estimate of the tax return population suffers from several biases. First, the federal tabulations include tax returns from Alaska and Hawaii as well as from continental United States, and there is no easy way of eliminating these two territories. However, the numbers involved are relatively small: in 1942, the last year for which data were published for both, Hawaii had 165,000 returns among the almost 37 million total; and even when the 39,000 returns for Alaska are added, the total for these territories is a negligible fraction of the tax return population.[4]

[1] For brevity, 'tax returns' designate federal income tax returns by individuals. Other types are distinguished by an adjective.

[2] For a more detailed discussion of the reasons for choosing the person instead of the recipient as the unit of classification in our analysis see Chapter 1.

[3] Because of paucity of data for statutory net deficit returns, and of the consequent difficulty of using them in our analysis, they were omitted. Hence, the tax return population throughout the analysis is that represented by statutory net income returns (see Sec. 3).

[4] *Statistics of Income, 1942,* Part 1, Table 1, pp. 88-9.

Second, nonresident aliens are required to file income tax returns for all taxable income from sources within the United States, regardless of amount, unless total tax has been paid at the source. They may be largely omitted from the count of total population of the United States, but they can be only a minute fraction of a percentage of the latter.[5]

More serious biases are likely to characterize the estimate of dependents proper. Because of tax advantages, the bias is toward exaggerating or duplicating the number of dependents claimed on returns as compared with the number that would be recognized in more disinterested reporting. On the other hand, before 1944 the tax law limited credit claims to dependents under 18 years of age and to those incapable of self-support because of mental or physical illness. Yet there must have been numerous dependents neither so young nor so disabled as to qualify under the law. Their exclusion causes an underestimate in the total number of persons dependent upon income reported on tax returns — in the sense of having and exercising claims on it for living and related expenses. This downward bias in the tax return population may be appreciably greater than the upward bias due to unwarranted claims for tax credits. If so, the contrast between the high per capita income of the tax return population and the low per capita income of the nontax return population is exaggerated.

Table 67 sheds some light on these issues. The tabulations of tax returns permit a distinction between those filed by heads of families (joint returns of husband and wife, single heads of families, etc.) and those filed by single persons (persons who, under the tax law, are neither heads of families nor dependents). There is no information to show whether the latter represent persons living alone, each constituting an independent economic unit, or members of families who file separate returns because they are not legally dependent and because the relation to the head of the family is such as to bar reporting on a joint return.

The major year to year changes in total returns (col. 1 and 2) are due to shifts in the exemption level. The increase following 1916 is due to a reduction in the personal exemption from $4,000 to $2,000 for a family head, and from $3,000 to $1,000 for a single person; the drop following 1924, to a raising of the exemption from $2,500 to $3,500 for a family head, and from $1,000 to $1,500 for a nonhead; the increase in 1932, to a restitution of the exemption to the lower levels of 1924; the further increase in 1940 and the years through 1944, in part to the drastic lower-

[5] In 1916 nonresident aliens filed 4,294 of the total 437,036 returns; their net income, tax definition, was $65.8 million of the total, $6,299 million. In 1917 the numbers were 3,602 and 3,472,890, and the net income $75.9 million and $13,652 million respectively (*Statistics of Income, 1916*, Table 11, p. 44; *1917*, Table 21, p. 71).

Table 67

Distribution of Federal Income Tax Returns between Family and Nonfamily Types, 1913-1948 (includes only net income returns; thousands).

	Total Returns (1)	Returns Adj. for Separate Returns of Wives & for Community Property Returns (2)	Family Returns (3)	Single Person Returns (4)	% Col. 3 Is of Col. 2 (5)	% Col. 4 Is of Col. 2 (6)
1913	358	351	n.a.	n.a.	n.a.	n.a.
1914	358[a]	354	n.a.	n.a.	n.a.	n.a.
1915	337[a]	332	n.a.	n.a.	n.a.	n.a.
1916	437	429	355	74	82.7	17.3
1917	3,473	3,441	2,077	1,364	60.4	39.6
1918	4,425	4,389	2,938	1,451	66.9	33.1
1919	5,333	5,274	3,310	1,964	62.8	37.2
1920	7,260	7,162	4,402	2,760	61.5	38.5
1921	6,662	6,560	4,007	2,554	61.1	38.9
1922	6,787	6,672	4,108	2,564	61.6	38.4
1923	7,698	7,510	5,088	2,422	67.7	32.3
1924	7,370	7,187	4,549	2,639	63.3	36.7
1925	4,171	4,041	2,455	1,586	60.8	39.2
1926	4,138	4,003	2,407	1,597	60.1	39.9
1927	4,102	3,977	2,435	1,541	61.2	38.8
1928	4,071	3,926	2,389	1,537	60.9	39.1
1929	4,044	3,907	2,393	1,513	61.3	38.7
1930	3,708	3,586	2,252	1,334	62.8	37.2
1931	3,226	3,126	2,001	1,125	64.0	36.0
1932	3,877	3,787	2,343	1,444	61.9	38.1
1933	3,724	3,636	2,288	1,349	62.9	37.1
1934	4,094	3,995	2,502	1,493	62.6	37.4
1935	4,575	4,454	2,723	1,731	61.1	38.9
1936	5,413	5,253	3,135	2,118	59.7	40.3
1937	6,350	6,165	3,627	2,538	58.8	41.2
1938	6,204	6,028	3,647	2,381	60.5	39.5
1939	7,633	7,427	4,326	3,101	58.3	41.7
1940	14,665	14,418	8,983	5,434	62.3	37.7
1941	25,855	25,304	17,010	8,294	67.2	32.8
1942	36,538	35,061	24,102	10,959	68.7	31.3
1943	43,602	40,624	27,793	12,831	68.4	31.6
1944[b]	47,012	44,332	30,451	13,881	68.7	31.3
1945[b]	49,865	46,876	31,949	14,928	68.2	31.8
1946[b]	52,722	49,690	33,725	15,965	67.9	32.1
1947[b]	54,910	n.a.	n.a.	n.a.	n.a.	n.a.
1948[b]	51,847	n.a.	n.a.	n.a.	n.a.	n.a.

Because of rounding, columns may not add to total.

n.a: not available.

[a] Excluding returns filed by withholding agents. For 1914 they numbered 28,471 on which a tax of $5,528,366 was collected at the source; for 1915 they numbered 34,132 and $6,591,912 was paid (*Annual Report of the Commissioner of Internal Revenue, 1915*, p. 25, and *1916*, p. 33).

[b] In this table and in all subsequent tables pertaining to federal income tax returns, the entries for 1944 and later years are for returns with adjusted gross, not net income.

Column

1 *1913-15: Statistics of Income, 1942*, Part 1, Table 14, p. 232
1916-48: Table 111, column 2

2 *1913-15: Annual Report of the Commissioner of Internal Revenue*
1916-46: Table 111, column 3

3, 4 Table 111, columns 4 and 5 respectively

ing of exemptions — by 1944 they had been reduced to $1,000 for a family head and $500 for a nonhead; and the decrease in 1948, in part to the raising of the per capita exemption from $500 to $600, with additional exemptions for old age and blindness.

A second factor affecting the number of tax returns are the changes in economic conditions that modify the significance of dollar exemption levels. For example, an exemption of $3,500 or $2,500 for a family head means a larger number of tax returns in years of prosperity and high incomes than in years of depression and low incomes. This explains the short term fluctuations in the number of returns, with the reference years of cyclical lows (1921, 1924, 1927, 1930-33, 1938) marked by drops, and the reference years of cyclical highs (1920, 1923, 1937, and the years associated with World War II) marked by peaks.

The large proportion of single person returns is the most significant point in the present connection. Except for 1916, when the exemption for a single person was at the high level of $3,000 — near that for a family head, $4,000 — single person returns through 1940 are over a third, distinctly exceeding the proportion of 1-person families in the total population. According to the 1940 Census, 1-person families constituted slightly less than 8 percent of total private families in 1930 and about 10 percent in 1940. A similar comparison for urban families alone, relevant because they are the chief filers, shows 8 and about 11 percent respectively. A large part of the difference between this low percentage in the Census data and the high percentage in Table 67 is explained by the Census definition of a private family: "a family head and all other persons in the home who are related to the head by blood, marriage, or adoption, and who live together and share common housekeeping arrangements".[6] The NRC Study of Consumer Incomes for 1935-36 followed a broader definition, including under single individuals not only individual householders but also single persons living in lodging houses or hotels, servants and lodgers in private homes, and sons and daughters living with their parents but paying for board and lodging and not pooling their incomes in the common family fund. Families were estimated to number 29.4 million, and single individuals, 10.1 million or 25.5 percent of total consuming units (institutional residents excluded).[7] The proportion of single person returns

[6] *1940 Census*, Population and Housing, Families, General Characteristics (Washington, 1943), p. 2. The percentages quoted in the text are from Table 8, p. 24. Neither the 1910 or 1920 Census classified families by size.

[7] *Consumer Incomes in the United States* (National Resources Committee, Washington, 1938), Table 1, p. 4. For the definition of single individuals, see *ibid.*, p. 30.

(Table 67, col. 6) is larger than even this higher percentage resulting from a more liberal definition of a single person economic unit.

Before attempting to interpret this structure of tax returns by family type, we comment upon two aspects of Table 67. First, the proportion of single person returns tends to rise from 1917 to 1939, before the recent wide extension of the coverage of the federal income tax law. This trend is especially manifest when we calculate arithmetic means for column 6 for the three periods distinguished by different exemption levels—1917-24, 1925-31, and 1932-39.[8] Their movement is in accord with the rise in the proportion of 1-person families shown by the Census data from 1930 to 1940. Second, the percentage of single person returns declines drastically after 1939, suggesting that as coverage of the income tax law expands, the family structure of the returns approaches that of the total population.

The very high proportion of single person returns may be attributed to two factors. First, the exemptions may reach relatively further down the income scale of single persons than of families. Second, individuals who, either in the Census or the NRC classification would be considered members of a family, may be required by law to report separately. As far as the first factor is operative, the tax returns give relatively greater representation to 1-person economic units than to family units; but, except for this bias in weighting, they represent both types of unit as completely. As far as the second factor is operative, tax returns understate the true size of economic families. The first factor does not present any obstacle in analyzing shares of upper income groups. The second factor, in and of itself, merely shifts persons from family to single person returns. But it suggests the greater difficulty that some individuals who share in and are dependent upon the family income may not be recorded even on single person returns and thereby may be omitted from the tax return population.

The first factor is by far the more important, largely explaining the high proportion of single person returns in all tax returns. The NRC distributions for 1935-36 show that the $1,000 exemption limit for single individuals covers about 40 percent of all individual units, whereas the $2,500 exemption limit for families covers only about 13 percent of all family

In an unpublished revision in 1943, the families were estimated to number 30.2 million and single individuals, 8.1 million. The definition of a family and of a single individual was not changed. With this revision, the percentage of individuals in total consuming units becomes 21.2 instead of 25.5. The excess of the proportion of single persons in income tax returns becomes, therefore, even larger. I am indebted to Hildegarde Kneeland for making these unpublished revisions available.

[8] The resulting means are 36.8, 38.4, and 39.3. For family heads a minor break in the first period should be noted between 1923 and 1924, the exemption having been raised in 1924 from $2,000 to $2,500.

units.[9] And this is not due entirely to the use of income tax returns to piece out the NRC distributions at the levels of $7,500 and over. Combining these results with the NRC estimates of the proportion of family and single individual units in total consuming units (74.5 and 25.5 percent respectively), we would expect that single person returns would exceed family returns — in the proportion of 102 (25.5 x 0.40) to 97 (74.5 x 0.13) — rather than fall short of them.[10] Even allowing for the fact that income as defined by the NRC is larger than that as defined by the federal law for tax purposes, one could reasonably attribute the peculiar family type structure of tax returns almost entirely to the first factor. Yet the second factor, the underreporting by families because some members may be required by law to report as individuals, should be explored, since it is possible that the missing family members may not all be accounted for on single person returns.

Table 68, column 1, tests the latter hypothesis crudely. Applying the methods described in Appendix 2, we calculate the number represented on family returns, then the average per return, which ranges from somewhat less than 3 to not more than 3⅓. For 1935-36 the number per family return is almost 3; the average number per family consumer unit, as estimated by the NRC, is 3.9. Thus, the average family unit is understated about 25 percent on tax returns.

However, part of the difference may be genuine in the sense that the population represented on tax returns is characterized by smaller family units than the total population. Obviously, through most of the period persons required to file federal tax returns were largely in the upper income brackets, living chiefly in the larger urban communities which are characterized by higher dollar incomes. From *Consumer Incomes in the United States* we calculated the average size of families in urban communities alone, excluding families that received any relief during the year, to be 3.6.[11] On the assumption that during most of the period returns from rural

[9] *Op. cit.*, Table 3, p. 18, and Table 15, p. 30.

[10] The revised NRC figures would yield a ratio of single person to family returns of 6 to 10 — almost the ratio actually observed in the number of income tax returns.

[11] Table 7, p. 23. The inclusion of rural nonfarm communities would not increase the average size of family significantly, since their average number per family is only 3.7. Nor would we get a substantially different average were we to weight community size means (of the number per family) by the number of tax returns, given for 1936 in *Statistics of Income Supplement Compiled from Income Tax Returns for 1936* (Treasury Department, June 1940), Section 1, Table 5, pp. 65 ff.

Making a similar calculation for nonrelief families classified by family income (see the distribution in App. 6, Sec. A, using number per family from Table 4, p. 21,

Table 68

Number of Persons per Family Return by Net Income Classes, Tax Definition, 1916-1946 (includes only net income returns)

	ALL NET INCOME RETURNS (1)	NET INCOME CLASSES, TAX DEFINITION $10,000 & Over (2)	$5,000-10,000 (3)	$3,000-5,000 (4)	$2,000-3,000 (5)	Under $2,000 (6)
1916	3.29	3.02	3.38	3.41		
1917	3.02	3.02	3.39	3.40	3.19	2.29
1918	3.22	2.98	3.34	3.38	3.38	2.51
1919	3.16	3.01	3.21	3.25	3.28	2.71
1920	3.32	3.05	3.25	3.31	3.56	2.71
1921	3.05	3.08	3.37	3.27	3.00	2.81
1922	3.20	3.17	3.47	3.28	3.23	2.97
1923	3.18	3.14	3.38	3.38	3.16	2.89
1924	3.20	3.26	3.29	3.32	3.14	3.03
1925	3.20	3.18	3.31	3.28	3.00	3.02
1926	3.26	3.28	3.31	3.44	2.95	2.94
1927	3.09	3.22	3.35	3.35	2.63	2.40
1928	3.14	3.22	3.30	3.25	2.74	2.94
1929	3.24[a]	3.23	3.26	3.31[a]	2.97[a]	3.31[a]
1930	3.14	3.23	3.30	3.25	2.77	3.02
1931	3.13	3.29	3.35	3.26	2.76	2.98
1932	3.16	3.25	3.40	3.51	2.99	2.97
1933	3.18	3.38	3.41	3.49	3.01	3.04
1934	3.06	3.41	3.41	3.39	2.97	2.70
1935	3.00	3.24	3.34	3.30	2.86	2.66
1936	2.97	3.19	3.29	3.25	2.82	2.64
1937	2.92	3.12	3.23	3.21	2.76	2.56
1938	2.88	3.11	3.24	3.21	2.74	2.52
1939	2.83	3.07	3.18	3.14	2.69	2.46
1940	2.92	3.05	3.15	3.18	3.00	2.55
1941	2.94	3.01	3.07	3.01	3.14	2.74
1942	3.06	2.98	3.06	3.16	3.24	2.89
1943	3.04	2.95	3.05	3.20	3.15	2.88
1944	3.19	3.08	3.24	3.31	3.13[b]	
1945	3.16	3.12	3.23	3.35	3.07[b]	
1946	3.17	3.19	3.25	3.16[c]		

[a] Owing to an error in the *Statistics of Income* tabulation of personal exemptions and credit for dependents for North Dakota returns under $5,000, columns 1 and 4-6 are too high. We estimated the correct figure for column 1 to be about 3.11, but made no corresponding estimates for columns 4-6.

[b] Not available for columns 5 and 6 separately.

[c] Not available for columns 4, 5, and 6 separately. For net income classes of $1,500-5,000, the figure is 3.25; for classes under $1,500, 2.86.

Calculated from Table 111, columns 4 and 6.

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and the distribution by family classes of different size from Table 8B, p. 97, *Consumer Incomes in the United States*), we get 4 as the average number per family unit for all nonrelief families with incomes of $3,000 and over. But this comparison assigns a double effect to the possible omission of earners: if such an earner is reported separately on or omitted from tax returns, his inclusion in the family unit would raise both the number per family and the total family income. The comparison in the text provides a more reliable approach to gauging the possible understatement in the size of the family unit on tax returns.

nonfarm or from rural farm areas are an insignificant proportion of the total tax return population,[12] the suggested understatement of the true size of the family unit is over 15 percent, indicating that the average number per family tax return should be raised almost a fifth to approximate the size of family as an economic unit.[13]

As already indicated, some of the individuals omitted from family tax returns may be recorded on single person returns, and thus not lost in the calculation of population dependent upon tax return income. In the Study of Consumer Incomes many separate earners were presumably reincluded with family units. These earner members, who pooled their income with that of the family and hence were not treated as single individuals, may have filed separate returns. But the analysis above has indicated that such separate reporting must be minor indeed and can scarcely compensate for the understatement of family size on family tax returns.

Even on the extreme assumption that the full excess in the proportion of single person returns is to be attributed to missing reporting earners of family units, the average size of the latter as shown by tax returns would not be increased very much. For 1935-36 the excess of the percentage in Table 67, column 6, over the NRC proportion of single individuals is 14.1, or 35.6 percent of the total single person return population. If we transfer 35.6 percent of the single person return population for 1935-36, which averaged 1.9 million, to the family return population, which averaged 8.7 million, the relative increase in the latter is only 7.8 percent. This means an increase in the average number per family to 3.2; in the Study of Consumer Incomes it is 3.6.[14]

It is not clear whether the underestimate in family size on income tax returns is larger in the top income brackets, and would thus lead to a particular exaggeration of their per capita income. In Table 68 the average number per family return is shown for broad groups classified by size of

[12] The special study for 1936, mentioned in note 11, shows that of total tax returns fewer than 30 percent came from communities with population under 10,000; and further reduction for urban communities of 2,500-10,000, and for rural nonfarm communities would leave a relatively small fraction for the farm population; see also Chapter 8.

[13] It is significant that with the change in the tax law in 1944, which permitted claiming dependents regardless of age or physical status, the number per family rises about 5 percent, reversing the downward trend observable during most of the period in the number per family return.

[14] The revision of the NRC estimates of single individuals would give an excess of 18.4 percent, which is 46.4 percent of the single person return population. The transfer of the latter to the family return population would raise the average number per family to 3.3.

net income as defined for tax purposes. Invariably the average number for returns with net income $10,000 and over is lower than that for the $5,000-10,000 classes; is in most years lower than that for the $3,000-5,000 classes; and in some years lower even than that for the $2,000-3,000 class. But for 1935-36 the average number per family as calculated from *Family Expenditures in the United States* also shows some tendency for upper income families to be smaller: 3.9 for families with income $10,000 and over; 4.2 for the $5,000-10,000 classes; 4.1 for the $3,000-5,000 classes; and 4.0 for the $2,000-3,000 class.[15]

Since income is not defined in the same way by the NRC study and the tax law, it is impossible to calculate differences in underreporting among the several upper income brackets.[16] The effect upon the inequality of the size distribution of income within the upper tail of the income distribution is, therefore, indeterminate.

The drop in the average number per family return, especially in the 1930's (Table 68, col. 1), is in consonance with the decline in the median size of families of 2 or more, calculated from the Census — from 3.11 in 1930 to 2.88 in 1940 for the total population, and from 2.94 to 2.74 for the urban population.[17] Combined with the increase in the proportion of single person returns, the drop in the average number per family return produces a marked downward trend to 1940 in the average number per tax return (Table 69, col. 4).

For our analysis the most important use of the tax return population is to compare it with the population to whom income payments flow — the total population of continental United States. In any year some residents of continental United States may neither receive any income nor have any ties with other recipients such as would entitle them to a part of this flow. They may live upon their assets or charity. But it is much to be doubted that they are numerous absolutely or significant relatively. Besides, in any analysis of the distribution of total income among the population, such groups should be included — with zero income. Accordingly column 5, the number dependent upon countrywide income payments, is for the total population of continental United States.[18]

[15] National Resources Planning Board, Washington, 1941, Table 335, p. 108.

[16] The much smaller number per family return in the lower income brackets should be interpreted in the light of the exemptions which at lower income levels mean a tax obligation only for families below a certain size. It cannot, therefore, be taken as evidence of a greater underreporting bias, in the sense of omission of members of an economic family unit.

[17] Table 8, p. 24, volume cited in note 6.

[18] Countrywide income payments include those for relief, pensions, and the like — which renders all the more justifiable the assumption just made in the text.

Table 69

Population Covered by Federal Income Tax Returns, 1913-1948
(includes only net income returns; population in millions)

	POPULATION			NO. OF PERSONS PER RETURN, ALL NET INCOME RETURNS (4)	TOTAL POPULATION (5)	% COL. 3 IS OF COL. 5 (6)
	Family Returns (1)	Single Person Returns (2)	All Net Income Returns (3)			
1913	n.a.	n.a.	1.02	2.84	97.2	1.05
1914	n.a.	n.a.	1.03[a]	2.89	99.1	1.04
1915	n.a.	n.a.	0.97[a]	2.88	100.6	0.96
1916	1.17	0.07	1.24	2.84	102.0	1.22
1917	6.27	1.36	7.63	2.20	103.5	7.38
1918	9.47	1.45	10.9	2.47	104.6	10.44
1919	10.5	1.96	12.4	2.33	105.2	11.83
1920	14.6	2.76	17.4	2.39	106.6	16.28
1921	12.2	2.55	14.8	2.22	108.7	13.59
1922	13.2	2.56	15.7	2.32	110.2	14.27
1923	16.2	2.42	18.6	2.42	112.1	16.60
1924	14.5	2.64	17.2	2.33	114.2	15.04
1925	7.85	1.59	9.43	2.26	116.0	8.14
1926	7.85	1.60	9.44	2.28	117.5	8.04
1927	7.53	1.54	9.07	2.21	119.1	7.61
1928	7.51	1.54	9.05	2.22	120.6	7.50
1929	7.75[b]	1.51	9.27[b]	2.29[b]	121.8	7.61[b]
1930	7.08	1.33	8.41	2.27	123.1	6.83
1931	6.26	1.12	7.39	2.29	124.0	5.96
1932	7.41	1.44	8.85	2.28	124.8	7.09
1933	7.26	1.35	8.61	2.31	125.6	6.86
1934	7.67	1.49	9.16	2.24	126.4	7.25
1935	8.16	1.73	9.90	2.16	127.2	7.78
1936	9.32	2.12	11.4	2.11	128.1	8.93
1937	10.6	2.54	13.1	2.07	128.8	10.19
1938	10.5	2.38	12.9	2.08	129.8	9.93
1939	12.3	3.10	15.4	2.01	130.9	11.73
1940	26.3	5.43	31.7	2.16	132.0	24.03
1941	50.1	8.29	58.4	2.26	133.2	43.81
1942	73.7	11.0	84.6	2.32	134.7	62.84
1943	84.6	12.8	97.5	2.24	136.5	71.40
1944	97.1	13.9	111.0	2.36	138.1	80.36
1945	100.8	14.9	115.7	2.32	139.6	82.90
1946	106.7	16.0	122.7	2.33	141.2	86.88
1947	n.a.	n.a.	127.1	2.31	144.0	88.25
1948	n.a.	n.a.	128.4	2.48	146.6	87.59

Because of rounding, columns may not add to total.
n.a: not available.

[a] Excluding population covered by returns filed by withholding agents; see note (a) to Table 67.

[b] Owing to an error in the *Statistics of Income* tabulation of personal exemptions and credit for dependents for North Dakota returns under $5,000, columns 1, 3, 4, and 6 are too high. We estimated the correct figures to be 7.45, 8.97, 2.22, and 7.36 respectively.

Column

1-3 *1913-15:* see Appendix 2, Section B
1916-48: Table 111, columns 6-8 respectively

In the years before 1940, population covered by tax returns constitutes only a small proportion of the country's total: before 1917, about 1 percent, and in most of the following years, between 6 and 12 percent (col. 6). The changes in the proportion are due largely to changes in the tax exemptions and in the economic conditions that determine purchasing power. Thus, the marked rise in the percentage following 1916 and the marked drop following 1924 are due to changes in the exemption limits already noted. The drop in the percentages in 1930 and 1931 when exemption requirements remained constant is due to the effects of the depression on the absolute levels of dollar incomes. The rise in the percentage in 1932 is due to the lowering of the exemption limits, and the upward movement after 1933, to the improvement in economic conditions. Finally, the marked increase in the percentage after 1939 is associated with World War II tax legislation and the rise in dollar incomes.

2 *Tax Return Income*

If we are to calculate the share of countrywide income payments received by the population covered by tax returns, the latter should record all income receipts fully and exclude elements that are not part of current income properly defined. But a scrutiny of the tax return tabulations reveals that even were the full detail of each return available, it would still be impossible to get a complete and unambiguous coverage of receipts that represent an individual's share in countrywide income payments. The already tabulated totals, i.e., the figures that can be analyzed — specifically those for returns with net income, tax definition — suffer from the omission of relevant items, the inclusion of receipts that are in the nature of transfers, and the deduction of items that should not be deducted.

The omissions comprise income exempt from tax, the notable examples being interest on tax exempt securities, and wages and salaries of state and local government employees (through 1938). The inclusions consist of gains from sales of assets that are not part of the net income of persons engaged in distribution or exchange. The deductions include contribu-

Notes to Table 69 concluded:

Column

4 Column 3 divided by column 1 of Table 67

5 *1913-29:* Consumption of Agricultural Products (Bureau of Agricultural Economics, March 1941)
1930-38: Bureau of the Census releases, March 15, 1941 and June 11, 1942
1939-45: Bureau of the Census releases, April 30, 1945 and July 10, 1946
1946 & 1947: Bureau of the Census release, August 19, 1949
1948: Bureau of the Census release, March 22, 1951
The series are for July 1 and include armed forces abroad. They are not strictly comparable from period to period but the differences are minor.

tions, losses from sales of assets not constituting the loss of persons engaged in distribution or exchange, and payments of interest and taxes that do not represent business expenses.

While these sins of omission and commission are numerous, the annual volumes of *Statistics of Income* (supplemented for years beginning with 1927 by the *Source Book*) permit a rough approximation to the desired income total. Our treatment of various income and deduction items in calculating total economic income of the tax return population is described fully in Appendix 2. The general rule was to add wages and salaries, income from business and partnerships, interest, dividends, rents and royalties (the last three whether received directly or through fiduciaries); to exclude gains and losses from sales of assets reported as such; and to avoid reducing the total by offsets reported in *Statistics of Income* under various deductions. Such an income total was calculated for each $1,000 income class up to $10,000 distinguished in the tabulations for each year, and for those of $10,000 and over treated as a single class, for net income returns alone.

This income total for the tax return population is not strictly comparable with countrywide income payments. First, it is impossible to compensate fully for the omission of interest payments on tax exempt securities: such an adjustment can be made only for statutory net income classes $5,000 and over (Table 70, col. 3). Second, the omission of wages and salaries of state and local government employees cannot be adjusted for.[19] Third, beginning in 1942 military pay of armed forces abroad was not reported; moreover, at least some of the transfer payments that we included in our countrywide total of employee compensation, e.g., social insurance benefits and payments to veterans, are exempt from reporting, fully or in part. These are the clearly recognizable omissions: there may be others, either explicitly allowed (e.g., such minor items as rental value of residence of clergy), or arising because a complex tax law inevitably has loopholes that are eagerly exploited (consider, for instance, the possibility of interpreting a business profit as capital gains subject to a lower rate of tax). However, *legally* permitted omissions have negligible effect on income at upper income levels; and the magnitude of such omissions as represent stretching the law is limited by the continuous effort to make the law inclusive in its coverage of all payments that may be viewed as current income. Finally, the published tabulations are of unaudited re-

[19] An attempt to compensate for this omission and to study its effect on the shares of upper income groups is presented in Chapter 9. Because of the necessarily approximate character of the adjustment, it is not given here; and the tax return data in our tables exclude this item for the years before 1939.

turns, and any willful or involuntary understatements have not been corrected for. All these factors make for an understatement of the income of the tax return population in comparison with countrywide income payments.

On the other hand, our estimate of income of the tax return population may be too high, largely because among the deductions that we reject some may be legitimate in the derivation of economic income as a share in income payments; e.g., net loss from business and partnerships which, before 1930, was included with 'other deductions' in the published tabulations and could not be deducted by us in deriving economic income for the years before 1930.[20] In this miscellaneous category there may be other items that are properly chargeable as business expenses, and this may be true also of some taxes and interest paid by individuals. Our reinclusion of deductions introduces an upward bias into our estimate of income of the tax return population.

The net balance of these errors cannot be determined from the data at hand. But it seems reasonable to conclude that the resulting estimate is a fair approximation to the economic income of the tax return population.

The size of and changes in the adjustments by years (Table 70) deserve note. The exclusions, gains from sales of assets, naturally move with business cycles — rise during expansions and decline during contractions. At their peak they constitute a substantial fraction of net income, tax definition, reported on tax returns — almost a fifth in 1928 and in 1929. The additions, largely capital losses, taxes, interest payments, and contributions, are continuously a sizeable proportion of net income, tax definition, never, until 1940, much less than a seventh and rising in some years to a quarter. The percentages these deductions constitute of net income tend to run counter to business cycles partly because capital losses naturally decline during expansions and rise during contractions; partly because other deductions tend to be relatively stable over time, with the result that positive cyclical fluctuations in the base, i.e., net income, tax definition, produce opposite changes in the relative magnitudes of these deductions.

The net balance of exclusions and additions, expressed as a percentage of net income, tax definition, is highly variable cyclically because the percentage constituted by the former moves with business cycles, while the percentage constituted by the latter runs counter to them. In consequence,

[20] We could have experimented with extrapolations from the 1930's, but the smallness of the item, and particularly the difficulty of estimating it by income brackets, made such an adjustment inadvisable. The item, it should be noted, covers only such net loss as is entered under deductions rather than applied as an offset to derive a net income total under the positive income items on the face of the return.

Table 70

Adjustments to Approximate Economic Income, Federal Income Tax Returns, 1918-1948
(includes only net income returns; dollar figures in million)

		Exclusions	*Additions*								
	NET INCOME, TAX DEFINITION (1)	Net gain from sales of capital assets & other property (2)	Interest on tax-exempt gov. obligations not incl. in col. 1 (3)	Contributions (4)	Net loss from sales of capital assets & other property (5)	Interest paid (6)	Taxes paid (7)	Other deductions (8)	EXCLUSIONS AS % OF COL. 1 (9)	ADDITIONS AS % OF COL. 1 (10)	NET BALANCE OF ADJUSTMENTS AS % OF COL. 1 Col. 10 – Col. 9 (11)
1918	15,925	291	136					1,821	1.83	12.29	10.46
1919	19,859	999	208					2,578	5.03	14.03	9.00
1920	23,736	1,021	261					2,955	4.30	13.55	9.25
1921	19,577	463	296					3,752	2.36	20.68	18.31
1922	21,336	991	261	425				3,110	4.65	17.79	13.15
1923	24,777	1,168	244	535				3,935	4.72	19.02	14.31
1924	25,656	1,514	209	533				3,390	5.90	16.10	10.20
1925	21,895	2,933	205	442				2,936	13.39	16.36	2.97
1926	21,959	2,379	223	484	178			2,827	10.83	16.91	6.08
1927	22,545	2,894	219	508	228			2,928	12.84	17.22	4.38
1928	25,226	4,808	228	533	172			3,057	19.06	15.81	–3.25

1929	24,801	4,683	230	527	995			3,522	18.88	21.26	2.38
1930	18,119	1,193	224	418	1,233			2,378	6.58	23.47	16.88
1931	13,605	472	206	328	1,161			2,040	3.47	27.46	23.99
1932	11,656	163	208	304	375			1,944	1.40	24.30	22.90
1933	11,009	554	202	252	366	508	506	661	5.02	22.66	17.64
1934	12,797	211	256	273	184	517	541	688	1.65	19.21	17.56
1935	14,910	510	239	305	146	504	597	764	3.42	17.13	13.71
1936	19,240	974	225	386	130	545	699	788	5.06	14.41	9.35
1937	21,239	434	253	440	264	561	837	986	2.04	15.74	13.69
1938	18,897	500	205	407	418	509	816	878	2.64	17.11	14.47
1939	23,192	426	237	495	344	549	882	799	1.84	14.26	12.42
1940	36,589	435	217	735	424	720	1,256	977	1.19	11.83	10.64
1941	58,868[a]	574	217	997	764	932	1,641	1,184	0.98	9.74	8.77
1942	78,889[a]	424	229	1,445	327	1,149	2,121	2,296	0.54	9.59	9.06
1943	99,586[a]	960	214	1,830	268	1,047	2,126	2,185	0.96	7.70	6.74
1944	117,370[b]	1,289	214		289				1.10	0.43	−0.67
1945	121,158[b]	2,541	214		255				2.10	0.39	−1.71
1946	135,395[b]	3,672	214		302				2.71	0.38	−2.33
1947	151,269[b]	2,656	214		347				1.76	0.37	−1.38
1948	165,161[b]	2,709	214		373				1.64	0.36	−1.28

Because of rounding, columns may not add to total.

[a] Includes gross income reported on Form 1040A for which there are no entries forcolumns 2-8

[b] Adjusted gross or total income, for which there are no entries for columns 4, 6, 7,and 8.

Source: Table 112

Table 71: Exclusions and Additions in Passing from Net Income, Tax Definition, to Economic Income, by Net Income Classes, 1916-1948

	$10,000 and over				$5,000-10,000			
	Net Income, Tax Definition ($ million) (1)	Exclusions as % of Col. 1 (2)	Additions as % of Col. 1 (3)	Net Balance of Col. 2 & 3 (4)	Net Income, Tax Definition ($ million) (5)	Exclusions as % of Col. 5 (6)	Additions as % of Col. 5 (7)	Net Balance of Col. 6 & 7 (8)
1916	4,637	n.a.	n.a.	5.08	1,037	n.a.	n.a.	4.72
1917	5,183	3.18	7.95	4.76	1,828	2.90	6.98	4.08
1918	4,385	2.70	20.19	17.49	2,146	3.22	18.31	15.09
1919	5,756	7.97	21.92	13.94	2,954	7.40	18.47	11.07
1920	5,393	6.28	29.98	23.70	3,068	9.30	18.19	8.89
1921	3,983	3.81	33.87	30.06	2,379	4.32	21.04	16.71
1922	5,162	11.43	25.04	13.60	2,642	5.68	19.05	13.37
1923	5,636	11.05	24.83	13.78	2,653	5.31	17.89	12.58
1924	6,760	14.11	19.81	5.70	2,991	6.87	17.71	10.83
1925	9,314	25.19	17.77	−7.42	3,464	9.18	17.29	8.11
1926	9,389	20.02	18.01	−2.01	3,839	6.70	17.52	10.82
1927	10,168	22.93	17.40	−5.53	3,896	6.72	16.59	9.87
1928	12,673	33.27	15.81	−17.46	4,282	8.50	16.14	7.64
1929	12,214	33.28	20.14	−13.14	4,482	7.27	17.50	10.23
1930	6,797	13.96	29.64	15.68	3,724	3.63	21.22	17.58
1931	4,135	7.54	36.28	28.74	2,807	1.95	25.08	23.13
1932	2,567	3.80	31.42	27.62	1,677	1.44	28.67	27.24
1933	2,610	13.90	27.53	13.64	1,538	5.18	26.09	20.91
1934	3,048	3.96	26.73	22.77	1,953	2.03	20.89	18.86
1935	3,812	8.13	22.78	14.65	2,283	3.94	18.20	14.26
1936	5,917	10.89	18.34	7.45	2,978	5.46	14.93	9.48
1937	5,646	4.27	21.96	17.69	3,171	2.66	17.13	14.47
1938	4,014	8.18	25.55	17.37	2,784	2.38	18.74	16.37
1939	4,733	4.88	22.63	17.74	3,241	2.41	16.08	13.67
1940	5,499	4.50	20.66	16.17	3,604	1.92	15.41	13.49
1941	7,269	4.69	18.48	13.78	4,286	1.72	15.68	13.96
1942	9,181	2.54	13.57	11.04	5,254	1.01	12.75	11.74
1943	11,836	4.57	10.97	6.39	7,384	1.89	9.94	8.05
1944	14,620*	4.63	1.75	−2.88	11,828*	1.92	0.64	−1.28
1945	17,393*	8.25	1.46	−6.79	12,393*	3.34	0.55	−2.78
1946	21,324*	8.58	1.28	−7.29	15,423*	4.15	0.53	−3.61
1947	21,873*	5.84	1.28	−4.56	18,552*	2.50	0.49	−2.01
1948	27,532*	5.32	1.07	−4.24	29,931*	1.76	0.34	−1.41

Calculated from Table 112.
n.a: not available.

during expansions, net income, tax definition, is appreciably reduced by the subtraction of relatively large capital gains and is increased by only moderate additions. During contractions, on the contrary, it is little reduced by the exclusion of capital gains and is raised appreciably by relatively large additions. Since it is itself very responsive to business cycles, the effect of the adjustments in passing to economic income is to reduce markedly the cyclical variability of the latter.

Both exclusions and additions tend to be relatively larger in the upper

$3,000-5,000				$2,000-3,000				Under $2,000			
Net Income, Tax Definition ($ million) (9)	Exclusions as % of Col. 9 (10)	Additions as % of Col. 9 (11)	Net Balance of Col. 10 & 11 (12)	Net Income, Tax Definition ($ million) (13)	Exclusions as % of Col. 13 (14)	Additions as % of Col. 13 (15)	Net Balance of Col. 14 & 15 (16)	Net Income, Tax Definition ($ million) (17)	Exclusions as % of Col. 17 (18)	Additions as % of Col. 17 (19)	Net Balance of Col. 18 & 19 (20)
625	n.a.	n.a.	6.78								
2,116	n.a.	n.a.	7.29	2,065	n.a.	n.a.	8.38	2,461	n.a.	n.a.	7.95
3,535	1.67	8.38	6.71	3,627	0.89	6.62	5.73	2,232	0.56	6.40	5.83
4,513	4.03	10.07	6.05	3,807	1.84	7.79	5.95	2,829	2.49	8.07	5.59
5,040	5.25	9.29	4.05	6,184	1.47	5.57	4.10	4,050	1.01	5.62	4.60
4,055	2.48	14.37	11.88	5,326	0.90	9.84	8.94	3,835	1.56	28.48	26.92
4,501	2.83	13.29	10.46	5,154	1.23	9.48	8.25	3,878	1.57	23.57	22.00
6,469	3.58	16.16	12.58	6,073	2.06	12.47	10.41	3,946	1.22	26.28	25.06
6,828	3.28	13.60	10.32	5,277	1.61	12.25	10.64	3,800	1.20	18.11	16.91
5,236	3.80	13.74	9.94	2,048	2.19	14.22	12.03	1,833	1.32	17.32	15.99
4,873	3.75	15.46	11.71	2,043	1.82	10.23	8.40	1,815	1.18	21.28	20.10
4,701	3.76	13.73	9.97	2,062	3.05	15.58	12.53	1,718	3.60	29.18	25.57
4,648	3.16	13.76	10.60	2,031	2.30	13.95	11.64	1,591	2.13	23.31	21.18
4,573	3.82	19.76	15.94	1,959	2.77	21.62	18.85	1,574	3.99	44.65	40.66
4,152	1.50	15.97	14.47	1,864	1.26	17.14	15.89	1,581	1.49	29.42	27.93
3,516	1.15	18.31	17.16	1,642	2.48	20.62	18.13	1,506	1.58	36.44	34.86
2,598	0.62	19.18	18.56	2,437	0.46	17.80	17.34	2,377	0.58	25.76	25.18
2,208	2.34	19.02	16.68	2,296	1.22	16.61	15.39	2,358	1.32	24.34	23.02
2,839	0.89	15.08	14.18	2,468	0.50	14.04	13.54	2,489	0.53	18.55	18.02
3,249	1.74	13.81	12.07	2,832	1.00	12.65	11.65	2,734	0.91	16.94	16.03
3,822	2.44	11.88	9.44	3,325	1.21	10.65	9.44	3,198	1.04	13.57	12.53
4,647	1.22	12.43	11.21	3,981	0.68	11.02	10.34	3,795	0.66	14.31	13.65
4,318	1.12	12.98	11.86	4,092	0.66	11.22	10.56	3,690	0.82	18.06	17.24
5,434	1.02	11.08	10.06	5,202	0.56	9.12	8.58	4,582	0.71	13.92	13.21
6,015	0.77	10.72	9.95	12,584	0.27	6.96	6.69	8,887	0.44	12.57	12.12
8,001	0.79	11.14	10.35	19,012	0.20	6.32	6.12	20,300	0.29	8.02	7.73
12,453	0.35	10.27	9.93	24,040	0.15	7.51	7.36	27,960	0.21	9.18	8.97
22,187	0.49	8.70	8.20	29,914	0.23	6.19	5.96	28,270	0.36	6.57	6.21
36,255*	0.49	0.13	−0.36	28,117*	0.36	0.16	−0.30	26,550*	0.39	0.30	−0.09
34,747*	0.93	0.14	−0.79	28,747*	0.63	0.13	−0.50	27,878*	0.68	0.21	−0.46
36,563*	1.65	0.14	−1.50	33,162*	0.97	0.12	−0.85	28,923*	0.97	0.23	−0.74
48,766*	0.93	0.12	−0.81	35,901*	0.68	0.13	−0.55	26,176*	0.82	0.31	−0.50
55,258*	0.66	0.14	−0.52	31,115*	0.56	0.13	−0.42	21,324*	0.84	0.32	−0.52

*Adjusted gross or total income, which includes contributions, interest paid, taxes paid, and 'other' deductions previously covered in columns 3, 7, 11, 15, and 19.

income brackets than in the lower (Table 71). Capital gains are of much greater relative importance in the $10,000 and over net income classes than in the lower classes. Indeed, in the classes with net income under $5,000, they account, in most years, for much less than 5 percent of net income, tax definition. Somewhat less expected are the differences among the broad net income classes in Table 71 with respect to the relative importance of additions. These too are relatively larger in the very top income brackets, tending to decline in relative importance as we descend the net

income scale until we reach the lowest income class distinguished, for which their percentage is again quite high. Apparently, in the high income brackets (disregarding the possible tendency toward overreporting deductions), the acquiring of large incomes is accompanied by a relatively substantial outlay in the form of deductible taxes, interest payments, and contributions (donations and gifts) plus, at least in some years, large capital losses. The percentage of such additions (appearing as deductions on tax returns) is again high in the very low net income brackets because the net income base is greatly reduced by them.

The cyclical variability of the net balance of exclusions and additions in Table 70 is manifest also in Table 71. But it is most pronounced in the top income brackets, where the expanded net income in the prosperous years 1928 and 1929 is reduced by between a seventh and a sixth; and the greatly reduced net income in 1931 and 1932 is raised by well over a quarter. This inverse cyclical variability of the net balance, i.e., total adjustment in passing from net income, tax definition, to economic income, persists through the $5,000-10,000 and the $3,000-5,000 classes, although with diminishing magnitude. It ceases in the $2,000-3,000 class, and in the under $2,000 classes the net balance begins to move with business cycles, tending to be greater in more prosperous years and smaller in contraction years, although the reversal in cyclical conformity is not complete. Since it is in the income brackets above $3,000 that net income, tax definition, moves with business cycles, we conclude that the net balance of exclusions and additions tends to damp its cyclical sensitivity in the upper brackets, especially the top.

The adjustments discussed were needed to approximate economic income on tax returns for comparison with countrywide income payments (Table 72). For the latter we used the series in *National Income and Its Composition, 1919-1938,* W. I. King's estimates for 1913-19 in *National Income and Its Purchasing Power,* and those of the Department of Commerce for 1929-48 in the *Survey of Current Business.* These series were in turn adjusted to assure greater comparability with the income of the tax return population. Imputed rent on owner-occupied houses and property income of life insurance companies were excluded, because neither is covered on tax returns. Net profits or losses of entrepreneurs were taken with the adjustment for gains and losses from sales of assets but without any other adjustments, e.g., for the effect of inventory revaluation. Several additional adjustments were made in the 1913-19 and 1929-48 series since they were derived from sources not strictly comparable with those underlying the NBER series. The changes in countrywide income payments to individuals resulting from these adjustments were minor, representing, on

Table 72

Economic Income Covered by Federal Income Tax Returns and Individuals' Total Income Receipts, 1913-1948 (includes only net income returns; dollar figures in billions)

	Economic Income, All Net Income Returns (1)	Individuals' Total Income Receipts (2)	% Col. 1 Is of Col. 2 (3)		Economic Income, All Net Income Returns (1)	Individuals' Total Income Receipts (2)	% Col. 1 Is of Col. 2 (3)
1913	4.9	32.5	15.13	1935	17.0	56.4	30.05
1914	4.2[a]	31.9	13.20	1936	21.0	63.8	32.97
1915	4.8[a]	34.1	14.20	1937	24.1	69.3	34.82
1916	6.6	40.7	16.29	1938	21.6	63.8	33.90
1917	14.5	49.5	29.27				
1918	17.6	55.2	31.86	1929	25.4	79.4	31.98
1919	21.6	63.1	34.29	1930	21.2[b]	70.3	30.14[b]
				1931	16.9	59.4	28.41
1919	21.6	63.7	33.97	1932	14.3	44.7	32.04
1920	25.9	66.9	38.77	1933	13.0	43.5	29.74
1921	23.2	53.3	43.48	1934	15.0	49.8	30.19
1922	24.1	57.3	42.11	1935	17.0	56.5	29.99
1923	28.3	66.5	42.61	1936	21.0	64.9	32.42
1924	28.3	66.9	42.23	1937	24.1	70.2	34.39
1925	22.5	70.8	31.85	1938	21.6	64.3	33.65
1926	23.3	73.7	31.62	1939	26.1	68.8	37.89
1927	23.5	74.1	31.78	1940	40.5	74.4	54.42
1928	24.4	75.9	32.15	1941	64.0	91.6	69.89
1929	25.4	80.2	31.65	1942	86.0	117.6	73.18
1930	21.2[b]	71.7	29.52[b]	1943	106.3	143.3	74.19
1931	16.9	59.5	28.36	1944	116.6	156.5	74.50
1932	14.3	45.9	31.19	1945	119.1	161.1	73.92
1933	13.0	44.8	28.92	1946	132.2	172.0	76.87
1934	15.0	51.7	29.09	1947	149.7	188.6	79.09
				1948	163.0	202.4	80.54

[a] Excluding income on returns filed by withholding agents, for which see note (a) to Table 67.

[b] Excluding net loss from business and partnerships. Entries comparable with those for 1929 and preceding years when this item could not be deducted are column 1, $21,350 million; column 3, 29.76 percent for the 1919-38 series and 30.39 percent for the 1929-48 series.

Column

1 Table 112, last column

Column

2 Table 114, column 12

the average, a reduction ranging from 3.2 percent for the 1913-19 series to 4.1 percent for the 1919-38 series to 5.5 percent for the 1929-48 series. Comparison of the adjusted series at the overlapping year, 1919, shows that the difference between the first two sets of estimates is quite minor, at least for the over-all totals in Table 72. Nor are the differences between our estimates and those of the Department of Commerce for 1929-38 significant.

The percentages of income received by the tax return population — between 28 and 39 in over half the years covered (col. 3) — are appre-

ciably higher than the percentages it constitutes of total population — between 6 and 12 in half the years covered (Table 69).[21] This, of course, confirms the obvious: the tax return population enjoys an average income very much larger than the total population. Second, the percentages of income coverage vary within a relatively narrower range — from about 13 to about 80 — than those of population coverage — from less than 1 to 88. In other words, persons who move in and out of the tax return population command a much smaller share of total income payments than persons who have to file a return every year, regardless of changes in the law or economic conditions.

3 *Net Deficit Returns*

Our entire analysis utilizes the various published, and some unpublished, data from net income returns alone. Data for net deficit returns are available from 1928 on, but not by deficit classes, so that it is impossible to determine their position on the income scale. We pause to consider the magnitude of the omission involved in their exclusion.

Summary data (Table 73) indicate that, at least for the second half of the period under study, net deficit returns are a small fraction of net income returns, accounting in the worst years of the 1930 depression for somewhat more than 5 percent of the total in Table 67. Conversion to population equivalents is impossible but there is no ground for assuming that the average number per net deficit return is much different from that per net income return. Hence, the population represented by net deficit returns at its greatest is probably not much more than 5 percent of the population represented by net income returns; which, in turn, means that it forms a small fraction of 1 percent of the total population.

Economic income reported on net deficit returns is also a very small fraction of that estimated for net income returns. Indeed, in the years beginning with 1930, when net losses from business and partnerships can be subtracted, the proportion it constitutes of income on net income returns is much smaller than the proportion of the number of returns. That this is not true for 1928 and 1929 is probably due to the impossibility of deducting net losses from business and partnerships in estimating income: this failure causes a much larger relative overestimate of income on statutory net deficit returns than on statutory net income returns (compare the two entries for 1930 in column 4 with those in Table 72, column 1 and note b). One may conclude, therefore, that per capita economic income on net deficit returns is much smaller than that on net income returns.

[21] The puzzling shortage of the income shares in 1944 and later years as compared with the proportion of the population is analyzed in Chapter 11.

In short, net deficit returns are relatively few, and are characterized by an average *economic* income per capita appreciably lower than that for net income returns. Even were it possible to include them, most of them

Table 73
Relative Proportion of Net Deficit Returns, 1928-1948

	No. of Net Deficit Returns (000) (1)	Col. 1 as % of Net Income Returns (2)	Economic Income, Net Deficit Returns ($ million) (3)	Col. 3 as % of Economic Income, Net Income Returns (4)
1928	73	1.79	367	1.50
1929	93	2.29	816	3.21
1930	145	3.91	1,136[a]	5.32
1930	145	3.91	566[b]	2.67
1931	185	5.72	680	4.03
1932	206	5.32	292	2.04
1933	168	4.52	408	3.15
1934	104	2.54	153	1.02
1935	95	2.07	117	0.69
1936	73	1.35	108	0.51
1937	84	1.32	69	0.29
1938	100	1.62	123	0.57
1939	82	1.08	64	0.25
1940	113	0.77	75	0.19
1941	100	0.39	125	0.19
1942	163	0.45	30	0.03
1943	217	0.50	−7	−0.01
1944[c]	192	0.41	−198	−0.17
1945[c]	214	0.43	−260	−0.22
1946[c]	216	0.41	−229	−0.17
1947[c]	299	0.54	−531	−0.36
1948[c]	326	0.63	−627	−0.38

[a] Comparable with preceding years in that net loss from business and partnerships is not deducted.

[b] Comparable with succeeding years in that net loss from business and partnerships is deducted.

[c] Entries are for returns with adjusted gross deficit.

Column

1 *1928-42:* from *Statistics of Income, 1942,* Part 1, pp. 243-7.
1943: from special tabulations provided by the Bureau of Internal Revenue.
1944-48: from Press Release dated August 21, 1947, Preliminary Reports dated July 30, 1948 and June 3, 1949, Press Release dated November 25, 1949, and Preliminary Report dated June 22, 1951.

2 Column 1 divided by column 1 of Table 67.

3 Derived by deducting from total income, profit from sales of real estate, stocks, bonds, etc., other than taxed as capital net gain, capital net gain from sales of assets held more than 2 years, net gain from sales of property other than capital assets, and net loss from business and partnerships when shown as a separate deduction. For sources see notes to column 1.

4 Column 3 divided by column 1 of Table 72.

would rank very low in an array of all tax returns in a descending scale of economic income per capita, and would tend to occupy a small span at the bottom of this scale. Since our calculations of income shares stop short of the lower reaches of this scale, it is quite likely that the analysis would not have extended to net deficit returns anyway, even had it been possible to include them in the tax return population. Inclusion of net deficit returns could, therefore, affect the results discussed below only slightly.

4 *Relative Income Levels, Tax Return and Total Population*

Having estimated the percentage the tax return population is of the total and the percentage it receives of countrywide income payments, we can compare the two percentages and calculate the ratio of the latter to the former (Table 74) – automatically the ratio of the per capita income of the tax return population to that of the total population (col. 4-6).

As already indicated, the per capita income of the tax return population is appreciably larger than that of the total population – from 2 to 5 times as large in most years, the ratio declining to less than 2 only in the recent years of widely expanded tax coverage, and rising in some years to almost 15 (exceptions in 1944 and later years, analyzed in Chapter 11, should again be noted). Obviously, the relative excess over the per capita income of the nontax return population is even greater; the necessary calculations can easily be made from Table 74.

The ratio of the per capita income of the tax return population to that of the total population varies inversely to the relative weight of the tax return population in the total. Thus, in 1920, 1923, and 1940-48, the years in which the tax return population coverage is the highest, the ratios in columns 3 and 6 are the lowest. In 1915, on the contrary, when the tax return population coverage is the lowest, the ratio is the highest. Thus, as the relative coverage of tax returns expands, it reaches into progressively lower levels of per capita income.

Our plan of analysis can now be briefly outlined. First, the relation between the percentage of population and of income received was studied not only for the whole tax return population but also at levels representing the top 1, 3, 5, etc., percent of the country's population. In other words, we studied the distribution within the tax return population, at selected levels short of the total coverage of tax returns.

Second, we carried through the analysis for each year separately instead of combining the years in a single regression line. The important question was whether the characteristics of the size distribution of income change from year to year in response to cyclical fluctuations or show any longer term drifts. True, we could study these characteristics for only the short

Table 74

Relative Income Levels, Tax Return and Total Population, 1913-1948

	TAX RETURN POPULATION AS % OF TOTAL (1)	ECONOMIC INCOME ON TAX RETURNS AS % OF INDIVIDUALS' TOTAL INCOME RECEIPTS (2)	RATIO: COL. 2 TO COL. 1 (3)	PER CAPITA INCOME (dollars) Tax Return Population (4)	Total Population (5)	RATIO: COL. 4 TO COL. 5 (6)
1913	1.05	15.13	14.47	4,840	335	14.45
1914	1.04	13.20	12.66	4,076	322	12.66
1915	0.96	14.20	14.74	4,997	339	14.74
1916	1.22	16.29	13.37	5,333	399	13.37
1917	7.38	29.27	3.97	1,899	479	3.96
1918	10.44	31.86	3.05	1,610	528	3.05
1919	11.83	34.29	2.90	1,740	600	2,90
1919	11.83	33.97	2.87	1,740	606	2.87
1920	16.28	38.77	2.38	1,494	627	2.38
1921	13.59	43.48	3.20	1,568	490	3.20
1922	14.27	42.11	2.95	1,535	520	2.95
1923	16.60	42.61	2.57	1,522	593	2.57
1924	15.04	42.23	2.81	1,646	586	2.81
1925	8.14	31.85	3.91	2,390	610	3.92
1926	8.04	31.62	3.93	2,467	627	3.93
1927	7.61	31.78	4.17	2,595	622	4.17
1928	7.50	32.15	4.28	2,698	630	4.28
1929	7.61*	31.65	4.16*	2,740*	659	4.16*
1930	6.83	29.52	4.32	2,518	583	4.32
1931	5.96	28.36	4.76	2,283	480	4.76
1932	7.09	31.19	4.40	1,618	368	4.40
1933	6.86	28.92	4.22	1,504	357	4.21
1934	7.25	29.09	4.01	1,643	409	4.02
1935	7.78	30.05	3.86	1,713	443	3.87
1936	8.93	32.97	3.69	1,840	498	3.69
1937	10.19	34.82	3.42	1,840	538	3.42
1938	9.93	33.90	3.41	1,678	491	3.42
1929	7.61*	31.98	4.20*	2,740*	652	4.20*
1930	6.83	30.14	4.41	2,518	571	4.41
1931	5.96	28.41	4.77	2,283	479	4.77
1932	7.09	32.04	4.52	1,618	358	4.52
1933	6.86	29.74	4.34	1,504	347	4.33
1934	7.25	30.19	4.17	1,643	394	4.17
1935	7.78	29.99	3.86	1,713	444	3.86
1936	8.93	32.42	3.63	1,840	507	3.63
1937	10.19	34.39	3.37	1,840	545	3.38
1938	9.93	33.65	3.39	1,678	495	3.39
1939	11.73	37.89	3.23	1,698	526	3.23
1940	24.03	54.42	2.26	1,277	564	2.26
1941	43.81	69.89	1.60	1,097	688	1.59
1942	62.84	73.18	1.16	1,017	873	1.16
1943	71.40	74.19	1.04	1,091	1,050	1.04
1944	80.36	74.50	0.93	1,051	1,133	0.93
1945	82.90	73.92	0.89	1,029	1,154	0.89
1946	86.88	76.87	0.88	1,078	1,218	0.89
1947	88.25	79.09	0.90	1,174	1,310	0.90
1948	87.59	80.54	0.92	1,270	1,381	0.92

For notes see page 266.

upper tail of the total distribution, and for a relatively brief period — thirty-six years at most. Nevertheless, the promise of the analysis lay in the two directions indicated; and whatever qualifications may attach to the conclusions, there is hope of reducing them by extending the series and by amplifying the evidence in the future.

The technical difficulties were numerous, due largely to the fact that the published and unpublished data employ units of classification and concepts of income that differ from those derived. How the analysis was carried out and the difficulties overcome, if only partly, is discussed in detail in Chapters 8-10.

Notes to Table 74:

* Owing to an error in the *Statistics of Income* tabulation of personal exemptions and credit for dependents for North Dakota returns under $5,000, columns 1, 3, 4, and 6 are incorrect. We estimated the correct figures to be 7.36, 4.30, 2,832, and 4.30 respectively for the 1919-38 series, and 7.36, 4.35, 2,832, and 4.34 for the 1929-48 series.

Column

1 Table 69, column 6
2 Table 72, column 3
4 Column 1 of Table 72 divided by column 3 of Table 69
5 Column 2 of Table 72 divided by column 5 of Table 69