This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Shares of Upper Income Groups in Income and Savings

Volume Author/Editor: Simon Kuznets, assisted by Elizabeth Jenks

Volume Publisher: NBER

Volume ISBN: 0-87014-054-X

Volume URL: http://www.nber.org/books/kuzn53-1

Publication Date: 1953

Chapter Title: Adjustments for Unit and Basis of Classification

Chapter Author: Simon Kuznets, Elizabeth Jenks

Chapter URL: http://www.nber.org/chapters/c3068

Chapter pages in book: (p. 366 - 410)

Chapter 10

ADJUSTMENTS FOR UNIT AND BASIS OF CLASSIFICATION

In calculating the basic variant and the adjustments for scope of income we use the net income classes in the published tabulations. True, for each class, originally by net income per return, we calculate economic income per capita, and rearray the classes. But the original class is treated throughout as a whole, and differences in economic income per capita among the reporting units within each class are disregarded.

We now deal with the problems caused by the fact that in the published classification the unit is a return, not an individual or family; and the base is net income, tax definition, not economic income. To adjust for the effects of the inappropriate unit and income base on our estimates of shares of upper income groups is more difficult than to adjust for scope of income, and the results are short of what is wanted. Nevertheless, the problems must be explored as far as possible, and solutions, in the way of approximate adjustments, sought.

1 Adjustment for Family Status, Preliminary

The classification of income by size used in the basic variant, whether or not adjusted for scope of income, is net income, tax definition, per return, modified by arraying the income classes by average economic income per person. Consequently, some returns, reporting large incomes because they represent several persons, may be placed too high in the distribution, and returns for single persons with moderate incomes, too low. To overcome this defect we would have had to retabulate the returns by size of income per person. For obvious practical reasons, that was impossible.

However, the fact that returns are classified by family status gives a clue to a possible adjustment. For each 'nonhead of family' return the number of persons is just one,[1] whereas for each joint return it is at least two, and for each 'head of family' return, at least above one. We can calculate for the head of family group, on the one hand, and the nonhead, on the other, the number per return for each net income class, tax definition.

[1] This is not exactly true. Tabulations of tax returns for recent years, which show credits for dependents classified by the family status of the returns claiming them, reveal some credits on returns by nonheads. The amounts involved are, however, quite small and can justifiably be neglected.

The difficulty lies in ascertaining the economic income of these two family status groups for each net income class, tax definition, because the published data do not provide the necessary detail by type of income. But we can make a rough approximation, then compute per capita income for each net income class, separately for head and nonhead returns, rearray the classes from top to bottom according to these per capitas and draw the partition lines. The only point at which this procedure differs from that for the basic variant is that instead of a single estimate of per capita income for all returns in a given net income class, tax definition, we now have two — one for head of family returns, the other for nonhead.[2]

This crude adjustment for number of persons per return has three effects on the basic variant for total population (Table 92 and Chart 19).

First, it increases the shares of the upper groups: whereas in the basic variant the upper income groups contain a mixture of returns with large total income but a fairly low income per capita (i.e., returns representing several persons) and returns with both a large total income and a fairly high income per capita (i.e., returns representing a small number of persons), the proportion of the former is reduced in the adjustment. Some head of family returns, ranked in the basic variant at upper income levels because they happened to be in a class with a high income per capita, drop down in the array and are replaced by nonhead return cells originally ranked at a lower income level. In general, the adjustment yields a better approximation to the basis upon which the distribution by income per capita is constructed, and thus necessarily shows larger shares for the upper percentage bands, since a *pure* array based on any classification will reveal more fully the spread than an array based on a *mixed* classification.

The second effect is somewhat less expected. The average addition to the share of the 2nd and 3rd percentage band is significantly larger than that to the share of the top 1 percent: for 1919-46 the former averages 0.78 percentage points and the latter only 0.52. Relatively, the difference in favor of the 2nd and 3rd percentage band is even larger, since its average share is 6.4 percent, and that of the top 1 percent, 12.3 percent of individuals' total income receipts. This differential effect of the adjustment is, however, easily explained: the per capita income of the top 1 percent is so much larger than that of the percentage band just below it that the adjustment does not produce as much reshuffling as takes place in the 2nd

[2] See Appendix 5, Section A. The *Statistics of Income* classification by family status for 1944 and later years does not indicate the distribution of single person returns between head of family returns and nonhead; but for these years returns were classified by the number for whom exemption was claimed. We treated all returns of single persons claiming one exemption as nonhead, and all others as head.

Table 92

Changes in Shares of Upper Income Groups Produced by Preliminary Adjustment for Family Status
Basic Variant, Total Population, 1917-1946

	Change in Share of Given Percentage Band Due to Adjustment			Factors Producing Gain in Share of Top 1 Percent		Factors Producing Gain in Share of 2nd & 3rd Percentage Band		
	Top 1	2nd & 3rd	4th & 5th	Nonhead Returns as % of All Returns, $5,000-8,000 Net Income Classes, Tax Definition	Excess of Share of Top 1 Percent over That of 2nd & 3rd	Av. No. per Family Return, $5,000-8,000 Net Income Classes, Tax Definition	Excess of Share of 2nd & 3rd Percentage Band over That of 4th & 5th	Coverage of Tax Return Population in Excess of 5% of Total Population (% of total population)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1917	0.58	0.77		14.23	8.50	3.43	0.90	2.38
1918	0.54	0.58	0.25	11.71	6.94	3.38	1.50	5.44
1919	0.48	0.55	0.51	11.90	6.97	3.22	1.82	6.83
1919	0.47	0.54	0.51	11.90	6.91	3.22	1.80	6.83
1920	0.53	0.90	0.73	12.55	6.57	3.26	1.83	11.28
1921	0.71	1.29	0.92	13.56	6.71	3.40	1.60	8.59
1922	0.62	0.75	1.22	13.91	6.59	3.51	2.16	9.27
1923	0.65	0.80	0.46	13.12	6.26	3.40	1.43	11.60
1924	0.69	0.74	0.52	12.43	6.28	3.30	1.89	10.04
1925	0.56	0.82	0.21	12.80	7.05	3.32	1.91	3.14
1926	0.56	0.87	0.12	12.91	7.25	3.32	2.04	3.04
1927	0.58	0.88	-0.19	13.19	7.70	3.34	1.79	2.61
1928	0.56	0.76	-0.06	13.10	8.04	3.31	1.97	2.50
1929	0.59	0.85	0.02	13.17	7.69	3.26	2.02	2.61
1930	0.54	0.87	-0.38	12.74	7.18	3.30	1.47	1.83
1931	0.63	0.83	-0.70	12.85	6.23	3.35	1.18	0.96
1932	0.79	0.92	-0.24	14.13	5.79	3.40	1.13	2.09
1933	0.62	0.76	0.02	13.74	5.18	3.41	1.40	1.86

|	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8
1934	0.60	0.76	−0.11	12.83	5.41	3.40	1.29	2.25
1935	0.59	0.77	−0.07	12.61	5.60	3.34	1.24	2.78
1936	0.49	0.64	0.20	13.06	6.77	3.29	1.80	3.93
1937	0.44	0.54	0.50	12.32	6.45	3.24	2.00	5.19
1938	0.46	0.65	0.35	11.51	5.00	3.25	1.62	4.93
1929	0.60	0.86	0.02	13.17	7.77	3.26	2.04	2.61
1930	0.55	0.89	−0.39	12.74	7.33	3.30	1.50	1.83
1931	0.63	0.83	−0.70	12.85	6.24	3.35	1.18	0.96
1932	0.81	0.94	−0.25	14.13	5.95	3.40	1.16	2.09
1933	0.64	0.79	0.03	13.74	5.32	3.41	1.44	1.86
1934	0.62	0.78	−0.11	12.83	5.62	3.40	1.34	2.25
1935	0.58	0.77	−0.07	12.61	5.59	3.34	1.24	2.78
1936	0.48	0.62	0.19	13.06	6.66	3.29	1.77	3.93
1937	0.43	0.54	0.49	12.32	6.37	3.24	1.97	5.19
1938	0.46	0.65	0.34	11.51	4.97	3.25	1.61	4.93
1939	0.54	0.76	0.41	11.35	5.12	3.18	1.70	6.73
1940	0.48	0.68	1.14	11.39	5.34	3.15	2.27	19.03
1941	0.42	0.85	0.78	12.22	5.14	3.07	2.01	38.81
1942	0.34	0.86	0.68	11.53	4.73	3.07	1.78	57.84
1943	0.28	0.78	0.75	11.13	4.27	3.06	1.87	66.40
1944	0.31	0.83	0.79	9.16	3.68	3.26	1.74	75.36
1945	0.33	0.58	0.73	10.36	3.51	3.25	2.02	77.90
1946	0.32	0.43	0.64	9.87	3.29	3.26	2.16	81.88

Column

1-3 Table 120: column 2 minus column 1.
4 Table 111: column 5 divided by column 3.
5 Table 120: column 1, Section A, minus column 1 of Section B.

Column

6 Table 111: column 6 divided by column 4.
7 Table 120: column 1, Section B, minus column 1 of Section C.
8 Table 69: column 6 minus 5 percent.

Chart 19

Preliminary Adjustment for Family Status
Basic Variant, Total Population, 1917–1946

Panel A

a   Change in share of top 1 percent due to adjustment (% of total income receipts)

b   Nonhead returns as % of all returns, $5,000–8,000 net income classes, tax definition
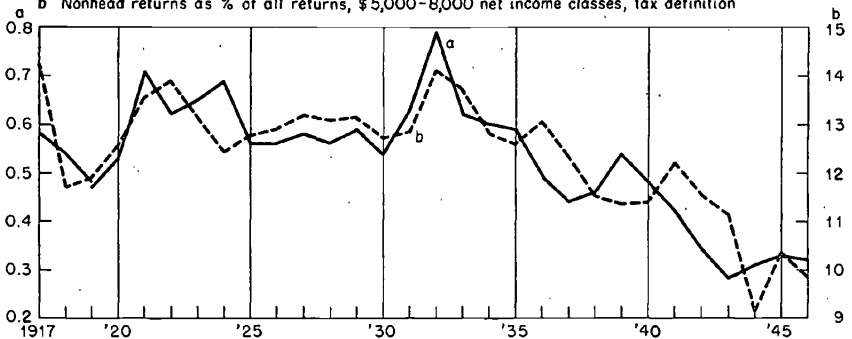
Panel B

a   Change in share of top 1 percent due to adjustment (% of total income receipts)

b   Excess of share of top 1 percent over that of 2nd and 3rd percentage band, basic variant, signs reversed (% of total income receipts)

Panel C

a   Change in share of 2nd and 3rd percentage bond due to adjustment (% of total income receipts)

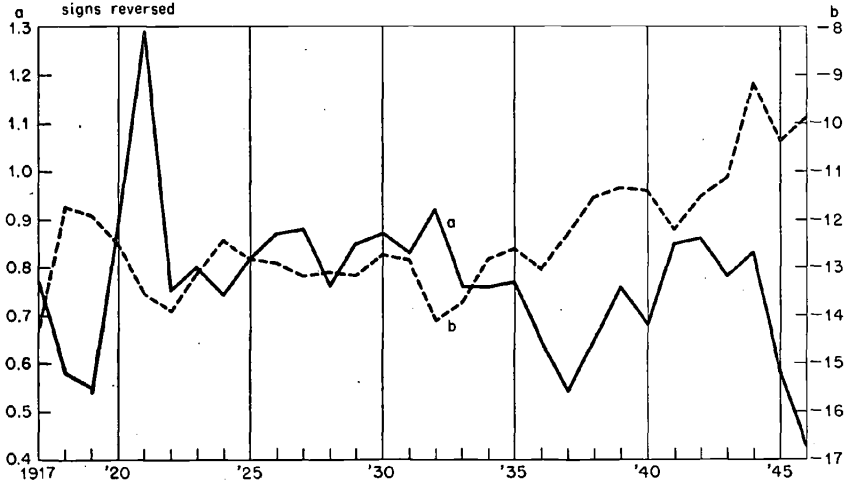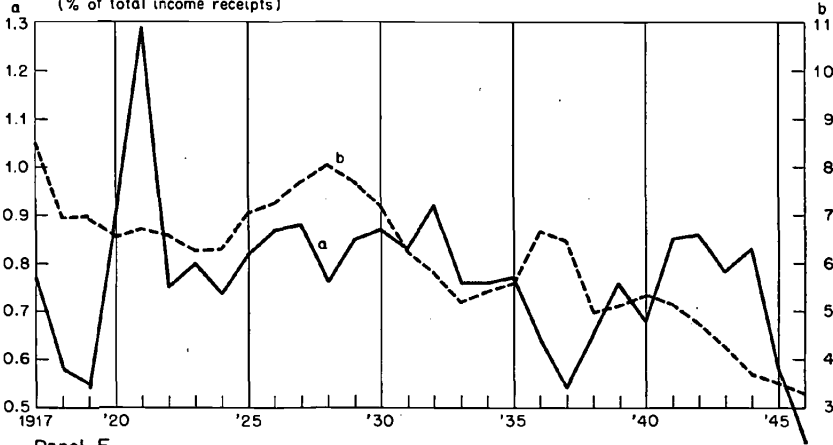b   Nonhead returns as % of all returns, $5,000–8,000 net income classes, tax definition, signs reversed
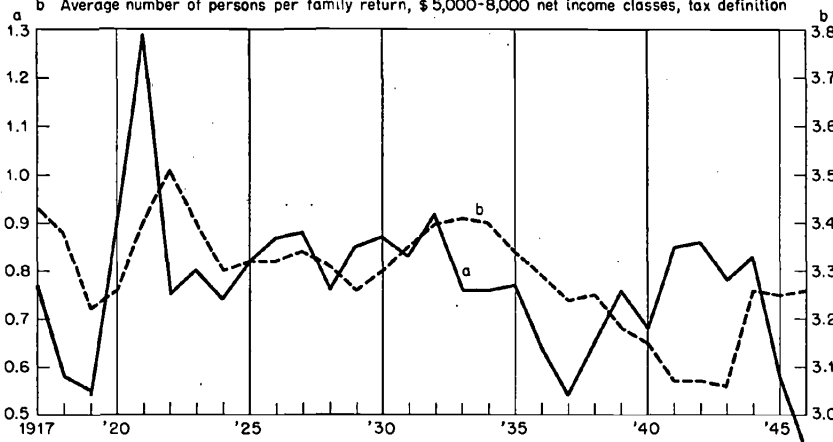

370

Chart 19 (cont.)

Panel D

a Change in share of 2nd and 3rd percentage band due to adjustment (% of total income receipts)
b Excess of share of top 1 percent over that of 2nd and 3rd percentage band, basic variant
(% of total income receipts)

Panel E

a Change in share of 2nd and 3rd percentage band due to adjustment (% of total income receipts)
b Average number of persons per family return, $ 5,000-8,000 net income classes, tax definition

Panel F

a Change in share of 2nd and 3rd percentage band due to adjustment (% of total income receipts)
b Excess of share of 2nd and 3rd percentage band over that of 4th and 5th percentage band,
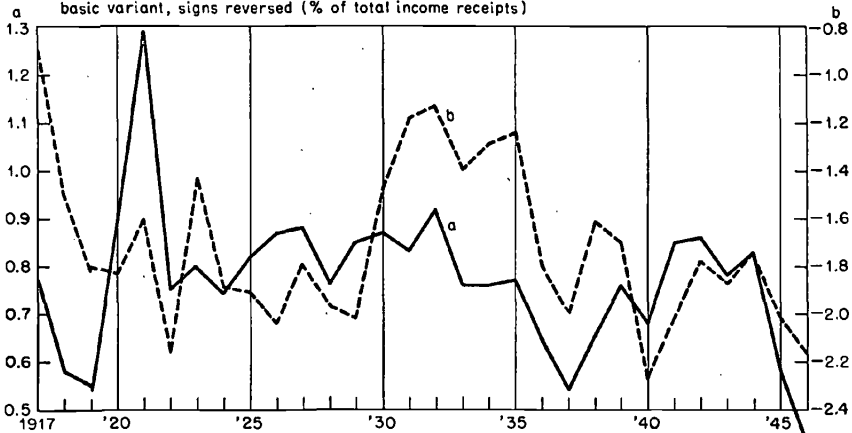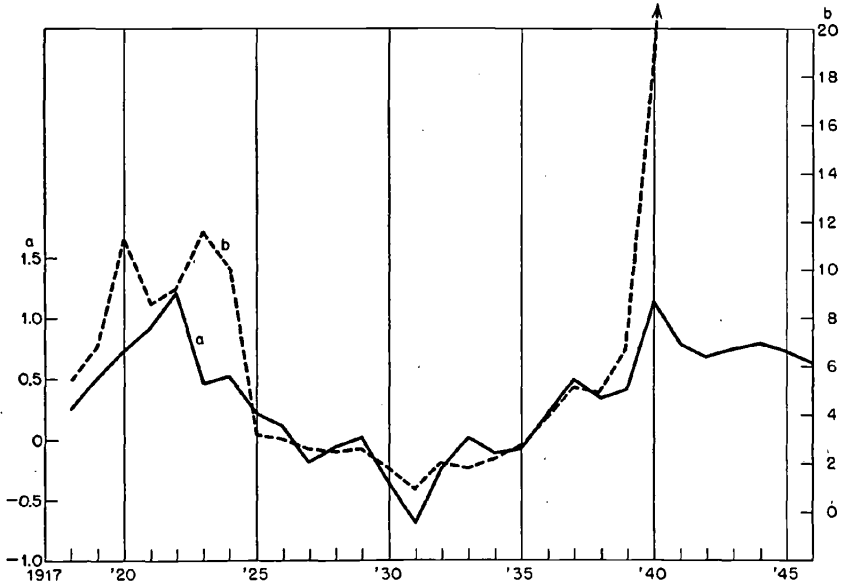basic variant, signs reversed (% of total income receipts)

371

Chart 19 (concl.)
  Panel G
    a Change in share of 4th and 5th percentage band due to adjustment (% of total income receipts)
    b Coverage of tax return population in excess of 5% of total population (% of total population)

and 3rd percentage band, i.e., fails to do as much replacing by bringing into the top percentage band returns from below with larger per capita incomes. Also, when there is an upward shift into the top percentage band, the addition to its share is not likely to be large relative to the mean if the excess of its share over that of the 2nd and 3rd percentage band is large. The income per capita of the 2nd and 3rd percentage band, on the contrary, is much nearer that of the band just below it and a substantial number of head of family returns that drop down from that band in the rearray are replaced by returns with higher income per capita shifted either downward from the top 1 percent or upward from the 4th and 5th, and lower percentage bands.

The third effect concerns the short term variations in the adjustment of the share of the top 1 and of the 2nd and 3rd percentage band. While they are fairly small, their causes are not without interest.

The adjustment in the share of the top 1 percent must always be positive: if shifts occur because we treat head of family and nonhead returns separately, returns that move down are replaced by returns with larger economic income per capita that move up. Nevertheless it need not be the same from year to year. It would vary (a) positively, with variations in the proportion of nonhead returns in the income classes below the top 1

percent line since the more there are of such returns, the greater may be the upward shift into the top percentage band; (b) negatively, with the excess of the share of the top 1 percent in the basic variant over the share of the 2nd and 3rd percentage band since the larger such excess, the greater the distance between the percentage bands, and the smaller the upward shift and the gain it is likely to contribute.

In Table 92 we measure factor (a) by the proportion that the nonhead returns are of all the returns in the $5,000-8,000 net income classes, tax definition (col. 4); and (b) by the absolute excess of the share of the top 1 percent in the basic variant over the share of the 2nd and 3rd percentage band (col. 5). Short term fluctuations in the adjustment of the share of the top 1 percent for family status (Chart 19, Panel A) move in fair agreement with factor (a). Factor (b), on the contrary, does not seem to have exercised the expected effect on those fluctuations (Panel B). The reason may well be that it is important only when its average level is not high, so that variations in it can exercise a marked effect on shifts from one band to another. When it is as large as it is in column 5, variations in it have little effect on the extent of shifting from the 2nd and 3rd to the top 1 percent.

Fluctuations in the adjustment for family status in the 2nd and 3rd percentage band are more complex. This band is intermediate in the sense that there may be upward shifts out of it and upward shifts from below into it, downward shifts out of it, and downward shifts from above into it. It always 'loses' from an upward shift out of it, which terminates in the top 1 percent, since the downward shift into it can never be fully compensatory. It always 'gains' from a downward shift out of it, since the upward shift into it must always be larger. The adjustment of its share thus equals the gain produced by the excess of the upward shift into it over the downward shift out of it minus the difference between the downward shift into it and the upward shift out of it.

If we can assume that the upward shift into the top 1 percent is entirely from the 2nd and 3rd percentage band, the two factors that influence fluctuations in the adjustment of the former's share perhaps might be expected, with signs reversed, to be positively correlated with those of the latter's share. This provides the rationale for Panels C and D of Chart 19: here the two factors used in Panels A and B to explain variations in the adjustment of the top 1 percent's share are used, with signs reversed, to explain variations in the adjustment for the 2nd and 3rd percentage band. On the whole, neither 'loss' factor shows significant association with the adjustment for family status in the 2nd and 3rd percentage band, probably because the adjustment is both large and positive.

The size of the adjustment depends upon the two 'gain' factors. That in Panel E is the average number per family return in the $5,000-8,000 net income classes. The larger the number, the larger is the downward shift out of the 2nd and 3rd percentage band likely to be; hence the larger the addition brought in by upward shifts into that band.[3] On the whole, the major swings in the adjustment follow those in this gain factor. The important exceptions occur in 1938-44.

The other gain factor, shown in Panel F, is measured by the excess of the share of the 2nd and 3rd percentage band over that of the 4th and 5th. The correlation is close, not for the major swings but for the year to year fluctuations. There is a strong suggestion in Panels E and F that some weighted combination of these two gain factors would yield an index whose changes would be closely correlated with, and thus account for, the short term fluctuations in the adjustment for the 2nd and 3rd percentage band.

A complete accounting for the fluctuations in the adjustment for family status, in both the top 1 and the 2nd and 3rd percentage bands, is a problem in multiple correlation. It did not seem worth while to make the laborious calculations that would be called for. But it is clear that, in general, in shifts between some pairs of bands the varying proportions of head of family and nonhead returns or some other family characteristic, such as size, may dominate; while for other pairs of bands variations in the income differential in the underlying basic variant may be more important.

We come finally to the most puzzling conclusion yielded by Table 92 — the low average level of the adjustment in the share of the 4th and 5th percentage band and its negative sign in several years. On the average the addition to the share is only 0.36 percentage points; yet its per capita income is so near that of the bands just above and below it in the basic variant that we would expect the displacement and consequent additions to its share would be at least as large relatively as those for the 2nd and 3rd percentage band. Even more puzzling is the fact that for some years the adjustment, which involves a 'purer' array and hence should yield larger shares of the upper percentage bands than the basic variant, yields smaller shares.

The explanation is that the adjustment involves the reshuffling of a limited population; consequently, as the process reaches groups near the bot-

[3] As an alternative measure of this gain factor we tried the proportion of nonhead returns in the $4,000-5,000 net income class. But net income classes in this income range cover large numbers of people — numbers that make our percentage band comparisons difficult. At any rate, the correlation between the proportion of nonheads in the $4,000-5,000 net income class and the adjustment in the 2nd and 3rd percentage band was not as close as in Panel E.

tom of the distribution there may be shifts upward out of a given per-
centage band that are not sufficiently compensated by shifts into it from
below. Shifts out of the 4th and 5th percentage band into the 2nd and 3rd
or top 1 percent cannot be fully compensated by shifts down into it: the
basis for the shift lies in the excess of the income of the groups shifted
upward over the income of the groups shifted downward. Hence, the loss
to the 4th and 5th percentage band can be compensated only by shifts
upward into it from the 6th and 7th percentage band. But in several years
the tax return population is so small that there is no 6th and 7th percentage
band. For lack of such a 'pool' beneath the 4th and 5th percentage band
from which a compensating upward movement can occur, the adjustment
necessarily reduces its share.

In Table 92, columns 3 and 8, and Chart 19, Panel G, the adjustment
in the share of the 4th and 5th percentage band is compared with the
'pool' below it, measured by the excess of the population covered on all
tax returns over that in the upper income bands (5 percent, in this case) —
all expressed as percentages of total population. When it is small, few
returns can be expected, upon adjustment, to rise above it. Clearly, since
the size of the pool and the adjustment are closely correlated, the former
can reasonably be accepted as a factor that dominates and explains the
latter.

Consequently, had the tax return population been sufficiently large in
all years, relatively to the upper percentage bands, the adjustment for
family status would not have caused reductions in their shares. The pres-
ent adjustment in the share of at least the 4th and 5th percentage band
reflects the small size of the tax return population, and must, therefore, be
further modified.

Before discussing this modification, let us consider the adjustment for
family status of the shares in the nonfarm variant (Table 93 and Chart
20). The conclusions and explanations parallel those in the adjustment
of the basic variant for total population. Here, also, separating head and
nonhead returns increases the share of the top 1 percent; even more so,
that of the 2nd and 3rd percentage band; and, on the average, that of the
4th and 5th percentage band. Here also, short term fluctuations in the
addition to the share of the top 1 percent are associated more closely with
those in the proportion of nonhead returns in the income classes below the
top 1 percent line — in this case, those of the $6,000-10,000 net income
classes, tax definition — than with the other factors, whereas those in the
addition to the share of the 2nd and 3rd percentage band are accounted
for largely in terms of variations in the average number per family return
in the $6,000-10,000 net income classes and in the excess of the share of

Table 93

Changes in Shares of Upper Income Groups Produced by Preliminary Adjustment for Family Status Basic Variant, Nonfarm Population, 1917-1946

	Change in Share of Given Percentage Band Due to Adjustment				Factors Producing Gain in Share of Top 1 Percent		Factors Producing Gain in 2nd & 3rd Percentage Band		Coverage of Tax Return Population in Excess of Given % of Nonfarm Population (% of nonfarm pop.)	
	Top 1	2nd & 3rd	4th & 5th	6th & 7th	Nonhead Returns as % of All Returns, $6,000-10,000 Net Income Classes, Tax Definition	Excess of Share of Top 1 Percent over That of 2nd & 3rd	Av. No. per Family Return, $6,000-10,000 Net Income Classes, Tax Definition	Excess of Share of 2nd & 3rd Percentage Band over That of 4th & 5th	5%	7%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1917	0.52	0.67	0.32		15.41	9.85	3.36	1.47	5.73	3.73
1918	0.51	0.64	0.48		13.05	8.05	3.32	1.86	10.00	8.00
1919	0.52	0.55	0.15	0.64	12.77	7.53	3.18	2.28	11.76	9.76
1920	0.52	0.54	0.15	0.63	12.77	7.44	3.18	2.25	11.76	9.76
1921	0.46	0.75	0.64	0.66	13.80	6.96	3.28	2.08	18.14	16.14
1922	0.62	1.06	0.93	0.69	13.88	6.81	3.30	2.22	14.20	12.20
1923	0.62	0.71	0.55	1.04	14.37	6.90	3.37	2.03	15.04	13.04
1924	0.56	0.72	0.47	0.44	13.86	6.47	3.33	1.81	17.98	15.98
1925	0.54	0.90	0.20	0.63	12.99	6.49	3.27	2.10	15.59	13.59
1926	0.48	0.83	0.48	-0.03	13.32	7.18	3.31	2.37	6.08	4.08
1927	0.50	0.72	0.71	-0.24	13.76	7.12	3.28	2.80	5.87	3.87
1928	0.51	0.74	0.57	-0.46	14.05	7.76	3.34	2.62	5.20	3.20
1929	0.41	0.80	0.48	-0.37	14.11	8.13	3.27	2.64	5.01	3.01
1930	0.49	0.75	0.62	-0.32	13.92	7.82	3.25	2.58	5.11	3.11
1931	0.52	0.65	0.35	-0.50	13.90	7.18	3.29	2.20	4.05	2.05
1932	0.57	0.98	-0.13	-0.88	14.25	6.38	3.34	1.55	2.90	0.90
1933	0.69	1.03	-0.02	-0.17	15.93	6.11	3.39	1.26	4.44	2.44
1934	0.62	0.99	-0.04	-0.17	15.18	5.69	3.41	1.13	4.21	2.21

Year	1	2	3	4	5	6	7	8	9	10
1934	0.55	0.66	0.24	−0.11	14.23	5.59	3.42	1.70	4.70	2.70
1935	0.51	0.56	0.46	−0.06	14.07	5.76	3.35	1.88	5.37	3.37
1936	0.51	0.35	0.77	−0.17	14.44	6.95	3.29	2.46	6.83	4.83
1937	0.48	0.35	0.70	0.11	13.67	6.65	3.24	2.41	8.41	6.41
1938	0.44	0.42	0.21	0.16	12.74	5.10	3.22	1.42	7.99	5.99
1929	0.49	0.76	0.62	−0.32	13.92	7.89	3.25	2.61	5.11	3.11
1930	0.53	0.66	0.35	−0.51	13.90	7.32	3.29	2.25	4.05	2.05
1931	0.57	0.98	−0.13	−0.88	14.25	6.41	3.34	1.55	2.90	0.90
1932	0.71	1.06	−0.02	−0.18	15.93	6.27	3.39	1.30	4.44	2.44
1933	0.64	1.01	−0.04	−0.17	15.18	5.82	3.41	1.15	4.21	2.21
1934	0.55	0.66	0.24	−0.11	14.23	5.65	3.42	1.72	4.70	2.70
1935	0.51	0.56	0.46	−0.06	14.07	5.80	3.35	1.89	5.37	3.37
1936	0.50	0.34	0.74	−0.16	14.44	6.70	3.29	2.37	6.83	4.83
1937	0.47	0.34	0.70	0.11	13.67	6.60	3.24	2.39	8.41	6.41
1938	0.44	0.42	0.21	0.16	12.74	5.06	3.22	1.41	7.99	5.99
1939	0.50	0.53	0.82	0.08	12.71	5.14	3.19	2.41	10.29	8.29
1940	0.45	0.68	0.73	0.83	12.76	5.48	3.16	2.23	26.18	24.18
1941	0.38	0.68	0.68	0.68	13.00	5.23	3.07	2.13	51.53	49.53
1942	0.30	0.76	0.73	0.52	12.43	4.83	3.06	2.05	75.12	73.12
1943	0.23	0.67	0.75	0.63	12.42	4.31	3.02	2.10	83.73	81.73
1944	0.26	0.73	0.76	0.60	12.78a	3.68	3.15a	1.94	93.58	91.58
1945	0.19	0.59	0.70	0.61	13.50b	3.45	3.18b	2.19	96.14	94.14
1946	0.33	0.33	0.58	0.52	13.00c	3.22	3.24c	2.32	102.28	100.28

Column

1-4 Table 121: column 2 minus column 1.
5 Table 111: column 5 divided by column 3.
6 Table 121: column 1, Section A, minus column 1 of Section B.
7 Table 111: column 6 divided by column 4.
8 Table 121: column 1, Section B, minus column 1 of Section C.

Column

9, 10 The percentage of the nonfarm population (Table 115, col. 1) accounted for by the tax return population (Table 69, col. 3) minus column 5 and 7 percent respectively.
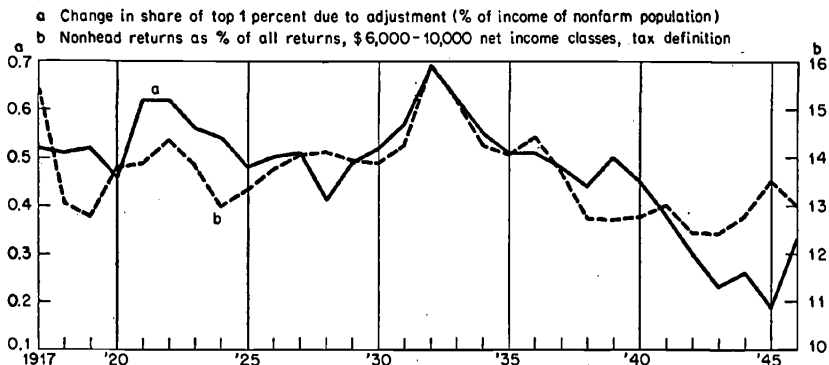
a For $7,000-11,000 net income classes, tax definition.
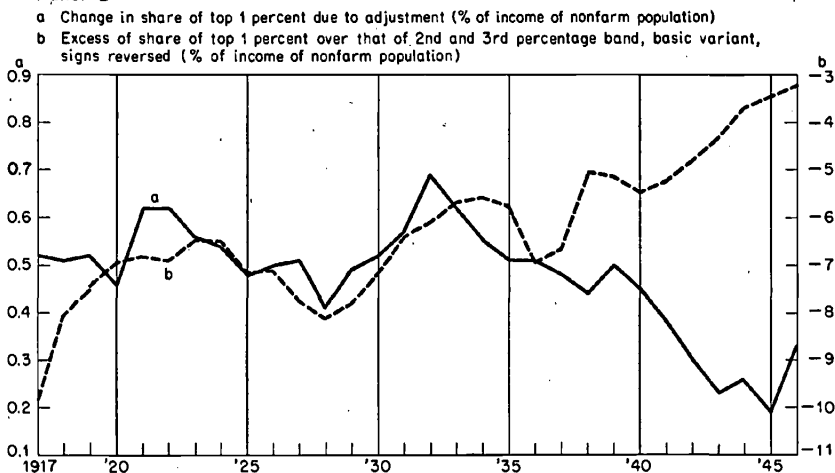b For $7,000-12,000 net income classes, tax definition.
c For $9,000-15,000 net income classes, tax definition.

Chart 20

Preliminary Adjustment for Family Status
Basic Variant, Nonfarm Population, 1917 – 1946

Panel A

a Change in share of top 1 percent due to adjustment (% of income of nonfarm population)
b Nonhead returns as % of all returns, $6,000 - 10,000 net income classes, tax definition

Panel B

a Change in share of top 1 percent due to adjustment (% of income of nonfarm population)
b Excess of share of top 1 percent over that of 2nd and 3rd percentage band, basic variant, signs reversed (% of income of nonfarm population)

Panel C

a Change in share of 2nd and 3rd percentage band due to adjustment (% of income of nonfarm population)
b Nonhead returns as % of all returns, $6,000 - 10,000 net income classes, tax definition, signs reversed

378
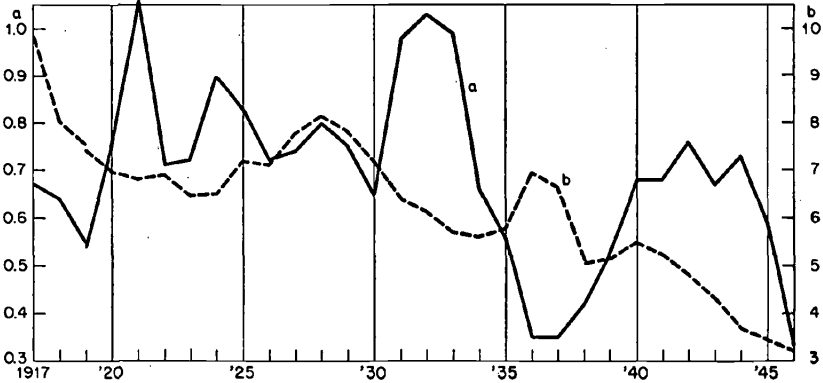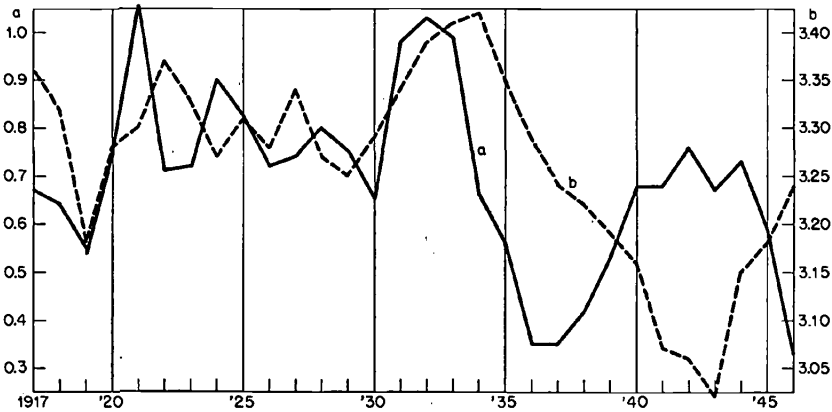
Chart 20 (cont.)

Panel D

a Change in share of 2nd and 3rd percentage band due to adjustment (% of income of nonfarm population)

b Excess of share of top 1 percent over that of 2nd and 3rd percentage band, basic variant
   (% of income of nonfarm population)

Panel E

a Change in share of 2nd and 3rd percentage band due to adjustment (% of income of nonfarm population)

b Average number of persons per family return, $6,000-10,000 net income classes, tax definition

Panel F

a Change in share of 2nd and 3rd percentage band due to adjustment (% of income of nonfarm population)

b Excess of share of 2nd and 3rd percentage band over that of 4th and 5th percentage band,
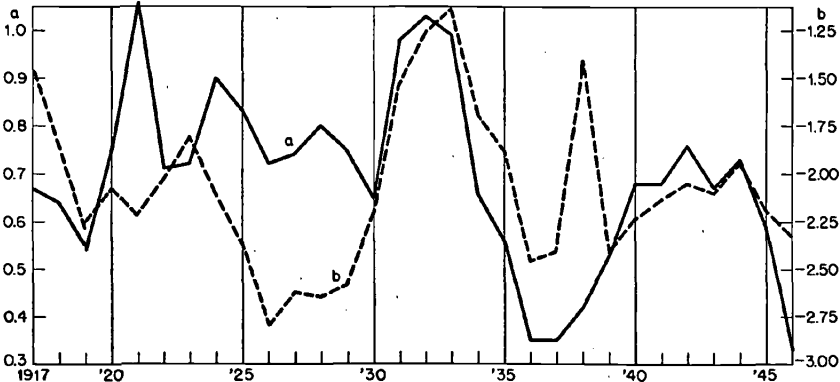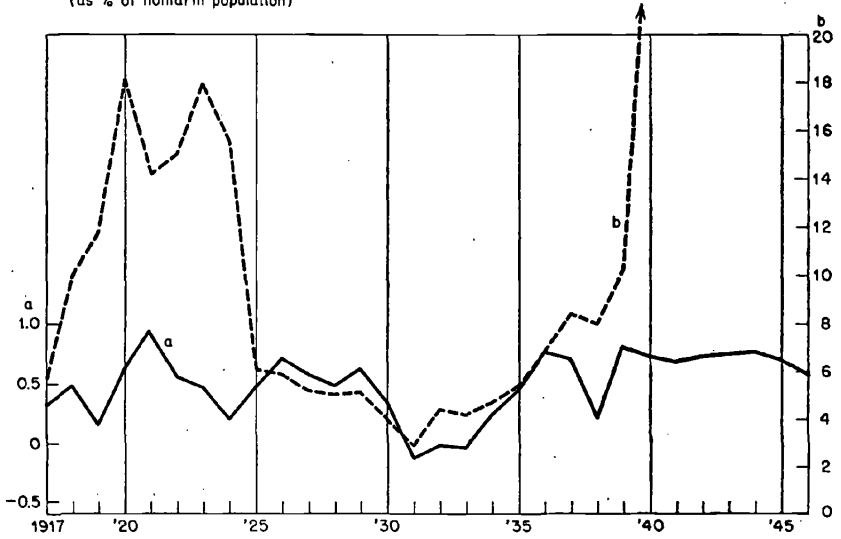   basic variant, signs reversed (% of income of nonfarm population)

379

Chart 20 (concl.)

Panel G

a Change in share of 4th and 5th percentage band due to adjustment
(% of income of nonfarm population)

b Coverage of tax return population in excess of 5% of nonfarm population
(as % of nonfarm population)

Panel H

a Change in share of 6th and 7th percentage band due to adjustment
(% of income of nonfarm population)

b Coverage of tax return population in excess of 7% of nonfarm population
(as % of nonfarm population)
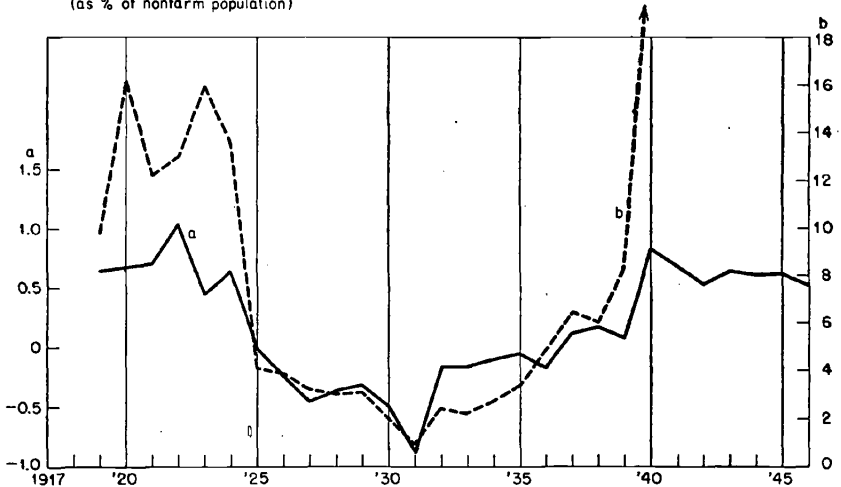
the 2nd and 3rd percentage band over that of the 4th and 5th. Finally, the smallness of the tax return population, i.e., the smallness of the 'pool' from

which returns can rise into the upper percentage bands, dominates the size of the adjustment for the 4th and 5th percentage band, and particularly that for the 6th and 7th percentage band.

2 Adjustment for Family Status, Final

Here we are concerned with the effect of the smallness of the tax return population on the adjustment for family status. Obviously, even a rough modification is indispensable if we are to use the adjustment for lower percentage bands — the 4th and 5th percentage band in the basic variant for total population, and the 4th and 5th, and 6th and 7th percentage bands in the nonfarm variant.

As already indicated, the adjustment for family status in these bands varies in close conformity with fluctuations in the excess of the tax return population over the lower percentage line of the bands. This suggests a modification procedure. We can calculate the regression of year to year deviations from the average level of the adjustment for family status, the dependent variable, upon the year to year deviations in the excess of the tax return population over that covered by the lower partition line of a given percentage band, the independent variable. Then, using the regression equation, we can 'correct' the dependent variable for the effects of the independent variable on it. These modified or 'corrected' fluctuations in the adjustment for family status can then be added to an estimated average level of the adjustment, an average not affected by the smallness of the tax return population.

Conversion of the adjustment for family status from preliminary to final consists, therefore, of two steps (App. 5, Sec. B). First, we modify year to year changes (deviations from the average) by regression analysis to eliminate the effect of the small tax return population on the annual value taken as a deviation from the average. Then we estimate a correct average level for the period affected by the small tax return population and add the corrected annual deviations. The modification was applied to the adjustment for family status for the 4th and 5th percentage band in the basic variant for total population for 1925-39; the 4th and 5th percentage band for the nonfarm variant for 1930-35 and the 6th and 7th percentage band for 1925-39. There was no apparent need to modify the adjustment for the top 1 or 2nd and 3rd percentage band for any year or for some of the lower bands in some years (notably before 1925 and after 1939) because the coverage of the tax return population provided an adequate pool below the critical partition line.

The results are subject to error on two counts — the regression line itself and the estimates of the average level for the period. Yet the final adjust-

Table 94

Change in Shares of 4th and 5th, and 6th and 7th Percentage Bands
Produced by Final Adjustment for Family Status
Basic Variant, Total and Nonfarm Population, 1917-1946

	TOTAL POPULATION Change in Share of 4th & 5th Percentage Band	NONFARM POPULATION		Excess of Share of 4th & 5th Percentage Band over That of 6th & 7th
		Change in Share of		
		4th & 5th percentage band	6th & 7th percentage band	
	(1)	(2)	(3)	(4)
1917		0.32		0.36
1918	0.25	0.48		0.51
1919	0.51	0.15	0.64	0.75
1919	0.51	0.15	0.63	0.74
1920	0.73,	0.64	0.66.	0.70
1921	0.92	0.93	0.69	0.48
1922	1.22	0.55	1.04	0.92
1923	0.46	0.47	0.44	0.49
1924	0.52	0.20	0.63	0.69
1925	0.80	0.48	0.68	0.49
1926	0.74	0.71	0.50	0.26
1927	0.55	0.57	0.38	0.20
1928	0.73	0.48	0.50	0.30
1929	0.77	0.62	0.54	0.35
1930	0.63	0.96	0.56	0.19
1931	0.67	0.72	0.47	0.55
1932	0.70	0.51	0.81	0.55
1933	1.05	0.54	0.86	0.79
1934	0.79	0.72	0.82	0.49
1935	0.68	0.79	0.75	0.40
1936	0.69	0.77	0.46	0.10
1937	0.85	0.70	0.64	0.30
1938	0.73	0.21	0.70	0.98
1929	0.77	0.62	0.54	0.36
1930	0.63	0.96	0.56	0.20
1931	0.67	0.72	0.47	0.55
1932	0.70	0.51	0.81	0.56
1933	1.05	0.54	0.86	0.81
·1934	0.79	0.72	0.82	0.49
1935	0.68	0.79	0.75	0.40
1936	0.69	0.74	0.46	0.10
1937	0.85	0.70	0.64	0.30
1938	0.73	0.21	0.70	0.97
1939	0.79	0.82	0.62	0.10
1940	1.14	0.73	0.83	0.82
1941	0.78	0.68	0.68	0.84
1942	0.68	0.73	0.52	0.61
1943	0.75	0.75	0.63	0.58
1944	0.79	0.76	0.60	0.55
1945	0.73	0.70	0.61	0.68
1946	0.64	0.58	0.52	0.76

ment is definitely to be preferred to the preliminary. It is shown in Table 94 and Chart 21. As will be seen at a glance, the big dip shown by the preliminary estimates, reflecting the narrowing of the tax return population in the depressed 1930's, is eliminated.

To explain the short term fluctuations that still persist we use the model employed above in dealing with the short term changes in the adjustment for the top 1 and the 2nd and 3rd percentage bands. Of the several 'loss' and 'gain' factors discussed in Section 1, the excess of the share of one band over the next is most relevant here. Thus in Chart 21, Panel A, we compare the final adjustment in the 4th and 5th percentage band, basic variant for total population, with the excess of the share of the 2nd and 3rd percentage band over that of the 4th and 5th percentage band. In general, when the excess is large, especially when its average level is low, there is less shifting out of the 4th and 5th band into the 2nd and 3rd, and less loss from such shifting as does occur. Bearing this in mind, one cannot fail to be impressed by the close correlation in Panel A.

This correlation is present also in the similar comparison for the 4th and 5th percentage band in the nonfarm variant (Panel B), but it is not as close. The reason is not far to seek. In the variant for total population the 4th and 5th percentage band is near the bottom of the tax return population in many years, and in these years only a downward shift into it could have affected year to year changes — there could not be any short term effects of an upward shift from below. But in the nonfarm variant a lower percentage band, the 6th and 7th, is continuously present; and the year to year changes in the final adjustment for the 4th and 5th percentage band thus reflect the upward shift from it as well as the downward shift from the 2nd and 3rd percentage band.[4]

The bearing of this explanation can be seen by comparing the year to year changes in the final adjustment for family status in the 4th and 5th

[4] The validity of this statement is not affected by the modification of the adjustment by the regression analysis. The correction attempted deals only with the effects of the smallness of the tax return population on the annual level of the adjustment, not with its effects on any differences in income level between successive percentage bands.

Notes to Table 94:
Column
1   1918-24 and 1940-46: Table 92, column 3; 1925-39: Table 120, columns 1 and 3.
2   1917-29 and 1936-46: Table 93, column 3; 1930-35: Table 121, columns 1 and 3.
3   1919-24 and 1940-46: Table 93, column 4; 1925-39: Table 121, columns 1 and 3.
4   Table 121: column 1, Section C, minus column 1 of Section E.

Chart 21

Final Adjustment for Family Status, Lower Percentage Bands Basic Variant, Total and Nonfarm Population, 1917–1946
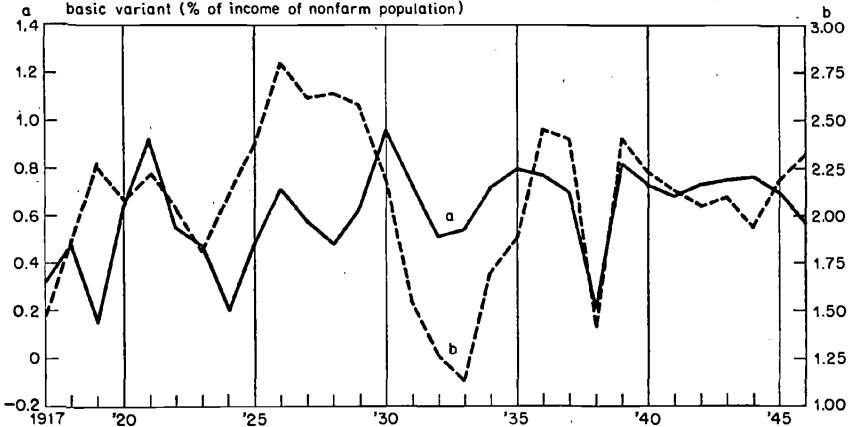
Panel A: 4th and 5th Percentage Band of Total Population

a Change in share due to adjustment (% of total income receipts)
b Excess of share of 2nd and 3rd percentage band over that of 4th and 5th percentage band, basic variant (% of total income receipts)
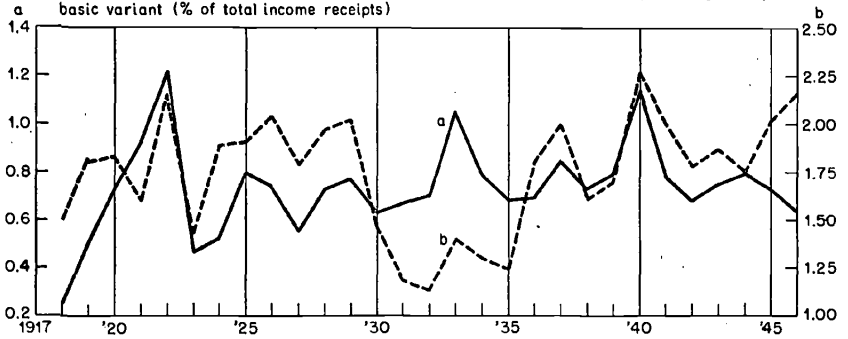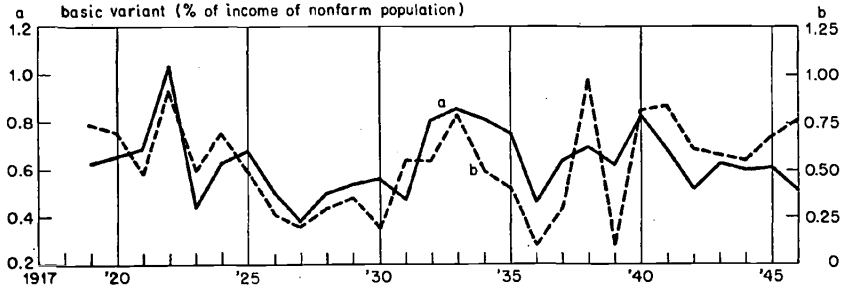
Panel B: 4th and 5th Percentage Band of Nonfarm Population

a Change in share due to adjustment (% of income of nonfarm population)
b Excess of share of 2nd and 3rd percentage band over that of 4th and 5th percentage band, basic variant (% of income of nonfarm population)

Panel C: 6th and 7th Percentage Band of Nonfarm Population

a Change in share due to adjustment (% of income of nonfarm population)
b Excess of share of 4th and 5th percentage band over that of 6th and 7th percentage band, basic variant (% of income of nonfarm population)

percentage band for the nonfarm variant (Panel B, solid line) with the excess of its share over that of the 6th and 7th percentage band (Panel C, dash line). This excess affects the 'gain' in the adjustment for the 4th and 5th percentage band. The closeness of their negative correlation reduces the positive correlation of the two lines in Panel B.

In Panel C, showing the comparison between the final adjustment for family status in the share of the 6th and 7th percentage band and the excess of the share of the 4th and 5th percentage band over that of the 6th and 7th, all in the nonfarm variant, the correlation is again quite close. The reason is obvious: since the 6th and 7th percentage band lies near the bottom of the tax return population in many years, the adjustment in its share tends to reflect largely annual variations in the downward shift from higher percentage bands, not in any upward shift from lower percentage bands.

3 Incompleteness of the Adjustment for Family Status

While the adjustment for family status is valid, it is manifestly incomplete as a measure of the effect of using the return as the unit of classification in a distribution that should use the person. In other words, the adjustment we want is for differences in the number per return. But that for family status gauges differences in the number per return only as far as they emerge when we separate head from nonhead returns.

It would have been desirable to refine the procedure even further: for example, by calculating per capita income separately for the joint returns subgroup, the male family head subgroup, the female family head subgroup, and so on. But the published data for most years do not provide a basis for calculating the number of dependents separately for each family status subgroup. More important, estimating economic income for each subgroup within each net income class, tax definition, would be very difficult. We deplored above our inability to derive more than a crude approximation to economic income even in the simple distinction between the large group of all family head returns on the one hand, and all nonhead returns, on the other. Any attempt to do so for the subgroups might introduce an error into economic income that would make the estimate of doubtful value.

As an adjustment for the number per return, that for family status is thus unavoidably incomplete. We can only hope that it accounts for a major part of the change that would be produced by a full adjustment. A special calculation for 1942, when *Statistics of Income* for the first time shows returns classified by both family status and number of dependents, provides some ground for this hope. We rearrayed the distribution, not

Table 95

Shares of Upper Income Groups Calculated for 1942 for Joint Returns and
Returns of Men, Nonheads, Based on Net Income as Reported

		Percentage Share in	
Percentage Band of Income Distribution	Basic Variant (1)	Basic Variant Adjusted for Family Status (2)	Basic Variant Taking Account of Family Status & No. of Dependents (3)
Top 1	7.64	8.06	8.41
2nd & 3rd	5.30	6.58	6.70
4th & 5th	3.79	4.63	4.93
Top 5	16.73	19.27	20.05
6th & 7th	3.25	3.82	4.16
Top 7	19.98	23.08	24.20

	Total Adjustment (col. 3 − col. 1) (4)	Adjustment for Family Status Alone (col. 2 − col. 1) (5)	% of Total Adjustment Realized by Family Status Adjustment (col. 5 ÷ col. 4) (6)
Top 1	0.78	0.42	54.51
2nd & 3rd	1.40	1.28	90.96
4th & 5th	1.14	0.84	73.44
Top 5	3.32	2.54	76.43
6th & 7th	0.91	0.57	62.47
Top 7	4.22	3.10	73.44

Columns 1-3 are calculated from *Statistics of Income, 1942,* Part 1, pp. 50-1, 64-5,
125-6, and 139-40; for procedure see text.

only distinguishing between head of family and nonhead returns but also
taking into account their classification by number of dependents. Since
this calculation is possible for only two or three years and can thus be of
merely experimental value, we confined it to two major family status
groups — joint returns and returns of men not heads of families — account-
ing in 1942 for about 25.6 million of 36.5 million returns; and dealt with
the distribution by size of statutory net instead of economic income. For
this large tax return universe we derived the shares of the upper groups
in three ways: the first paralleled the procedure used for the basic variant
except that income and population totals were those of the tax coverage,
not of the country; the second paralleled that used to adjust the basic
variant for family status — distinguishing between head of family (in this
case, joint) and nonhead returns; the third took account also of the num-
ber of dependents classification, yielding a variant fully adjusted for differ-
ences in the number per return (Table 95).

For the top 7 percent the adjustment for the difference between head

and nonhead returns accounts for over seven-tenths of the total adjustment; and that for the top 5 percent is even more efficient (col. 6). But the efficiency varies among the percentage bands, being least for the top 1 and greatest for the 2nd and 3rd. Thus, the experimental calculation suggests, though it does not prove, that our procedure which takes into account the twofold family status division, yields the major portion of the adjustment called for by differences in the number per return; but that it is incomplete, i.e., it still understates the shares of the upper groups in comparison with what they would be in a distribution in which per capita economic income was established for each return and made directly the basis of classification.

4   Adjustment for Income Base — Unwarranted Inclusions

To adjust the distribution by size of net income, tax definition, so as to approximate a distribution by size of economic income is very difficult. One attempt, based on interpolations within each published statutory net income class of subclasses, yielding number of persons and economic income for each subclass, was completely unsuccessful. We finally had recourse to assumptions designed to give the disparity between net income, tax definition, and economic income the maximum weight in its possible effect on the distribution by size, and thus yield the upper limit of the adjustment that would result could we actually base it on specific data.

   As already indicated, net income, tax definition, includes gains on sales of assets which, in terms of economic income, are unwarranted inclusions. To adjust for them, we assume that they are: (a) concentrated on a few returns within each net income class for which gains are shown; (b) not offset even partly for any return that shows them by deductions we later reinclude as items properly belonging to economic income (designated 'unwarranted deductions'); (c) not combined with any other element of economic income, i.e., the units that report them do not have any other income. To determine the maximum number of returns in each net income class whose income could be assumed to consist solely of gains from sales of assets and that would account for all the gains reported, the total gains for each net income class were divided by its lower income limit. These returns were then dropped from the distribution. The remaining returns were converted to population equivalents, cumulated by the usual procedure, and new partition lines drawn to determine the income shares (see App. 5, Sec. C).

   This assumption allows for the maximum effect of unwarranted inclusions because it stipulates that they be concentrated on a few returns rather than spread proportionately among all returns within each net income

class. With such a proportionate spread, the size distribution of income would be the same as in the basic variant. By assuming both that the unwarranted inclusions are concentrated and that they are not offset by any unwarranted deductions or combined with any genuine economic income, we in fact cause the economic income of any net income class to be distributed among fewer returns, thus raising the per return and per capita economic income and allowing a purer gradation by per capita economic income than is possible in the basic variant.

From the annual changes produced by the assumption of maximum effect of unwarranted inclusions in the basic variant for total population (Table 96 and Chart 22), we conclude:

First, the adjustment, as would be expected, tends to increase the shares of upper percentage bands. Since its purpose is to get a distribution that conforms better to the basis of classification, the spread is of course less diluted, and larger shares are assigned to the upper bands.

Second, the increase in the shares is appreciable only for the top 1 percent, where it averages about a third of 1 percent. In the lower percentage bands the adjustments are quite small on the average. The reason lies in the differences among income classes in the proportion of unwarranted inclusions in economic income. This proportion, in the net income classes $10,000 and over, tax definition, was in some years more than 33 percent of net income; and in 10 years, over 10 percent of economic income (Table 71, col. 2, related to col. 4). In the $5,000-10,000 classes it was below 10 percent in all years and below 5 percent during two-thirds of the period; in the $3,000-5,000 classes it exceeded 5 percent in only one year. Naturally, the adjustment is significant only for the share of the top 1 percent, which is ordinarily dominated by the net income classes over $9,000 or $10,000.

Third, annual variations in the adjustment for unwarranted inclusions require explanation. As was to be expected, those in the share of the top 1 percent are closely associated with annual variations in the proportion of unwarranted inclusions in net income in the income classes over $10,000 (Chart 22, Panel A). Somewhat less expected is the effect of the adjustment on the share of the 2nd and 3rd percentage band. The exclusion from the distribution of a sizeable number of upper level returns, all assumed to report capital gains alone, moves up a corresponding number of returns from what in the basic variant was the 2nd and 3rd percentage band. Obviously, the loss in the latter is not compensated by replacements from the lower percentage bands; nor in some years, even by the adjustment within the band itself. As a result, fluctuations in the adjustment for this band are almost exactly inverted to those for the top 1 percent; and

Table 96

Changes in Shares of Upper Income Groups Produced by Adjustment for Maximum Effect of Unwarranted Inclusions
Basic Variant, Total Population, 1919-1947

	Change in Share of Given Percentage Band Due to Adjustment			% Unwarranted Inclusions Are of Net Income, Tax Definition, Net Income Classes of	
	Top 1	2nd & 3rd	4th & 5th	$10,000 & over	$2,000- 3,000
	(1)	(2)	(3)	(4)	(5)
1919	0.38	0.14	0.07	7.97	1.84
1920	0.41	0.21	*	6.28	1.47
1921	0.22	0.44	0.02	3.81	0.90
1922	0.38	0.06	0.17	11.43	1.23
1923	0.32	0.11	0.08	11.05	2.06
1924	0.50	0.04	0.05	14.11	1.61
1925	0.90	—0.09	0.14	25.19	2.19
1926	0.69	—0.09	0.15	20.02	1.82
1927	0.75	—0.10	0.22	22.93	3.05
1928	1.12	—0.27	0.14	33.27	2.30
1929	0.95	—0.10	0.17	33.28	2.77
1930	0.34	—0.02	0.04	13.96	1.26
1931	0.15	0.06	0.06	7.54	2.48
1932	0.08	0.02	0.02	3.80	0.46
1933	0.28	0.04	0.02	13.90	1.22
1934	0.12	0.01	0.01	3.96	0.50
1935	0.24	—0.02	0.04	8.13	1.00
1936	0.41	—0.04	0.05	10.89	1.21
1937	0.17	0.01	0.03	4.27	0.68
1938	0.15	*	0.04	8.18	0.66
1929	0.96	—0.10	0.17	33.28	2.77
1930	0.34	—0.02	0.04	13.96	1.26
1931	0.15	0.06	0.06	7.54	2.48
1932	0.08	0.02	0.02	3.80	0.46
1933	0.29	0.04	0.02	13.90	1.22
1934	0.12	0.01	0.01	3.96	0.50
1935	0.24	—0.02	0.04	8.13	1.00
1936	0.40	—0.04	0.05	10.89	1.21
1937	0.17	0.01	0.03	4.27	0.68
1938	0.15	*	0.04	8.18	0.66
1939	0.16	—0.01	0.04	4.88	0.56
1940	0.13	0.01	—0.01	4.50	0.27
1941	0.12	0.02	*	4.69	0.20
1942	0.06	*	0.00	2.54	0.15
1943	0.13	*	*	4.57	0.23
1944	0.14	0.02	0.01	4.63	0.36
1945	0.28	0.03	0.00	8.25	0.63
1946	0.32	0.07	0.03	8.58	0.97
1947	0.19	0.05	0.03	5.84	0.68

* Less than ±0.005.

Column
1, 2   Table 120: column 3 minus column 1.
   3   Table 120: column 4 minus column 1.
4, 5   Table 71: columns 2 and 14 respectively.
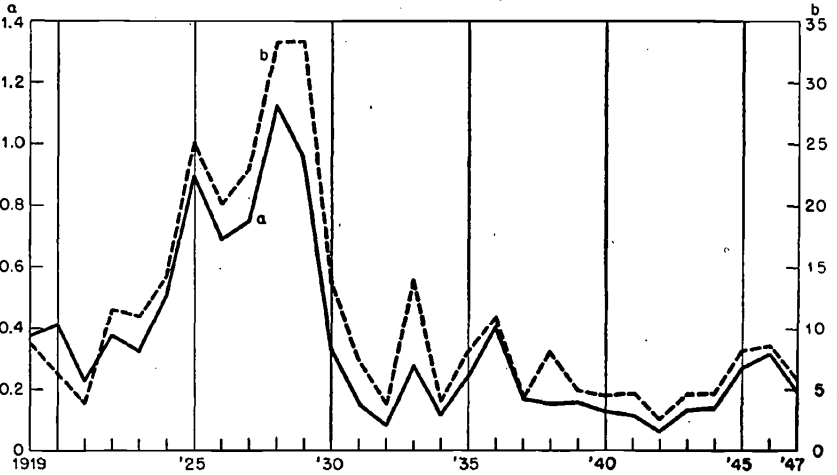
Chart 22
Adjustment for Maximum Effect of Unwarranted Inclusions
Basic Variant, Total Population, 1919–1947

Panel A: Top 1 Percent
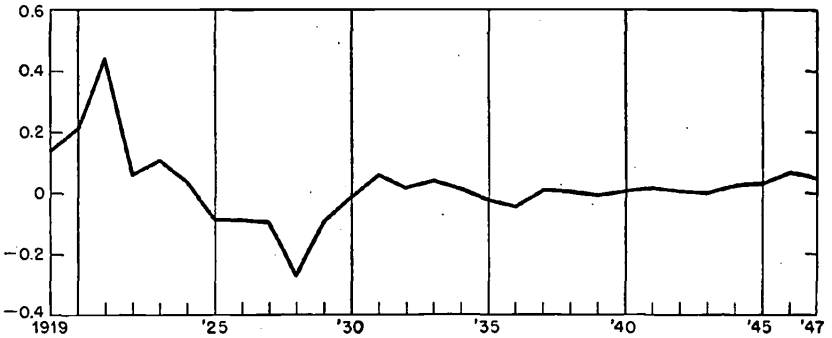a Change in share due to adjustment (% of total income receipts)
b Unwarranted inclusions as % of net income, tax definition, $10,000 and over net income classes

Panel B: 2nd and 3rd Percentage Band
Change in share due to adjustment (% of total income receipts)

Panel C: 4th and 5th Percentage Band
a Change in share due to adjustment (% of total income receipts)
b Unwarranted inclusions as % of net income, tax definition, $2,000–3,000 net income class
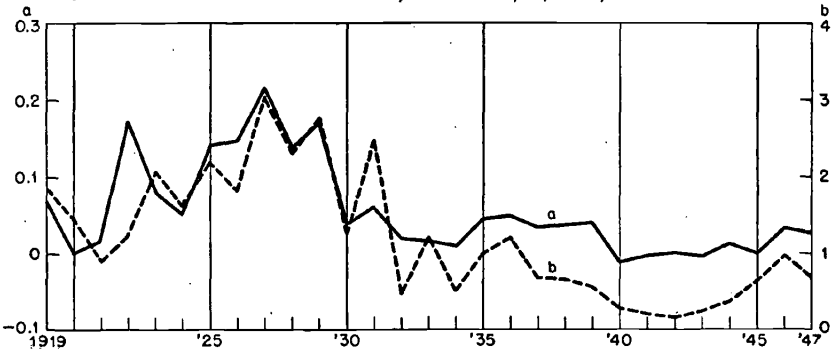
Table 97

Changes in Shares of Upper Income Groups Produced by Adjustment for Maximum Effect of Unwarranted Inclusions
Basic Variant, Nonfarm Population, 1919-1947

	Change in Share of Given Percentage Band Due to Adjustment				% Unwarranted Inclusions Are of Net Income, Tax Definition, Net Income Classes of $2,000-5,000
	Top 1	*2nd & 3rd*	*4th & 5th*	*6th & 7th*	
	(1)	(2)	(3)	(4)	(5)
1919	0.44	0.13	0.07	0.06	3.03
1920	0.42	0.22	0.10	*	3.17
1921	0.23	0.10	0.40	0.04	1.58
1922	0.39	0.09	0.01	0.19	1.97
1923	0.35	0.09	0.12	0.02	2.84
1924	0.57	0.05	0.06	−0.01	2.55
1925	1.09	−0.11	0.01	0.09	3.35
1926	0.77	−0.08	0.09	0.06	3.18
1927	0.82	−0.11	0.15	0.13	3.54
1928	1.32	−0.26	0.02	0.04	2.90
1929	1.11	−0.17	0.12	0.11	3.51
1930	0.38	−0.05	0.02	0.06	1.42
1931	0.17	0.02	0.10	0.01	1.58
1932	0.09	−0.01	0.03	0.02	0.54
1933	0.32	0.04	−0.01	0.02	1.77
1934	0.13	−0.01	0.02	0.01	0.71
1935	0.27	−0.01	0.05	0.02	1.40
1936	0.45	−0.02	0.04	−0.02	1.87
1937	0.18	0.02	−0.01	0.05	0.97
1938	0.17	0.01	0.03	0.02	0.89
1929	1.12	−0.18	0.13	0.11	3.51
1930	0.38	−0.05	0.02	0.06	1.42
1931	0.17	0.02	0.10	0.01	1.58
1932	0.09	−0.01	0.03	0.02	0.54
1933	0.32	0.04	−0.01	0.03	1.77
1934	0.13	−0.01	0.02	0.01	0.71
1935	0.28	−0.01	0.05	0.02	1.40
1936	0.44	−0.02	0.04	−0.02	1.87
1937	0.18	0.02	−0.01	0.05	0.97
1938	0.16	0.01	0.03	0.02	0.89
1939	0.17	0.01	0.03	0.01	0.80
1940	0.14	0.01	*	0.02	0.43
1941	0.13	0.01	0.01	−0.01	0.37
1942	0.07	*	*	−0.01	0.22
1943	0.15	*	*	−0.01	0.34
1944	0.16	0.02	0.01	0.01	0.44
1945	0.31	0.02	0.01	0.01	0.79
1946	0.35	0.07	0.04	0.03	1.32
1947	0.21	0.05	0.03	0.02	0.83

* Less than ±0.005.

Column

   1, 2   Table 121: column 3 minus column 1.
   3, 4   Table 121: column 4 minus column 1.
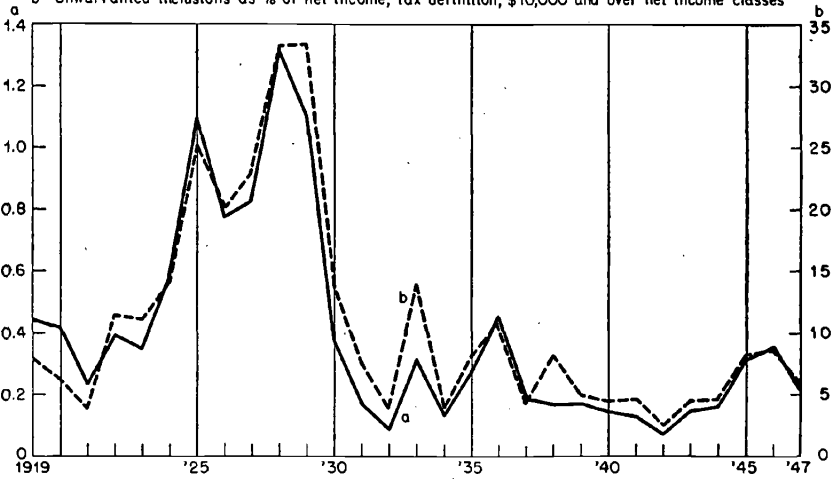   5   Weighted mean of columns 10 and 14 of Table 71.

Chart 23

Adjustment for Maximum Effect of Unwarranted Inclusions
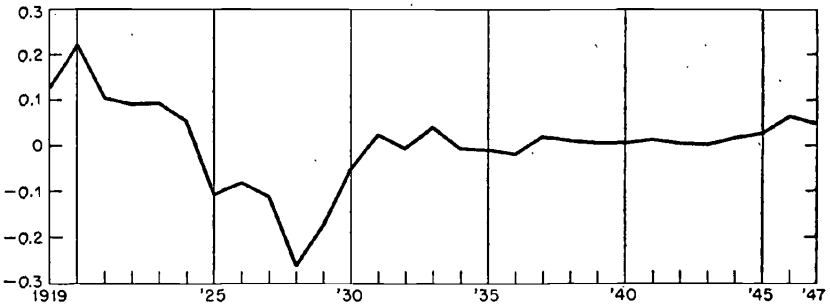## Basic Variant, Nonfarm Population, 1919–1947

Panel A: Top 1 Percent
a Change in share due to adjustment (% of income of nonfarm population)
b Unwarranted inclusions as % of net income, tax definition, $10,000 and over net income classes

Panel B: 2nd and 3rd Percentage Band
Change in share due to adjustment (% of income of nonfarm population)

Panel C: 4th and 5th Percentage Band
a Change in share due to adjustment (% of income of nonfarm population)
b Unwarranted inclusions as % of net income, tax definition, $2,000–5,000 net income classes
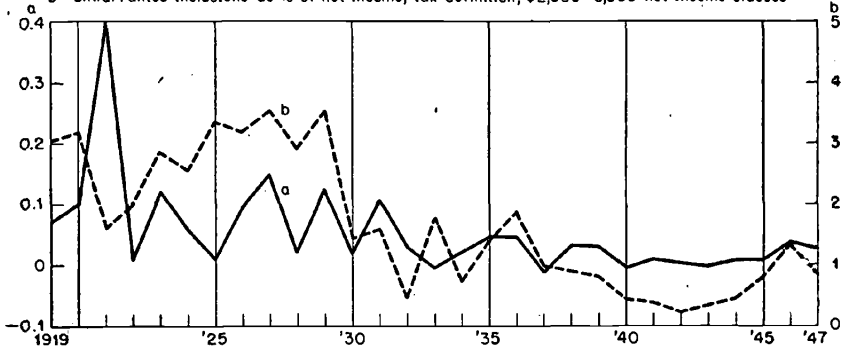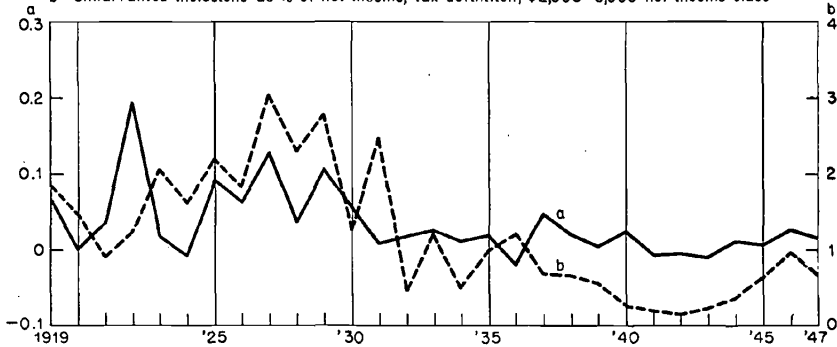
Chart 23 (concl.)
   Panel D: 6th and 7th Percentage Band
   a Change in share due to adjustment (% of income of nonfarm population)
   b Unwarranted inclusions as %-of net income, tax definition, $2,000-3,000 net income class

in some years its adjustment is negative (cf. Chart 22, Panel B, with the solid line of Panel A). Finally, in the 4th and 5th percentage band the adjustment is closely associated with the proportion of unwarranted inclusions in net income in the $2,000-3,000 net income class — the one that dominates this band in the basic variant for total population.[5]

An exactly parallel set of assumptions concerning the distribution of unwarranted inclusions was employed in connection with the nonfarm variant (Table 97 and Chart 23), yielding the same conclusions, somewhat accentuated. Again, the adjustment adds significantly to the share of the top 1 percent alone, even though its population is a narrower and more selective group. Again, annual fluctuations in the adjustment for the share of the top 1 percent follow closely changes in the proportion of unwarranted inclusions in net income in the $10,000 and over net income classes, tax definition; whereas those in the adjustment for the 2nd and 3rd per-

[5] Here and in Section 5 we might have refined the analysis by experimenting with the combinations of net income classes, tax definition, to fit more exactly the composition of our percentage bands. Also, it would have been more effective to take unwarranted inclusions (and subsequently, deductions) as percentages of economic income than of net income, tax definition. But this more laborious analysis was not justified, since the purpose is to explain the general nature of the factors that determine the average level and the short term fluctuations in the adjustments, not to account completely for them.

Taking unwarranted inclusions in percentages of economic instead of net income, tax definition, would not modify the direction and general swings in the percentages as they are portrayed by the dash lines in Charts 22 and 23. All that would happen would be that the amplitude would be wider in the percentages of economic income than they are of net income, tax definition. Taking unwarranted deductions (Sec. 5) in percentages of economic income, on the contrary, would make the amplitude narrower than that in the percentages of net income, tax definition.

centage band are negatively correlated with those in the adjustment for
the top 1 percent. Changes in the adjustment for the 4th and 5th per-
centage band follow fluctuations in the proportion of unwarranted inclu-
sions in net income in the $2,000-5,000 net income classes (Chart 23,
Panel C: somewhat higher income classes are used in this comparison
than in that for the 4th and 5th percentage band in the basic variant for
total population in Chart 22, Panel C — for obvious reasons). Finally, for
the 6th and 7th percentage band, fluctuations in the adjustment follow
those in the proportion of unwarranted inclusions in net income in the
$2,000-3,000 net income class (Chart 23, Panel D).

5   *Adjustment for Income Base — Unwarranted Deductions*

We turn now to the discrepancy between net income, tax definition, and
economic income arising from unwarranted deductions (tax exempt in-
terest, losses on sales of assets, taxes, interest, etc.) from the former that
have to be included to obtain the latter. These items loom much larger
than unwarranted inclusions, at least for the lower income classes in most
years. We must make an assumption concerning their distribution within
each net income class of a type that will yield the upper limit of the adjust-
ment that would be obtained were specific data available.

We assumed that all unwarranted deductions are concentrated in a
tenth of the returns (and population) remaining in each net income class
after returns assumed to receive all gains on sales of assets (unwarranted
inclusions) have been excluded. The selection of a tenth was arbitrary.
Had we assumed ten-tenths, i.e., the entire number in each class, no change
from the basic variant (adjusted for unwarranted inclusions) would ensue.
Had we assumed a hundredth, the adjustment would be more marked. But
it seemed that assigning all the deductions of a net income class to only a
tenth of its returns implied a sufficient degree of concentration and that
there was no need to make the assumption so extreme as to verge on the
absurd.

For this tenth of returns (and population) in each net income class we
then assumed an average net income per capita equal to that of the given
class (gains on sales of assets having already been removed); and total
economic income equal to the sum of net income (calculated as the prod-
uct of the number and the per capita net income) and all the unwarranted
deductions for the given class. This in fact split the returns (and popula-
tion) in each net income class, after the adjustment for unwarranted inclu-
sions, into two parts: nine-tenths, whose economic income equaled net
income, excluding gains on sales of assets; and one-tenth, whose economic
income equaled net income, also excluding gains on sales of assets, plus

all unwarranted deductions. The population on whose returns the unwarranted deductions were assumed to be concentrated was removed from its original net income classes and redistributed among the income classes whose economic income per capita most nearly approximated its own. The distribution was then recumulated on the basis of per capita income, the usual partition lines drawn, and the shares of the upper percentage bands calculated.[6]

From the annual adjustments of the basic variant for total population thus derived (Table 98 and Chart 24), we conclude:

First, the shares of the top 1 and 2nd and 3rd percentage bands are increased — an average of 0.8 and 0.5 percentage points respectively, about a fifteenth of the former and about a thirteenth of the latter.

Second, the adjustment of the top 1 percent's share fluctuates roughly with the proportion of unwarranted deductions in net income in the $5,000-10,000 net income classes, tax definition, the classes from which a tenth of the returns — those to which total unwarranted deductions are assigned — are likely to shift into the top 1 percent. The larger the proportion of unwarranted deductions in net income, the larger the contribution these returns, shifting upward, are likely to make to the top 1 percent.

Third, since some returns are shifted from the bottom of the distribution to the top, the smallness of the tax return population affects the adjustment for lower percentage bands much as it does their adjustment for family status. In this case, however, it affects not only the adjustment for the share of the 4th and 5th percentage band, as is revealed in Panel C of Chart 24, but also that of the 2nd and 3rd percentage band, as is indicated by the marked dip in the 1930's in Panel B reflecting the drastic contraction of the tax return population in the depression years. For this reason we did not attempt to associate the fluctuations in the adjustment for the 2nd and 3rd percentage band with any factor similar to that used in Panel A.

Because of the effects of the small tax return population, the adjustment for unwarranted deductions for the 2nd and 3rd percentage band in 1925-38, and for the 4th and 5th percentage band in 1919-39, as given in Table 98, are preliminary and have to be modified. Before dealing with

[6] For details and an illustrative calculation, see Appendix 5, Section C. The effects of allowing for unwarranted deductions were measured jointly with those for unwarranted inclusions. But there is little error in deriving the specific adjustment for unwarranted deductions by simple subtraction, as we did for the present analysis from Tables 120 and 121. The calculations were carried through 1943 only. For 1944 and later years, when returns are classified by gross income, an adjustment for deductions is not called for.

Table 98

Changes in Shares of Upper Income Groups Produced by Preliminary
Adjustment for Maximum Effect of Unwarranted Deductions
Basic Variant, Total Population, 1919-1943

	Change in Share of Given Percentage Band Due to Adjustment			% Unwarranted Deductions Are of Net Income, Tax Definition, Net Income Classes of $5,000-10,000
	Top 1 (1)	2nd & 3rd (2)	4th & 5th (3)	(4)
1919	0.44	0.17	−0.01	18.47
1920	0.46	−0.05	0.17	18.19
1921	1.88	0.48	−0.28	21.04
1922	1.36	0.41	0.13	19.05
1923	0.90	1.57	−0.02	17.89
1924	0.74	0.97	0.11	17.71
1925	0.69	0.50	−0.54	17.29
1926	0.73	0.51	−0.50	17.52
1927	0.88	0.61	−0.67	16.59
1928	0.68	0.55	−0.60	16.14
1929	1.24	0.61	−0.83	17.50
1930	1.00	0.34	−0.69	21.22
1931	1.61	−0.07	−0.97	25.08
1932	1.60	0.14	−0.72	28.67
1933	1.41	0.06	−0.62	26.09
1934	0.88	0.41	−0.56	20.89
1935	0.76	0.61	−0.54	18.20
1936	0.51	0.64	−0.35	14.93
1937	0.59	0.76	−0.29	17.13
1938	0.77	0.91	−0.37	18.74
1929	1.25	0.62	−0.84	17.50
1930	1.02	0.35	−0.70	21.22
1931	1.61	−0.07	−0.98	25.08
1932	1.65	0.14	−0.74	28.67
1933	1.45	0.06	−0.64	26.09
1934	0.92	0.43	−0.58	20.89
1935	0.76	0.61	−0.54	18.20
1936	0.50	0.63	−0.34	14.93
1937	0.58	0.74	−0.28	17.13
1938	0.77	0.90	−0.37	18.74
1939	0.70	0.88	−0.31	16.08
1940	0.44	0.53	0.81	15.41
1941	0.46	0.42	0.80	15.68
1942	0.29	0.58	0.79	12.75
1943	0.20	0.25	0.79	9.94

Column

1, 2   Table 120: column 4 minus column 3.
3   Table 120: column 5 minus column 4.
4   Table 71, column 7.

this modification, we review the adjustment as applied to the shares of
the upper percentage bands in the nonfarm variant (Table 99 and Chart
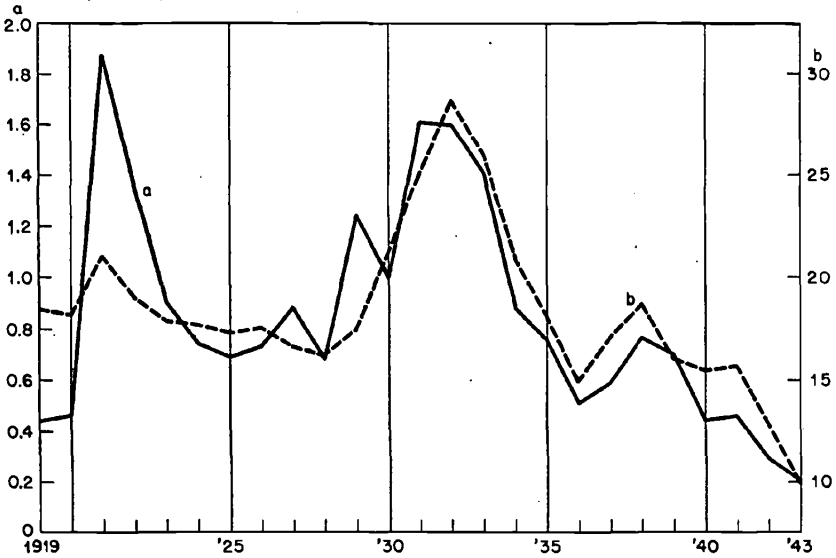25).

Chart 24
Preliminary Adjustment for Maximum Effect of Unwarranted Deductions
Basic Variant, Total Population, 1919–1943

Panel A: Top 1 Percent
a Change in share due to adjustment (% of total income receipts)
b Unwarranted deductions as % of net income, tax definition,
   $ 5,000 – 10,000 net income classes

Panel B: 2nd and 3rd Percentage Band
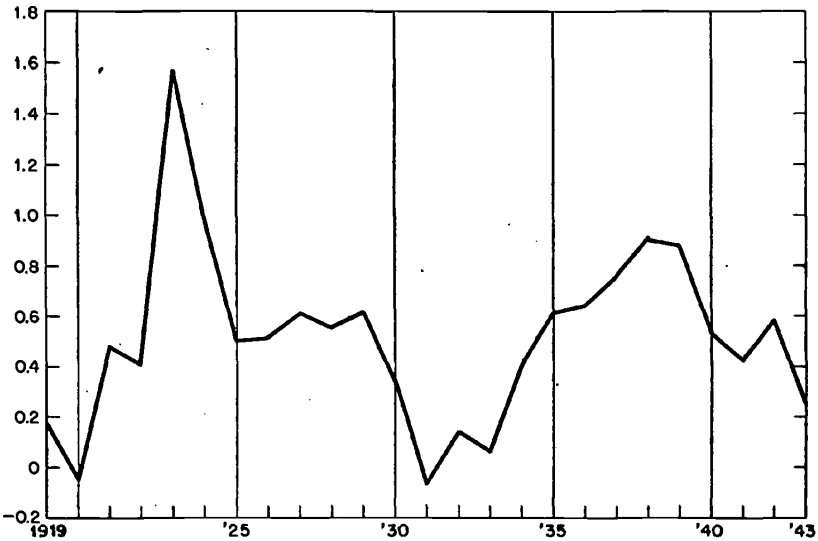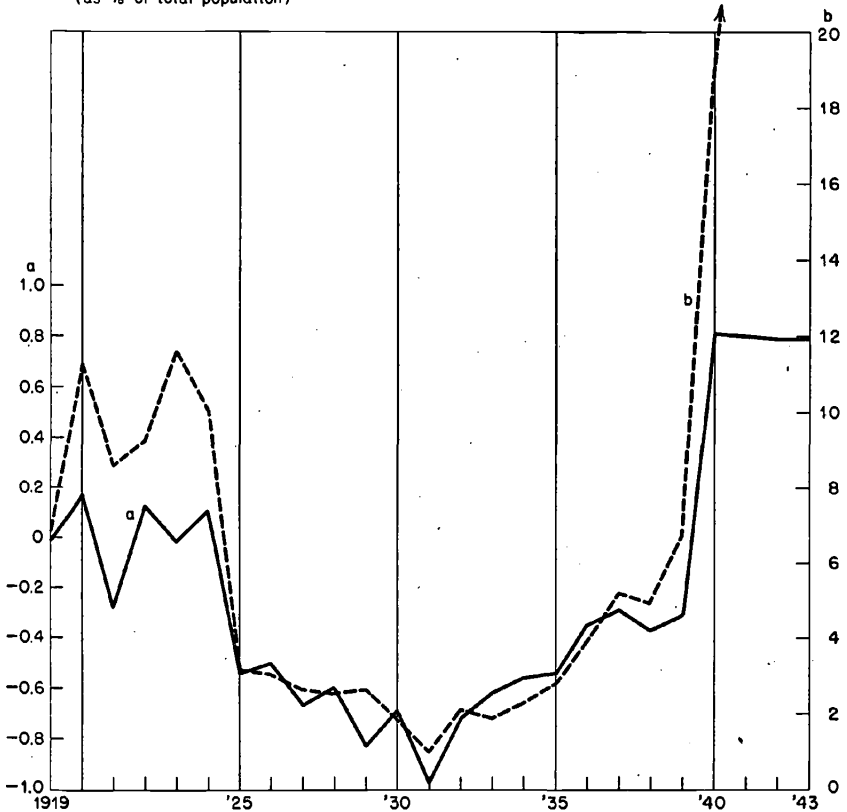Change in share due to adjustment (% of total income receipts)

Chart 24 (concl.)

Panel C: 4th and 5th Percentage Band
a Change in share due to adjustment (% of total income receipts)
b Coverage of tax return population in excess of 5% of total population
   (as % of total population)

The assumption is identical with that employed in adjusting the basic variant for total population. The reshuffling of the classes in the tax return population is therefore the same. The difference lies in the size of the denominators: as nonfarm population is smaller than total population, the percentage partition lines are drawn at higher levels in the tax return population. As might be expected, the biggest additions on the average are still to the share of the top 1 percent, and they fluctuate from year to year roughly with the proportion of unwarranted deductions in net income in the $5,000-10,000 net income classes, tax definition (Chart 25, Panel A). Additions to the share of the 2nd and 3rd percentage band are significantly larger on the average than those to the share of the corresponding band in the basic variant for the total population: the former band, occupying a

Table 99

Changes in Shares of Upper Income Groups Produced by Preliminary
Adjustment for Maximum Effect of Unwarranted Deductions
Basic Variant, Nonfarm Population, 1919-1943

	Change in Share of Given Percentage Band Due to Adjustment				% Unwarranted Deductions Are of Net Income, Tax Definition, Net Income Classes of $3,000-5,000
	Top 1	2nd & 3rd	4th & 5th	6th & 7th	
	(1)	(2)	(3)	(4)	(5)
1919	0.63	−0.05	0.15	0.02	10.07
1920	0.56	−0.13	0.05	0.19	9.29
1921	1.99	0.46	0.24	−0.33	14.37
1922	1.43	0.38	0.41	−0.06	13.29
1923	0.67	1.60	0.52	−0.03	16.16
1924	0.65	0.88	0.48	0.04	13.60
1925	0.63	0.73	−0.20	−0.46	13.74
1926	0.76	0.66	−0.30	−0.34	15.46
1927	0.90	0.84	−0.39	−0.50	13.73
1928	0.70	0.71	−0.31	−0.46	13.76
1929	1.03	1.22	−0.53	−0.71	19.76
1930	0.96	0.71	−0.43	−0.61	15.97
1931	1.41	0.59	−0.85	−0.66	18.31
1932	1.33	1.02	−0.71	−0.63	19.18
1933	1.23	0.83	−0.63	−0.56	19.02
1934	0.77	0.85	−0.42	−0.44	15.08
1935	0.69	0.84	−0.34	−0.33	13.81
1936	0.54	0.61	0.06	−0.34	11.88
1937	0.64	0.65	0.27	−0.41	12.43
1938	0.82	0.91	−0.20	−0.25	12.98
1929	1.04	1.24	−0.53	−0.71	19.76
1930	0.98	0.72	−0.44	−0.62	15.97
1931	1.41	0.59	−0.85	−0.66	18.31
1932	1.36	1.04	−0.73	−0.64	19.18
1933	1.26	0.85	−0.64	−0.58	19.02
1934	0.77	0.86	−0.42	−0.44	15.08
1935	0.70	0.85	−0.34	−0.34	13.81
1936	0.52	0.59	0.05	−0.33	11.88
1937	0.64	0.65	0.27	−0.41	12.43
1938	0.82	0.90	−0.20	−0.25	12.98
1939	0.74	0.52	0.46	−0.31	11.08
1940	0.49	0.32	0.69	0.49	10.72
1941	0.50	0.35	0.55	0.63	11.14
1942	0.32	0.33	0.72	0.81	10.27
1943	0.21	0.11	0.71	0.60	8.70

Column
   1, 2   Table 121: column 4 minus column 3.
   3, 4   Table 121: column 5 minus column 4.
   5   Table 71, column 11.

higher position in the tax return population, comprises classes in which
the proportion of unwarranted deductions in net income is larger. For the
same reason, the adjustment of its share does not reflect the small tax

Chart 25

Preliminary Adjustment for Maximum Effect of Unwarranted Deductions
Basic Variant, Nonfarm Population, 1919–1943

Panel A: Top 1 Percent
a Change in share due to adjustment (% of income of nonfarm population)
b Unwarranted deductions as % of net income, tax definition,
   $ 5,000–10,000 net income classes
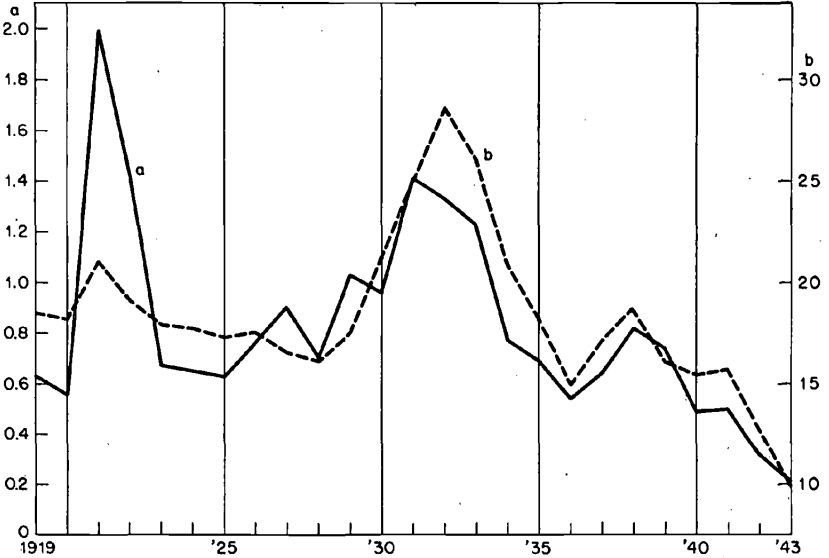
Panel B: 2nd and 3rd Percentage Band
a Change in share due to adjustment (% of income of nonfarm population)
b Unwarranted deductions as % of net income, tax definition,
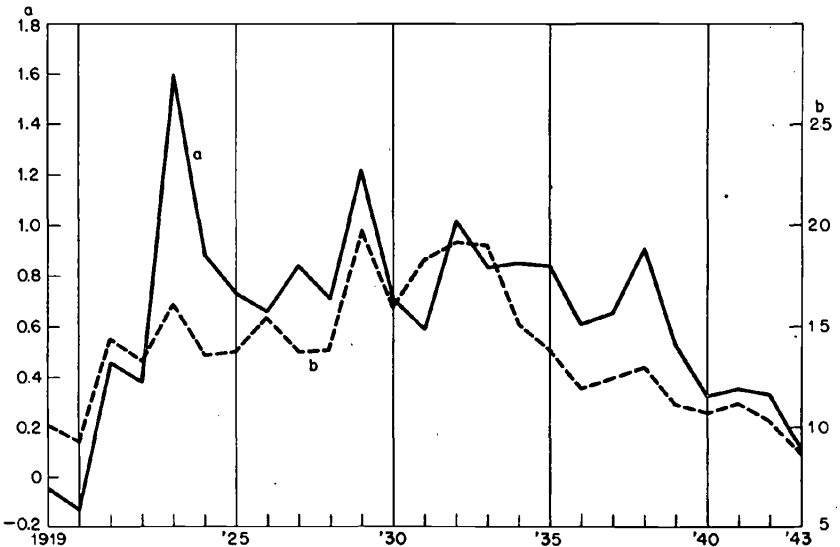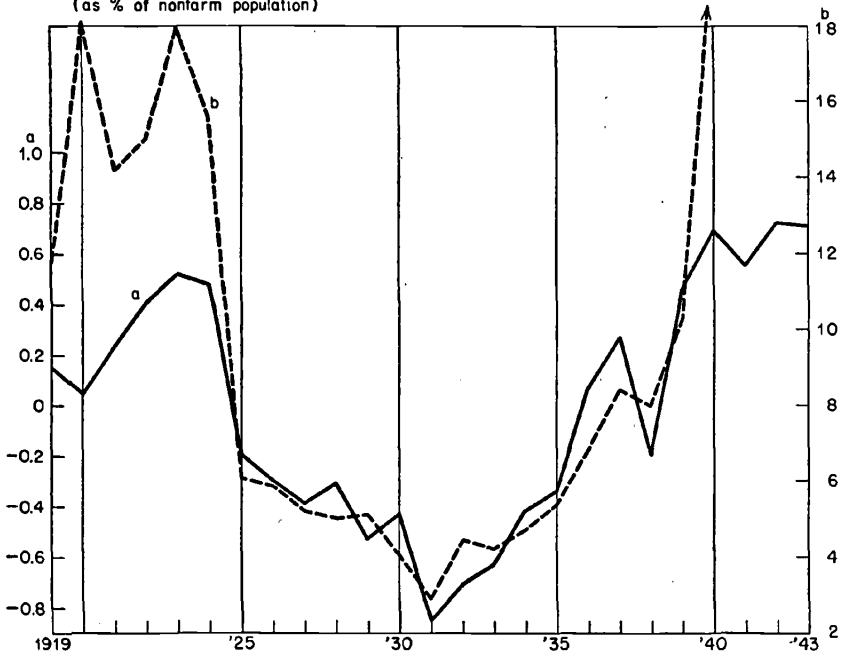 $ 3,000–5,000 net income classes

Chart 25 (concl.)

Panel C: 4th and 5th Percentage Band
a Change in share due to adjustment (% of income of nonfarm population)
b Coverage of tax return population in excess of 5% of nonfarm population
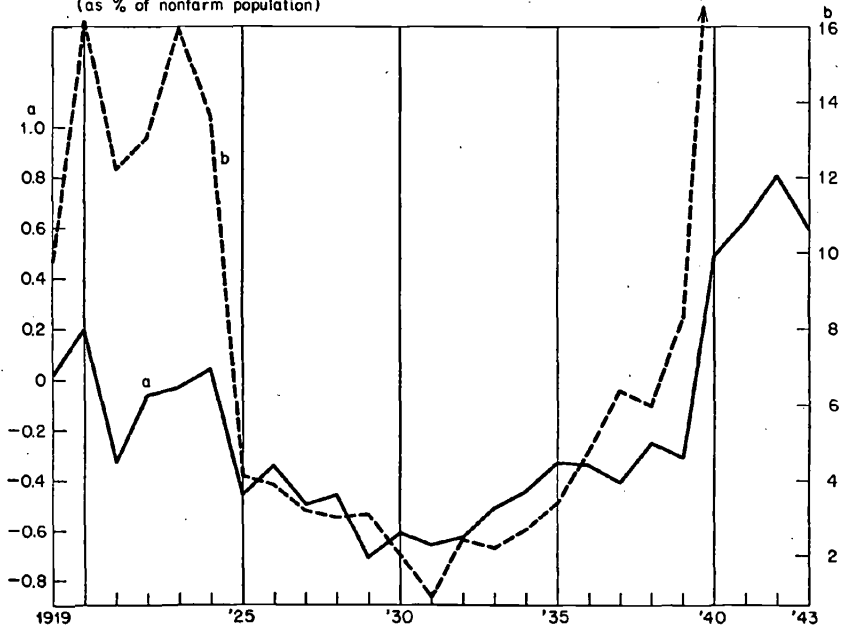(as % of nonfarm population)

Panel D: 6th and 7th Percentage Band
a Change in share due to adjustment (% of income of nonfarm population)
b Coverage of tax return population in excess of 7% of nonfarm population
(as % of nonfarm population)

return population as does that of the corresponding band in the basic variant for total population. Hence we can see the association between additions to its share and variations in the proportion of unwarranted deductions in net income in the $3,000-5,000 net income classes, tax definition (Panel B). The effects of the small tax return population are conspicuous in the adjustments for the 4th and 5th, and 6th and 7th percentage bands (Panels C and D).

The procedure by which the adjustment for unwarranted deductions was modified for the effects of the small tax return population resembles that by which the adjustment for family status was modified: (a) the deviations from the average level were 'corrected' by a regression equation that associates them with those in the excess of the tax return population over a given percentage of the entire population; and (b) a corrected average level was estimated for the period for which it is affected in the preliminary adjustment by the small tax return population. It was applied to the adjustment for the 2nd and 3rd percentage band in the basic variant for total population for 1925-38, the 4th and 5th percentage band for 1919-39; and the 4th and 5th percentage band in the nonfarm variant for 1925-38, and the 6th and 7th percentage band for 1925-39 (App. 5, Sec. D).

The effectiveness of the modification is revealed by the disappearance of the dip so conspicuous in the preliminary adjustment in the 1930's (Table 100 and Chart 26). In consequence, the amplitude of fluctuations in the final adjustment is much smaller. In the 2nd and 3rd percentage band of the basic variant for total population for the years after 1924, and in the 4th and 5th percentage band throughout the period (Chart 26, first 2 lines), fluctuations are relatively minor, as they are also for the 4th and 5th, and 6th and 7th percentage bands in the nonfarm variant (last 2 lines).

Year to year fluctuations remain, however, because of the factors discussed above in connection with the adjustment for family status: differing magnitudes of the factors in the various net income classes that determine the movement upward and downward, in and out of given percentage bands. To attempt a complete analysis of these fluctuations as the complex result of varying combinations of such factors as the proportion of unwarranted deductions in economic income in the various net income classes and the excess of average economic income per capita in a given percentage band over that in a higher or lower band did not seem worth while since the procedure is based upon hypothetical assumptions whose main purpose is to give some idea of the maximum adjustment, not its exact size.

Table 100

Changes in Shares of 2nd and 3rd, and Lower Percentage Bands
Produced by Final Adjustment for Maximum Effect of Unwarranted
Deductions: Basic Variant, Total and Nonfarm Population, 1919-1943

	TOTAL POPULATION Change in Share of		NONFARM POPULATION Change in Share of	
	2nd & 3rd percentage band	4th & 5th percentage band	4th & 5th percentage band	6th & 7th percentage band
	(1)	(2)	(3)	(4)
1919	0.17	0.55	0.15	0.02
1920	−0.05	0.57	0.05	0.19
1921	0.48	0.21	0.24	−0.33
1922	0.41	0.61	0.41	−0.06
1923	1.57	0.37	0.52	−0.03
1924	0.97	0.56	0.48	0.04
1925	0.65	0.60	0.86	0.62
1926	0.68	0.64	0.80	0.75
1927	0.88	0.54	0.83	0.63
1928	0.85	0.62	0.94	0.67
1929	0.88	0.38	0.70	0.42
1930	0.85	0.66	1.01	0.58
1931	0.79	0.56	0.83	0.60
1932	0.56	0.59	0.65	0.54
1933	0.56	0.72	0.78	0.67
1934	0.79	0.72	0.89	0.71
1935	0.84	0.64	0.84	0.78
1936	0.65	0.68	1.00	0.69
1937	0.70	0.63	0.99	0.54
1938	0.86	0.57	0.57	0.72
1929	0.88	0.38	0.70	0.42
1930	0.85	0.66	1.01	0.58
1931	0.79	0.56	0.83	0.60
1932	0.56	0.59	0.65	0.54
1933	0.56	0.72	0.78	0.67
1934	0.79	0.72	0.89	0.71
1935	0.84	0.64	0.84	0.78
1936	0.65	0.68	1.00	0.69
1937	0.70	0.63	0.99	0.54
1938	0.86	0.57	0.57	0.72
1939	0.88	0.56	0.46	0.55
1940	0.53	0.81	0.69	0.49
1941	0.42	0.80	0.55	0.63
1942	0.58	0.79	0.72	0.81
1943	0.25	0.79	0.71	0.60

Column

  1   1919-24 and 1939-43: Table 98, column 2;
     1925-38: Table 120, columns 5 and 3.
  2   1919-39: Table 120, columns 6 and 4;
     1940-43: Table 98, column 3.
  3   1919-24 and 1939-43: Table 99, column 3;
     1925-38: Table 121, columns 6 and 4.
  4   1919-39: Table 121, columns 6 and 4;
     1940-43: Table 99, column 4.

Chart 26
**Changes in Shares Due to Final Adjustment for Maximum Effect of
Unwarranted Deductions, Lower Percentage Bands
Basic Variant, Total and Nonfarm Population, 1919–1943**
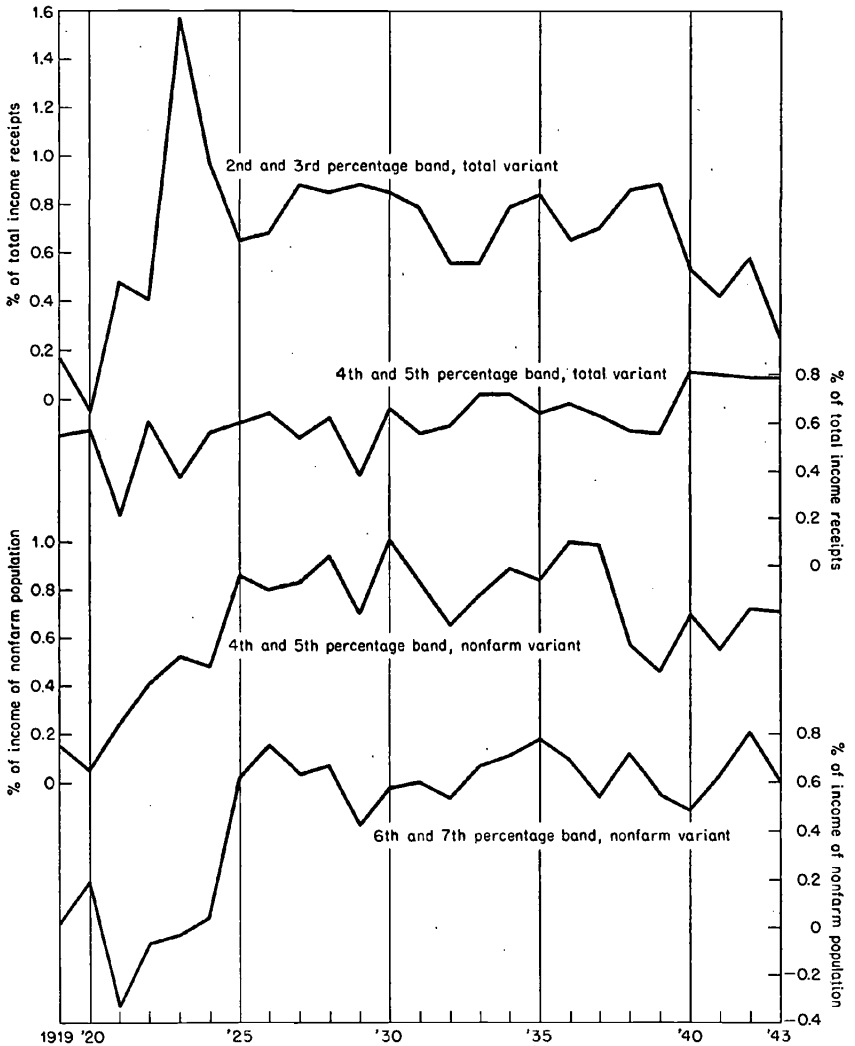
6   *Adjustment for Income Base Suggested by Other Data*

The adjustments for unwarranted inclusions and deductions discussed in
Sections 4 and 5 are obviously hypothetical, being based on somewhat
extreme assumptions, not on specific data. The correction for the dispar-

ity in the classification bases between the published distributions and those by economic income is not likely to be larger than that calculated. But we still do not know the degree to which our adjustments may have exaggerated the true correction. While compelled to retain those based on maximum assumptions because they are the only ones possible on a continuous basis throughout the period, we should at least know by how much their average level is likely to exceed the true level.

An approximation to the true adjustments is possible with data in which a classification of one and the same income universe is carried through on two bases: the size of economic income (or of income close to that concept) and of income defined otherwise, preferably similar to net income, tax definition. By comparing two such distributions we can observe the effect of using a base for classification by size that differs from the income total that is being distributed.

Using the special tabulation of federal tax returns for 1936 we compare the distribution of one and the same income total on a base identical with the total being distributed, net income *excluding* capital gains and losses, and on a base identical with that underlying the distribution in *Statistics of Income,* net income *including* capital gains and losses. Neither concept is identical with our economic income. But the two totals for 1936 differ by about 4 percent of net income excluding capital gains and losses. Using Wisconsin tax returns for 1929 and 1934-36, we compare the distribution of an income total that is quite close to our concept of economic income on two bases: 'income bracket' income[7] and net taxable income, the latter concept being close to that of net income, tax definition, in the federal returns. These two totals differ by percentages of net taxable income that vary, through the years covered, from about 7 to 10.

For both bodies of data we compare the distributions cumulated from the top down, estimating the proportion of income on all tax returns accounted for by the upper percentage bands of the tax return population (Table 101). The percentage lines were drawn to approximate those for the basic variant for total population. Thus, the line for the top 1 percent of total population cuts off roughly the top 9 percent of returns; hence column 1 for the federal tax data comparison shows the share of income received by the top 9 percent of returns. Since there are at least twice as many state tax returns for Wisconsin as there are federal returns, the top 3 percent of the former suffices to approximate the top 1 percent of the state's population. Hence columns 1-3 represent the three upper percent-

[7] This differs from our concept of economic income in allowing for occupational labor expenses and in including types of income receipt (withdrawals for family use and insurance) that are not covered in the federal returns.

Table 101

Distribution of Income by Different Income Bases: Federal Tax Returns for 1936 and Wisconsin Tax Returns for 1929, 1934-36

		Percentage Shares of Upper Income Groups			
1936 Federal Tax Returns					
	Net Income Excl. Capital Gains & Losses	Top 9 Percent (1)	10th-27th Percentage Band (2)	28th-45th Percentage Band (3)	Top 45 Percent (4)
1 a	By net income excl. capital gains & losses	39.31	21.99	14.86	76.17
b	By net income incl. capital gains & losses	38.79	21.85	14.86	75.50
c	a minus b	0.52	0.14	0.01	0.67
Wisconsin State Tax Returns					
	'Income Bracket' Income	Top 3 Percent (1)	4th-9th Percentage Band (2)	10th-15th Percentage Band (3)	Top 15 Percent (4)
	1929				
2 a	By 'income bracket' income	20.17	12.15	8.55	40.86
b	By net taxable income	18.18	12.18	8.61	38.97
c	a minus b	1.99	−0.03	−0.06	1.90
	1934				
3 a	By 'income bracket' income	17.46	12.99	9.55	40.00
b	By net taxable income	16.26	12.82	9.49	38.57
c	a minus b	1.20	0.17	0.06	1.43
	1935				
4 a	By 'income bracket' income	16.79	12.60	9.31	38.69
b	By net taxable income	15.85	12.46	9.26	37.57
c	a minus b	0.94	0.14	0.05	1.12
	1936				
5 a	By 'income bracket' income	18.77	12.20	8.81	39.78
b	By net taxable income	17.71	12.11	8.79	38.61
c	a minus b	1.06	0.09	0.02	1.17

Line

1a Calculated from *Statistics of Income Supplement Compiled from Income Tax Returns for 1936,* Section I, Table 1.

1b Calculated from *Statistics of Income, 1936,* Basic Tables 5 and 7, and data for net income classes under $5,000 from the *Source Book*.

2a, 3a, 4a, 5a Calculated from *Wisconsin Individual Income Tax Statistics* (Wisconsin Tax Commission, mimeo: 1929, 1934, 1935, and 1936, Vol. One, Table 2). From total income are subtracted capital gains, interest paid, business losses, and partnership losses.

2b, 3b, 4b, 5b Calculated from *ibid.,* Table 1. See note to lines 2a, etc.

age bands of the basic variant for total population in that they show shares of income for the upper percentage bands of returns that are roughly equivalent to the top 1, 2nd and 3rd, and 4th and 5th percentage bands of total population; and column 4 represents the share of the top 5 percent of the population of each area. But the entries are shares of income re-

corded on all tax returns, not of income flow to the whole population of the area.

The adjustment for maximum effects of unwarranted inclusions or deductions cannot be compared precisely with the change in the shares of upper percentage bands due to the shift in the income base. The special study of 1936 federal tax returns shows only the effect of excluding statutory net capital gains and losses, whereas our corresponding adjustment is for maximum effects of the unwarranted inclusion of statutory net capital gains alone.[8] In the Wisconsin state income tax data comparison, where we try to test our combined adjustment for the maximum effects of both unwarranted inclusions and deductions, there is even more dissimilarity. The Wisconsin definition of tax income differs from the federal; and the concept of 'income bracket' income, while on the whole close to ours of economic income differs from it in several respects. Most important, the size of unwarranted inclusions and deductions, relative to net taxable or net statutory income, may be appreciably different for the Wisconsin state data and for the countrywide federal data.[9] Nevertheless, we make the comparisons, using our adjustments in their final form for maximum effects of unwarranted inclusions and deductions for the basic variant for total population. In all these comparisons the differences are expressed as ratios to the shares that are being adjusted or are affected by the shifts in the income base (Table 102).

The results for the separate percentage bands are rough indeed, and are to be given less weight than those for the top 5 percent as a whole. The sole definite conclusion is that our maximum assumptions do exaggerate the adjustments that would have been obtained with specific data. Our adjustment for unwarranted inclusions is almost double that derived from the special study of 1936 federal data. This excess can hardly be due to the fact that our adjustment takes account of statutory net capital gains alone, inasmuch as the special federal study, reflecting both statutory net

[8] In the 1936 study the proportion of statutory net capital gains and losses, signs disregarded, in net income for roughly the top 45 percent of returns (corresponding to the top 5 percent of total population) is 6.5 percent whereas in our basic variant for total population the proportion of capital gains alone in net income for the top 5 percent is 5.9 percent.

[9] A rough check is possible. For Wisconsin the difference between 'income bracket' income and net taxable income (various items, signs disregarded) for roughly the top 15 percent of returns (by net taxable income) amounts to the following percentages of net taxable income: 33 in 1938; 18 in 1934; 21 in 1935; and 28 in 1936. For the federal data the sum, signs disregarded, of unwarranted inclusions and deductions in percentages of net income, tax definition, for roughly the top 45 percent of returns amounts to: 41 in 1928; 21 in 1934; 21 in 1935; and 20 in 1936 (Table 112).

Table 102

Adjustments for Maximum Effect of Unwarranted Inclusions and Deductions,
Basic Variant, Total Population, and Those Suggested by Other Data,
Selected Years (Ratios to Unadjusted Shares)

		PERCENTAGE BAND		
		Top 1	2nd & 3rd	4th & 5th	Top 5
		(1)	(2)	(3)	(4)
Comparison with Special Federal Data for 1936					
1	Adjustment for statutory capital gains & losses, Treasury Study	0.013	0.006	*	0.009
2	Adjustment for max. effect of unwarranted inclusions, basic variant, total population	0.030	−0.007	0.010	0.017
Comparison with Wisconsin Data (using our final adjustment for unwarranted inclusions & deductions, basic variant, total population)					
	1929				
3	Wisconsin data	0.109	−0.003	−0.007	0.049
4	Our adjustments	0.151	0.116	0.115	0.135
	1934				
5	Wisconsin data	0.074	0.013	0.006	0.037
6	Our adjustments	0.083	0.120	0.136	0.105
	1935				
7	Wisconsin data	0.059	0.011	0.005	0.030
8	Our adjustments	0.083	0.127	0.131	0.106
	1936				
9	Wisconsin data	0.060	0.008	0.002	0.030
10	Our adjustments	0.068	0.092	0.153	0.091
	Av. for Given Years				
11	Wisconsin data	0.076	0.007	0.002	0.036
12	Our adjustments	0.096	0.114	0.134	0.109

* Less than 0.0005.

Line

1	Table 101: line 1c divided by line 1b.
2	Table 96, columns 1-3 divided by column 1 of Table 118.
3, 5, 7, 9	Table 101: lines 2c, 3c, 4c, and 5c divided by lines 2b, 3b, 4b, and 5b.
4, 6, 8, 10	Table 120: difference between column 4 (or 5 or 6) and column 1, divided by column 1.

gains and losses, should have yielded a 'purer' array and hence more of
an increase in the share of upper percentage bands. Comparison of our
adjustments with that derived from the Wisconsin data yields similar con-
clusions, even allowing for the difference in the income structure between
the state and the country. Our adjustments for maximum effects of un-
warranted inclusions and deductions combined are, on the whole, about
three times that based on Wisconsin data. One may reasonably conclude,
therefore, that in contrast to our adjustment for family status, which mani-
festly underestimates the necessary correction for number of persons per

return, our adjustments for the income base quite definitely overestimate the correction for unwarranted inclusions and deductions.

From Table 102 it appears that at least in the case of unwarranted deductions, the relative exaggeration in our adjustment is larger for the 2nd and 3rd, and 4th and 5th percentage bands than for the top 1 percent, and this can be accepted as plausible. In the adjustment for family status the shortage was biggest in the top 1 percent (Sec. 3). Consequently, if we combine the adjustment for family status with those for maximum effects of unwarranted inclusions and deductions, the error in the estimated share of the top 5 percent (basic variant for total population) or of the top 7 percent (nonfarm variant) is likely to be quite minor; but there may be a slight underestimate in the top 1 percent's share and a slight overestimate in the shares of the percentage bands between the 1st and the 7th.[10]

[10] Delaware data for 1936 afford another confirmation of the substantial exaggeration in our adjustments for unwarranted inclusions and deductions. The federal tax returns for the state were reclassified by total income per return, a concept close to our economic income (*Delaware Income Statistics*, I, University of Delaware, 1941, Table 13, pp. 184 ff.). From the double classification of the same body of returns by net income, tax definition, and by total income, we can see the effect of the income base on the shares in total income. We estimated the percentage share of total tax reported income received by the top 8.1 percent of returns to be 63.98 in the distribution by total income and 63.45 in the distribution by net income, tax definition. The difference, +0.54, is thus only 0.0085 of the unadjusted share, 63.45. Our adjustments for 1936 are much larger relatively − 0.068 for the top 1 percent of population (Table 102, line 10).

)