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Part VI

Appraisal of Basic Data

Many problems of appraising basic data considered in this paper have been discussed in the Interagency Technical Committee on Income Distribution established in 1946. The Office of Business Economics, Bureaus of Agricultural Economics, of Labor Statistics, of the Census, and the Federal Reserve Board are represented on this Committee which is under the chairmanship of the Budget Bureau. Special tabulations of data from recent field surveys of family income supplied by the Bureau of the Census to the Committee were used in the analysis presented here. BETTY FISHMAN, HELEN JENSEN, *and* HYMAN KAITZ *assisted in preparing several of the series.*

Available for Constructing Income Size Distributions

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THE NEED FOR A TIME SERIES on the size distribution of consumer income that would provide reliable estimates comparable from year to year and consistent with estimates of national income and its components has been recognized increasingly in recent years. This paper discusses the problems encountered in reconciling and integrating the various types of data used in constructing income size distributions.

A BASIC INCOME SERIES

Statistics for constructing income size distributions for recent years are available from five major sources:

1) Field surveys covering representative samples of families and single individuals in which trained enumerators collect income data by personal interview.
2) Federal individual income tax returns including those from persons requesting refund of withholdings, filed with the Bureau of Internal Revenue.
3) Reports on workers with wage credits to the Bureau of Old-Age and Survivors Insurance filed by employers.
4) Estimates of aggregate income, by source, prepared by the Department of Commerce, Office of Business Economics, National Income Division.
5) Estimates of the total population and of the number of families and single individuals prepared by the Bureau of the Census.

The last two differ from the others in that they furnish basic control totals on aggregate income and population but no information on the distribution by size classes.

Many other series are utilized in preparing income size distributions, as the notes to the tables indicate. Miscellaneous examples are labor force and employment, military inductions and discharges, and income distributions for Delaware, Wisconsin, and Minnesota. But these are subsidiary sources of information for our purposes and the discussion is confined to the five series listed.

1 *Sample Field Surveys*

During the last decade there have been ten field surveys of family income representing samples of the nation as a whole: the Survey of Spending and Saving in Wartime conducted by the Bureaus of Labor Statistics and of Human Nutrition and Home Economics for 1941; the Surveys of Consumer Income conducted by the Bureau of the Census for each of the five years 1944–48, with the cooperation of the Bureau of Agricultural Economics in the survey for 1946; the Surveys of Consumer Finances conducted by the Survey Research Center of the University of Michigan for the Federal Reserve Board for each of the four years 1945–48, hereafter referred to as FRB surveys. Other recent field surveys of income undertaken by governmental agencies have covered

only certain population or income groups: a sample survey of urban families for 1944 by the Bureau of Labor Statistics, several surveys of individual cities by the Bureaus of Labor Statistics and of the Census, several surveys of farm families by the Department of Agriculture, and a nationwide survey in the 1940 Census of Population concerning wage or salary income and the presence or absence of $50 or more of 'other' income in 1939.

The reader is referred to Part IX for a detailed description of the recent nationwide surveys, together with a discussion of their differences in definition and coverage. Here it is sufficient to point out some general characteristics they have in common.

a) *Universe.* They represent samples of a universe defined as the civilian noninstitutional population of this country.

b) *Income receiving unit.* They present frequency distributions of family and single individual units. The family is defined as a group of two or more persons living in the same household who are related by blood, marriage, or adoption. The single individual is the one-person family, or the unrelated lodger, boarder, or servant living with families or in rooming houses or hotels.[1] Except for the 1941 survey, families and single individuals were defined as constituted on the date of interview, early in the calendar year following the year to which the income data pertain. In the 1941 survey the family was defined as constituted during the calendar year. In some surveys the spending unit, defined to include members of the family who pooled their major items of income or expense, was the basic interview unit. However, for all except the 1941 survey, spending units were combined into family units in some of the tabulations and classified by size of family income.

In addition to data for family and single individual units, the Census surveys provide income size distributions for persons 14 and older. Although certain other surveys collected data on earnings for each member of the family separately, they did not collect

[1] The term 'single individual' does not refer to marital status; it is used here to distinguish the person living with no relatives from the family of two or more related persons. Recent Census Bureau press releases label this group 'individuals not in families'.

separate figures for other types of income, so that size distributions for persons could not be prepared.

c) *Income covered.* The distributions from the surveys are by size of consumer money income, defined as the sum of civilian money wages and salaries; farm entrepreneurial money income; entrepreneurial income from nonfarm business or profession; cash interest, dividends, and income from estates and trusts; rents and royalties, including roomer-boarder income; armed force pay of persons living with the family at the time of the survey, i.e., of veterans and armed forces personnel living off post; dependency allotments and contributions from members of the armed forces; veterans' payments; social security benefits, unemployment and workmen's compensation, pensions, and assistance; and miscellaneous items such as periodic contributions for support from persons not in the household, periodic payments from insurance policies or annuities, and alimony. The income is for the calendar year before income or social security taxes have been deducted. Nonmoney items are not covered except in the 1941 survey where frequency distributions are presented by both money and total (money plus nonmoney) income classes. In all except the 1941 survey the income data for the calendar year were obtained for the persons comprising the family at the time of enumeration; in the 1941 survey, for the persons comprising the family during the calendar year.

In giving enumerators information some respondents referred to records, such as withholding statements supplied them by their employers, or income tax returns if they had filled them out before the enumerator's visit. Most respondents, however, relied on memory.

2 *Individual Income Tax Returns*

The Bureau of Internal Revenue tabulates individual income tax returns annually, before auditing, for publication in *Statistics of Income.* These tabulations differ from the surveys on the following counts.

a) *Universe.* The universe is limited by the legal filing requirements in force for any given year. For 1941 a married person had

to file a return if gross income was $1,500 or more, a single person or married person not living with spouse, if $750 or more. For 1944–47 the minimum filing requirement was $500 or more of gross income for every person (but see c below for income excluded), and for 1948, $600. Persons with incomes under the minimum who filed to obtain refund of withholding taxes are also included in the tabulations.

b) *Unit.* Tax returns are not equivalent to either families or persons. Beginning with 1944 separate tabulations were made for: (1) joint returns of husbands and wives; (2) separate returns of husbands; (3) separate returns of wives; (4) separate community property returns of husbands and (5) of wives; (6) returns of single persons (males and females, separately). Each return in groups 2–6 covers the income of one person, but groups 4 and 5 offer special difficulties. Returns in group 1 represent two persons when both husband and wife had some income, and one recipient when only one spouse had income.[2] Tax returns for all family members, other than the husbands and wives in groups 1–5, are in group 6 which therefore includes single individuals (as defined in the field surveys), heads of families of two or more persons in which husband and wife were not both present ('broken' families), and supplementary income recipients in 'husband-wife' and 'broken' families. Children's income is not included on the tax returns of parents. Of the 47 million individual income tax returns for 1944, 24 million were in group 1, 5 million in groups 2–5, and 18 million in the heterogeneous group, 6.

Tabulations of tax returns represent size distributions of family income only for families in which one tax return was filed and no member other than the person filing (or other than the head and his wife in the case of a joint return) received income during the year. But for all families for which more than one tax return was filed, e.g., a family in which the head and his son living in the same household each filed a return, or a family in

2 Joint returns include returns filed jointly by husband and wife, both of whom had income, and returns claiming exemptions for both spouses even though one spouse did not have any income.

which the head and his wife filed separate returns, tabulations of tax returns do not tell us anything about combined family income or supply cross-classifications necessary for combining returns into family units. Moreover, returns representing complete family income are not separated from other returns because, except in the case of separate returns of husband and wife, we do not have any way of knowing whether more than one return was filed.

To construct a size distribution of family income from tax returns is laborious; separate returns (groups 2–5) are paired into husband-wife units; single returns (group 6) are split at different income levels into the components mentioned above; and supplementary income-recipients (part of group 6) are combined with either husband-wife units (group 1 and combined groups 2–5) or with heads of 'broken' families (part of group 6); see Part VII where the splitting and combining of size distributions for the different types of tax return were based in large part on relations determined from field surveys of family income.[3]

Tax returns for recent years can be more readily converted into size distributions for persons than for families. For the estimated number of joint returns with two incomes (part of group 1) a distribution of persons by size classes of their own rather than of their combined income is estimated; from this distribution the number and size distribution of separate community property returns representing persons who did not have any income according to the concepts used here is subtracted, then the income reported on such returns is added to that of the appropriate spouse (see Sec. D). This type of conversion will be more tenuous beginning with 1948 because the introduction of the 'split-income' provision doubtless caused a substantial increase in the number of joint returns with two incomes.

c) *Income covered.* Beginning with 1944 income tax returns are

[3] In Part IV Joseph Pechman describes his procedures for developing the 'tail' of a family distribution from income tax returns for 1941. Enid Baird and Selma Fine describe estimates for 1935–36 in 'The Use of Income Tax Data in the National Resources Committee Estimate of the Distribution of Income by Size', *Studies in Income and Wealth, Volume Three* (1939).

classified by size classes of adjusted gross income, a concept that differs from consumer money income in field surveys mainly because it excludes all military pay (except for amounts above $1,500 earned by officers), military family allowances, veterans' payments, social security benefits, sickness and injury benefits, certain types of interest, inter-family contributions for support, and a large fraction of pensions and periodic payments from insurance companies; and includes net taxable gains and losses from sales of property. Adjusted gross income is defined as gross income minus allowable trade and business deductions, expenses of travel and lodging in connection with employment, deductions attributable to rents and royalties, allowable losses from sales of property, and certain minor deductions. It represents income before allowable personal expenses (contributions, medical expenses, taxes, and interest) and exemption credits have been deducted.

3 *Workers with Wage Credits under OASI*

Reports on workers with wage credits under Old-Age and Survivors Insurance, as reported by the employer and tabulated by the Social Security Administration, differ on all three counts from both the field surveys and tax returns.

a) *Universe.* Only workers in 'covered' employment under OASI, which for recent years is defined to exclude self-employment, agricultural, domestic, government, railroad, and several minor types, are included (separate series for railroad workers are available from the Railroad Retirement Board).

b) *Units.* Data are tabulated for persons, not for families. As the OASI records do not have any information on relationship, it is impossible to combine the data into family units.

c) *Income.* Data are confined to wage credits, defined as wages and salaries up to $3,000 earned by a worker during the calendar year in 'covered' employment.[4] The OASI records do not give any

[4] In addition, the BOASI has estimated the distribution of workers with $3,000 in wage credits by size classes above $3,000 for wages and salaries earned in 'covered' employment.

information, of course, on earnings from noncovered employment or on income other than earnings.[5]

4 *National Income Division Estimates of Personal Income*

As part of its work on national income, the National Income Division (NID) of the Department of Commerce prepares a monthly series on personal income, defined as the "aggregate current income received by persons".

a) Persons are defined as individuals, including members of the armed forces and institutional residents, plus nonprofit institutions serving individuals, private trust funds, and private pension and welfare funds.

b) The NID estimates of aggregate income are classified by income sources rather than by receiving units.

c) The personal income aggregate differs conceptually from the income covered in field surveys on several counts, the main differences, aside from the broader coverage mentioned in (a) above, being in nonmoney income, military pay, and social security deductions (see Sec. B1).

5 *Census Bureau Estimates of Number of Families and Single Individuals*

The Bureau of the Census estimates the number of families of two or more persons and of single individuals for specified dates from recent sample surveys and decennial census data. For very recent years the definitions are those employed in recent field surveys of family income. Secondary as well as primary families and single individuals in private households are treated as separate units. The primary family comprises the head of the household plus all relatives living in the household; the secondary family lodgers or servants and their relatives living in the household. The single individual is the person with no relatives in the household, who is either living alone as the head of a household (primary) or is living as an unrelated lodger, boarder, or servant (secondary). The counts of families and of single individuals in-

[5] Such information could be obtained by matching OASI records with income tax returns and reports from field surveys for identical individuals; see Part VIII.

clude units in quasi-households (hotels, large rooming and boarding houses), most of whom are single individuals, as well as in private households (the usual house or apartment), and exclude members of the armed forces living on posts and inmates of institutions such as patients in mental hospitals and persons in homes for the aged and in penal institutions, other than resident employees.

These definitions differ from those used in the 1930 and 1940 decennial censuses where 'family' covered only the primary families and primary single individuals in private households as defined above; secondary families and single individuals in private and quasi-households were not included in the count of families. In April 1947 approximately 98 percent of the families but only 49 percent of the single individuals were primary.[6] Of the remaining 51 percent, 39 percent were secondary single individuals (lodgers, servants) in private households, and 12 percent were single individuals in hotels, boarding houses, and other quasi-households. The more recent definitions have been used in all the income size distribution work of the last decade, and their adoption by the Bureau of the Census has proved extremely useful.

In contrast to the various sets of income data described above, which cover the calendar year, Census Bureau estimates of the number of families and single individuals are for a given date. Mrs. Brady in Part I discusses some of the problems and limitations involved in integrating the point of time concept of the family with the annual concept of income.

B Aggregate Income Covered by Field Surveys, Income Tax Returns, OASI Records, and NID Series

1 *Derivation of Estimates of Consumer Money Income by Source from NID Estimates of Personal Income*

Because of differences in population and income items covered, the aggregate income accounted for by the 'blown-up' sample

6 Census Bureau press release, *Characteristics of Families and Sub-families in the U. S. in April, 1947,* Series P–20, No. 17, May 19, 1948, Table 11.

field surveys and by income tax returns cannot be compared directly with the NID personal income series. The personal income series is therefore adjusted to remove as many of the incomparable items as can be measured. The adjustments in Table 1 are for the purpose of deriving a consistent calendar year series representing the consumer money income, as defined in the field surveys, of persons who were in the civilian noninstitutional population at the close of the calendar year. Though some surveys were made in January and February others were not made until April or May of the following year. Because each survey covered the calendar year income of persons who were in the civilian noninstitutional population as of its date,[7] and because of some variation in income definition among the surveys, certain further adjustments are made to bring the estimates of consumer money income into line with the coverage of each survey (Tables 2 and 3). Other adjustments are later introduced for comparability with tax returns (Table 8).

a *Adjustments for conceptual differences*

Under conceptual differences in Table 1 are included differences in population coverage and income definition of a more basic sort than the differences due to practical limitations of the survey or NID series which are discussed separately below.

Differences in population coverage arise in part because the consumer money income series includes income of the civilian noninstitutional population whereas the personal income series includes income accruing to all 'resident individuals'. As a result, consumer money income excludes, and personal income includes, the calendar year earnings of persons living on military posts or in institutions throughout the year. These groups are excluded by definition from the civilian noninstitutional population but included under 'resident individuals' even if stationed abroad. Furthermore, consumer money income refers to a point of time, December 31, whereas personal income does not, so that the former excludes, and the latter includes, the calendar year

[7] Except the field survey for 1941 which covered the family as it was constituted during that year.

Table 1

Consumer Money Income, Estimates by Source, 1941, 1944–48
(millions of dollars)

		1941	1944	1945	1946	1947	1948
	NATIONAL INCOME DIVISION PERSONAL INCOME						
1	Wages & salaries	60,907	114,881	115,326	109,440	120,153	133,108
2	Nonfarm business & professional income [a]	9,566	17,156	18,719	20,790	23,111	24,477
3	Farm operator income	6,938	11,841	12,528	14,245	15,420	18,371
4	Personal interest income	5,402	5,940	6,672	7,401	7,785	8,267
5	Dividends	4,465	4,680	4,699	5,808	7,018	7,932
6	Rental income of persons	4,322	6,495	6,256	6,215	6,544	6,648
7	Transfer payments & other labor income	3,708	4,899	7,727	13,009	13,477	13,097
8	Total personal income	95,308	165,892	171,927	176,908	193,508	211,900
	ADJUSTMENTS IN PERSONAL INCOME TO DERIVE CONSUMER MONEY INCOME						
A	*Adjustments for Conceptual Differences between NID Series and Survey Data*						
9	Military money pay of persons not returned to civ. life by end of calendar year	−1,427	−10,496	−6,457	−2,379	−1,833	−2,123
10	Military nonmoney pay, total	−435	−3,724	−4,082	−1,355	−603	−600
11	Civ. earn. of persons entering armed forces during calendar year	−749	−1,538	−802	−333	−263	−650
12	Civ. earn. of persons dying during calendar year	−340	−540	−550	−560	−630	−670
13	Int., div., & trans. pay. rec. by nonprofit org. furnishing services to individuals	−280	−479	−440	−510	−728	−784
14	Int., div., rent, & bus. inc. rec. by fiduciaries	−1,126	−1,212	−1,205	−1,421	−1,634	−1,797
15	Fiduciary inc. rec. by individuals	+804	+940	+962	+1,120	+1,288	+1,417
16	Value of services furnished individuals without pay. by fin. intermediaries, incl. life ins. cos.	−2,161	−2,700	−2,965	−3,201	−3,362	−3,682
17	Periodic pay. to individuals from life ins. cos.	+385	+445	+470	+540	+575	+630
18	Employee contributions for social insurance	+801	+2,236	+2,333	+2,012	+2,108	+2,145
19	Net adj. for misc. items [b]	−989	−1,655	−1,944	−1,552	−1,950	−2,413
20	Total net adj. (algebraic sum of lines 9–19)	−5,517	−18,723	−14,680	−7,639	−7,032	−8,527

Table 1 (concl.)

		1941	1944	1945	1946	1947	1948
B	*Adjustments due to Practical Limitations of Surveys or NID Series*						
21	Imputed net rental value of owner-occupied non-farm houses	−1,564	−2,523	−2,395	−2,035	−1,950	−2,111
22	Nonmoney income of farm operators	−1,828	−2,640	−2,769	−3,212	−3,816	−3,871
23	Nonmoney farm & nonfarm wages (other than military) & nonmoney nonfarm entrep. inc.	−1,068	−1,350	−1,417	−1,588	−1,880	−2,048
24	Value of change in farm inventories [c]	−458	+545	+148	+228	+2,162	−1,324
25	Noncorp. nonfarm inventory valuation adj.[c]	+644	+70	+113	+1,886	+1,616	+397
26	Accrued int. on unredeemed U.S. gov. bonds	−57	−252	−377	−439	−490	−557
27	Net inc. from roomers & boarders	+675	+500	+500	+800	+950	+950
28	Total net adj. (algebraic sum of lines 21–7)	−3,656	−5,650	−6,197	−4,360	−3,408	−8,564
C	*Total Adjustment*						
29	Total net adj. in personal inc. (line 20 + line 28)	−9,173	−24,373	−20,877	−11,999	−10,440	−17,091
30	Consumer money inc. (line 8 + line 29)	86,135	141,519	151,050	164,909	183,068	194,809
	TRANSFER OF INCOME ITEMS TO MATCH INCOME CATEGORIES USED IN FIELD SURVEYS						
31	Military money pay of persons returned to civ. life by end of calendar year, 1944–48 (tr. from line 1 to 42); CCC pay. sent to family in 1941 (tr. from line 1 to 45)	63	334	4,828	2,387	612	352
32	Military family allow. & allot. (tr. from line 1 to 42)	...	6,084	7,231	1,841	903	835
33	Veterans' pay. & pay of military reservists (tr. from line 7 to 42)	524	902	2,781	6,726	6,805	5,898
34	Net rent from farm prop. rec. by farm operators (tr. from line 3 to 44)	316	533	536	647	732	670
35	Directors', jury, witness, & marriage fees (tr. from line 7 to 39)	72	69	75	85	91	97
36	Gov. life ins. benefits other than lump sum, military & naval ins. pay., pay. for care of foster children, merchant marine war-risk life claims (tr. from line 7 to 46)	60	126	276	328	343	365

37	Patronage refunds & stock div. paid by farmers' coop. (tr. from line 2 to 41)	60	167	185	226	285	297
38	Total of items transferred (lines 31–7)	1,095	8,215	15,912	12,240	9,771	8,514
	CONSUMER MONEY INCOME, BY SOURCE						
39	Civilian wages & salaries	57,939	93,493	92,768	101,549	116,191	128,682
40	Nonfarm entrep. income	9,750	16,517	18,085	21,813	23,679	23,757
41	Farm entrep. income	4,396	9,380	9,556	10,840	13,319	12,803
42	Military income	524	7,320	14,840	11,556	8,485	6,786
43	Int., div., & fiduciary inc. to individuals	7,286	7,471	7,838	9,317	10,647	11,605
44	Rent & roomer-boarder income	3,635	4,853	4,743	5,460	6,096	5,976
45	Social security, etc.	2,160	1,914	2,474	3,506	3,733	4,205
46	Other income	445	571	746	868	918	995
47	Total consumer money inc. (lines 39–46)	86,135	141,519	151,050	164,909	183,068	194,809

[a] Includes inventory valuation adjustment.
[b] Sum of employer contributions to private pension and welfare funds, lump sum payments under social insurance programs, business transfer payments to individuals, compensation of prison inmates and prisoners of war, profits of military post exchanges, nonmoney payments under workmen's compensation, interest on guaranteed loans to veterans, CCC payments other than those sent to the family, and terminal leave bond redemptions minus terminal leave bond issues.
[c] Amount included in personal income with sign reversed.

income (civilian and military) of persons who were in the civilian noninstitutional population at the beginning of the year but entered the armed forces or died before the close of the year (Table 1, lines 9–12).

A second type of adjustment is made because 'persons' are defined in the personal income series to include nonprofit organizations furnishing services to individuals, private trust funds, and private pension and welfare funds as well as individuals. The consumer money income series covers families and single individuals, as defined above. Consequently, consumer income excludes, and personal income includes, income flowing to these funds or organizations that was not distributed to families (lines 13–5).

A third set of conceptual adjustments is to reconcile differences in the treatment of certain income items (lines 16 and 17). Personal income includes as 'imputed interest' the value of services furnished individuals gratis by commercial banks and other financial intermediaries, and imputed income paid out by life insurance carriers. The latter is included because the personal income series measures the property income of life insurance companies as if it were received directly by individuals. The field surveys, on the other hand, cover only 'periodic' payments, not lump sum payments, from insurance companies received by families and single individuals.

Other adjustments allow for the fact that the field surveys include as income, and personal income excludes, employee contributions for social insurance (both series exclude employer contributions); the reverse is true of employer contributions to private pension and welfare funds. Business transfer payments, representing chiefly consumer bad debts and corporate gifts to nonprofit institutions, are excluded from field survey income and must therefore be subtracted from the personal income series for purposes of comparability (lines 18 and 19).

Adjustments for several other conceptual differences are not made in Table 1 owing to lack of reasonably adequate data or time. For example, alimony and contributions for support received by families or single individuals from persons who were

not members of the household are included in survey income, i.e., are counted as income of the recipient family and not deducted from the income of the donor family, whereas such transfers among families are not included in personal income. Cash gifts sent to the family by members of the armed forces are incompletely allowed for in the adjustments because although dependency allowances (class F) and voluntary allotments (class E) sent home are included, no attempt was made to estimate less regular cash contributions. In addition, pensions received by family members from private pension funds, cash receipts from private relief agencies, and patronage dividends from nonfarm cooperatives, also included in the field survey income definition, should properly be added to the personal income series for purposes of comparison.

On the other hand, income other than earnings, e.g., interest, dividends, rents, of persons who died or entered the armed forces should properly be subtracted from the personal income series to match the field survey coverage. Only the earnings of such persons were subtracted in lines 11 and 12. Moreover, insufficient allowance was made in the subtraction in line 19 for the income of permanent institutional inmates and of persons entering institutions during the year who were not covered in the field surveys.

b *Adjustments for practical limitations*

The most important of the adjustments in Table 1 to correct for differences arising because of practical limitations is due to the failure of recent field surveys to include items of nonmoney income, e.g., imputed rental value of owner-occupied dwellings, value of home-consumed food and fuel grown by farmers, and nonmoney wages received by both farm and nonfarm laborers (lines 21–3). These items were omitted largely because they are extremely costly and difficult to enumerate, but partly because size distributions confined to money income are felt to be adequate for certain types of analysis. The value of physical changes in farm inventories is likewise excluded from most field surveys because of the difficulty in enumeration (line 24). Consequently, the farmer's net cash income is measured without regard to any

increase or decrease during the year in his crops or livestock. For nonfarm business the noncorporate inventory valuation adjustment is excluded (line 25). This adjustment removes from the personal income series any inventory profit or loss due to changes in prices. The field surveys have not attempted any such precise measurement of entrepreneurial income. Accrued interest on unredeemed United States savings bonds (line 26) is likewise not included in field surveys, whereas net income from roomers and boarders in private homes (line 27) is not included in personal income.

c *Transfer of income items to match field survey categories*
The adjustments to reclassify several income items to match the field survey grouping (lines 31–7) affect only the classification of personal income, not the total. Most important are the transfer from 'wages and salaries' or 'transfer payments' to 'military income' of (a) military pay of persons who were in the civilian noninstitutional population at the close of the calendar year (military pay of persons not in that population at the close of the year was subtracted from personal income in line 9); (b) military family allowances and allotments; and (c) veterans' payments. Agricultural rents received by farm operators, treated as rental income in field surveys, are transferred from farm operator income to rental income, and dividends paid by farmers' cooperatives from nonfarm business to farm operator income.

Incorporating the various adjustments, total consumer money income ranges from $9 billion to $17 billion lower than personal income, except in 1944 and 1945 when the difference was $24 and $21 billion, respectively, owing to the sizeable subtractions for military pay (lines 9 and 10). Largely because of the different treatment of military pay, consumer money income rises less steeply from 1941 to 1944 than personal income, and more steeply in the postwar years.

Aside from military pay, the largest adjustments in personal income were for the purpose of excluding various items of nonmoney income, e.g., imputed interest, imputed rental value of dwellings, and nonmoney agricultural income. Removal of the

nonfarm inventory valuation item (line 25) and of the value of changes in farm inventories (line 24) were sizeable adjustments in 1946–48. Exclusion of the latter reversed the change in farm operator income from 1947 to 1948: when changes in inventory are included as in personal income (conceptually preferable), farm operator income rises about one-fifth; when they are excluded, as in consumer money income, it declines slightly.

2 *Aggregate Income Covered by Field Surveys*

In Tables 2 and 3 aggregate consumer money income accounted for in nine 'blown-up' sample field surveys of family income are compared with estimates derived above from the NID personal income series.[8] Column 1 is from Table 1, lines 39–47, except for adjustments to bring the estimates into line (a) with the varying dates on which the several field surveys were conducted, which resulted in differences in population and hence in income covered, and (b) with certain variations in the classification of income items among the surveys (see App. C, notes to col. 1).

The 'blown-up' aggregates from the sample field surveys were adjusted (a) to add the income of families and single individuals living in large rooming houses, hotels, and other quasi-households when this minor group was not represented in the sample universe, and (b) to bring the 'blown-up' aggregates into line with revised estimates of the number of families and of single individuals (see App. D).

The survey aggregates labeled 'Census Bureau' incorporate my estimates of the aggregate income of the 'blown-up' number of families and single individuals reported in the $10,000 and over class because the Census did not request the amount if the income was $10,000 or more; instead, '$10,000 or more' was recorded on the schedule (see App. D).[9]

a *Total consumer money income*

Of the 9 field surveys covered in Table 2 for 1941 and 1944–48, 4

[8] Data from a tenth survey, the Census income survey covering 1948, were not available when this paper was prepared.

[9] The notes describe also estimates of the aggregate income of families and single individuals whose income was 'not ascertained' in the 1945 Census survey.

Table 2

Consumer Money Income as Estimated from NID Personal Income Series and as Covered in Field Surveys, 1941, 1944–48

		Aggregate Consumer Money Income				Average Consumer Money Income			
			Covered in field surveys				Reported in field surveys		
		Estimated [a]	As reported [b]	Adj. to check with rev. pop. estimates	Ratio	Estimated mean	Mean [b]	Median	% by which mean exceeds median
		(billions of dollars)			(3 ÷ 1) [c]		(dollars)		
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
					Federal Reserve Board				
1	1945	151.1	113.5	115.7	.77	3,604	2,838	2,400	18.2
2	1946	164.9	135.0	137.4	.83	3,805	3,293	2,600	26.7
3	1947	182.9	161.0	164.3	.90	4,089	3,388	2,920	29.7
4	1948	194.8	176.0	179.4	.92	4,231	4,018	3,120	28.8
					Bureau of the Census				
5	1944	140.3	110.6	111.0	.77–.79	3,419	2,708	2,209	22.6
6	1945	153.8	110.1	114.4	.74	3,633	2,747	2,378	15.5
7	1946	165.2	129.8	129.8	.77–.79	3,769	2,942	2,455	19.8
8	1947	182.7	147.8	147.8	.79–.81	4,058	3,259	2,727	19.5
					Bureaus of Labor Statistics and of Human Nutrition and Home Economics				
9	1941	86.3	79.0 [d]	78.2	.91	2,086	1,974 [f]	1,512 [f]	30.6
			75.3 [e]	74.6 [e]	.86				

[a] Applies to population as of date of specified field survey. For differences between consumer money income shown here and in Table 1 see Appendix B, notes to column 1.

[b] Covers all income groups. Lines 5–8, where amounts of income were not asked of the family if $10,000 or over, and line 6, where tabulated amounts excluded families whose income was not ascertained, include estimates for these groups derived as explained in Appendix D, notes to columns 1 and 2. Line 7 is from Census-BAE survey.

[c] For an explanation of the range in percentages for Census surveys, see Appendix B, notes to this column.

[d] For difference between this figure and that in BLS *Bulletin 822*, p. 43, see Appendix B, notes to this column.

[e] Includes also an adjustment to remove income that was added by raising mean of $10,000 and over income class. See Appendix D, notes to column 2.

[f] For 'full-period' families and single individuals; see Appendix B, notes to column 6.

accounted for 74–79 percent of consumer money income, the other 5 for 81–92 percent. The lowest percentages are for 1944–46, when difficulties of field enumeration were increased by major shifts in the population; the highest percentages are for 1941 and 1948.

An appraisal of field surveys in terms of the percentage of total income accounted for does not imply, of course, that it should be the sole criterion for the accuracy of income size distributions. A very high percentage coverage would not in itself indicate at all that the survey was free from bias. More significant are the relative understatement of the income sources, discussed below, and comparisons with size distributions based on tax returns and other data, discussed in Section D.

Nor should differences of a few percentage points be viewed as significant. One survey cannot be regarded as having done better merely because it accounted for several more percentage points of consumer money income than another. As explained below, the estimates of consumer money income presented here are not deemed sufficiently accurate for such conclusions. Moreover, because the field surveys covered small samples, the 'blown-up' aggregates, and hence the percentages, of income accounted for are subject to sampling variations and should properly be shown as ranges rather than single figures.[10]

The differences among surveys in the percentage of aggregate income covered, as shown in Table 2, are affected by certain basic differences in methods of inflating the sample results. Although the totals from the surveys have been adjusted in the tables to make them comparable with respect to population coverage and to allow for variations in the definition of income, they have not been adjusted to make them comparable with respect to inflating procedures.

If it is assumed that the rate of nonresponse in field surveys and the rental value of dwellings each varies directly with income,[11]

[10] See Part IX for a discussion of size of samples and sampling errors in median incomes.

[11] In the 1941 survey there was "a marked tendency for the refusal rate to be high in the groups living in blocks with higher rent levels and with a larger proportion of the families in the upper income levels" (Family Spending and Saving in War-

an inflating procedure in which families with unascertained income (NA) are distributed by size classes like those with known income within individual rental value strata would yield a higher aggregate income (a 'richer' size distribution) than an inflating procedure that did not use rental value or some other measure of 'economic level' in determining strata. Rental value was a basic determinant in distributing NA's by size classes in the 1941 survey,[12] and a major characteristic of the strata within which adjustments to include NA's were made in the Federal Reserve Board surveys. The Census Bureau did not use rental value as a control in inflating its samples; its schedule did not contain questions about the rental value of owner-occupied dwellings. For 1946 and 1947 it used age, sex, color, urban-rural residence, and veterans' status as controls, and for 1944 and 1945 the number of private households without controls for component groups.[13]

In the 1941 BLS-BHNHE study approximately $2.5 billion of consumer money income was added by the differential adjustment for NA's based on the rental value of dwellings in urban and rural nonfarm areas.[14] In other words, had the NA's been distributed like the families with known income and not been controlled by rental value, the survey would have accounted for 88 percent instead of 91 percent of consumer money income. Another 5 percent was accounted for by a step-up of the mean in-

time, BLS *Bulletin 822*, p. 22).

In the Federal Reserve Board survey for 1946 nonresponse "amounted to 14 percent of spending units for groups sampled at the basic rate, and 29 percent of the cases sampled at much more than the regular rate," i. e., cases in the higher rent strata (Part IX).

In the 1945 Census survey "categories which had the highest incomes were those with the highest non-reporting rates. White families failed to report more frequently than non-white families, owner families more frequently than tenant". See the discussion of this point and the nevertheless minor effect of a redistribution by income classes of NA tenant families on the basis of reported rent for 1945 and 1947 (ibid.). A similar redistribution for owner families would probably have had more effect on the income size distribution in these particular years.

12 BLS *Bulletin 822*, pp. 22–5. An estimated refusal rate based on estimated rental values ranged from 1 percent for families with incomes under $500 to 35 percent for those with incomes of $10,000 and over.

13 Part IX. For the Census method of allowing for NA's see Appendix D, notes to column 1.

14 Derived from percentage distributions of urban families and single individuals by size of money income before and after adjustment for refusals (BLS *Bulletin 822*, pp. 24, 68, 94) and mean money income of rural nonfarm families before and after such adjustment (ibid., p. 28).

come of the $10,000 and over class in the 1941 survey (see Table 2). Because of the relatively high estimated refusal rate the original urban sample mean for the class was assumed to be inaccurate, and was replaced by an average determined by fitting a Pareto curve to the number of cases in the $5,000–10,000 and the $10,000 and over classes.[15] This substitution accounted for about $3.5 billion. The higher average is a close approximation to the actual average of the $10,000 and over income class, as the mean for families in that class based on tax returns for 1941 indicates (see App. D, notes to col. 2).

Data for similarly appraising the effect of differential adjustment for NA's on the basis of rental value strata in the FRB surveys are not available. But there is every reason to believe that it was as important, relatively, as in the 1941 survey, because the rate of nonresponse was about the same. Nor can the effect of controls by such factors as age, sex, and color in inflating the Census survey data be measured, but they probably had less effect on the income size distribution than the rental value controls used in the BLS and FRB surveys.[16]

Thus some of the disparity, but by no means all, among field surveys with respect to the percentage of consumer income covered may be explained by the different treatment of NA's or, as in 1941, by adjustments in the mean of the top income class. These and other factors accounting for a higher aggregate income in one field survey than in another are discussed in Part IX.

b *Consumer money income by source*

More important than the over-all understatement of income is the distribution of understatement among sources. The proportion of civilian wages and salaries accounted for in the 1941 BLS-BHNHE and 1944–46 Census surveys ranged from 86 to 92 percent (Table 3).[17] For nonfarm entrepreneurial income the range was from 51 to 106 percent, and for farm entrepreneurial

[15] Ibid., pp. 25–7.

[16] Mr. Wasson indicates that the control by age which he used to reweight the income size distributions for 3 very broad age-of-head groups of families in 1947 did not change the over-all median significantly (Part IX). These age groups, however, may have been too broad to produce significant results.

[17] The 1947 Census survey did not collect data for the separate income sources, except wages and salaries.

income from 48 to 98 percent. For military income, including armed force pay of persons living with the family at the time of the enumeration, family allowances and allotments, and veterans' payments, the range was from 65 to 81 percent.

Table 3
Consumer Money Income as Estimated from NID Personal Income Series and as Covered in Field Surveys, by Source, 1941, 1944–46 (millions of dollars)

	Source [a]	Estimated [b] (1)	Survey [c] (2)	Ratio [d] (2÷1) (3)
	1941			
1	Civilian wages & salaries	57,370	51,263	.89
2	Nonfarm entrep. income	9,800	10,420	1.06
3	Farm entrep. income	5,067	4,947	.98
			(4,513)[e]	(.89)[e]
4	Armed force pay			
5	Military allows. & allots.	....	....	....
6	Veterans' payments			
7	Interest & dividends	7,286	1,186	.16
8	Rent & roomer-boarder income	3,635	3,065	.84
9	Social security, etc.	2,684	2,182	.81
10	Other income	445	1,523	
11	Total	86,287	74,586	.86
	1944			
1	Civilian wages & salaries	92,148	79,124	.85–.86
2	Nonfarm entrep. income	16,362	12,869	.72–.79
3	Farm entrep. income	9,380	6,332	.63–.68
			(8,370)[e]	(.89)[e]
4	Armed force pay			
5	Military allows. & allots.	7,520	6,082	.81
6	Veterans' payments			
7	Interest & dividends	6,531	2,120	.29–.32
8	Rent & roomer-boarder income	4,938	2,300	.45–.47
9	Social security, etc.	3,425	2,158	.63
10	Other income			
11	Total	140,304	110,985	.77–.79
	1945			
1	Civilian wages & salaries	92,148	81,474	.88
2	Nonfarm entrep. income	17,926	9,180	.50–.51
3	Farm entrep. income	9,556	4,557	.47–.48
			(6,396)[e]	(.67)[e]
4	Armed force pay	10,080	7,278	.72
5	Military allows. & allots.	5,366	4,624	.86
6	Veterans' payments	2,776	1,753	.63
7	Interest & dividends	6,876	1,225	.17–.18
8	Rent & roomer-boarder income	4,842	2,205	.45–.46
9	Social security, etc.	1,488	759	.51
10	Other income	2,694	1,331	
11	Total	153,752	114,386	.74

	Source [a]	Estimated [b] (1)	Survey [c] (2)	Ratio [d] (2÷1) (3)
	1946			
1	Civilian wages & salaries	101,155	92,813	.90–.92
2	Nonfarm entrep. income	21,743	13,279	.56–.61
3	Farm entrep. income	11,182	7,184	.61–.64
4	Armed force pay	3,906	3,311	.83–.85
5	Military allows. & allots.	1,373	864	.63
6	Veterans' payments	6,697	3,603	.54
7	Interest & dividends	9,317	2,185	.21–.24
8	Rent & roomer-boarder income	5,460	3,265	.58–.60
9	Social security, etc.	3,506	2,226	.64
10	Other income	868	1,102	
11	Total	165,207	129,832	.77–.79

[a] The following differences in the coverage of the income items in the various years, due to differences in the classification used in the several surveys, should be noted: Coverage of civilian wages and salaries, nonfarm entrepreneurial income, and armed force pay varies with the date of the survey. Net income from rooming and boarding houses is included in nonfarm entrepreneurial income in 1941 and 1946 but in rent in 1944 and 1945. Value of change in farm inventories is included in farm entrepreneurial income in 1941 but not in other years. Military family allotments are included partly in armed force pay and partly in family allowances and allotments. Veterans' payments are shown separately in 1944–46 but are included in social security, etc. in 1941. Fiduciary income received by individuals is included in interest and dividends in 1941 and 1946 but in 'other' income in 1944 and 1945. State and local direct relief payments are included in social security, etc. in 1941 and 1946 but in 'other' income in 1945. For differences between column 1 and lines 39–47 of Table 1 see Appendix C, notes to column 1.

[b] Applies to population as of date of field survey. See Appendix C, notes to column 1.

[c] Adjusted as shown in Table 4. Represents BLS–BHNHE survey for 1941, Census surveys for 1944 and 1945, and Census-BAE survey for 1946.

[d] For an explanation of the range in percentages, see Appendix C, notes to column 3.

[e] Farm entrepreneurial income that would have been covered in the 1941 field survey if a revised number of families with cash farm income had been used, and maximum farm income that would have been covered in 1944 and 1945 if the inflated number of families with farm income had been the same as in the 1946 survey; see Appendix D, notes to column 2.

Table 4

Consumer Money Income in Field Surveys, Reported and Adjusted, by Source, 1941, 1944–46 (millions of dollars)

	Source *	Reported in survey by units with inc. under $10,000 (1)	Col. 1 adj. to incl. units with inc. $10,000 & over (2)	Col. 2 adj. to check with rev. pop. est. (3)
	1941			
1	Civilian wages & salaries	48,915	51,774	51,263
2	Nonfarm entrep. income	8,611	10,524	10,420
3	Farm entrep. income	4,551	4,996 (4,576) *	4,947 (4,531) *
4	Armed force pay	...	...	...
5	Military allows. & allots.	...	...	...
6	Veterans' payments	...	...	...

Table 4 (concl.)

	Source*	Reported in survey by units with inc. under $10,000 (1)	Col. 1 adj. to incl. units with inc. $10,000 & over (2)	Col. 2. adj. to check with rev. pop. est. (3)
7	Interest & dividends	779	1,198	1,186
8	Rent & roomer-boarder income	2,448	3,095	3,065
9	Social security, etc.	2,204	2,204	2,182
10	Other income	1,347	1,538	1,523
11	Total	68,855	75,329	74,586
	1944			
1	Civilian wages & salaries	73,670	78,798	79,124
2	Nonfarm entrep. income	7,953	12,892	12,869
3	Farm entrep. income	4,468	6,394	6,332
			(8,451)*	(8,370)*
4	Armed force pay			
5	Military allows. & allots.	5,849	5,951	6,082
6	Veterans' payments			
7	Interest & dividends	1,188	2,124	2,120
8	Rent & roomer-boarder income	1,873	2,282	2,300
9	Social security, etc.	2,061	2,117	2,158
10	Other income			
11	Total	97,062	110,558	110,985
	1945			
1	Civilian wages & salaries	74,950	78,474	81,474
2	Nonfarm entrep. income	5,738	8,879	9,180
3	Farm entrep. income	4,057	4,444	4,557
			(6,238)*	(6,396)*
4	Armed force pay	6,865	6,980	7,278
5	Military allows. & allots.	4,352	4,355	4,624
6	Veterans' payments	1,660	1,662	1,753
7	Interest & dividends	699	1,185	1,225
8	Rent & roomer-boarder income	1,857	2,118	2,205
9	Social security, etc.	715	716	759
10	Other income	1,229	1,266	1,331
11	Total	102,122	110,079	114,386
	1946			
1	Civilian wages & salaries	85,625	92,813	92,813
2	Nonfarm entrep. income	8,145	13,279	13,279
3	Farm entrep. income	5,506	7,184	7,184
4	Armed force pay	3,005	3,311	3,311
5	Military allows. & allots.	861	864	864
6	Veterans' payments	3,593	3,603	3,603
7	Interest & dividends	1,089	2,185	2,185
8	Rent & roomer-boarder income	2,884	3,265	3,265
9	Social security, etc.	2,225	2,226	2,226
10	Other income	1,028	1,102	1,102
11	Total	113,961	129,832	129,832

* See Table 3, notes a and e. Represents BLS–BHNHE survey for 1941, Census surveys for 1944 and 1945, and Census-BAE survey for 1946.

Survey interest and dividend income represented only 16–32 percent of the estimated annual totals; rental income 46–84 percent. Survey social security benefits, unemployment compensation, and nonveterans' pensions together accounted for 51–81 percent. The miscellaneous items in 'other income' in the surveys are not sufficiently similar to those in the estimate based on the personal income series to make percentage comparisons significant (see App. A, notes to line 46).

The 1946 survey accounted for the highest percentage of civilian wages and salaries, 92, but was almost the lowest with respect to entrepreneurial and military income. The 1941 survey covered 89 percent of wages and salaries and all entrepreneurial income, but ranked lowest with respect to coverage of interest and dividends. The 1944 and 1946 Census surveys covered the same overall percentage of income. But the former accounted for much higher fractions of entrepreneurial and military income counterbalanced largely by a lower fraction of civilian wages and salaries.

Unfortunately, estimates of aggregate income by categories are not available from the FRB surveys. Respondents were not required to report separate sources and some gave only the overall total. Tabulations of income by source for families furnishing the detail would be extremely useful for analytical purposes, provided the families were a representative subsample of the families surveyed. If they were not, the data by source could be appropriately weighted to obtain the source pattern.

As noted above, none of the percentages in Table 3 should be interpreted as an exact measure of the proportion of income accounted for. The survey estimates classified by income source, which are components of relatively small samples, should properly be in terms of wide ranges in most instances, rather than single figures. Nor are the estimates for the various income sources derived from the NID personal income series precise enough to warrant such an interpretation. While most of the adjustments in personal income in Table 1 are subtractions of components as they were estimated to derive the personal income series, some were arbitrary, such as the adjustments for fiduciary

income and income from roomers and boarders in private houses (lines 14, 15, 27).

Moreover, the personal income series itself is more reliable for certain components than for others. The wage and salary component, for example, includes a highly accurate estimate of total payrolls in 'covered' industries, obtained by combining data from the Railroad Retirement Board, Bureau of Old-Age and Survivors Insurance, and state unemployment compensation agencies. To this is added payrolls in the government sector, and in certain agricultural and service industry groups, based on relatively reliable series for recent years. Dividends, estimated from corporate income tax returns as the difference between total dividends paid and received by corporations, are also relatively accurate.

The rent and interest components of personal income, on the contrary, are open to a wider margin of error largely because of the nature of the basic data. For recent years the rental component, nonagricultural, is extrapolated from a 1941 figure, based on individual income tax returns, by data on movements in gross rent paid for different kinds of property, changes in the allocation of rental income between individuals on the one hand and business and government on the other, and changes in expense items and their ratios to gross rental income. Monetary interest to individuals is a residual, the difference between the sum of all types of monetary interest paid and the sum received by business and government. Because interest income comes from so many sectors of the economy and the source material is so varied, the series is subject to more error than the more simply derived dividend residual. For neither rent nor interest are the amounts reported as income on individual tax returns regarded as sufficiently reliable for recent years to be used as extrapolating series (see Sec. B3).

Entrepreneurial income, likewise based on varied sources, is probably the least satisfactory component. The BAE derived farm money income by adding gross receipts from different crop and livestock categories and government payments and subtracting the total of various types of production expense. Net income

of nonfarm business has been estimated in recent years for each of more than 50 industries by methods that vary with the nature of the source material. In general, gross receipts, extrapolated from Census figures, were multiplied by a profit ratio determined from tax returns, or the number of proprietors by an average net income per proprietor, also based largely on tax returns. For certain professional groups, average net income is determined by special mail questionnaire surveys. The BIR audit study may indicate the extent of adjustment in the entrepreneurial income series that would be required to allow for the part of the understatement on tax returns not yet taken into account.[18]

The margin of error in all the income components, however, is very much smaller than the differences between survey and consumer money income aggregates in Table 3. While differences of a few points in the percentage coverage of one survey and another with respect to a given source may not be significant, in most instances the much larger variations among surveys represent real differences in coverage. Before concluding what has happened to the income distribution over time, it is essential therefore to adjust the results for each source separately (see Sec. E).

c *Number of families reporting income from different sources*

For any given source, variations among surveys with respect to the percentage of income covered reflect differences not only in the amounts reported but also in the extent to which families receiving income from that source were represented in the 'blown-up' results. The latter is a function of the adequacy of the sample and the efficiency of the enumeration, as well as of the control totals. As mentioned above, for 1944 and 1945 the Census Bureau used only a single control in inflating its sample, the number of private households, whereas for 1946 and later years the samples were inflated to agree with the population in urban, rural nonfarm, and rural farm areas estimated from a sample

18 In 1945 the nonfarm entrepreneurial income component of personal income, after adjustment for comparability with tax returns, was about 15 percent higher than the amount reported on tax returns; see Table 8.

survey of population, and with independent estimates of the population in each of several age, sex, color (1946 only), and veteran status of male groups. The 1941 BLS-BHNHE survey was inflated to agree with independent estimates of the number of urban, rural nonfarm, and rural farm family units, whereas the various FRB surveys were inflated by only a single control total similar to that for the first two Census surveys.

Table 5

Number of Families and Single Individuals Reporting Income from Various Sources and Mean Income per Unit Reporting, Census Field Surveys, 1944–1946

	Source [a]	Number [b] (000)			Mean Income, $, per Unit Reporting Specified Source [c]		
		1944	*1945*	*1946*	*1944*	*1945*	*1946*
		(1)	(2)	(3)	(4)	(5)	(6)
1	Civ. wages & salaries	31,050	30,722	33,925	2,538	2,554	2,736
2	Nonfarm entrep. income	4,150	3,422	4,412	3,107	2,595	3,010
3	Farm entrep. income	4,575	4,305	6,045	1,398	1,032	1,188
4	Armed force pay		7,133	5,242		979	632
5	Military allows. & allots.	6,100	5,987	2,270	976	727	380
6	Veterans' payments		5,342	7,501		311	480
7	Interest & dividends	3,034	3,055	3,286	700	388	665
8	Rent	4,653	3,293	4,280	490	534	621
9	Roomer-boarder income		1,356	1,730		265	352
10	Social security, etc.	3,844	2,111	5,383	551	339	414
11	Other income		2,405	1,713		526	643
12	Total	40,823	40,069	44,135	2,708	2,747	2,942

[a] See Table 3, note a.
[b] Covers all income groups. Represents the 'blown-up' number of families and single individuals reporting receipts from each source (including, for 1945, estimates for units with income not ascertained described in App. D, notes to col. 1) but without adjustment to check with revised population estimates or to include estimates for quasi-households in 1944 and 1945. Represents Census-BAE survey for 1946.
[c] Derived by dividing the aggregates in Table 4, column 2, by the number of families and single individuals in columns 1–3 of this table.

The introduction of an urban-rural population control into the 1946 Census survey was probably responsible for the markedly larger number of families reporting receipt of farm income than in surveys for earlier years. In 1944 and 1945 when such controls were not used, only about 4.5 million families reported receipt of farm income or loss; 6 million reported in 1946 (Table 5).[19] The increase was not due to a change in definition. In all 3 years the farm income questions were supposed to be asked of all families operating farms as defined in the Census of Agriculture; no attempt was made to limit them to families whose "major source of earnings" was farming.

[19] The 6 million figure checks well with the 5.9 million farm operators enumerated in the *1945 Census of Agriculture*. For discussion of farm income in the 1946 survey, see Part V.

The lower aggregate farm income in the 1945 than in the 1946 survey (Table 3) is due partly to the relatively low mean income obtained in the former, but to a greater extent to the understatement in the farm operator family population (Table 5). In 1944, when the farm operator population was almost as grossly understated as in 1945, the size distribution was 'higher pitched' so that aggregate farm income was almost as high as in 1946 (Table 3). Needless to say, the variations among the three surveys in mean farm income and in farm operator population accounted for, as shown in Table 5, are such as to make it impossible to draw any conclusions concerning the income distribution of farm operators in this period.

Though 6 million families with farm income were covered in the 1946 survey, only 64 percent of aggregate farm income was covered (Table 3). If the 1.6 million farm operator families not accounted for in the 1945 survey are assumed to have been distributed by size classes of net farm income like the families reporting farm income (which would not be the case if they had been excluded from the survey because of biases) [20] the percentage of farm income covered would have been 67 instead of 48 (Table 3). Similarly, the proportion in the 1944 survey would have been raised from 68 to 89 percent. But if, as may well have happened, the missing farms in 1944 and 1945 were in large degree the 'borderline' ones with value of products just above the $250 point used by the Census to define farms under 3 acres, these percentages overstate the coverage. In the 1941 survey the sample mean was 'blown-up' by what now seems too high an estimated number of farm operator families with cash income, and an adjustment for this factor reduces the percentage coverage in Table 3 from 98 to 89 (see App. D, notes to col. 2).

For the nonfarm entrepreneurial group also the surveys varied markedly in the number of recipient families and mean entrepreneurial income covered. It is not surprising that the understatement on both counts was relatively largest in 1945. Difficulties of enumeration were especially great because military dis-

20 Biases not necessarily in the sample design, but due to misconceptions by the enumerator with respect to the definition of a farm.

charges, which bulked so large in late 1945 and early 1946, caused major shifts in family composition. Many families interviewed in April 1946, the month when the 1945 survey was taken, differed markedly in their composition as compared with calendar 1945, the year to which the income data pertain.

Nor is it surprising, in view of the small samples, that the entrepreneurial income components, farm and nonfarm, vary more erratically from one survey to the next than does the much larger wage and salary component (Tables 3 and 5).[21]

d *$10,000 and over income class*

Variations among surveys in estimates of family income in the top 'and over' class help explain some of the variations in the percentage of total income covered. In the Census surveys, for example, 12 percent of total consumer money income was accounted for by families in the $10,000 and over class in 1944; only 7 percent in 1945. As Table 6 indicates, this was partly because a larger percentage of families was in this class in the 1944 survey, but also partly because the mean estimated for the class was so much higher. The averages for the $10,000 and over class in the Census surveys are maximum estimates based on the assumption that if families who reported the receipt of income from a given source had been asked the amount they would have reported the same average amount as given on income tax returns in the $10,000 and over adjusted gross income class.[22] The much higher mean income in the 'and over' class in 1944 than in 1945 (Table 6) is due to the larger proportion of families (within the $10,000 and over class) reporting receipt of entrepreneurial income (the

[21] Certain of the variations among surveys shown in Table 5 with respect to the inflated number of families reporting the receipt of income from a given source are due to differences in the definition of the income categories as indicated in Table 3, note a. For example, the relatively low figure in Table 5 for the number of families with income from 'social security, etc.' in 1945 is due in part to the fact that state and local direct relief payments were included in 'other income' in the survey for 1945 but in 'social security, etc.' in the survey for 1946.

[22] As indicated above, the amount was not requested in the Census surveys if income was $10,000 or over. Means for the $10,000 and over class were estimated (see App. D, notes to col. 2) to determine the income that might have been obtained had amounts been asked. They do not represent the actual averages which can best be estimated by combining tax returns into family units.

source with the highest average per tax return in the $10,000 and over class) or reporting multi-source income in the 1944 survey, not to the slightly higher averages for individual income sources reported on tax returns for 1944 than for 1945.

Table 6

Percentage of Families and Single Individuals and of Consumer Money Income in the $10,000 and Over Class, as Reported in Field Surveys, 1941, 1944–48

Income Year	Income Class $10,000 and Over: % of total consumer money inc. in class	Mean income of class [a]	% of families & single individuals in class
	Federal Reserve Board		
1945	10.6	$15,000	2.0
1946	16.4	18,600	2.9
1947	20.6	19,100	4.1
1948	18.3	18,700	3.8
	Bureau of the Census [b]		
1944	12.2	21,300	1.6
1945	7.2	15,900	1.3
1946	12.2	19,200	1.9
1947	14.2	19,200	2.5
	BLS–BHNHE		
1941, Sample mean	8.8	14,400	1.1
1941, Higher mean	13.3	22,500	1.1

% of aggregate income from given source accounted for by families & single individuals with total incomes of $10,000 and over [c]

	Civilian wages & salaries	Nonfarm entrep. income	Farm entrep. income	Int. & div.	Rent & roomer-boarder inc.
	Bureau of the Census [b]				
1944	6.5	38.3	30.1	44.1	17.9
1945	4.5	35.4	8.7	41.0	12.3
1946	7.7	38.7	23.4	50.1	11.7
	BLS–BHNHE				
1941, Sample mean	5.7	18.3	8.9	36.5	21.1
1941, Higher mean	8.2	28.5	8.9	58.0	22.7

[a] For the Census surveys the means shown here are maximum estimates. For minimum estimates, and for discussion of mean income in 1941, see Appendix D, notes to column 2.
[b] Census-BAE survey for 1946.
[c] See Table 3, note a.

The mean income of the 'top' class was unusually low for 1945 in the FRB survey too (Table 6). But this was the first year of the FRB surveys and, as explained above, exceptionally difficult to enumerate. In later FRB surveys means for the $10,000 and over class were much closer to averages based on tax returns.[23] This is in marked contrast to the 1941 survey when the original mean was strikingly lower than the tax return average, and the BLS introduced a correction factor by fitting a Pareto curve to the urban frequencies above $5,000 (Table 6).The chance factor involved in the mean of the 'and over' class obtained in any small sample field survey is bound to be extremely large; one or two 'millionaire' families in the sample can raise the average substantially. Since the nonresponse rate varies directly with income, a special effort to reduce this rate in 'richer' rental-value strata in the FRB sample surveys may be responsible for the higher means. It would be interesting to know whether the similarity between the FRB means for the $10,000 and over class and those estimated for the Census surveys (Table 6) reflect similar income composition within the class; e.g., similar proportions of families with wages, entrepreneurial income, interest, and dividends. Such comparisons cannot be made because tabulations showing income source patterns for families at different income levels are not available from FRB surveys.

The effect of raising the urban sample mean of the $10,000 and over class in the 1941 survey was significant for certain income sources. With the higher instead of the original sample mean, families with money income of $10,000 and over accounted for 28 instead of 18 percent of nonfarm entrepreneurial income, and for 58 instead of 36 percent of interest and dividends (Table 6).

e *Percentage distribution of income missing from field surveys, by source*

In 1941 about half the income unaccounted for by the field survey was wages and salaries; the other half interest, dividends, and rent. Only minor percentages come from other sources (Table 7,

23 For comparison see Appendix D, notes to column 2. Preliminary results for 1944 indicate that the mean per family, calculated from tax returns, is somewhat lower than that per tax return.

col. 1). In 1945 and 1946 only about a quarter of the missing income was wages and salaries, about a third entrepreneurial income, and roughly a quarter interest, dividends, and rents. In 1944 somewhat under half was wages and salaries, and less entrepreneurial income was missing than in the 1945 and 1946 surveys.

Table 7
Consumer Money Income Missing from Field Surveys, Percentage Distribution by Source, 1941, 1944–46

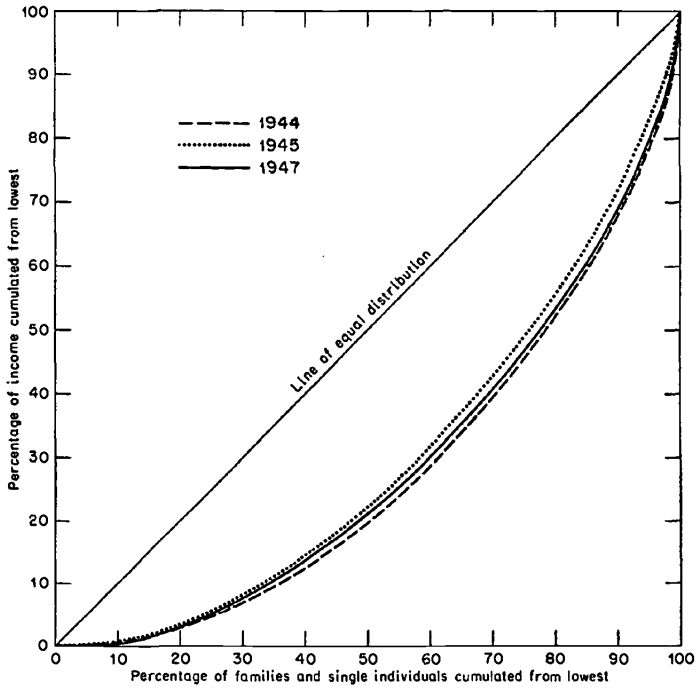
Source [a]	BLS-BHNHE, 1941 [b]		Census Bureau [c]		
	Using original sample mean for $10,000 & over class	Using higher mean for $10,000 & over class	*1944*	*1945*	*1946*
	(1)	(2)	(3)	(4)	(5)
Civilian wages & salaries	52.2	58.6	44.4	27.0	23.6
Nonfarm entrep. income	−5.3	−25.9	11.9	22.2	24.0
Farm entrep. income	1.0	1.5	10.4	12.7	11.3
Military income	...	...	4.9	11.7	11.8
Interest & dividends	52.1	68.2	15.1	14.4	20.2
Rent & roomer-boarder income	4.9	6.2	9.0	6.7	6.2
Social security, etc. & other inc.	−4.9	−8.6	4.3	5.3	2.9
Total	100.0	100.0	100.0	100.0	100.0

Columns 1 and 3-5 are percentage distributions of the difference between columns 1 and 2 of Table 3. Column 2 is the distribution of the difference between column 1 of Table 3 and the amounts from the survey derived by using the higher mean (see App. D, notes to col. 2), then adjusting to allow for revised population weights.
[a] See Table 3, note a.
[b] For discussion of sample mean of $10,000 and over class see Appendix D, notes to column 2.
[c] For 1946, Census-BAE survey.

f *Lorenz curves for the distribution of income from field surveys*
If corrections for the various income sources prove to offset one another in large degree, as might be the case for the corrections to add 'missing' dividends and social security benefits, for example, the unadjusted survey results indicate adequately, though not precisely, what has happened to the degree of inequality. Proper adjustments might, however, affect the various surveys in markedly different degrees; compare, for instance, the relative adjustments in entrepreneurial and wage and salary income necessary in the 1944 and 1946 surveys (Table 7).

These considerations should be borne in mind when the chart comparing Lorenz curves for various Census field surveys is examined. Inequality as measured by Lorenz curves was similar for the 3 years. However, since Lorenz curves are relatively insensitive, the difference of 3 or 4 percentage points at the area of widest difference may reflect sizeable changes. Inequality de-

Lorenz Curves for the Distribution of Consumer Money Income



Sources: Census Field Surveys.

creases from 1944 to 1945, but then the movement is reversed so that the curve for 1947 is slightly to the right of that for 1945.

One reason why the Lorenz curve for 1945 is to the left of those for other years, for both the Census and FRB surveys, is the relatively low mean income in the $10,000 and over class (Table 6). To test the effect of this factor, the 1944 mean of the $10,000 and over class was substituted for the 1945 mean in the Census size distribution for 1945, and a new Lorenz curve drawn for 1945. This curve was to the right of the curve for 1945 shown in the chart and closely approached the curve for 1947.[24]

24 The change in the degree of inequality between two years that is not dependent upon the 'and over' mean can be measured by computing the ratio of the class limit of a given group, e.g., decile, of families and single individuals in one year to that of the same decile in the other year, and examining changes for successive deciles.

Decile number (starting with lowest incomes)	2	4	6	8
Ratio of upper income limit of decile in 1945 to that in 1944	1.20	1.13	1.04	1.05

However, even with this adjustment in the $10,000 and over mean, the curve for 1945 remains to the left of that for 1944. A Lorenz curve based on 1941 survey data is to the right of the curve for 1944.[25] In other words, according to the surveys, there was some movement toward more equality in the income distribution from 1941 to 1944 and again in 1945, and some reversal of that movement thereafter. Adjustment of the several sets of survey data is called for to verify these findings and to measure the extent of such shifts. As field survey techniques continue to improve they may produce direct measures of shifts in income inequality. At present, however, we do not know how much of the shift reflects changes, often improvements, in the reporting of major income sources between successive surveys.

3 *Aggregate Income Covered by Individual Income Tax Returns* Individual income tax returns are a second major source of data for income size distributions. They accounted for 86 percent of consumer money income in 1944–46 excluding military income, social security benefits, unemployment compensation, pensions, and annuities (Table 8); 95 percent of civilian wages and salaries; 66–71 percent of entrepreneurial income, farm and nonfarm combined; 65–68 percent of interest, dividends, and fiduciary income; 44–45 percent of rent, excluding roomer-boarder income. All these percentages are very slightly understated because of the partial exclusion of the 'under $500' group from the tax return universe (see Sec. 4).

According to preliminary results of a special tabulation of the business schedules on tax returns for 1945, by industry groups, most of the difference in entrepreneurial income seems to be in farm operator income. Only 36 percent of farm income was re-

[25] Above about the 35 percent point on the *X* axis. This result is obtained when the higher mean for the $10,000 and over class—derived by fitting a Pareto curve to survey frequencies—is used for 1941. The curve based on the original sample mean for 1941 is to the left of that for 1944. At the area of widest difference between the two curves for 1941, based on the higher or original sample mean for the $10,000 and over class, the two curves were about 3 percentage points apart, about as large a difference as our chart shows between 1944 and 1945. The curve based on the higher average is more comparable with the surveys for 1944 and later years. See Appendix D, notes to column 2.

ported on tax returns in 1945, as against 87 percent of nonfarm entrepreneurial income. As stated above, the estimates of farm income with which the tax return aggregates are compared are derived independently, whereas for nonfarm business the estimates for many of the industry groups rely on information from tax returns in determining mean incomes or profit ratios. The BIR audit study may indicate whether the margin between the estimated nonfarm entrepreneurial income total and the aggregate on tax returns is even larger than in Table 8.

Table 8

Consumer Money Income as Estimated from NID Personal Income Series and as Reported on Individual Income Tax Returns, by Source, 1944–1946 (millions of dollars)

	Source	Estimated: Table 1, lines 39-47 (1)	Estimated: Adj. for comparability with tax returns (2)	Reported [a] (3)	Ratio (3 ÷ 2) (4)	
			1944			
1	Civilian wages & salaries	93,493	94,237	89,240	.95	
2	Nonfarm entrep. income	16,517	15,773	17,170	.66	
3	Farm entrep. income	9,380	10,285			
4	Military income	7,320	...	...	...	
5	Interest					
6	Dividends	7,471	7,171	4,906	.68	
7	Fid. income to individuals					
8	Rent	4,853	3,820	1,668	.44	
9	Social security, etc.	1,914	...	...	...	
10	Other income	571	...	...	...	
11	Total	141,519	131,286	112,984	.86	
			1945			
1	Civilian wages & salaries	92,768	93,583	88,586	.95	
2	Nonfarm entrep. income	18,085	17,270	15,068	.87	.68
3	Farm entrep. income	9,556	10,489	3,800	.36	
4	Military income	14,840	...	...	...	
5	Interest					
6	Dividends	7,838	7,555	4,943	.65	
7	Fid. income to individuals					
8	Rent	4,743	3,707	1,668	.45	
9	Social security, etc.	2,474	...	...	...	
10	Other income	746	...	...	...	
11	Total	151,050	132,604	114,065	.86	
			1946			
1	Civilian wages & salaries	101,549	102,546	97,409	.95	
2	Nonfarm entrep. income	21,813	20,816	23,136	.71	
3	Farm entrep. income	10,840	11,929			
4	Military income	11,556	...	...	...	
5	Interest		2,989	1,105	.37	
6	Dividends	9,317	4,933	3,730	.76	.66
7	Fid. income to individuals		1,120 [b]	1,108	.99 [b]	
8	Rent	5,460	4,013	1,799	.45	
9	Social security, etc.	3,506	...	...	...	
10	Other income	868	...	...	...	
11	Total	164,909	148,346	128,287	.86	

[a] Adjusted as described in the notes to this column.
[b] Fiduciary income in column 2 is estimated to be the same as reported on individual income tax returns (col. 3) except for a minor adjustment explained in Appendix A, notes to line 15.

About two-thirds of the combined total of cash interest, dividends, and fiduciary income, as estimated from the NID series, was covered on individual income tax returns in the 3 years. Interest and dividends were not reported separately in 1944 and 1945, but in 1946 dividends accounted for 76 percent and interest for 37 percent of the estimated totals from these sources. The fiduciary income figures (line 7) are close because in the absence of supplementary data, the total was arbitrarily set at the figure reported on tax returns with a minor adjustment as explained in Appendix A, notes to line 15.

To determine whether the interest unaccounted for on tax returns or in field surveys might have a minor effect on the size distributions, i.e., whether a large number of persons may have failed to report very small amounts of interest, monetary interest was classified by source (Table 9). Such a classification is not available in the NID series because monetary interest received by business and government, which is subtracted from total monetary interest paid to get monetary interest to individuals, is not estimated by source.

The classification in Table 9 is extremely rough, as the large residual in line 12 indicates. If we ignore the residual, only about a fourth of monetary interest payments, other than tax-exempt interest, represented interest on bank deposits and amounts paid by savings and loan associations in 1944–46 (lines 7–9), items that can be assumed to have been distributed in small amounts to a very large number of persons. Mortgage loan interest to individuals accounted for another fourth. Interest on corporate bonds was about a third of the total in 1944 and a fifth in 1946. Government interest to individuals, exclusive of accrued interest on unredeemed United States savings bonds and wholly tax-exempt interest, was about a third in 1946.[26] Since only 37 percent of total cash interest was reported on tax returns in that year (Table 8), understatement and nonreporting probably applied to interest on corporate and government bonds as well as other types of interest.

[26] Primarily interest on government bonds; only a relatively small fraction, about $50 million in 1945 and 1946, was interest on postal savings accounts.

Table 9
Monetary Interest by Source, Rough Estimates, 1944–1946 (millions of dollars)

		1944	*1945*	*1946*
1	Interest as in personal inc.	5,940	6,672	7,401
	Minus:			
2	Value of services furnished to individuals without pay. by fin. intermediaries, incl. life ins. cos.	2,700	2,965	3,201
3	Accrued int. on unredeemed U.S. gov. bonds	252	377	439
4	Tax-exempt gov. interest	265	245	235
	Equals:			
5	Monetary int. to individuals, fiduciaries, & nonprofit org. furnishing services to individuals	2,723	3,085	3,526
	Breakdown of monetary interest by source			
6	Corporate bonds	730	700	650
7	Commercial bank deposits	200	300	300
8	Mutual bank payments	200	215	240
9	Savings & loan assoc. & credit unions	165	175	200
10	Mortgage loans	650	670	780
11	Gov. int. excl. accrued & tax-exempt int.	285	575	1,025
12	Residual	493	450	331
13	Total monetary interest	2,723	3,085	3,526

Interest reported on individual income tax returns for 1946 was very little larger than on those for 1941 despite the higher filing requirements in the earlier year. About the same total rent too was reported in 1946 as in 1941. Nonreporting and understatement of income from these sources has apparently increased. The BIR audit study will show some data on the amount of understatement of income from these sources on tax returns. If successful, it may indicate whether the estimates of rent and possibly interest in the consumer money income series are somewhat too high for very recent years.

Tax returns accounted for a somewhat larger fraction of wages and salaries than field surveys in 1944–46, and for much larger fractions of interest and dividends and nonfarm entrepreneurial income (Tables 3 and 8). The field surveys covered a larger proportion of farm income and somewhat more rent. For certain types of income not covered by tax returns, e.g., social security benefits and family military income of various kinds, the surveys are the only source of data for size distributions of family income.

4 *Aggregate Wages and Salaries Covered by Income Tax Returns and OASI Records*

a *Income tax returns*

Civilian wages and salaries reported on tax returns accounted for 95 percent of the total estimated from the NID personal income series for 1944–46 (Table 8). Since the two series are entirely independent, this close correspondence deserves comment.

To make the NID wage and salary series conceptually comparable with wages and salaries reported on tax returns, military pay, civilian wages and salaries of persons who entered the armed forces or died, and nonmoney wages were subtracted, and employee contributions for social insurance and fees added (Table 1, lines 9–12, 18, 23, 31, 32, and 35). Furthermore, certain items included in entrepreneurial income, notably part of the income in contract construction, were transferred to wages and salaries on the assumption that they would appear under that category on tax returns (see App. F, notes to col. 2). Wages and salaries reported on tax returns were adjusted to exclude amounts earned in Alaska and Hawaii, estimated military pay in excess of $1,500 reported by officers, and military retirement pay (ibid., col. 3).

With these adjustments, the estimated total of wages and salaries is $5 billion larger than the amount reported on tax returns in each of the three years 1944–46 (Table 8, line 1). It could not be adjusted to allow for occupational expenses in connection with employment, which are deducted on tax returns but not from wage and salary receipts in the personal income series, or for the portion of civilian wages earned by persons who entered the armed forces or died that are covered on tax returns but were deducted in estimating total wages and salaries. These two adjustments would offset each other to some extent.

The $5 billion gap reflects such factors on tax returns as exclusion of part of the group with wages under $500, understatement in reporting wages and salaries, and sampling error in the reported total, as well as possible errors in estimating or adjusting NID wage and salary receipts. To determine the size of the first factor, it was estimated that some 9 to 11 million wage earners

are excluded from the tax return total, most of whom earned less than $500 (Table 14). Very roughly, the wages of persons earning less than $500 and not filing returns may have amounted to $1.5–2.5 billion.[27] The remaining gap, $2.5–3.5 billion, can be explained by nonreporting or understatement by certain groups, e.g., domestics and farm laborers with total cash wages above $500. Whether understatement of wages on tax returns is even larger may be determined by the BIR audit study.

b *OASI records*

Wages and salaries earned in employment covered under the OASI program are about three-fourths of total civilian wages and salaries in 1944–46.[28] What makes this very significant set of social security data so difficult to use is the lack of 'bridge-data' to the other sets of income size distributions described in Section A. No information is available, for example, on income sources other than 'covered' wages and salaries accruing to workers in 'covered' employment, or on the family relationship of 'covered' workers which would enable us to combine the OASI data into family units. Wage and salary distributions from the BOASI, income tax returns, and income field surveys are compared in Section D.

C Number of Civilian Earners Accounted for by Surveys, Income Tax Returns, and Our Estimate

The number of civilian earners in 1944–46 was estimated to appraise the basic series on income size distribution and to prepare adjusted distributions. Civilian earners are defined as persons 14 and older who received $1 or more of income (or loss) from one or more of the following sources: civilian wages or

27 Some wages under $500 are included in the tax return aggregate, chiefly when returns were filed requesting refunds of withholding taxes. In 1945, e.g., $1.3 billion of wages and salaries was reported on returns with adjusted gross incomes under $500.

28 Wages and salaries in 'covered' employment, as used here, include earnings both over and under $3,000, and were adjusted to exclude estimates for Hawaii and Alaska. Total civilian wages and salaries represent NID wage and salary receipts minus military wages plus employee contributions for social insurance (*Survey of Current Business,* July 1949, Tables 3 and 14).

salaries, farm entrepreneurial income, and nonfarm entrepreneurial income. That is, they worked for pay or profit in civilian jobs at some time during the year. They represent civilian employment in the peak month of the year, exclusive of unpaid family workers, plus persons who worked only in other months.

1 *Estimated Number of Civilian Earners*

The procedures by which the number of civilian earners were estimated are outlined in Tables 10 and 11 and in the detailed notes to those tables. The estimates are subject to revision on the basis of the analysis of data on labor force turnover such as are available from the Census Bureau's sample used in preparing its *Monthly Report on the Labor Force,* discussed by Emmett Welch in Part X.

Table 10

Estimated Number of Civilian Earners 14 and Older with 1 to 3 Quarters of or with no Covered Employment under OASI, by Source of Earnings, 1944–1946 (millions)

		Total	1 to 3 quarters of covered empl.	No covered employment
		(1)	(2)	(3)
			1944	
1	Nonfarm entrepreneurs	5.0	.8	4.2
2	Farm operators with no wages or sals.	4.4		4.4
3	Farm operators with farm or nonfarm wages or sals.	1.5	1.0	.5
4	Persons with farm wages, excl. farm operators	2.9	1.0	1.9
5	Railroad workers	3.0	1.4	1.6
6	Federal civilian government workers	4.4	2.1	2.3
7	State & local government workers	3.7	.5	3.2
8	Domestic service	2.7	.3	2.4
9	Employees in forestry, FR Banks	.1		.1
10	Employees of nonprofit institutions	1.0	.1	.9
11	Persons leaving civ. labor force during year to enter armed forces who worked in covered empl.	1.4	1.4	
12	Persons discharged from armed forces during year who entered civ. labor force to work in covered empl.	.4	.4	
13	Persons 'permanently' entering labor force to work in covered empl.	1.3	1.3	
14	Persons 'permanently' leaving labor force who worked in covered empl.	.8	.8	
15	Residual: housewives, students, disabled persons, & other part-time components of labor force (not accounted for above)	6.6	6.6	
16	Total	39.2	17.7	21.5

Table 10 (concl.)

		Total (1)	1 to 3 quarters of covered empl. (2)	No covered employment (3)
			1945	
1	Nonfarm entrepreneurs	5.4	.9	4.5
2	Farm operators with no wages or sals.	4.4		4.4
3	Farm operators with farm or nonfarm wages or sals.	1.5	1.0	.5
4	Persons with farm wages, excl. farm operators	2.9	1.0	1.9
5	Railroad workers	3.1	1.5	1.6
6	Federal civilian government workers	4.3	2.2	2.1
7	State & local government workers	3.8	.6	3.2
8	Domestic service	2.6	.3	2.3
9	Employees in forestry, FR Banks	.1		.1
10	Employees of nonprofit institutions	1.0	.1	.9
11	Persons leaving civ. labor force during year to enter armed forces who worked in covered empl.	.9	.9	
12	Persons discharged from armed forces during year who entered civ. labor force to work in covered empl.	2.4	2.4	
13	Persons 'permanently' entering labor force to work in covered empl.	1.3	1.3	
14	Persons 'permanently' leaving labor force who worked in covered empl.	.8	.8	
15	Residual: housewives, students, disabled persons, & other part-time components of labor force (not accounted for above)	6.5	6.5	
16	Total	41.0	19.5	21.5
			1946	
1	Nonfarm entrepreneurs	6.5	1.3	5.2
2	Farm operators with no wages or sals.	4.4		4.4
3	Farm operators with farm or nonfarm wages or sals.	1.5	1.0	.5
4	Persons with farm wages, excl. farm operators	3.0	1.0	2.0
5	Railroad workers	2.7	1.1	1.6
6	Federal civilian government workers	3.5	1.7	1.8
7	State & local government workers	4.1	.6	3.5
8	Domestic service	2.4	.2	2.2
9	Employees in forestry, FR Banks	.1		.1
10	Employees of nonprofit institutions	1.1	.1	1.0
11	Persons leaving civ. labor force during year to enter armed forces who worked in covered empl.	.4	.4	
12	Persons discharged from armed forces during year who entered civ. labor force to work in covered empl.	3.5	3.5	
13	Persons 'permanently' entering labor force to work in covered empl.	1.3	1.3	
14	Persons 'permanently' leaving labor force who worked in covered empl.	.8	.8	
15	Residual: housewives, students, disabled persons, & other part-time components of labor force (not accounted for above)	7.6	7.6	
16	Total	42.9	20.6	22.3

Table 11
Estimated Number of Civilian Earners 14 and Older, by Source of Earnings, 1944–1946 (millions)

	Civilian earners	With 4 quarters of covered empl. under OASI (1)	With 1 to 3 quarters of covered empl. (from Table 10) (2)	With no covered empl. (3)	Total civ. earners (1 + 2 + 3) (4)	Total civ. earners adj. to excl. those who died or entered armed forces or instit. before survey (5)
			1944			
1	With civ. wages or sals.	28.3	17.7	12.9	58.9	55.9
2	No other civ. earn.	28.3	15.9	12.4	56.6	53.6
3	With farm entrep. inc.		1.0	.5	1.5	1.5
4	With nonfarm entrep. inc.		.8		.8	.8
5	Without civ. wages or sals.			8.6	8.6	8.4
6	With farm entrep. inc.			4.4	4.4	4.4
7	With nonfarm entrep. inc.			4.2	4.2	4.0
8	Total	28.3	17.7	21.5	67.5	64.3
			1945			
1	With civ. wages or sals.	26.6	19.5	12.6	58.7	56.6
2	No other civ. earn.	26.6	17.6	12.1	56.3	54.2
3	With farm entrep. inc.		1.0	.5	1.5	1.5
4	With nonfarm entrep. inc.		.9		.9	.9
5	Without civ. wages or sals.			8.9	8.9	8.8
6	With farm entrep. inc.			4.4	4.4	4.4
7	With nonfarm entrep. inc.			4.5	4.5	4.4
8	Total	26.6	19.5	21.5	67.6	65.4
			1946			
1	With civ. wages or sals.	28.2	20.6	12.7	61.5	60.1
2	No other civ. earn.	28.2	18.3	12.2	58.7	57.3
3	With farm entrep. inc.		1.0	.5	1.5	1.5
4	With nonfarm entrep. inc.		1.3		1.3	1.3
5	Without civ. wages or sals.			9.6	9.6	9.5
6	With farm entrep. inc.			4.4	4.4	4.4
7	With nonfarm entrep. inc.			5.2	5.2	5.1
8	Total	28.2	20.6	22.3	71.1	69.6

Civilian earners are classified by income source into 3 groups of workers with civilian wages and salaries, including both farm and nonfarm wages and salaries: (a) with civilian wages and salaries only; (b) with farm entrepreneurial income in addition to wages and salaries; (c) with nonfarm entrepreneurial income in addition to wages and salaries; and two groups of earners without civilian wages or salaries: (d) with farm entrepreneurial income; and (e) with nonfarm entrepreneurial income (Table 11). The number with other earnings combinations was too small to be considered separately.

An OASI series of 'estimated number of persons employed at some time during the year', derived by similar methods, was not

classified by source of earnings.[29] Our series was developed partly because the classification was essential to adjust income size distributions, but also because it was felt, originally, that the OASI estimates were too high. As a matter of fact, the two estimates turned out to be reasonably close. After allowance for differences in coverage our series run only about 2 million lower than the revised OASI figures, a difference of not much significance in view of the rough estimates for overlap groups and for turnover in certain occupations in both sets of estimates.

Civilian earners 14 and older are estimated to number almost 68 million in 1944 and 1945, and 71 million in 1946 (Table 11, col. 4). When these figures are made comparable with the Census survey data by excluding civilian earners who died or entered the armed forces or institutions before the survey date, they are 64 million for 1944, 65 million for 1945, and almost 70 million for 1946 (col. 5)—surprisingly high in view of the fact that peak civilian employment, exclusive of unpaid family workers, was 52 million in 1944, 51 million in 1945, and 55 million in 1946. Part of the difference is explained by labor force turnover (Table 10, lines 11–15). Workers entering or leaving the armed forces, youths 'permanently' entering the labor force, and older persons 'permanently' retiring from the labor force, many of whom would not be counted in the peak employment figure, totaled 4 million in 1944, 5 million in 1945, and 6 million in 1946. More important are the housewives, students, disabled persons, and other part-time components of the labor force not accounted for in preceding lines of Table 10, who totaled almost 7 million in 1944 and 1945, and almost 8 million in 1946. This component is estimated as a residual, the difference between the total of workers with 1 to 3 quarters of 'covered' employment, as reported by the BOASI, and the number of part-year workers in 'covered' employment that could be accounted for among entrepreneurs, farm laborers, railroad workers, government workers, domestics, etc. (Table 10).

If social security is extended, we would have figures to replace

[29] Estimates for 1945 and 1946 are published in the *Social Security Bulletin*, August 1947. The BOASI has made similar estimates for 1947 and revised the earlier figures.

some of the rough estimates of overlap among groups, e.g., the number of nonfarm entrepreneurs and domestic servants who also worked at some time during the year in 'covered' employment. Special tabulations of railroad workers and surveys of government workers to ascertain the number who worked also in 'covered' OASI employment during the year would further improve the accuracy of the number of earner series.

2 *Field Surveys*

The introduction of controls by urban, rural nonfarm, and rural farm population in each of several age, sex, color, and veteran status of male groups may be a major reason why the survey coverage of civilian earners (after adjustment in Table 12 for quasi-household groups not covered and for revisions in the population weights) was better in 1946 than in earlier years. The surveys for 1944 and 1945 accounted for about 80 percent of the estimated number of civilian wage and salary earners, and in 1946 for 86 percent (Table 13, line 9). For persons with farm operator income, the coverage in the three years was 88, 78, and 102 percent, respectively, and for nonfarm entrepreneurs 92, 70, and 73 percent.

Multi-source earners were more poorly represented, proportionately, than single-source earners in two of the three surveys (lines 12 and 13). However, the estimates for this category should be regarded as approximations reflecting fairly arbitrary estimates of the various overlap groups (see App. H, notes to lines 1–3).

A larger proportion of wage and salary earners than of aggregate wages and salaries was missed in the surveys (Tables 3 and 13) indicating that the surveys missed the wages of many persons with relatively small earnings (Welch confirms this). In other words, wage earners who were missed in the surveys were more highly concentrated at the low wage levels than were those accounted for. The reverse was true of entrepreneurial income, where the percentage of farm and nonfarm entrepreneurial income unaccounted for in the surveys (Table 3) was larger than the percentage of entrepreneurs (Table 13).

Table 12

Number of Civilian Earners 14 and Older Accounted for in Census Field Surveys, as Reported, and as Adjusted, by Source of Earnings, 1944–1946 (millions)

Civilian earners	With inc. fully reported in field survey (1)	Incl. adj. for persons with income not reported or only partly reported (2)	Incl. adj. for civ. noninstitut. pop. not incl. in scope of surveys (& incl. preceding adj. for nonreporting) (3)
		1944	
With civ. wages or sals.	n.a.	43.3	44.4
No other civ. earn.	n.a.	41.5	42.6
With farm entrep. inc.	n.a.	1.2	1.2
With nonfarm entrep. inc.	n.a.	.6	.6
Without civ. wages or sals.	n.a.	7.5	7.6
With farm entrep. inc. [a]	n.a.	4.0	4.0
With nonfarm entrep. inc.[a]	n.a.	3.7	3.8
Total	n.a.	50.8	52.0
		1945	
With civ. wages or sals.	37.7	42.9	45.5
No other civ. earn.	36.6	41.6	44.1
With farm entrep. inc.	.7	.8	.9
With nonfarm entrep. inc.	.4	.5	.5
Without civ. wages or sals.	5.7	6.4	6.7
With farm entrep. inc.[a]	3.2	3.6	3.7
With nonfarm entrep. inc.[a]	2.5	3.0	3.2
Total	43.4	49.3	52.2
		1946 [b]	
With civ. wages or sals.	n.a.	51.4	51.4
No other civ. earn.	n.a.	49.4	49.4
With farm entrep. inc.	n.a.	1.5	1.5
With nonfarm entrep. inc.	n.a.	.5	.5
Without civ. wages or sals.	n.a.	8.5	8.5
With farm entrep. inc.[a]	n.a.	4.5	4.5
With nonfarm entrep. inc.[a]	n.a.	4.2	4.2
Total	n.a.	59.9	59.9

n.a.: not available.

[a] Columns 2 and 3 include about 200,000 with both farm and nonfarm entrepreneurial income.

[b] Census-BAE survey.

Table 13

Number of Civilian Earners 14 and Older as Estimated and as Accounted for in Census Field Surveys, by Source of Earnings, 1944–1946 (millions)

	Civilian earners	Estimated [a] (1)	Survey [b] (2)	Ratio (2 + 1) (3)
	1944			
1	With civilian wages or salaries	55.9	44.4	.79
2	No other civilian earnings	53.6	42.6	.79
3	With farm entrep. income	1.5	1.2	.80
4	With nonfarm entrep. income	.8	.6	.75
5	Without civilian wages or salaries	8.4	7.6	.90
6	With farm entrep. income [c]	4.4	4.0	.91
7	With nonfarm entrep. income [c]	4.0	3.8	.95
8	Total	64.3	52.0	.81
9	With civilian wages or salaries (line 1)	55.9	44.4	.79
10	With farm entrep. income (line 3 + 6)	5.9	5.2	.88
11	With nonfarm entrep. income (line 4 + 7)	4.8	4.4	.92
12	Single source earners	62.0	50.0	.81
13	Multi-source earners	2.3	2.0	.87
	1945			
1	With civilian wages or salaries	56.6	45.5	.80
2	No other civilian earnings	54.2	44.1	.81
3	With farm entrep. income	1.5	.9	.60
4	With nonfarm entrep. income	.9	.5	.56
5	Without civilian wages or salaries	8.8	6.7	.76
6	With farm entrep. income [c]	4.4	3.7	.84
7	With nonfarm entrep. income [c]	4.4	3.2	.73
8	Total	65.4	52.2	.80
9	With civilian wages or salaries (line 1)	56.6	45.5	.80
10	With farm entrep. income (line 3 + 6)	5.9	4.6	.78
11	With nonfarm entrep. income (line 4 + 7)	5.3	3.7	.70
12	Single source earners	63.0	50.6	.80
13	Multi-source earners	2.4	1.6	.67
	1946 [d]			
1	With civilian wages or salaries	60.1	51.4	.86
2	No other civilian earnings	57.3	49.4	.86
3	With farm entrep. income	1.5	1.5	1.00
4	With nonfarm entrep. income	1.3	.5	.38
5	Without civilian wages or salaries	9.5	8.5	.89
6	With farm entrep. income [c]	4.4	4.5	1.02
7	With nonfarm entrep. income [c]	5.1	4.2	.82
8	Total	69 6	59.9	.86

Table 13 (concl.)

	Civilian earners	Estimated [a]	Survey [b]	Ratio (2 ÷ 1)
		(1)	(2)	(3)
9	With civilian wages or salaries (line 1)	60.1	51.4	.86
10	With farm entrep. income (line 3 + 6)	5.9	6.0	1.02
11	With nonfarm entrep. income (line 4 + 7)	6.4	4.7	.73
12	Single source earners	66.8	57.7	.86
13	Multi-source earners	2.8	2.2	.79

[a] From Table 11, col. 5. [b] From Table 12, col. 3.
[c] Number from field survey includes about 200,000 with both farm and nonfarm entrepreneurial income.
[d] Census-BAE survey.

3 *Income Tax Returns*

The number of wage and salary earners covered on tax returns can be estimated roughly from *Statistics of Income* by adjusting the tabulated number of tax returns reporting wages and salaries to allow for an estimated number of joint returns covering two wage or salary earners (husband and wife). All other types of return, it will be recalled, cover the income of one person only, except that there is some overstatement in the case of community property returns.

About 45 million wage and salary earners were covered on income tax returns in 1944, 48 million in 1945, and 50 million in 1946 (Table 14). Subtracting these figures from the estimated total of wage and salary earners in each year yields some 9 to 11 million not covered, chiefly wage earners with very small earnings from which no taxes were withheld or whose withholdings were so small as to give them little incentive to file for refunds. Undoubtedly some others who should have filed returns under the provisions of the Revenue Act did not. Wage and salary earners not covered on tax returns accounted for about a fifth of all civilian wage and salary earners in 1944, and about a sixth in 1945 and 1946.

The 'missing' wage and salary earners are classified roughly in Table 14. Probably only a small fraction of the 4 million domestic workers and farm laborers filed tax returns. A residual group of 5 to 7 million consists mainly of part-time members of the labor force who did not file returns, such as housewives, students, and others with very small wages, plus some persons filing

returns to declare other sources of income but not reporting minor amounts of wages they earned during the year. The 5–7 million estimate may be an overstatement either because the total of wage and salary earners is too high—although this is unlikely if we accept as a starting point the BOASI number of workers with wage credits (Tables 10 and 11)—or because the estimates of the number of wage and salary earners covered on tax returns is too low owing to an underestimate of joint returns with two wage and salary earners. However, the BOASI reported 8–9 million workers with wage credits under $200 in 'covered' employment in each year 1944–46. Although an unknown number earned substantial amounts in 'noncovered' employment, 5–7 million is not an unreasonable figure for the number of wage earners, other than domestics and farm laborers, who did not file tax returns.

Probably most of these 5–7 million persons and about half of the 4 million domestic servants and farm laborers earned money wages of less than $500.[30] In other words, only about 2 of the 9 to 11 million wage earners not filing tax returns earned wages above the minimum $500 filing requirement.[31]

Income or loss from farm operations was reported on about 2.9 million tax returns in 1945, less than half the estimated total of almost 6 million farm operators (Table 14). According to Mr. Koffsky's preliminary findings, about 2 million of the 6 million farms in the United States had gross cash receipts of less than $500

[30] A rough estimate based upon earnings size distributions for domestic servants from Census surveys, and for agricultural laborers from BAE surveys (see App. H, notes to lines 3 and 4), adjusted upward for understatement in reported wages. Estimates are necessarily rough because of the high turnover in these occupations. In 1945, for example, there were 2.1 million full-time equivalent employees on farms (*Survey of Current Business*, July 1949, Table 24) but over 4.2 million persons who worked for farm wages at some time during the year (*Employment and Wages of the Hired Farm Working Force in 1945*, BAE, 1946).

[31] To determine the total group with wages under $500 the 7–9 million not filing because their wages were under $500 must be added to the number under $500 who filed for refund of withholding taxes. In 1946, for example, almost 5 million returns reported wages of less than $500. The number of persons who filed returns and had wages under $500 was somewhat higher because some persons with small amounts of wage income reported on joint returns. On the other hand, some separate community property returns reporting wages earned by the other spouse should be subtracted from the 5 million.

in 1946. In other words, the tax return figure is undoubtedly low in part because the gross receipts of some farms were under the legal filing requirement; some farm operators may have filed returns declaring income from other sources but not reporting minor amounts of farm income. The understatement of aggregate net farm income on tax returns, however, was much too large to be explained by this factor (Table 8).

Table 14

Number of Civilian Earners 14 and Older as Estimated and as Accounted for on Federal Individual Income Tax Returns, by Source of Earnings, 1944–1946 (millions)

		1944	*1945*	*1946*
	Civilian Wages and Salaries			
1	Estimated no. of earners (Table 13, col. 1)	56	57	60
2	No. of tax returns with wages or sals.[a]	41	44	46
3	Adj. for joint returns with wages or sals. earned by both spouses [b]	4	4	4
4	Total no. of earners on tax returns	45	48	50
5	Difference (line 1 — line 4)	11	9	10
	RECONCILIATION FOR EARNERS NOT FILING RETURNS			
6	Domestic service [b]	2	2	2
7	Agricultural laborers [b]	2	2	2
8	Residual: housewives, students, & other part-time components of labor force with small amounts of wages not subject to withholding or not filing returns to claim refund of withholdings, & entrep. & others with undeclared wages	7	5	6
	Farm Entrepreneurial Income			
9	Estimated no. of earners (Table 13, col. 1)		6	
10	No. of tax returns with business or partnership profit or loss from 'farming' [c]		3	
	Nonfarm Entrepreneurial Income			
11	Estimated no. of earners (Table 13, col. 1)[d]		5	
12	No. of tax returns with business or partnership profit or loss from industries other than 'farming' [e]		4.5	

[a] From Treasury Department releases S-436, S-2020, and *Statistics of Income for 1946*, Part 1 (Preliminary Report).

[b] Rough estimate.

[c] Number of individual income tax returns with business profit or loss classified in 'farming' in 1945, as tabulated by the BIR, plus estimated number with partnership profit or loss from 'farming'. Partnership income as reported on individual income tax returns is not classified by industry. Estimate was derived by multiplying the number of partnership income tax returns classified in 'farming' in 1945 by the average number of partners per partnership return in 'farming' both from BIR tabulations.

[d] Excludes certain groups whose income would probably be reported under wages and salaries on tax returns; see Appendix F, notes to column 2.

[e] Total number of individual income tax returns reporting business or partnership profit or loss in 1945, as tabulated by the BIR, minus number in 'farming' as estimated above.

About 4.5 million tax returns reported net profits or losses from nonfarm business or profession in 1945; our total was 5 million (Table 14). The series are actually closer than these figures suggest because some tax returns report the joint income of husbands and wives both engaged in the same business enterprise. Thus only a small part of the aggregate nonfarm entrepreneurial income not reported on tax returns (Table 8) is due to nonreporting because the income was less than the minimum filing requirement.

D Size Distributions from Field Surveys, Income Tax Returns, and OASI Records

Conceptually, distributions of tax returns for recent years are much more nearly comparable with distributions of persons than of families. For example, the mean number of income recipients in the 1944 Census survey was 1.5 per family and single individual combined, and 1.6 per family. The mean number of income recipients per tax return in 1944 is estimated to be 1.1, derived from the accompanying classification of tax returns.[32]

	(millions)
All returns	47.1
Returns covering income of 2 persons	
Joint returns (estimated)	4.5
Returns covering income of 1 person	
Joint returns (estimated)	19.7
Separate returns of husbands	1.8
Separate returns of wives	2.0
Separate community property returns	1.3
Returns of single persons	17.8
Total	42.6
Minus: Separate community property returns estimated to have had no income	.3
Equals: Total returns with one income	42.3
No. of recipients estimated to be represented by tax returns (42.3 + 4.5 + 4.5)	51.3

In Table 15, column 4, the income size distribution of tax returns for 1944 has been converted to a distribution of persons by splitting the estimated 4.5 million joint returns with two in-

[32] The split-income provision introduced for 1948 will increase the number of joint returns with two incomes and raise somewhat the mean number of income recipients per return.

comes into two parts, and assigning each spouse to his or her own (instead of their combined) income class, and by removing from the distribution 0.3 million separate community property returns estimated not to have had any income, and assigning the income reported on such returns to the other spouse. Tax returns accounted for an estimated 51 million income recipients. The survey figure, 60 million (Table 15, col. 2), is too low for, as the preceding section indicated, it fails to account for a very sizeable number of civilian earners (see Table 13).[33] Since the deficiency represented to a large extent persons with small amounts of income, and since tax return coverage was limited by the $500 filing requirement, comparisons of numbers exclusive of the 'under $500' group are more meaningful. An estimated 46 million recipients with income above $500 are accounted for on tax returns; somewhat under 48 million by the survey. But frequencies in all the classes above $3,000 are substantially higher in the distribution from tax returns than from the survey. Some 11.4 million persons had adjusted gross incomes of $3,000 or more according to tax returns, about a fourth of the total above $500; 9.8 million, a fifth, had consumer money incomes of that amount according to the survey. Differences in income concept would not appear to explain the discrepancy.[34]

The count of wage and salary earners above approximately the $3,000 wage and salary level was also substantially understated in the surveys (Table 16). For 1944 the survey showed 7.2 million persons with wages and salaries of $3,000 or more, whereas there were almost 10 million tax returns, probably representing somewhat fewer persons,[35] above that point. The 7.2 million from the survey was practically the same figure as the number of workers with wage credits of $3,000 (i.e., wages of $3,000 or more) under

[33] No satisfactory estimates are available of the number of income recipients (the sum of civilian earners and recipients of other income sources, e.g., interest, dividends, social security benefits, who were not earners).

[34] Removal of taxable capital gains and losses from the size distribution of tax returns did not materially alter the distribution; see Part VII.

[35] The number of tax returns above the $3,000 level exceeds the number of persons covered on tax returns who earned wages or salaries above that level because some joint returns with wages and salaries above $3,000 include husband and wife each with earnings below that figure (Table 15, col. 3 and 4).

OASI. The latter is a minimum figure for the $3,000 and over wage and salary class because it excludes workers outside 'covered' employment who earned wages or salaries of $3,000 or more, as well as those with less than $3,000 of wages in 'covered' employment whose jobs in 'noncovered' employment brought them to or over the $3,000 wage and salary point.

Table 15
Frequency Distributions by Size of Total Income, Census Field Survey and Federal Individual Income Tax Returns, 1944

Total Income as Defined in Column Headings	Survey (by total consumer money income)		BIR Tax Returns (by adj. gross income)	
	Families & single ind. (1)	Persons (2)	Tax returns (3)	Persons (4)
	Number (thousands)			
$1– 500*	4,866	12,420	3,452	5,458
500– 1,000	4,616	10,190	6,068	8,036
1,000– 2,000	9,014	16,112	14,086	15,192
2,000– 3,000	8,438	11,534	11,302	11,260
3,000– 4,000	6,608	5,744	6,919	6,450
4,000– 5,000	3,230	1,922	2,817	2,503
5,000–10,000	3,418	1,596	1,834	1,800
10,000 & over	634	498	633	636
Total	40,824	60,016	47,111	51,335
Total $500 & over	35,958	47,596	43,659	45,877
	Percentage Distribution for Groups with $500 & over			
500– 1,000	12.8	21.4	13.9	17.5
1,000– 2,000	25.0	33.9	32.3	33.1
2,000– 3,000	23.5	24.2	25.9	24.5
3,000– 4,000	18.4	12.1	15.8	14.1
4,000– 5,000	9.0	4.0	6.5	5.5
5,000–10,000	9.5	3.4	4.2	3.9
10,000 & over	1.8	1.0	1.4	1.4
Total $500 & over	100.0	100.0	100.0	100.0

Columns 1 and 2 from the Bureau of the Census; column 3 from Treasury Department release S-436; column 4 estimated as described in text.
* Includes loss.

The top tail of the survey wage and salary distribution was understated also in 1945 and 1946, but in lesser degree than in 1944. In 1945 the survey showed 7.1 million wage and salary earners above $3,000; the corresponding OASI figure, which sets a floor, was 6.4 million. In 1946 the survey figure was 8.0 million and the OASI figure 6.5 million. Wage and salary earners above

Table 16

Frequency Distributions by Size of Wage and Salary Income, Census Field Surveys, Federal Individual Income Tax Returns, and BOASI Records, 1944–1946

Wages & Salaries	1944 Survey Persons (1)	1944 BIR Returns (2)	1944 BOASI Workers (3)	1945 Survey Persons (4)	1945 BIR Returns (5)	1945 BOASI Workers (6)	1946 Survey Persons (7)	1946 BIR Returns (8)	1946 BOASI Workers (9)
				Number (thousands)					
$1– 500	7,920	3,247	14,000	8,922	5,548	14,850	9,570	4,990	14,000
500– 1,000	6,356	5,093	6,428	6,091	5,422	6,460	6,821	5,482	7,019
1,000– 2,000	12,949	12,382	10,908	12,961	12,990	11,135	15,173	13,439	12,656
2,000– 3,000	10,023	10,250	7,822	10,386	10,523	7,586	11,859	12,010	8,893
3,000– 4,000	4,793	6,243		4,788	5,973		5,255	6,021	
4,000– 5,000	1,464	2,362	7,138	1,297	2,126	6,361	1,434	2,145	6,528
5,000–10,000	723	1,138		933	1,080		1,114	1,309	
10,000 & over	172	201		122	227		148	304	
Total	44,400	40,916	46,296	45,500	43,889	46,392	51,374	45,700	49,096
Total $500 & over	36,480	37,669	32,296	36,578	38,341	31,542	41,804	40,710	35,096
				Percentage Distribution for Groups with $500 & over					
500– 1,000	17.4	13.5	19.9	16.7	14.1	20.5	16.3	13.5	20.0
1,000– 2,000	35.5	32.9	33.8	35.4	33.9	35.3	36.3	33.0	36.1
2,000– 3,000	27.5	27.2	24.2	28.4	27.5	24.0	28.4	29.5	25.3
3,000– 4,000	13.1	16.6		13.1	15.6		12.6	14.8	
4,000– 5,000	4.0	6.3	22.1	3.5	5.5	20.2	3.4	5.3	18.6
5,000–10,000	2.0	3.0		2.6	2.8		2.7	3.2	
10,000 & over	.5	.5		.3	.6		.3	.7	
Total $500 & over	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Columns 1, 4, and 7 from Census surveys for 1944 and 1945 and Census-BAE survey for 1946 with adjustments for 1944 and 1945 described in Appendix J, notes to column 3. Columns 2, 5, and 8 from BIR. Columns 3, 6, and 9 from BOASI; differ from OASI figures used in Tables 10 and 11 in that adjustments were not made here to exclude workers in Alaska and Hawaii or children under 14 years.

$3,000 in the surveys were 72 percent of tax returns in the corresponding class in 1944, 76 percent in 1945, and 81 percent in 1946.

At the lower end of the wage and salary scale the various series are not comparable because of the omission of small wage earners from the tax return series and the inclusion of persons who actually had substantial amounts of wages and salaries in noncovered employment in the very low wage brackets of the OASI series. The survey, like tax returns, apparently excludes numerous small wage recipients. If through special matching studies it were possible to determine how many of the workers with very low wage credits under OASI did not have supplementary earnings in noncovered employment, we would have a check on the survey results for the lower end of the wage scale such as tax returns give for the upper end (see Part VIII).

Table 17

Frequency Distributions by Size of Farm and Nonfarm Entrepreneurial Income, Census Field Survey and Federal Individual Income Tax Returns, 1945

Net Entrepreneurial Income	Farm		Nonfarm		Farm		Nonfarm	
	Survey Persons (1)	BIR Returns (2)	Survey Persons (3)	BIR Returns (4)	Survey Persons (5)	BIR Returns (6)	Survey Persons (7)	BIR Returns (8)
	Number (thousands)				*Percentage Distribution*			
Loss	417	402	57	277	9.1	13.9	1.5	6.2
$1 - 1,000	2,605	1,116	1,594	1,224	56.6	38.5	43.1	27.3
1,000 - 2,000	810	763	621	983	17.6	26.3	16.8	21.9
2,000 - 3,000	485	302	464	645	10.5	10.4	12.5	14.4
3,000 - 4,000	101	136	332	376	2.2	4.7	9.0	8.4
4,000 - 5,000	92	68	139	225	2.0	2.4	3.8	5.0
5,000 - 10,000	83	85	323	442	1.8	2.9	8.7	9.9
10,000 & over	7	25	170	308	.2	.9	4.6	6.9
Total	4,600	2,897	3,700	4,480	100.0	100.0	100.0	100.0

Columns 1 and 3 from Census survey with adjustments described in Appendix J, notes to col. 3. Column 2 from BIR tabulations of individual income tax returns with business profit or loss from 'farming' in 1945 by size classes of such profit or loss, plus estimated distribution of individual income tax returns with partnership profit or loss from 'farming'. Partnership income on individual income tax returns is not reported classified by industry. Estimates were derived from BIR tabulations of partnership income tax returns in 'farming' for 1945 by size classes of partnership ordinary net income or deficit, and by number of partners, on the assumption (in the absence of other information) that the percentage distribution by number of partners did not vary by income level and that partnership net income was equally distributed among the various partners. Column 4 is BIR distribution of individual income tax returns in 1945 by size classes of business or partnership profit or loss, minus column 2.

Unfortunately, size distributions for farm and nonfarm business income are available separately from tax returns only for 1945, when the survey results for entrepreneurial income were

unusually poor. Since the 1945 survey accounted for less than half of estimated total net farm income, and tax returns for only 36 percent, neither distribution for farmers in Table 17 can be regarded as representing the true situation. For nonfarm entrepreneurs, understatement in the 1945 survey is reflected in smaller percentages in almost all income classes above $1,000 than on tax returns.

E Integrating Basic Series on Income Size Distribution

From the preceding discussion it is clear that corrections necessary in the basic series in order to develop adjusted income size distributions must be made separately for component income sources, e.g., wages and salaries, farm entrepreneurial income, nonfarm business and professional income, interest, dividends, rent.

Variation among field surveys with respect to the extent of undercoverage of the different income sources has been large enough to render such differential adjustment essential. Tax returns, likewise, despite their very broad coverage in recent years, account for very different proportions of the several income sources, e.g., extremely good coverage of wages and salaries and relatively poor coverage of farm entrepreneurial income, interest, and rent. Wage and salary distributions from OASI records give an incomplete picture of the size distribution of this source, because they are limited to workers in 'covered' employment.

Various methods of adjusting the basic series by correcting the size distributions for individual income sources separately are discussed by Liebenberg and Kaitz in Part VII. Because of the nature of the data from tax returns, the adjustment "involving the isolation of earner groups" seems to be promising for recent years. Briefly, it consists in (a) constructing separate size distributions of persons, i.e., individual earners, *not* families, with earnings from each of the three major sources—wages and salaries, farm entrepreneurial income, nonfarm entrepreneurial income —and from combinations of these sources; (b) converting the

resulting size distribution of persons into a distribution of families on the basis of cross-tabulations of data from surveys which distribute earners within any given earnings class among size classes of total family earnings; and (c) converting the family distribution to total money income classes.

The argument in favor of this approach is that it makes possible maximum use of basic data on income size distributions. As indicated above, tax returns and OASI records already represent or can be more readily converted into size distributions of persons than of families. Many surveys give size distributions for persons as well as for families.

Size distributions by wage and salary classes would be based upon tax returns, supplemented by survey data and by OASI records if the necessary cross-relations between 'covered' and 'noncovered' earnings, discussed below, are made available. Tax returns classified by wage and salary level are tabulated for recent years for *Statistics of Income*. For nonfarm business and professional groups tabulations of tax returns for 1945, classifying individual returns with income from business or profession by size classes of net income from business or profession, by industry groups, would be the basis for the distributions. Partnership returns will be tabulated similarly. Supplemented by other series, tax returns could be used to build up size distributions for component groups of nonfarm entrepreneurs, e.g., wholesale and retail trade, professional services, other service establishments.[36] For farm operators, size distributions would be based upon surveys adjusted by various controls from the Census of Agriculture, e.g., distributions of farms by size of farm and value of product sold, and adjusted further to check with aggregate

[36] Supplementary data for size distributions of nonfarm entrepreneurial income are from the following sources: (1) mail questionnaire surveys of selected professional groups, e.g., lawyers, doctors, conducted by the National Income Division which give distributions of professional persons by size of net income from profession; (2) distributions of proprietorships and partnerships in specified industry groups by size classes of gross receipts from business from the *Census of Business for 1948*, to be used in conjunction with cross-tabulations of income tax returns for the same industry groups, by size classes of both net and gross income from business; (3) control totals of the number of active proprietors of unincorporated businesses and of aggregate net entrepreneurial income, by detailed industry groups, as estimated annually by the National Income Division.

cash receipts from farm marketings and farmers' production expenses as estimated by the BAE. Koffsky uses this type of approach for deriving farm income distributions in Part V.

Cross-tabulations from the surveys would be used for estimating the distribution of multi-source earners (Sec. C) by size of their total earnings and for translating the size distribution of earners into a distribution of families by earnings levels. The cross-tabulation to translate individual earnings into family earnings shows individuals by size classes of their own earnings cross-classified by size classes of family earnings. The revised distribution of individuals by the size of their own earnings—the sum of the distributions for wage and salary earners, entrepreneurs, and multi-source earners—would be substituted in one margin of the survey cross-tabulation, and the revised number of earners at each level would be distributed among family earnings levels on the basis of the distributions in the cross-tabulation.

The size distributions of earners, even if not combined into family units, would be an extremely interesting byproduct. In view of the large number of part-time workers with small earnings (Sec. C) they would be more useful if classified into 'sole family earners', 'chief family earners', 'supplementary family earners', and 'individual earners' (single individuals).

A final set of adjustments would be necessary to translate the family earnings distribution into a family income distribution, i.e., to add interest, dividends, rent, social security benefits, etc. This involves first, adding to family earnings estimated unearned income and making the appropriate shifts in the distribution; second, adding the estimated distribution of families or single individuals without earnings who were living on pensions, social security benefits, interfamily gifts, or property income. Tax returns, supplemented by the BIR audit study, might give the data for the first type of adjustment, and surveys the data for the second.

Size distributions tabulated by the BOASI (workers by size classes of wages in 'covered' employment) could be a check on the lower tail of the wage and salary earner distribution if it were possible to determine for each size class of wages earned in covered employment (a) the number of workers who did not

have any earnings outside covered employment during the year; and (b) for workers who had outside earnings, the amount. Such statistics could be obtained only through a reasonably large scale study of a sample of covered workers who would be personally asked their 'noncovered' earnings, or by a matching study of OASI records with tax returns and field survey data for identical individuals, similar but larger in scope than those described by Mandel in Part VIII. In the absence of bridge data of this type, the OASI wage distributions cannot be used in preparing adjusted income size distributions except, as noted in Section D, as a rough check on the reasonableness of the top tail of a size distribution of wage and salary earners. This is highly regrettable since the OASI records cover such a large fraction of total wages and salaries, and wider coverage is promised.

The procedure outlined above is applicable to recent years through 1947. The larger number of returns with two incomes resulting from introduction of the split-income provision for 1948 will increase the error in translating distributions of returns into distributions of persons. Although problems involved in assigning some 18 million 'single' returns to, and combining with, families will still remain, the new provision, by reducing the number of separate returns of husbands and wives, brings the tax return closer to a 'family' concept. Beginning with 1948, therefore, family distributions would be constructed by combining tax returns of supplementary family income recipients with joint returns as outlined in Section A2 and developed for 1944 by Liebenberg and Kaitz (Part VII). However, before such a combination was carried through, revised size distributions for certain groups of earners, the most important being farmers, would be substituted for the tax return figures.

The procedure is obviously time-consuming. Moreover, the necessary tabulations of tax returns do not become available for several years after the close of the calendar year. Consequently the adjusted income size distributions for any given year would be completed too late to be of use in analyzing current problems. What is hoped is that by carrying through the detailed procedure for several years, adjustment factors for each source of income might be derived. These could be applied directly to the compo-

nents of the size distribution determined from a survey for a current year to yield a preliminary adjusted size distribution. This would be an improvement over the rough procedures sometimes used where, in the absence of separate adjustment factors for components, an over-all adjustment assuming equal percentage underreporting of incomes at all levels is applied to the size distribution from the survey.

Several improvements in the various basic series would facilitate the preparation of adjusted income size distributions. Among them the following merit attention, although some have little chance of adoption in view of the limitations of funds and personnel.

a) From surveys, tabulations designed to measure the extent of income coverage and to present various cross-tabulations needed in developing adjusted size distributions should be made in addition to the simpler tabulations prepared by the collecting agency;[37] e.g., frequency distributions of earners by the size of their own earnings cross-classified by the size of family earnings, needed for translating size distributions of earners into size distributions of families; or of wives and other supplementary income recipients in families by the size of their own income cross-classified by the size of the head's or head plus wife's income, needed for combining income tax returns into family units. Wasson, Hurwitz, and Schweiger discuss ways of improving methods of collecting data in surveys (Part IX).

b) From a sample of tax returns tabulations should be prepared that separate joint returns reporting wages and salaries earned by both spouses from other joint returns and, for the first group, that show size distributions of each spouse by wage and salary level. This calls for identifying the husband's and wife's wages on the tax form when both are reported. Because many husbands and wives formerly filing separate returns file jointly beginning with 1948, conversion of a size distribution of tax returns into one of persons will require such tabulations.

c) Tabulations of tax returns by size classes of net income from business or profession should include separate classifications

[37] The Census Bureau has tabulated several cross-classifications of this type.

for farmers and for other major nonfarm business and professional groups. If those now being run for 1945 tax returns were a basic procedure for other years as well separate adjustment for component groups of entrepreneurs would be possible.

d) To render unnecessary the elaborate estimating procedure involved in combining tax returns into family units, tabulations are suggested combining the tax returns of the various family members living in a household. Special studies could be undertaken in selected Collectors' offices to match the tax returns for the various persons in given families. A list of the names of the members of a sample of families, together with addresses and other data needed for identification, could be prepared from the decennial census of population.

e) For a sample of OASI records 'bridge' material should be supplied such as described above to indicate the size and amount, if any, of earnings in 'noncovered' employment for persons in the various brackets of wage credits earned in covered employment. OASI records could then be used in preparing income size distributions.

f) If social security is extended to the self-employed, domestic servants, and farm laborers, attention should be given to the possibility of future field surveys drawn from samples of covered workers, including railroad workers, and supplemented by lists for government workers and other noncovered groups. Such surveys need not ask for earnings data, available from OASI records, but would collect information on family composition to be used in combining OASI records for persons into family units. Questions might be asked on amounts of income other than earnings, e.g., interest, dividends, and rents, and on 'noncovered' earnings if the extended coverage excludes certain occupational groups.

Appendix

A Notes to Table 1

Except for the following lines and for the figures representing sums of other lines, all figures in Table 1 are estimates by the Department

of Commerce, National Income Division (referred to as NID) used in deriving its personal income series, and are published for 1941 in the *Survey of Current Business,* July 1947, National Income Supplement and, for 1944–48, in the July 1949 issue, or are unpublished components underlying the published estimates. The estimates are for calendar years.

LINE

9 1941: NID estimate of total military money pay; military pay earned by persons who had returned to civilian life by the end of the calendar year was assumed to be negligible.
1944–48: NID estimate of total military money pay, excluding family allowances and allotments to individuals (line 32), but including allotments other than to individuals, e.g., sent to insurance companies, minus line 31, military pay of persons returned to civilian life by the end of calendar year.

11 Estimated as follows:

a) Number of inductees, Enlisted Reserve Corps calls, and enlistees into Army, and number of accessions to the Navy for each calendar year by month of accession, by age groups, were taken from unpublished monthly reports of the War and Navy Departments.

b) To the number in each age group in each month was applied the appropriate labor force participation rate, estimated from Census data, to determine the number of accessions leaving the labor force. In the case of ERC calls, the entire age group 18–19 was assumed to have been in school before they went into the Army.

c) Total number of man months of employment in the calendar year prior to entry into the armed forces was determined by assuming that accessions from the labor force were spread evenly within each month. Thus, accessions in January 1944 of persons leaving the labor force from step b (all age groups combined) was multiplied by .5; accessions in February 1944 by 1.5, etc. An adjustment was then made to subtract unpaid family workers by applying a percentage reduction based on Census data on the proportions of unpaid family workers in the labor force in various age groups.

d) Total number of man months of employment from step c was multiplied by an average monthly wage or salary, determined, separately for accessions to the Army and Navy be-

cause of the difference in the age distribution of the two groups, as follows:

1) An average civilian money wage or salary was derived by dividing civilian money wages and salaries for the calendar year by 12 times the estimated average number of civilian wage or salary workers in the year. Civilian money wages and salaries were derived by subtracting military pay and non-money civilian farm and nonfarm wages from wages and salaries (personal income series), and adding employee contributions to social insurance and government retirement funds, and miscellaneous fees. The number of civilian wage or salary workers was derived by subtracting from the average number of employees (*National Income Supplement,* Table 24) the estimated number of military employees, government personnel stationed abroad, persons under 14, and an adjustment to allow for persons holding more than one job.

2) An average civilian money wage or salary for males was derived by applying to the average from (1) the ratio of the average earnings for males to that for both sexes as determined from the Census income survey for the given year.

3) A ratio of average civilian wages and salaries of males entering the Army who left the labor force to average civilian wages and salaries of all male wage or salary workers was estimated for each year from average earnings by age groups (Census income surveys). The average for persons entering the Army was determined by weighting the survey average earnings for 4 age groups of males (18–19, 20–24, 25–44, and 45–64) by the number of accessions to the Army leaving the labor force in each age group. A similar (lower) ratio was computed for accessions to the Navy, taking a fifth age group, 17 years, into account.

4) The average wage or salary for accessions to the Army and Navy was determined by applying the appropriate ratio from (3) to the average for males from (2).

e) Aggregate civilian wages and salaries earned in each calendar year by persons entering the Army and Navy, from d, was inflated to include a corresponding estimate for accessions to the Marine Corps and Coast Guard and of officers and females.

12 The number of civilian earners who died each calendar year was

estimated by age-sex groups from labor force and death rate data, as described in the notes to Table 11, column 5, and distributed by the month of death on the basis of the percentage distribution of deaths by months as reported by the Public Health Service. Total man months worked during the year by civilian earners before they died was estimated by assuming that deaths were spread evenly within each month and that no work was performed during the month preceding death. Man months worked by civilian wage and salary workers, nonfarm entrepreneurs, and farm operators were estimated by distributing total man months worked by the relative importance of these groups in the labor force. (Number of civilian wage and salary workers as estimated in the notes to line 11 d (1); number of farm and nonfarm entrepreneurs from *Survey of Current Business,* July 1949, Table 27. An alternative computation based upon the average number of wage and salary workers and of nonfarm and farm self-employed workers for each year, as reported in the *Monthly Report on the Labor Force,* yielded estimates which differed by only a few million dollars from those derived below.)

Man months worked by wage and salary workers and by nonfarm entrepreneurs were multiplied by average monthly earnings for each group, estimated as follows: For wage and salary workers, the average wage or salary, as determined in the notes to line 11 d (1), was raised to allow for the higher average age among earners who died than among all wage and salary earners. The increase, about 5 percent in most years, was estimated by weighting average earnings in the several age-sex groups, reported in each Census income survey, by the number of civilian earner deaths in those groups, and comparing the results with the average earnings for all age-sex groups combined. For nonfarm entrepreneurs, average monthly earnings of deceased persons was determined by dividing nonfarm entrepreneurial income (line 40 below) by 12 times the number of nonfarm active proprietors, and arbitrarily increasing the result to allow for the higher age and earnings of deceased persons. Earnings of farm operators who died during the calendar year were not computed because assignment of a farm income recipient to each farm means that farm income should not have been lost to the survey because of deaths.

A similar adjustment to remove items of unearned income (interest, dividends, rents, etc.) of deceased persons should also have been made since most of this income was not covered in recent surveys, but the data were inadequate.

14 Includes amounts received by both taxable and nontaxable fiduciaries. For taxable fiduciaries for 1941 and 1944–46 interest, dividends, rents, business and partnership income received are from *Statistics of Income,* Part 1. Estimates for nontaxable fiduciaries (data for which the BIR has not tabulated since 1939) were derived by (a) subtracting from fiduciary income as reported on individual income tax returns (ibid.) the estimated total received by individuals from taxable fiduciaries; (b) adding the estimated deductions of nontaxable fiduciaries, based on the ratio of deductions to total income for taxable fiduciaries; and (c) distributing total income received by nontaxable fiduciaries from step b (other than received by common trust funds) among the several sources of income in proportion to the corresponding distribution for taxable fiduciaries. Estimates of the distribution by income source for nontaxable fiduciaries based on the distribution for taxable fiduciaries in the same year were considered preferable to using relationships based upon 1939 data by income source for nontaxable fiduciaries.

The total amount received by individuals from taxable fiduciaries and reported by them as 'fiduciary income', used in step a, was determined by subtracting from the amount distributable to beneficiaries reported by taxable fiduciaries (ibid.) an estimated minor amount individuals received from taxable fiduciaries but reported as interest and dividends on their returns rather than as fiduciary income, or which one fiduciary distributed to another.

In step c the income received by common trust funds representing interest and dividends, and the minor amount from nontaxable fiduciaries reported as interest and dividends on individual returns rather than as fiduciary income were allowed for.

For 1947 and 1948 BIR data were not available. The estimate for 1947 was derived by stepping up the 1946 figure 15 percent, and that for 1948 by stepping up the derived 1947 figure 10 percent. The 15 and 10 percent increases were somewhat less than the percentage increases in dividend payments to individuals (line 5) which rose 21 percent from 1946 to 1947, and 13 percent

from 1947 to 1948. From 1945 to 1946 fiduciary income from the sources included here rose 18 percent, dividends to individuals, 24 percent. Only part of the income of fiduciaries is from stocks, and there was probably some shift to lower interest bearing bonds.

These estimates were found to be in line with an alternative, equally rough, set derived as follows: Total assets of trust funds, excluding endowment and foundation funds, state and local government retirement funds, and private pension funds, classified by type of asset were estimated for each year from Comptroller of the Currency data on assets of trust accounts in national banks and from FRB estimates of the holdings of all trust funds administered by corporate trustees. Estimated holdings of United States government securities and of other bonds were multiplied by United States Treasury and corporate bond yields, respectively. Dividends for 1941 were estimated to be 6 percent of estimated stockholdings of fiduciaries, and for other years were stepped up on the basis of the percentage increase in the NID series on dividend payments. To the sum of interest and dividend income of fiduciaries was added estimated income from real estate, mortgages, saving deposits, and miscellaneous sources.

15 For 1941 and 1944–46, derived by adding to fiduciary income as reported on individual income tax returns (*Statistics of Income,* Part 1) an estimate of income received by individuals from fiduciaries but reported as interest and dividends on their returns rather than as fiduciary income. Estimates for 1947 and 1948 derived by stepping up figure for preceding year 15 and 10 percent, respectively (see notes to line 14).

Line 15 represents 71 percent of line 14 in 1941 and 78–80 percent in 1944–48. In 1939, the last year for which the BIR tabulated returns of nontaxable as well as those of taxable fiduciaries, the total amount distributable to beneficiaries was 71 percent of the total net income received by all fiduciaries exclusive of capital gains and losses and miscellaneous income. Line 15 includes some net capital gains realized by fiduciaries which are reported as fiduciary income on individual income tax returns.

17 Represents periodic payments by life insurance carriers in the form of annuities including group annuities, disability payments, and periodic payments under supplementary contracts

(*Spectator Insurance Year Book, Life Insurance*). Periodic payments under supplementary contracts are based in part upon unpublished data from the Office of the Actuary, Social Security Administration. Does not include dividends to policyholders, which are not treated as income in the field surveys, or payments under accident and health insurance or by fraternal and assessment associations, data for which were not available.

19 The various items included in personal income, which are subtracted in this line, are from NID worksheets except the following:

a) Lump sum payments under social insurance programs include nonperiodic payments under OASI, Railroad Retirement Insurance, federal, state and local government retirement, and government life insurance, as estimated by the Social Security and Veterans Administrations.

b) Civilian Conservation Corps payments (1941 only) are NID figures minus amounts sent to the family as estimated by the OPA Consumer Income and Demand Branch.

c) Nonmoney payments under workmen's compensation are payments made directly to physicians or hospitals rather than to workmen, as estimated by the Social Security Administration.

d) Issues of terminal leave bonds from *Treasury Daily Statement*. Issues were substituted for redemptions to match the treatment of these bonds in the surveys.

22 Value of food and fuel produced on farms, minus value of perquisites furnished farm laborers (included in line 23), plus gross imputed rental value of owner and tenant-occupied farm dwellings. These nonmoney items are deducted from the personal income series to yield money income as defined in the surveys. For owner-occupied farm dwellings, gross imputed rental value is subtracted to match the treatment in surveys which in most cases did not include this item but, like the NID personal income series, deducted expenses on such dwellings in determining farm operator income. In the case of tenant-occupied farm dwellings, a gross imputed rental value is included in farm operator income in the NID personal income series to offset the inclusion of rent paid for the dwellings under the tenants' production expenses. That is, farm operator income in the NID personal income series represents income before rent has been

paid on the dwelling whereas in consumer money income, to match the treatment in surveys, it represents income after dwelling rent has been deducted.

26 Accrued discount on United States government bonds owned by individuals minus accrued discount on redemptions (*Treasury Bulletin,* April 1948, pp. 24–6, and June 1949, p. 26). In deriving line 26 it was assumed that 80 percent of Series A-D bonds and 66⅔ percent of Series F bonds were owned by individuals; all Series E bonds are held by individuals.

27 Estimate for 1941 from OPA Consumer Income and Demand Branch. Other years extrapolated on basis of estimated changes in the number of lodgers in private households, based upon Census data which indicate a sharp fall in the lodger population during the war, and in the net income per lodger, assumed to have increased somewhat less rapidly than the BLS consumers' price index.

31 Military money pay of persons returned to civilian life estimated as follows:

a) Average military money pay per man year was derived for each calendar year by dividing total military money pay exclusive of family allowances and allotments (NID estimate) by the average strength of the armed forces in the given year (War and Navy Department reports).

b) Number of persons in the armed forces returned to civilian life during the calendar year (ibid.) were converted to man years of military employment by assuming that persons discharged in January worked .5 month, in February 1.5 months, etc.

Man years of military employment were then multiplied by the averages in (a). Average pay and man months of military employment were calculated separately for the first and second half of 1946 because of the pay raise in the latter.

CCC payments sent to the family in 1941 as estimated by OPA Consumer Income and Demand Branch.

33 Veterans' payments include military pension, disability, and retirement payments; adjusted compensation benefits; mustering out payments to discharged servicemen and terminal leave benefits; readjustment, self-employment, and subsistence allowances to veterans, excluding interest on guaranteed loans to veterans; and state and local veterans' aid and bonuses.

39 Algebraic sum of lines 1, 9, 10, 11, and 18 minus wages in lines 12 and 23, minus lines 31 and 32, plus line 35, minus, in 1941, CCC payments from line 19.

40 Algebraic sum of lines 2 and 25 minus entrepreneurial income in lines 12, 14, and 23, minus line 37.

41 Algebraic sum of lines 3, 22, and 24 minus line 34, plus line 37.

42 Sum of lines 31 (excluding in 1941 CCC payments), 32, and 33, plus issues minus redemptions of terminal leave bonds from line 19.

43 Algebraic sum of lines 4, 5, 15, 16, and 26 minus interest and dividends in lines 13 and 14.

44 Algebraic sum of lines 6, 21, and 27 minus rents in lines 13 and 14, plus line 34.

45 Algebraic sum of lines 7 and 19 (excluding issues and redemptions of terminal leave bonds and, in 1941, CCC payments other than those sent to the family) minus transfer payments in line 13, minus lines 33, 35, and 36, plus, in 1941, CCC payments from line 31. Includes: benefits, other than lump sum, from federal government social insurance funds (OASI, state unemployment insurance, Railroad Retirement Insurance, railroad unemployment insurance, and federal civilian pensions); state and local government pensions and cash sickness compensation; federal, state and local government direct relief including Farm Security Administration grants, and state and local government general and special types of public assistance and, in 1941, value of free stamps issued under surplus food and cotton stamp programs, and CCC payments sent to the family but not payments to members in CCC camps; payments under Panama Canal Construction Annuity Act; enemy alien and civilian war assistance; workmen's compensation payments excluding nonmoney payments directly to doctors and hospitals.

46 Sum of lines 17 and 36. Includes government life insurance benefits except lump sum payments; military and naval insurance payments; payments for care of foster children in private homes; merchant marine war risk life claims; periodic payments from life insurance companies (see note to line 17). Excludes the following items which should properly be included for comparison with family field surveys but for which data are not available: cash receipts from private relief agencies; alimony; contributions for support from persons not members of the household

other than from members of the armed forces; periodic payments from inheritances or from annuities other than those issued by life insurance companies; pensions received from private organizations. (The personal income series includes the income flowing to private pension funds. The proper adjustment to match the coverage of income field surveys would be to subtract property income flowing to such funds—employer contributions to the funds were subtracted in line 19—and add pensions paid to individuals from such funds.)

B Notes to Table 2

COLUMN

1 Table 1, line 47, except when the estimates have been adjusted to cover the income of the civilian noninstitutional population as it was constituted on the date of the particular Census survey, rather than, as in Table 1, at the close of the calendar year; and except when adjustments have been made here, but not in Table 1, to allow for variations in the definition of income used in the several surveys.

Lines 1–4

Table 1, line 47, except that the estimates for 1946–48 (lines 2–4) have been reduced to exclude enlisted men's cash terminal leave payments which were not included in the FRB surveys.

The FRB surveys exclude from income traveling and other expenses in connection with employment, whereas in column 1 occupational expenses of this kind were not deducted.

Lines 5–7 and 9

See Appendix C, notes to column 1, line 11.

Line 8

Table 1, line 47, except that adjustments were made similar to those described for 1944–46 in Appendix C, notes to column 1, to subtract civilian earnings of persons who entered the armed forces, $146 million, or died, $400 million, between December 31, 1947 and April 1948, when the survey was made, and to add armed forces pay earned during the calendar year by persons who returned to civilian life during the 3 months, $224 million.

2 Represents the total money income accounted for by the sample

surveys when 'blown up' to the universe covered by each. As indicated in Part IX, the surveys differed in their methods of 'blowing up' the sample results, especially with respect to estimates for unascertained income, as well as in their population coverage, especially with respect to the quasi-household population. (In col. 3 differences that could be measured were allowed for in order to make the results of the several surveys more comparable.)

For the number of families and single individuals used in deriving the aggregates in this column, see the notes to column 6.

Lines 1–4

As reported by the FRB. Line 1 is lower than the previously published figure (*Federal Reserve Bulletin,* June 1946) because it has been adjusted by the FRB to give families and single individuals whose income was not ascertained the mean income of the 'knowns', rather than a somewhat higher average, to match the treatment accorded this group in later FRB surveys. Line 2 was adjusted upward to cover a revised higher figure of the number of families and single individuals in the universe.

Lines 5–8

For 1944–46 as reported in special tabulations prepared by the Census Bureau for the Interagency Technical Committee on Income Distribution covering families and single individuals with money incomes under $10,000, plus my estimates for the $10,000 and over class where the Census surveys did not request data on aggregate income, plus, in the case of the 1945 income survey (line 6), estimates for families and single individuals whose income was not ascertained. For 1947, when Census Bureau tabulations of aggregate income were not available, line 8 represents the 'blown-up' number of families and single individuals in each income class, as reported by the Census Bureau, multiplied by the average income in each class shown by the 1946 Census survey, plus estimates for the $10,000 and over class. The estimates of aggregate income covered by the surveys for NA's (income unascertained) in 1945, and for families and single individuals in the $10,000 and over class are described in Appendix D, notes to columns 1 and 2. The figures in the table incorporate what are probably maximum estimates of the income covered in the $10,000 and over class in the Census sur-

veys. If minimum estimates are substituted in the class (described in App. D, notes to col. 2), the totals are (in millions): $107,573 in 1944; $109,378 in 1945; $126,671 in 1946; $143,843 in 1947.

Line 9

For 1941 this figure is the aggregate money income reported in the BLS-BHNHE survey (BLS *Bulletin 822,* p. 43) minus the survey coverage of earnings of men inducted into the armed forces (to match the exclusion from col. 1 of earnings of military personnel not living with their families at the time of the survey), plus the survey coverage of certain items excluded from the BLS special purpose figure on aggregate income but included in the BLS size distributions: net income from roomers and boarders in private homes, workmen's compensation payments, alimony, prizes, rewards, gambling gains, annuities, regular (monthly or quarterly) payments in settlement of insurance policies, and regular contributions from persons not in the family.

	Millions
Aggregate consumer money income covered in the survey (BLS *Bulletin 822,* p.43)	$77,270
Minus	
Income of military inductees	1,082
Plus	
Roomer-boarder income & misc. income items listed above that were covered in survey but excluded from above total	2,782
Equals	
Aggregate consumer money income covered in survey as given in Table 2	78,970

In line 9 the adjusted survey aggregate is presented both with and without a further adjustment to remove the effect of a step-up in the original sample mean for the $10,000 and over class that was carried through by the BLS by extrapolating a Pareto curve fitted to the urban survey frequencies above $5,000 (see App. D, notes to col. 2).

3 The 'blown-up' aggregates from column 2 were adjusted (a) to revise lines 1–6 and 9 to agree with revised estimates of the population in private households, and (b) to include in lines 1–6 estimates of the income of the population in quasi-households not covered in the surveys (see App. D, notes to col. 3).

The figures in the table incorporate what are probably maximum estimates of the income covered in the $10,000 and over class in the Census surveys. If minimum estimates are substituted in the class (described in App. D, notes to col. 2 and 3), the totals are (in millions): $107,989 in 1944; $113,662 in 1945; $126,671 in 1946; $143,843 in 1947.

4 Presented in terms of a range in the case of the Census surveys to reflect the two sets of estimates for income covered in the $10,000 and over class. Aggregates incorporating the higher set of estimates are shown in column 3; those based on the lower set in the notes to column 3 above.

For the similar ratio for 1935–36, see Appendix C, notes to column 3.

5 Derived by dividing column 1 by revised estimates of the total number of families and single individuals in private and quasi-households (see notes to col. 6); for the derivation of these estimates and more detail see Appendix D, notes to column 3.

6 Lines 1–8 derived by dividing column 2 by the total number of families and single individuals underlying the Census and FRB inflation of the samples.

		No. of Families & Single Individuals (000)	
		Rev. est. for private & quasi-households	Underlying the FRB & Census inflation of the samples [a]
	FEDERAL RESERVE BOARD SURVEYS		
1945	Dec. 31, 1945	41,915	40,000
1946	Dec. 31, 1946	43,330	41,000
1947	Dec. 31, 1947	44,740	42,500
1948	Dec. 31, 1948	46,040	43,800
	BUREAU OF CENSUS SURVEYS [b]		
1944	April 30, 1945	41,035	40,823
1945	March 31, 1946	42,320	40,069
1946	March 31, 1947	43,835	44,135
1947	March 31, 1948	45,036	45,336
	BUREAUS OF LABOR STATISTICS AND OF HUMAN NUTRITION AND HOME ECONOMICS SURVEY		
1941	Dec. 31, 1941	41,370	

[a] Private households only were covered in the FRB surveys and in the 1944 and 1945 Census surveys, except that a sector of the quasi-household population was covered in 1944. Both private and quasi-households were covered in the 1946 and 1947 Census surveys; see Appendix D, notes to column 3. Subsequent to the preparation of this article the FRB revised the figures for the end of 1947 and 1948 to 42,600 and 44,000, respectively.

[b] Census-BAE survey for 1946.

The mean income in line 9 is for the 39,287,000 'full-period' families and single individuals used by the BLS in inflating the 1941 survey results. It therefore differs from the income for 1941 in column 2 which covers, in addition to the full-period families and single individuals, 1,561,000 'part-period' year-equivalent persons other than men inducted into the armed forces. The derivation of the income of the 'full-period' group is given in the accompanying tabulation.

	Millions
Aggregate consumer money income covered in survey: col. 2	$78,970
Minus	
Income of 'part-period' year-equivalent persons other than inductees	1,412
Equals	
Aggregate consumer money income of 'full-period families' & single individuals covered in survey, used in deriving mean income in col. 6	77,558

7 *Lines 1–4*
Federal Reserve Bulletin, June 1948; revised median for 1948 from FRB.

Lines 5–8
Part IX.

Line 9
Calculated from the income distribution in BLS *Bulletin 822,* p. 68. Covers 'full-period' families and single individuals only (see notes to col. 6, line 9, above).

C Notes to Table 3

COLUMN

1 Table 1, lines 39–47, except for adjustments for differences in population coverage and income definition described below.

Line 1
Civilian wages and salaries earned in 1941 by persons who entered the armed forces between January 1 and March 31, 1942, $859 million, were subtracted from line 39 of Table 1, because such persons, mostly single individuals, were in the main not included in the BLS-BHNHE survey which began in April 1942. Civilian wages and salaries earned by persons who died in 1941,

$290 million, which had been subtracted in Table 1, line 12, were added back here. By 'reconstructing' the family as it was constituted during the income year the earnings of most deceased persons were not lost to the survey. No adjustment was made for the fact that the 1941 survey reported wages and salaries net of occupational expenses such as traveling expenses not reimbursed by the employer, union dues, and tools. Wages and salaries in column 1 are gross of these items.

To eliminate civilian wages and salaries earned in 1944–46 by persons who entered the armed forces between January 1 and April 30, 1945, January 1 and March 31, 1946, and January 1 and March 31, 1947, $975, $340, and $94 million, respectively, were deducted. As the Census surveys were taken in May 1945 and in April 1946 and 1947, and income data were collected for the family as it was constituted on those dates, such wages and salaries were not covered. (Since the civilian wages and salaries of persons entering the armed forces during each calendar year were excluded from consumer money income in Table 1, they are not included here.) Adjustments were also made to eliminate wages and salaries earned by persons who died during the 3 or 4 months between the close of the calendar year and the survey, estimated to be $370, $280, and $300 million, respectively. For the derivation see Appendix A, notes to lines 11 and 12.

Line 2

For 1944 and 1945 net income from rooming and boarding houses, which is included in nonfarm entrepreneurial income in Table 1 (line 40), was transferred to rental income to match the income classification in the surveys for these years. An adjustment to eliminate entrepreneurial income of persons who died during the 3 or 4 months between the close of the calendar year and the 1944–46 surveys, $70, $60, and $70 million, respectively, was made similarly to that for wages and salaries. For the reverse adjustment for 1941, $50 million, see the notes to line 1. Also see notes to line 7.

Line 3

For 1941 the estimate in Table 1, line 41 was adjusted to add (a) the value of the change in farm inventories between the beginning and end of the year (plus $458 million) because this item was included in the 1941 field survey, and (b) charges for de-

preciation, repairs, and insurance on owner-occupied farm dwellings, $213 million, which were not deducted in determining net cash farm income in the 1941 survey.

For 1946 the estimate in Table 1 was adjusted to add depreciation charges on owner-occupied farm dwellings, $342 million, which were not deducted in the Census-BAE survey.

Lines 4–6

For 1941 veterans' payments, the only item of military consumer money income in Table 1 in that year (military pay of persons returned to civilian life was considered negligible), was transferred to line 9 to match the income classification in the 1941 survey. For 1944 military income from Table 1, line 42, was stepped-up $200 million to include the military money pay earned by persons who returned to civilian life between January 1 and April 30, 1945, the latter being the date of the Census 1944 survey; for 1945 and 1946 similar additions to the figures in Table 1 were made for the military money pay of persons returned to civilian life between January 1 and March 31, 1946, and between January 1 and March 31, 1947: $3,382 and $420 million, respectively. (As military money pay earned by persons who returned to civilian life during the calendar year was included in consumer money income in Table 1, it is included here in military pay in col. 1.) For the derivation see Appendix A, notes to line 31.

The division of military income from Table 1, line 42, into the three items shown here for 1945 and 1946 is as follows: Line 4 includes pay of persons who returned to civilian life during the calendar year (Table 1, line 31) plus pay of persons who returned in the first few months of the following year (see discussion above), plus pay of military reservists (included in Table 1, line 33), plus two-thirds of class E allotments (included in Table 1, line 32), plus, for 1946, value of terminal leave bonds issued during the year. Class E allotments are included because the surveys classified them as 'armed force pay' if they had been sent home to the family during 1945 (1946) by persons who had meanwhile returned home and were living with their families in April 1946 (1947), the date of the survey. About two-thirds of class E allotments were estimated to be in this category, on the basis of the ratio of military separations to total military

strength. Line 5 includes dependency (class F) allowances and one-third of the voluntary class E allotments (balance of line 32, Table 1). Line 6 includes the various items in line 33 of Table 1 minus pay of military reservists and value of terminal leave bond redemptions.

Line 7

For 1944 and 1945 fiduciary income received by individuals (Table 1, line 15) was transferred from interest and dividends to 'other' income (line 10) to match the classification in the surveys for these years.

It was not possible to adjust for the interest and dividends of nonfarm businessmen that may be reported in column 2 under entrepreneurial income (line 2) whereas all such income is included under interest and dividends in column 1 (line 7). Nor were data available to allow for interest payments from one individual to another which, conceptually, are included in column 2 (line 7).

Line 8

For 1944 and 1945 includes net income from rooming and boarding houses (see line 2 above). No attempt was made to adjust the rough estimates of net income from roomers and boarders in private homes (Table 1, line 27) for variations in the concept in different surveys. The 1941 survey instructions called for gross receipts from roomers and boarders minus food but not other expenses; the FRB surveys asked for gross receipts if there were fewer than 4 roomers, and net receipts (deducting all expenses) if 4 or more; the Census surveys asked for net income after all expenses had been deducted.

Lines 9 and 10

For 1941 line 9 includes veterans' payments (see line 4 above). For 1944 and 1945 line 10 includes fiduciary income transferred from interest and dividends (see line 7 above). For 1945 state and local direct relief payments, $986 million in Table 1, line 45, were transferred to line 10 to match the survey classification. For further information on the items included in lines 9 and 10, see Appendix A, notes to lines 45 and 46.

Line 11

Unlike line 47 of Table 1, the aggregate for 1941 excludes

civilian earnings of persons who entered the armed forces between the close of the calendar year and the survey, includes civilian earnings of persons who died during the calendar year and the value of farm inventory change, and is gross of depreciation, insurance, and repairs on owner-occupied farm dwellings. For 1944–46 it excludes civilian earnings of persons who entered the armed forces or died between the close of the calendar year and the survey, and includes armed force pay earned during the calendar year by persons who returned to civilian life during the 3 or 4 months. For 1946, furthermore, it is gross of depreciation charges on owner-occupied farm dwellings. The amounts of these adjustments are given in the notes to lines 1–4 above.

2 From Table 4; for derivation, see Appendix D. The figures incorporate what are probably maximum estimates of the income covered in the $10,000 and over class in the Census surveys. Aggregates derived by using lower estimates for that class are given, for 1944 and 1945, in Appendix D, notes to column 3, and for 1946, notes to column 2.

3 Presented in terms of ranges to reflect the two sets of estimates for income covered in the $10,000 and over class in the Census surveys, derived as described in Appendix D, notes to columns 2 and 3.

Subsequent to the preparation of these tables, a comparison was made for 1935–36 of consumer money income derived from the NID series and covered in the field survey for that year. By averaging the NID personal income series for 1935 and 1936 after adjusting the figures for each year as we did for 1941 (see Table 1 and App. C, notes to col. 1) consumer money income was estimated to be $58 billion. Two adjustments require special comment. NID personal income included $1.4 billion of soldiers' bonus payments in 1936; only $200 million was included in the $58 billion because the Consumer Purchases Study (the field survey that was the main basis for the estimated income distribution for 1935–36) covered only a small part of these payments. For the value of changes in farm inventories, the amount covered in the inflated survey, $153 million, was used instead of the average of the positive value for 1935 and the negative value for 1936 included in the NID series.

Consumer money income accounted for in the income distribution for 1935–36 prepared by the National Resources Committee (*Consumer Incomes in the United States: Their Distri-*

bution in 1935–36, Washington, D. C., 1938) is $54 billion. After adjustment for revised estimates of the number of families and of single individuals it is $52.9 billion, 91 percent of the $58 billion total estimated above. The income distribution published by the National Resources Committee is in terms of total (money plus nonmoney) income; the money income accounted for was estimated from unpublished worksheets.

The National Resources Committee figures are based in part on data from income tax returns that were substituted for the survey data for the upper 'tail' of the income distribution (ibid., App. A, Sec. 7). This substitution added a sizeable amount of income to that covered in the inflated survey. If the substitution had not been made, it is estimated from unpublished worksheets that the inflated survey results would have accounted for about $47.6 billion of consumer money income, 82 percent of the $58 billion total. Comparing the several sources of income, the 1935–36 distribution before adjustment by income tax data accounted for 92 percent of the combined total of money wages and salaries and nonfarm entrepreneurial income as estimated from the NID series, 120 percent of cash farm entrepreneurial income, 52 percent of rent and roomer-boarder income, and 13 percent of cash interest and dividends. The high coverage of farm income was due in part to the fact that in inflating the sample data the National Resources Committee probably used too high an estimated number of farm operator families.

D Notes to Table 4

COLUMN

1 1941: as reported in BLS *Bulletin 822,* p. 43, adjusted as described in Appendix B, notes to column 2, line 9, minus income of units with $10,000 and over of total income based on the higher mean for this income group, as given in the notes to column 2 below.

1944–46: survey aggregates for families and single individuals with money incomes under $10,000, as reported in special tabulations prepared by the Census Bureau for the Interagency Technical Committee on Income Distribution, plus estimates for 1945, described below, for NA's.

Unlike the other years covered by the Census surveys, NA's in 1945 were tabulated as a separate group and no income was as-

signed to them. For 1946 and 1947 they were assigned incomes in the course of the tabulating process, based on the distribution of the 'knowns' in the various urban-rural-age-sex-veteran status groups among which they were distributed; for 1944, they were assigned incomes based on income data for neighboring families with similar characteristics (see Part IX).

In order to match as closely as possible the treatment accorded the NA's in the Census surveys for 1946 and 1947, their aggregate income in 1945 was estimated as follows. For each of 6 groups—families in urban, rural nonfarm, and rural farm areas, and single individuals in each area—the NA's, including those who were NA on every income source plus those who reported their income from some sources but were NA on one or more other sources and hence on total income, were distributed among 3 total money income classes ($0; loss or positive income of $1–9,999; income of $10,000 and over) on the basis of the knowns in the corresponding group; and the units assigned to each of the latter two classes were assumed to have received $1 or more of income from each of the several sources in the same proportions, and in the same average amount, as the knowns. (NA's were assigned to total money income groups before the estimates of aggregate income for the $10,000 and over group were prepared.) The adjustment increased the aggregate income from $83.3 billion for the knowns with total incomes under $10,000 to $102.1 billion when the 7.2 million 'blown-up' number of NA's estimated to have had incomes under $10,000 were included. Whether this increase would have been larger if it had been possible to assign the NA's to their proper age-sex-veteran status groups before multiplying by the average incomes of the knowns in the survey, as was done in 1946 and 1947, cannot be determined in the absence of tabulations from the 1946 or 1947 Census survey indicating the extent of the difference between income distributions including and excluding NA's.

For 1946 the aggregate income tabulated by the Census Bureau was adjusted upward $47 per family and single individual to allow for the fact that the Census tabulations of aggregates for this year were run, for reasons of economy, only in hundreds of dollars, unrounded.

2 Column 1 stepped up to include estimates for families and single individuals with money incomes of $10,000 or more.

1941: The amounts accounted for by all income groups if the original sample mean income for the $10,000 and over income group is used. The BLS substituted $23,438 as the mean income of urban families and single individuals with money incomes of $10,000 and over to replace the sample mean, $14,125, in estimating the aggregate income covered by the 1941 survey. The higher mean was determined by the BLS by extrapolating a Pareto curve fitted to the urban survey frequencies above $5,000 (BLS *Bulletin 822,* pp. 25–6). To derive column 2 approximately $3.6 billion was subtracted from the BLS figures as given in ibid., p. 43 (adjusted as described in App. B, notes to col. 2, line 9). This amount was derived by multiplying the 391,000 urban families and single individuals estimated by the survey to have been in this class by the step-up of $9,313 in the mean; its distribution by income source was based on the income source pattern for urban families and single individuals with incomes of $10,000 and over from the survey (ibid., p. 94). The higher mean is, of course, a closer approximation to the actual average than was the original sample mean. Moreover, in comparing the results of the 1941 survey with those of the FRB surveys for 1945–48, the higher figure is the better one because the special attention devoted in the FRB surveys to obtaining data for the upper income groups (see Part IX) probably gave them a better representation and a higher average income. The lower figure is used in the tables to measure the income covered in the 1941 survey without any adjustment. The accompanying tabulation shows the aggregate income of units in the $10,000 and over class, by source, using the higher and the original sample mean, and the aggregate income of all income groups combined if the higher mean is used.

Aggregate Income, by Source, 1941 Field Survey (millions)

	Incomes of $10,000 & Over		All Income Levels (using higher mean)
	Higher mean (Pareto fit)	Original sample mean	
Civilian wages & salaries	$4,237	$2,859	$53,152
Nonfarm entrep. income	3,400	1,913	12,011
Farm entrep. income	445	445	4,996
Interest & dividends	1,006	419	1,785
Rent & roomer-boarder income	712	647	3,160
Social security, etc.	...	...	2,204
Other income	315	191	1,662
Total	10,115	6,474	78,970

Census surveys: For the total money income class $10,000 and over, the Census tabulations for 1944–46 tell us the total number of families and single individuals and the number reporting a receipt from each income source but not the amount from each source or the total from all sources combined. To approximate the 'blown-up' total income for the $10,000 and over class the Census Bureau would have obtained had it asked for amounts, the procedures outlined below were used to determine maximum and minimum estimates.

To avoid any misunderstanding it is well to stress that these averages for the $10,000 and over class do not represent my estimates of the actual averages but were developed only to fill a gap in the Census data on aggregate income. (For a discussion of the method of developing a 'best' estimate of the average and aggregate income in this 'top' family income class on the basis of income tax returns, see Part VII.)

Average Total Money Income in the $10,000 and over Total Money Income Class

		1941	*1944*	*1945*	*1946*	*1947*	*1948*
1	Av. inc. for each source (from income tax returns) weighted by Census survey frequencies		$21,300	$15,900	$19,200	$19,200	
2	Pareto curve fitted to survey frequencies	$22,500	16,600	14,500	15,400	15,600	
3	Ind. income tax returns [a]	23,100	22,400 [b]	22,300	21,800		
4	FRB surveys			15,000	18,600	19,100	$18,700

[a] Includes taxable gains and losses from sales of capital assets, but see note b.
[b] Excluding capital gains and losses and returns whose incomes from sources other than capital gains were under $10,000, the average per income tax return is $22,000; per family and single individual $21,100 (see Part VII).

1) For 1944–46 the 'blown-up' number of families and single individuals from the survey in the $10,000 and over total money income class reporting a receipt from each source—wages and salaries, nonfarm entrepreneurial income, etc.—was multiplied by the average income from that source per tax return in the $10,000 and over adjusted gross income class reporting a receipt from that source to the BIR. (As data from tax returns for entrepreneurial income were not available for farm and nonfarm business separately, the same average income from tax

returns, business and partnership income combined, was used for both sources in each year.) The total from all sources divided by the 'blown-up' number of families and single individuals from the survey in the $10,000 and over class yielded a first estimate of the average total money income in the class, as shown in the tabulation above.

For 1947 (Table 2) when survey data on the number of families receiving income from each of the several sources were not available, the 'blown-up' number of families and single individuals in the $10,000 and over class from the 1947 survey was multiplied by the 1946 average total money income to determine aggregate money income.

2) An average total money income for the $10,000 and over class for each year 1944–47 was determined by fitting a Pareto curve to the frequencies from the survey in the $6,000–10,000 and $10,000 and over classes. (For 1944 a Pareto curve fitted to the survey frequencies in the $7,500–10,000 and $10,000 and over classes yielded a very similar average to that obtained by using the $6,000–10,000 class. For 1945–47 the Census surveys did not make any break between $6,000 and $10,000.) This average was multiplied by the 'blown-up' number of families and single individuals in the $10,000 and over money income class to obtain total money income in the class. For individual sources the income in the 'and over' class could not be similarly determined by a Pareto curve because frequency distributions of families by the size of each source were not available. To estimate the aggregate income from each source the total money income in the class determined from the Pareto fit was distributed among the sources in proportion to the distribution in (1).

Estimates developed in (1) are probably maximum for the average income in the class that would have been reported had amounts been asked. The various underestimates of income characteristic of the surveys, discussed at different points in this paper, make it likely that the 'top' group would have understated income from the various sources more than they would on tax returns.

Estimates developed in (2) by the Pareto fit are probably minimum for the 1944–47 surveys. There is some evidence that for the tail of the family distribution above $6,000 the Pareto curve may not be as good a fit for recent years as for 1941, when the proportion of frequencies above that point was much lower.

As indicated above, the curve fitted to the BLS family data for 1941 yielded an average for the $10,000 and over class that was reasonably close to that based on income tax returns. For 1944, however, a Pareto curve fitted to the frequencies of families and single individuals in the $6,000–10,000 (or $7,500–10,000) and $10,000 or over classes, as determined by Liebenberg and Kaitz, yielded $16,400 as the average for the 'top' class; the average for families and single individuals based on income tax returns was $21,100.

The relatively high average for 1944 in line 1 is due to the larger proportion of surveyed families (within the $10,000 and over class) reporting receipt of entrepreneurial income or multi-source income than in other years, not to the slightly higher averages for various sources from tax returns for 1944 than for 1945 and 1946. In 1945, when the average in line 1 is extremely low, especially in comparison with line 3, less than half of the families in the $10,000 and over class in the survey reported entrepreneurial income and only one-fifth reported interest and dividends; two-thirds of tax returns within the $10,000 and over adjusted gross income class reported income from each of these sources.

Because of the range in the estimates of income covered in the $10,000 and over class, we present the percentage comparisons between Census survey coverages of income and the NID personal income series in Tables 2 and 3 in terms of ranges, the upper limit being determined by the estimates based on (1) above, and the lower on (2).

Column 2 is the sum of column 1 and the maximum estimates for the $10,000 and over class derived in (1) above. The corresponding figures using the set of minimum estimates derived in (2) above range from $107,573 million in 1944 to $126,671 million in 1946.

	Source	*1944*	*1945* (millions)	*1946*
1	Civilian wages & salaries	$77,664	$78,164	$91,381
2	Nonfarm entrep. income	11,800	8,602	12,256
3	Farm entrep. income	5,968	4,410	6,850
4	Armed force pay		6,970	3,250
5	Military allows. & allots.	5,928	4,355	863
6	Veterans' payments		1,662	3,601
7	Interest & dividends	1,917	1,142	1,967
8	Rent & roomer-boarder income	2,191	2,095	3,189
9	Social security, etc.	2,105	716	2,226
10	Other income		1,262	1,088
11	Total	107,573	109,378	126,671

Farm entrepreneurial income accounted for in the 1946 survey, as shown here and in column 2 of Table 3, was $6.9–7.2 billion. Mr. Koffsky gives a range of $5.4–5.6 billion for the coverage of the same survey as determined from BAE tabulations. This difference in the aggregate reflects a corresponding difference in the net farm income size distribution as tabulated by the Census Bureau and the BAE which in turn was due to the fact that in running their tabulations the two agencies differed with respect to farm schedules discarded because of incomplete information, schedules used for farms of less than 10 acres, editing procedures, and type of controls. All the estimates presented here are based on the Census Bureau tabulations.

For 1944 and 1945 alternative figures (in parentheses) for farm entrepreneurial income in line 3 indicate how much more farm income would have been accounted for in the surveys if the total 'blown-up' number of families and single individuals with farm income or loss had been as large as in the 1946 Census-BAE survey. Only 4.6 million families reported farm income or loss in 1944, 4.3 million in 1945, and 6.0 million in 1946 (Table 5).

The alternative figures were derived by multiplying the mean farm income (Table 5) from the surveys for 1944 and 1945, including the $10,000 and over family income class, by the 'blown-up' number of families and single individuals reporting farm income or loss in the 1946 survey. This procedure assumes that the farms covered in 1944 and 1945 were representative of all farms. If the million and a half farms not accounted for in those surveys were small, just barely meeting the Census definition, the estimated aggregate in parentheses is, of course, too high. In view of the large proportion of farms unaccounted for in 1944 and 1945, and the smallness of the samples, it is unlikely that the sample farm income data were representative of the unaccounted-for farms; consequently, the figures in parentheses should be regarded as only very rough adjustments for the undercount in the 1944 and 1945 Census surveys.

The alternative figure for 1941 in line 3 represents the farm income accounted for if the 6.355 million used in blowing up the 1941 sample results, which now appears to have been too high, is replaced by 5.8 million farm operator families and single individuals, the number of farms from the *1940 Census of Agri-*

Number of Families and Single Individuals in the Civilian Noninstitutional Population, Revised Estimates (thousands)

	1941	*1945*		*1946*		*1947*		*1948*	
	12/31	4/30	12/31	3/31	12/31	3/31	12/31	3/31	12/31
				Private & Quasi-households					
Total families & single individuals*	41,370	41,035	41,915	42,320	43,330	43,835	44,740	45,036	46,040
Families of 2 or more	32,920	33,435	34,655	34,920	35,860	36,240	37,025	37,280	38,225
Single individuals	8,450	7,600	7,260	7,400	7,470	7,595	7,715	7,756	7,815
				Private Households					
Total families & single individuals	40,280	39,975	40,855	41,260	42,270	42,766	43,690	44,001	45,015
Families of 2 or more	32,780	33,275	34,495	34,760	35,700	36,071	36,875	37,142	38,100
Single individuals	7,500	6,700	6,360	6,500	6,570	6,695	6,815	6,859	6,915
				Quasi-households					
Total families & single individuals	1,090	1,060	1,060	1,060	1,060	1,069	1,050	1,035	1,025
Families of 2 or more	140	160	160	160	160	169	150	138	125
Single individuals	950	900	900	900	900	900	900	897	900

* For estimates underlying the inflation of the samples by the FRB and Census Bureau, see Appendix B, notes to column 6.

culture minus the estimated number without cash sales. The latter were excluded from the farm operator group in the 1941 survey (BLS *Bulletin 822,* pp. 13, 32).

3 Revised population weights were substituted for those originally used in 'blowing up' the results of the several surveys and the estimated income of quasi-households was added for surveys where it was excluded or only partly included.

The number of families and single individuals as of the approximate date of each survey was revised mainly on the basis of information published by the Census Bureau. Families and single individuals include the number of primary and secondary families and of primary and secondary single individuals in private households, and of families and single individuals in quasi-households (defined in Sec. A5 of the text).

The Census Bureau has published a semi-annual series back to 1940 on the number of primary families and single individuals in private households (release P–46, No. 4) but similar time series are not available prior to April 1947 for (a) the number of secondary families and single individuals in private households, (b) the number of families of 2 or more separately from the number of single individuals within the primary or secondary groups in private households, or (c) the size and composition of quasi-households. The estimates for 1941, 1945, and 1946 in the accompanying tabulation relied on interpolations of scattered Census data, and in certain cases, on fairly arbitrary guesses. For March 31, 1947 and 1948, the figures are from Census Bureau releases P–20, No. 17 and 21, adjusted to exclude from the group of single individuals in quasi-households an estimated number of monks, nuns, and sanitorium patients, who were transferred to the institutional population, and a few secondary single individuals in private households under 14 years of age. For December 31, 1947 and 1948 the estimates are straight-line interpolations between the Census figures for the preceding and following April.

Total income for private households was revised for each survey, except the 1946 and 1947 Census surveys, by multiplying the sample mean incomes for (a) families of 2 or more and (b) single individuals by the revised estimates of the number of families and of single individuals in private households, respectively. The revised population estimates for April 30, 1945

and March 31, 1946, respectively, were used to reweight the Census survey means for 1944 and 1945, and those for December 31 of each year to reweight the means from the four FRB surveys (see Table 2, col. 3).

To this aggregate income for private households was added, in the Census surveys for 1944 and 1945 and the four FRB surveys, the income of quasi-households estimated by multiplying the estimated number of families and single individuals in quasi-households by slightly more than half the survey mean income of families and single individuals in private households. The proportion was based upon the ratio of the mean income of quasi-household families and single individuals to that of private household families and single individuals obtained in the 1946 Census survey. For 1944 the estimate allowed for the fact that about a fourth of quasi-household units, i.e., those living in large rooming houses and trailer camps, were covered in the Census survey.

Income of institutional residents was not included in any of these estimates of aggregate income because such persons are properly not included in surveys that collect data to measure the distribution of income by size. It has been excluded as far as possible from the estimates with which the survey aggregates are compared in Tables 2 and 3.

For the 1944 and 1945 Census surveys the revised aggregate income of private households was distributed among the various sources on the basis of the distribution of the unrevised aggregates. The estimated aggregate income of quasi-households was distributed on the basis of the survey income source pattern for families and single individuals in private households in the $1,000–2,000 class, except that quasi-household units were assumed not to have received any farm entrepreneurial income.

As indicated in the notes to column 2 above, columns 2 and 3

	Source	*1944*	*1945*
		(millions)	
1	Civilian wages & salaries	$77,971	$81,152
2	Nonfarm entrep. income	11,785	8,896
3	Farm entrep. income	5,910	4,522
4	Armed force pay		7,267
5	Military allows. & allots.	6,055	4,622
6	Veterans' payments		1,753
7	Interest & dividends	1,914	1,181
8	Rent & roomer-boarder income	2,210	2,182
9	Social security, etc.	2,144	759
10	Other income		1,328
11	Total	107,989	113,662

include what may be regarded as maximum estimates for the income covered by the survey in the $10,000 and over class. Utilizing minimum estimates (see notes to col. 2) the corresponding aggregates for column 3 are $107,989 and $113,662 million (shown in the tabulation above).

For the 1946 and 1947 Census surveys adjustments in population weights were not necessary because the results were already adjusted to the latest available population estimates and because quasi-households were included.

For 1941 the sample mean incomes of families and single individuals were reweighted by the revised population estimates as of December 31, 1941. The reweighting was not carried through separately for private and quasi-household units, as the mean income was not available from the sample separately for the two household groups, though both were covered in the 1941 survey. The revised population weights reduced the estimated aggregate income covered by the 1941 survey more than $700 million, largely because the revisions indicated a higher proportion of single individuals, whose incomes are substantially lower than those for families, than was used in the original 'blow-up' of the sample data for that year.

For 1941, 1944, and 1945 the alternative figures in column 3 (in parentheses) were derived by multiplying the alternative figures in column 2 by the ratio of line 3, column 3, to line 3, column 2.

E Notes to Table 6

For FRB surveys the figures are from Part IX or are in unpublished data from Michigan Survey Research Center or FRB.

For Census surveys percentages of families and single individuals are from Part IX; mean income is estimated as described in Appendix D, notes to column 2 (maximum estimates); percentages of consumer money income are derived from Table 4 by dividing the difference between columns 1 and 2 by column 2.

For the BLS-BHNHE survey the figures cover 'full-period' families and single individuals (see App. B, notes to col. 6, line 9) and are taken or derived from BLS *Bulletin 822*, p. 33. For discussion of the higher mean income in the $10,000 and over class based on a Pareto curve fitted to urban survey frequencies, see Appendix D, notes to column 2.

F Notes to Table 8

COLUMN

1 See Appendix A.

2 Column 1 was adjusted to achieve more comparability with the income items covered by federal individual income tax returns.

Lines 1 and 2

Certain items were transferred from line 2 to line 1 on the assumption that when reported on income tax returns they would appear under wages and salaries. Including 35 percent of the NID estimate of unincorporated business income in contract construction, total cash earnings of newsboys and private duty nurses, and total commissions of 'office solicitors' (persons who solicit insurance on a commission basis and do not maintain an establishment of their own), the total transferred was $744 million in 1944, $815 million in 1945, and $997 million in 1946. The 35 percent estimate for contract construction was derived for 1945 by determining (a) the portion of the NID unincorporated business income in this industry accruing to proprietors 'not in establishments' in 1945, e.g., carpenters working on their own account and not maintaining a formal business establishment; (b) multiplying (a) by the ratio of the estimated number of proprietors 'not in establishments' who did not report entrepreneurial income from contract construction on their 1945 tax returns to the total number of proprietors 'not in establishments' in this industry; and (c) dividing (b) by the NID estimate of unincorporated business income in the industry.

It was impossible to make an appropriate subtraction from wages and salaries in columns 1 and 2 to allow for the fact that column 3 is net of traveling expenses in connection with employment that are not reimbursed by the employer. (All three columns exclude reimbursed expenses.) On the other hand, wages and salaries are understated in columns 1 and 2 to the extent that column 3 includes the earnings of persons who died or entered the armed forces during the year for whom tax returns were filed. How much of such earnings, subtracted in Table 1, lines 11 and 12, was reported on tax returns could not be determined. Nor was it possible to allow for contributions by employers for insurance of their employees that are not included

in columns 1 and 2 but are supposed to be reported as income on tax returns in column 3.

Interest and dividends received by unincorporated business enterprises, except in the 'finance' industry, are included in lines 5 and 6 rather than line 2.

Line 3

Net rent from farm property received by farm operators ($533 million in 1944, $536 million in 1945, $647 million in 1946), which was included in rental income in column 1, was transferred to farm entrepreneurial income on the assumption that the majority of such rent that is reported on income tax returns is included in farm business income. Actually, part of agricultural rent received by farm operators is reported on tax returns as rental income, but data on the proportion so reported are not available. (Net rent from farm property received by persons other than farm operators is included here under rent.) Expenses on owner-occupied farm homes, not deductible on income tax returns ($372 million in 1944, $397 million in 1945, and $442 million in 1946), were added to column 1.

The value of the change in farm inventories is excluded from farm entrepreneurial income in column 2 (as well as in col. 1) on the assumption that changes in inventories are not taken into account on most tax returns, i.e., that most farmers' tax returns are filed on a cash rather than on an accrual basis. Since some farmers file their tax returns on an accrual basis, a portion of the change in inventories should properly be included here.

Line 4

Military income is excluded because most of this type of income is exempt from the federal income tax and is not reported on tax returns (see notes to col. 3, line 1, for adjustment to remove military pay of officers in excess of $1,500 and military retirement pay).

Lines 5–7

Dividends received by mutual life and non-life insurance companies which should properly have been subtracted from dividends in Table 1, estimated to be $35 million in 1944, $38 million in 1945, and $40 million in 1946, were subtracted from column 1. Wholly tax exempt interest, mainly interest on state

and local government bonds, was also subtracted. Such interest, not reportable on tax returns, was estimated to be $265 million in 1944, $245 million in 1945, and $235 million in 1946. No adjustment is needed for partly tax exempt interest because the full amount is called for on tax returns. The following items of interest were excluded from consumer money income in Table 1 and are therefore excluded from columns 1 and 2 of this table: accrued interest on United States government bonds (except interest on redemptions), interest and dividends to fiduciaries and to nonprofit organizations, and interest flowing to life insurance companies and other financial intermediaries, which is treated as imputed interest in the NID personal income series (Table 1, lines 13, 14, 16, 26).

The allocation in lines 5–7 of column 2 for 1946 was derived from Table 1, lines 4 and 5, by making the adjustments shown in lines 13–16 and 26, then subtracting the wholly tax exempt interest on government bonds and dividends received by mutual insurance companies. It was assumed that dividend and interest income of nonprofit organizations (Table 1, line 13) were equal and that, for fiduciaries (Table 1, line 14) dividends were somewhat larger than interest, the latter source representing interest other than from wholly tax exempt securities. Fiduciary income to individuals is estimated to be the figure reported on individual income tax returns with a minor adjustment as explained in Appendix A, notes to line 15.

Line 8

Net rent from farm property received by farm operators was treated as in line 3 above. Net income from roomers and boarders in private homes ($500 million in 1944 and 1945, and $800 million in 1946), which was included in column 1, was excluded on the assumption that little of such income is reported on tax returns.

Lines 9 and 10

Since practically all the income items included in lines 9 and 10 (see App. A, notes to lines 45 and 46, for items included) are tax exempt they are omitted here. Actually, a portion of the amount received as pensions and annuities, but not social security benefits or veterans' pensions, which the taxpayer has purchased or to which he has contributed is supposed to be

reported on tax returns, i.e., 3 percent of the taxpayer's total cost of the annuity or pension, unless he has already recovered his total cost tax free, in which case the entire amount received as a pension or annuity must be reported. However, since it was impossible to determine how much of federal civilian pensions plus state and local government pensions from line 9, and of periodic payments from life insurance companies from line 10 (pensions from private employers were not taken into account) to include for comparability with tax returns, lines 9 and 10 were omitted and the annuity and pension item was omitted from column 3.

Line 11

The NID personal income series and the totals in line 11 are reconciled in the accompanying tabulation.

	1944	*1945*	*1946*
		(millions of dollars)	
NID personal income	165,892	171,927	176,908
Minus			
Transfer payments except fees	3,528	6,104	11,321
Other labor income	1,302	1,548	1,603
Military pay incl. allows. & allots.	20,638	22,598	7,962
Value of services furnished individuals without pay by financial intermediaries	2,700	2,965	3,201
Imputed net rental value of owner-occupied nonfarm houses	2,523	2,395	2,035
Nonmoney income of farm operators*	2,268	2,372	2,770
Nonmoney farm & nonfarm wages (except military) & nonmoney nonfarm entrep. income	1,350	1,417	1,588
Earnings of persons who entered armed forces or died during year	2,078	1,352	893
Value of change in farm inventories	−545	−148	−228
Noncorp. nonfarm inventory valuation adj.	−70	−113	−1,886
Accrued interest on unredeemed U.S. gov. bonds	252	377	439
Tax exempt interest	265	245	235
Div. rec. by mutual life ins. cos.	35	38	40
Prop. inc. rec. by nonprofit organizations furnishing services to individuals	246	263	300
Income retained by fiduciaries	272	243	301
Plus			
Employee contributions for social ins.	2,236	2,333	2,012
Equals			
NID series adj. for comparability with tax returns	131,286	132,604	148,346

* Including value of home-grown food except that furnished to hired laborers, plus imputed gross rental value of farm homes less depreciation, taxes, and other expenses on owner-occupied houses not allowable as expenses on tax returns.

3 From tabulations of individual income tax returns in *Statistics of Income,* for 1944, 1945, and 1946, Part 1 (BIR press releases S–366, S–2020, and S–1015), except as noted below.

Adjustments to exclude Hawaii and Alaska: Tabulated amounts were adjusted to exclude estimates for Hawaii and Alaska. Tabulations of amounts of wages and salaries, interest and dividends, and the balance of adjusted gross income were available from the BIR for Hawaii, and for Alaska combined with the state of Washington. The allocation of the balance in Hawaii among rent and farm and nonfarm entrepreneurial income was based upon the relative importance of the income shares in this territory as estimated by the NID. Wages and salaries were split between Alaska and Washington on the basis of wage credits under the unemployment compensation program in the two areas. The other income shares were divided in proportion to the totals for the two areas as estimated by the NID.

Estimated Income by Source Reported on Individual Income Tax Returns, Hawaii and Alaska (millions)

	Hawaii			Alaska		
	1944	*1945*	*1946*	*1944*	*1945*	*1946*
Wages & salaries	$370	$392	$374	$78	$78	$79
Nonfarm entrep. income	79	96	75	18	19	24
Farm entrep. income	7	9	7	1	1	1
Interest	10	13	1	9	9	4
Dividends			12			7
Rent	10	12	9	1	1	2
Total	476	522	478	107	108	117

Line 1 from *Statistics of Income* adjusted (a) to exclude estimates for Hawaii and Alaska; (b) to include wages not subject to withholding reported as 'other income' on Form W–2 (estimated to be $23 million in 1944, $26 million in 1945, and $29 million in 1946) and tabulated under 'miscellaneous income' by the BIR; and (c) to exclude military retirement pay other than for disability (NID estimates) and officers' military pay in excess of $1,500 reported on returns filed in time to be included in the tabulations on which column 3 is based (estimated to be 50 percent of total officers' pay in excess of $1,500 in 1944 and 85 percent in 1945 and 1946). Total officers' pay in excess of $1,500 is the difference between calendar year total cash pay of officers in each of the services (NID estimates) and an aggregate derived by multiplying the average number of

officers in each year by $1,500. Members of the armed forces on sea duty or outside the continental United States could postpone filing tax returns until 6 months after their return to the United States. From the percentage of officers returning from overseas in the second half of 1945, 1946, and 1947, or outside the continental United States at the close of the year, it was estimated that half the officers in 1944 and 15 percent in 1945 and 1946 postponed filing. The total deducted from *Statistics of Income* figures for officers' pay and military retirement pay was $1,460 million in 1944, $2,670 million in 1945, and $1,330 million in 1946.

It was impossible to estimate accurately the amount of officers' pay earned in prior years that is included, because of postponed filing, in the tabulated amounts for the current year.

Lines 2 and 3 from *Statistics of Income* adjusted (a) to exclude estimates for Hawaii and Alaska; (b) to include an estimated $75 million of depletion and $80 million of net operating loss deduction (to match the coverage of col. 1 and 2); and (c) to exclude most of the interest and dividends reported as 'partnership' income on tax returns, and the estimated net rent reported as 'partnership' income on tax returns in 'real estate' that reported no gross receipts from business, which were transferred to interest and dividend income and to rent, respectively, to match the coverage of columns 1 and 2 (such interest and dividends estimated to be $55 million in 1944, $66 million in 1945, and $70 million in 1946; and net rent $75 million in 1944 and $100 million in 1945 and 1946; based on BIR tabulations of partnership returns for 1945). The separation of farm and nonfarm entrepreneurial income in lines 2 and 3 for 1945 was based on BIR tabulations by industry groups.

Lines 5 and 6 from *Statistics of Income* adjusted (a) to exclude estimates for Hawaii and Alaska; (b) to include interest and dividends not exceeding $100 per return reported as 'other income' on Form W–2 (estimated to be $23 million in 1944, $25 million in 1945, and $28 million in 1946) and tabulated under 'miscellaneous income' by the BIR; and (c) to include interest and dividends transferred from line 2 above.

Line 7, like line 7 of columns 1 and 2, includes an unknown amount reported as fiduciary income on individual tax returns that represents net capital gains realized by fiduciaries. The

estimates of fiduciary income included in columns 1 and 2 (shown separately from interest and dividends in 1946) agree closely with those included in column 3 because the figures in columns 1 and 2 are simply the amounts reported on individual income tax returns with a minor adjustment as explained in Appendix A, notes to line 15.

Line 8 excludes estimates for Alaska and Hawaii and includes rent transferred from line 2 above.

Line 11 excludes 5 items of adjusted gross income (totaling $3,481 million in 1944, $5,944 million in 1945, and $5,796 million in 1946) reported on individual income tax returns:

a) Net gains from sales or exchange of capital assets and of property other than capital assets: $854 million in 1944, $2,055 million in 1945, and $3,100 million in 1946. This item is not included in consumer money income in the preceding column.

b) Income from annuities and pensions: $181 million in 1944, $196 million in 1945, and $233 million in 1946. See the discussion under column 2, lines 9 and 10, above.

c) Miscellaneous income (except wages, interest, and dividends totaling $46 million in 1944, $51 million in 1945, and $57 million in 1946, which were transferred to lines 1 and 5 above): $558 million in 1944, $549 million in 1945, and $693 million in 1946. The miscellaneous category includes alimony, rewards, prizes, gambling profits, recoveries of bad debts for which a deduction was taken in a preceding year, and health and accident insurance benefits received as reimbursement for medical expenses for which a deduction was taken in a preceding year. As none of these items is included in column 2, all are excluded here.

d) Income in Alaska and Hawaii estimated to be $583 million in 1944, $630 million in 1945, and $595 million in 1946.

e) Military pay deducted in line 1 above minus depletion and net operating loss deduction added in line 2 above: $1,305 million in 1944, $2,515 million in 1945, and $1,175 million in 1946.

G Notes to Table 9

LINE

1–3 From Table 1, lines 4, 16, 26.

4 From Appendix F, notes to column 2, line 5.

5 Line 1 minus lines 2–4.

6 Estimated holdings of corporate bonds by 'individuals' (from SEC) multiplied by corporate bond yields (based on data from Moody's Investors Service).

7 Ninety-seven percent of NID estimate of total monetary interest paid by commercial banks, based on the proportion of total time deposits in commercial banks held by individuals and nonfinancial unincorporated businesses as estimated by the FRB.

8, 9 From NID worksheets.

10 Nonfarm real estate mortgage debt held by 'individuals and others' from 'Public and Private Debt in 1947', Elwyn T. Bonnell, *Survey of Current Business,* Oct. 1948, Table 6, multiplied by interest rate charged by savings and loan associations; plus farm mortgage debt held by 'individuals and others' from *Agricultural Finance Review,* Nov. 1947, p. 112, multiplied by interest rate on farm mortgages as estimated by the BAE. This estimate is probably high because 'individuals and others' is a residual including all lenders other than banks, insurance companies, savings and loan associations, HOLC, and certain farm lending organizations.

11 Total money interest paid by government minus government interest received by government, corporations, mutual banks, and savings and loan associations (from NID worksheets), minus lines 3 and 4. Includes accrued interest on redemptions of United States savings bonds.

12 Line 5 minus sum of lines 6–11. Includes interest from abroad.

13 Sum of lines 6–12. Including interest to fiduciaries and nonprofit organizations furnishing services to individuals, it is larger than the estimate in Table 8, column 2.

H Notes to Table 10

LINE

1 *Column 1*

For 1944 and 1945 the ratio of (a) the number of business firms in existence at any time during the year to (b) the average number of business firms for the year was applied to (c) the NID estimate of the average number of active proprietors of unincorporated enterprises other than farms and professional services, then (d) the NID estimated number of persons in professional services for the year was added.

a) The number of business firms in existence during the year

was calculated as follows: To the number of operating firms on December 31 of the preceding year was added the number of new businesses and business transfers during the year, minus 40 percent of the number of business transfers plus discontinued businesses. The subtraction was made to avoid counting twice persons who sold or liquidated one firm and began operating another within the same year. Data on the number of operating business firms, new businesses, business transfers, and discontinued businesses, by quarters, from Office of Business Economics, Business Structure Division (*Survey of Current Business,* May 1946, p. 21 as revised). In the second quarter of 1946, on the basis of a survey of firms liquidated or sold, 29 percent of the owners were operating another business 4 to 6 months after the liquidation or sale (ibid., April 1947, p. 14). This was stepped up to 40 percent to allow for a full year.

b) Averaging the number of operating firms as of the end of each quarter yielded the average number of operating business firms during the year.

c) and (d) *Survey of Current Business,* July 1949. The ratio from steps (a) and (b) was applied directly to the number of active proprietors of unincorporated enterprises without adjusting the ratio for incorporated firms included. However, figures on the proportion of new firms that were corporations, sole proprietorships, and partnerships (available for the second and fourth quarters of 1945 and 1946) were sufficiently similar to justify the assumption that the ratios would not have been very different had it been possible to exclude corporations.

For 1946 an estimate of 6.2 million nonfarm entrepreneurs, derived by following the procedure described above for 1944 and 1945, was felt to be too low in comparison with the 7.1 million persons reporting work experience at a nonfarm business or profession during 1947 in a Census labor force survey conducted in December 1947 (*Work Experience of the Population in 1947,* series P–50, No. 8, Table 2). It was therefore raised to 6.5 million, on the assumption that the number in 1946 was somewhat smaller than in 1947. A measure of the turnover of nonfarm entrepreneurs based upon the number of firms, such as that described above for 1944 and 1945, is probably too low because some persons engage in entrepreneurial activities for part of the year without affecting the statistics on the number of firms.

Column 2

For 1944 and 1945 roughly estimated to be a sixth of column 1.

a) According to *Analysis of Wisconsin Income* (NBER, 1946, pp. 30, 42) 10 percent of persons with nonfarm entrepreneurial income in 1936 received wages or salaries also.

b) According to *Delaware Income Statistics* (University of Delaware, 1941, pp. xxxix and xli, plus estimates for certain groups of multi-source returns not shown in the tables) 20 percent of the income tax returns with farm or nonfarm entrepreneurial income in 1936 and 1938 reported wages or salaries also. Separate figures are not available for returns with nonfarm and farm entrepreneurial income. By assuming that 22 percent of the farm operator group received wages and salaries, i.e., the proportion of farm operators in Delaware reporting 1 or more days worked off the farm in 1939 in the *1940 Census of Agriculture,* the percentage of nonfarm entrepreneurs with wages and salaries is estimated to be about 18.5.

c) In the *1940 Census of Population* 17.5 percent of persons classified as employers and own account workers in industries other than agriculture in the census week, March 24–30, 1940, reported that they received some wages or salaries during 1939 (*Population, The Labor Force (Sample Statistics), Wage or Salary Income in 1939,* pp. 113, 122, adjusted to exclude estimates for unpaid family workers).

d) In the 3 Census income surveys for 1944, 1945, 1946, 11–14 percent of individuals with nonfarm business income reported civilian wages or salaries also.

For 1946 estimated to be a fifth of column 1. This proportion was higher than that used for 1944 and 1945 to take into account a higher figure for 1947 when 27 percent of the persons reporting work experience at a nonfarm business or profession said they had worked also for cash wages or salaries at some time during the year (Census release P–50, No. 8, Table 1).

Column 3

Difference between columns 1 and 2.

2 *Columns 1 and 3*

Total number of farm operators (*1945 Census of Agriculture*) stepped up to include partners of farm operators living in separate dwellings (based on BAE Enumerative Survey of Agri-

culture, Jan. 1947) minus line 3, column 1. In this study, based on the concepts used in recent surveys of family income, the entire income from the farm is attributed to one person, the farm operator, except for partners living in separate dwelling units, in which case two earners are recognized. (Nonrelated partners living in the same dwelling unit were also treated as separate farm earners but are probably few in number and are not allowed for here.)

3 *Column 1*

The number of farm operators reporting 1 or more days worked off the farm during 1944 (*1945 Census of Agriculture*) rounded down to allow for farm operators doing custom work.

Column 2

Difference between columns 1 and 3 on the assumption that all farm operators who reported some nonfarm work had worked in covered employment during the year. The relatively few farm operators with nonfarm self-employment as their second source of earnings are ignored.

Column 3

Number of farm operators reporting farm wage work and no nonfarm work during the year. Figure for 1946 based on a Census survey in January 1947 for the BAE (*Farm and Nonfarm Wage Income of the Hired Farm Working Force in 1946,* L. J. Ducoff and Margaret J. Hagood, BAE, June 1947, p. 15). Same figures used for 1944 and 1945.

4 *Column 1*

For 1945 and 1946 number of persons reporting farm wage work during the year (based on Census surveys in January 1946 and 1947 and December 1947 for the BAE) minus farm operators reporting farm wage work (with or without nonfarm work) plus estimated number of migratory agricultural wage workers and persons with farm wage work entering the armed forces during the year who were not covered in the survey. (The total of farm wage workers in 1946 in the BAE report issued in June 1947 was adjusted upward on the basis of the December 1947 and January 1946 surveys, with the advice of the BAE for reasons cited on the inside cover of the *Hired Farm Working Force of 1947,* BAE, June 1948. Estimates of the migratory workers and

persons entering the armed forces are from the BAE reports cited.) The 1945 figures are used for 1944 when survey data were not available. For all 3 years line 4 excludes the following groups of persons with farm wage work: farm operators, children under 14 years, persons who died during the year, institutional inmates, prisoners of war, and imported foreign workers.

Column 2
Number of persons other than farm operators reporting both farm wage work and nonfarm work during the year, including an estimate (one-half) of the migratory agricultural workers not covered in the BAE survey who did nonfarm work also. As in line 4, col. 1, the estimates for 1946 are based on BAE estimates adjusted in the light of the January 1946 and December 1947 surveys. For 1945 the figure, exclusive of migratory workers, was derived by multiplying the number of persons reporting agricultural wage work during 1945 from the special January 1946 survey by the percentage of such wage workers who were not farm operators and who did some nonfarm work during the year as reported in the adjusted estimates for 1946. The 1945 figures are used for 1944.

Column 3
Difference between columns 1 and 2.

5 *Column 1*
All employees of employers covered by both the Railroad Retirement and Railroad Unemployment Insurance Acts (*Compensation and Service of Railroad Employees, Statistical Tables, 1944, 1945, and 1946,* Railroad Retirement Board).

Column 2
Employees in column 1 who reported less than 10 months of railroad service (ibid.) minus arbitrary estimate of 100,000 persons to allow for railroad workers entering or leaving the labor force during the year.

Column 3
Difference between columns 1 and 2.

6 *Column 1*
Number of federal civilian full- and part-time workers as of January 1 plus accessions during year exclusive of transfers (Civil Service Commission).

Column 2
Estimated to be 70 percent (see line 11) of the sum of the following series for federal workers for each year: accessions minus transfers, plus separations minus transfers, minus accessions of persons reemployed after military service, minus separations for military service, minus 5 percent of accessions (other than transfers and persons reemployed after military service) estimated to avoid counting twice persons who entered and left civilian federal employment within the same year. (Data on annual accessions and separations, by type, from Civil Service Commission.)

Column 3
Difference between columns 1 and 2.

7–10 *Column 1*
NID estimates of average annual number of full- and part-time employees (*Survey of Current Business,* July 1948). To allow for turnover, average for state and local government was arbitrarily stepped up 20 percent and that for domestic service 50 percent. Employees in forestry exclude part of turpentine and rosin industry, assumed to be in covered employment under OASI. Nonprofit institutions include nonprofit hospitals other than proprietary hospitals; educational services, n.e.c. other than educational institutions and agencies, n.e.c.; religious organizations; and welfare and relief organizations.

Column 2
Lines 7, 8, and 10 arbitrarily estimated to be 15, 10, and 10 percent, respectively, of column 1.

Column 3
Difference between columns 1 and 2.

11 *Columns 1 and 2*
Seventy percent of the estimated number of persons who left the civilian labor force to enter the armed forces during the year. For the number entering the armed forces who left the labor force see Appendix A, notes to line 11. NID estimates for 1944–46 indicate that the number of full- and part-time employees, other than those in farming, railroads, private households, and government, constituted 61–62 percent of the sum of all full- and part-time employees (excluding military employees) plus active proprietors of unincorporated enterprises

(*Survey of Current Business,* July 1949, Tables 25 and 27). These percentages were raised to 70 on the assumption that men of military age were somewhat more concentrated in covered employment. Persons entering the armed forces who worked in jobs not covered by the OASI or at entrepreneurial or professional work are not included in columns 1 or 3 on the ground that they were already taken into account in preceding lines.

12 *Columns 1 and 2*
Seventy percent (see line 11) of the number of persons separated from the armed forces during the calendar year who entered the civilian labor force. Separations entering labor force estimated to be 90 percent of persons returned to civilian life during calendar 1944; 90 percent of persons returned in first 8 months and 50 percent of those returned in last 4 months of 1945; and 85 percent of persons returned during calendar 1946. (Separations from armed forces from reports of Army and Navy Departments. Percentages assumed to have entered civilian labor force based on monthly data from Bureau of the Census on percentage of veterans in civilian labor force.)

13–14 *Columns 1 and 2*
Seventy percent (see line 11) of the estimated normal annual 'permanent' additions to the labor force and of the estimated normal annual 'permanent' withdrawals minus 100,000. Although 'permanent' additions were doubtless above normal during the war, many of them entered the armed forces.

15 *Column 1*
From line 15, column 2.

Column 2
A residual, the difference between line 16, column 2, and the sum of lines 1–14, column 2.

16 *Columns 1 and 3*
Sum of lines 1–15, columns 1 and 3.

Column 2
Total number of persons with wage credits in 1 to 3 quarters minus number in Alaska and Hawaii (both from OASI), minus number under 14 years (based on special OASI tabulation showing age distribution of a 3 percent sample of workers, by quarters of employment in 1944).

I Notes to Table 11

COLUMN

1 Total number of persons with wage credits under OASI in 4 quarters minus number in Alaska and Hawaii (both from OASI). Number of 4-quarter workers under 14 was considered negligible. It was arbitrarily assumed that none of these 'full-time' workers had any farm or nonfarm entrepreneurial income; such multi-source earners were taken into account in the estimates for workers with 1–3 quarters of covered employment (see Table 10).

2 From Table 10, column 2, as follows:
- Line 1: From line 16.
- Line 2: Sum of lines 4–15.
- Line 3: From line 3.
- Line 4: From line 1.

3 From Table 10, column 3, as follows:
- Line 1: Sum of lines 3–10.
- Line 2: Sum of lines 4–10.
- Line 3: From line 3.
- Line 4: Zero because of the arbitrary assumption in Table 10, line 1 that all nonfarm entrepreneurs with wage or salary income had worked in covered employment at some time during the year.
- Line 5: Sum of lines 1 and 2.
- Line 6: From line 2.
- Line 7: From line 1.

4 Sum of columns 1–3.

5 The number of civilian earners in each of the three years 1944–46 who were in the civilian noninstitutional population as of May 1945, April 1946, and April 1947, respectively, when the three Census income surveys were conducted. To derive column 5, line 8, the estimated number of civilian earners 14 and older (other than farm operators) who died or entered the armed forces between January 1944 and April 1945, January 1945 and March 1946, and January 1946 and March 1947, respectively, was subtracted from column 4, line 8.

a) The number of deaths among civilian earners in 1944–46, 800,000, 750,000, and 700,000, respectively, was derived by ap-

plying annual death rates in each of 10 age-sex groups (National Office of Vital Statistics, Public Health Service, excluding deaths among armed forces overseas) to the number of persons in the civilian labor force exclusive of unpaid family workers in the corresponding age-sex groups in the peak month of the year (*Monthly Report on the Labor Force*; unpaid family workers, who were subtracted from the MRLF figures, were distributed by age groups on the basis of the *1940 Census of Population*). Calendar year deaths among civilian earners were stepped-up a third for 1944, and a fourth for 1945 and 1946 to allow for deaths of 1944 earners in January through April 1945, and for deaths of 1945 and 1946 earners in January through March 1946 and 1947, respectively.

b) The number of civilian earners entering the armed forces 1944–46, 2,500,000, 1,500,000, and 700,000, respectively, was estimated by multiplying the number of accessions to each branch of the armed forces, classified by age, in each month January 1944 through April 1945, January 1945 through March 1946, and January 1946 through March 1947, respectively (unpublished reports of the Army and Navy Departments) by a labor force participation rate for each age group and month (computed from Census labor force data).

c) The number of civilian earners entering institutions each year, 200,000, was based upon admissions to mental institutions and prisons reported by the Bureau of the Census. Admissions to these institutions were stepped up to include admissions to other types of institution, based upon the relative size of the population in specified institutions of different types. It was assumed arbitrarily that one-third of the persons admitted had had civilian earnings during the year.

Total deaths and entries into the armed forces or institutions in each year were distributed among the various source of earnings groups (lines 1–7) in proportion to the distribution of column 4, lines 1–7. A final adjustment was made in the case of farm operators (lines 3, 6, and 8) to add back the estimated deaths and entries into the armed forces or institutions from that group because of the procedure in field surveys of assigning a farm income recipient to each farm.

J Notes to Table 12

Columns 1 and 2

Column 1 for 1945 and column 2 for 1944 and 1946 from data from the 3 income surveys tabulated by the Census Bureau for the Interagency Technical Committee on Income Distribution. For 1944 column 2 includes some persons furnishing incomplete income reports in the field survey; in such cases income information for neighboring persons in the sample with similar characteristics and furnishing complete income data was substituted in the Census editing. For 1946 column 2 represents persons on family schedules with complete income information for all family members, inflated to the estimated total civilian noninstitutional population; family schedules with incomplete income information for one or more family members were discarded (see Part IX).

Column 2 for 1945 was derived by assuming that for persons 14 and older with incomplete income information the proportion receiving any civilian earnings and the proportion receiving civilian earnings from each of the several sources listed were the same as the corresponding proportions for persons furnishing complete income information.

Column 3

The 1944 and 1945 income surveys did not cover the quasi-household population except that the former included the part living in large rooming houses and trailer camps. Accordingly, column 2 for 1944 and 1945 was stepped up to include civilian earners in these households, derived by multiplying the estimated number of persons in excluded quasi-households by the percentage of persons in quasi-households in the 1946 survey who were civilian earners. An additional step-up was needed in these years because the private household population accounted for in the income surveys was too low, especially in 1945 when schedules not having any data on family composition were omitted. The number of civilian earners in 1945 was revised by multiplying the private household population in each of 10 age-sex groups, i.e., the civilian noninstitutional population as of April 1946 as given in the *Monthly*

Report on the Labor Force minus the estimated quasi-household population, by the percentage of persons having civilian earnings in the corresponding age-sex group, as determined from the 1945 income survey.

The additional number of civilian earners determined above was distributed among the various source of earnings groups on the basis of column 2, except that none of the civilian earners in quasi-households was assumed to have farm income. The additional wage and salary earners and entrepreneurs were distributed by size classes of earnings (for Tables 16 and 17) by the corresponding percentage distribution in the survey, except that those in quasi-households were assumed to have been more heavily concentrated in the lower earnings brackets than were earners in private households, as indicated in the 1946 income survey.

Comment

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The members of this Conference, in the course of their work, have undoubtedly come across research problems which demanded persistent and painstaking analysis of detailed statistics for their solution. To accomplish this will not achieve any startling discoveries. But further research in the area cannot otherwise be pursued with real success. We owe a debt of gratitude to Mrs. Goldsmith for carrying through this task and not merely labeling it "needed further research in the field".

Her study provides perspective needed for evaluating the various distributions and estimates presented in other papers prepared for this Conference. The procedure is to estimate aggregate 'consumer money income', a lowest common denominator, from BIR data and from the results of various field surveys. After a series of adjustments made with admirable precision and appalling comprehensiveness, these data are then compared with those derived from the Department of Commerce estimates of personal income. The disparities are substantial, and carry serious implications for the use of size distributions based on unadjusted survey data, as so many in this field are.

I would like to comment first on Mrs. Goldsmith's major findings, then on some of their implications for further research in the field.

1) The adjustments Mrs. Goldsmith made in the Commerce estimates of personal income are numerous and, in the aggregate, substantial. Those made to 3 items are of key importance: military payrolls, nonmoney income, and employee contributions to the social security system. Their algebraic sum in 1945 was $18 billion; Mrs. Goldsmith's total adjustment is $21 billion.

2) How completely does each source report consumer money income? In 1945 the Census Bureau covered 74 percent of the adjusted Commerce estimate of consumer money income; the Federal Reserve Board, 77 percent; and the Bureau of Internal Revenue, 86 percent. The highest proportions are 91 percent, achieved by the BLS-BHNHE survey of 1941, and 92 percent in the 1948 FRB survey. In all years the FRB estimates were higher than adjusted Census figures, though not always significantly so.

3) Differences in the aggregates, however, do not give any clear indication of what differences exist in the related distributions. Some further insight is given by the data for each income source. (a) For wages and salaries the Census surveys were 86–92 percent of the adjusted Commerce total; BLS, 89 percent; BIR, 95 percent in 1945. (b) Reporting on interest and dividends ranged from 16 percent in the BLS survey to 32 percent in the Census surveys and roughly 65 percent, the maximum percentage, in the BIR returns. (c) Of total farm entrepreneurial income, reported almost completely in the BLS-BHNHE survey, only half was reported in the 1945 Census survey and only 36 percent to the BIR in 1945. (d) For nonfarm entrepreneurial income the BLS-BHNHE survey overreported (possibly because this source was confused with interest and dividends); the 1945 Census percentage was 51 and the BIR, 87.

In summary, BIR in general achieved more complete reporting of consumer money income for every source except farm entrepreneurial income than did any field survey.

4) The estimates of consumer money income in Mrs. Goldsmith's paper do not test the income coverage of either the field

surveys or the BIR. They are confined to comparisons using the specific concept of 'consumer money income' and to the procedures the National Income Division employs in estimating personal income.

One example concerns income from interest. The National Income Division computes interest paid on agricultural property and urban residences by multiplying gross rent received by the interest rate. The difference between (a) this estimate of interest accrued and (b) interest actually paid is probably small in recent years, but it might well affect an evaluation of how completely the 1941 expenditure survey reported income.

By definition the National Income Division estimates exclude interest paid to individuals by other individuals. Since such payments should be reported on income tax returns, they must be considered in assessing the completeness with which income tax returns are filled out and the effectiveness with which the field surveys measure total money income of families and individuals (as distinguished from 'consumer money income').

5) As a preliminary to constructing a size distribution of aggregate income it is essential to estimate total earners. Mrs. Goldsmith makes such an estimate along the lines used by the Social Security Administration—adding to covered employment estimates of employees on farms, in government, etc. Although it is desirable to see what such an estimate looks like I do not believe that her technique commends itself quite as well as Welch's, requiring as it does a host of special adjustments to noncomparable series from various sources. The two estimates are very similar but in the end we cannot be certain that Mrs. Goldsmith has not counted some persons twice and omitted others altogether.

The major virtue of Mr. Welch's procedure, which relies on the Bureau of Census Current Population Survey, is that it covers the entire population at a given time without duplication. In December 1947 the enumerators inquired of each family member 14 and older whether he had done any work for pay or had operated a business during 1947. Mr. Welch increased the total from his survey by 5.5 percent, the proportion of the persons

reported as not having done any work in 1947 who had in fact worked, according to the monthly Current Population Surveys.[1] This procedure is, in my opinion, preferable to other methods for estimating total earners because of its simplicity and the basic consistency of its constituent data.

6) The implications of Mrs. Goldsmith's estimates for survey procedure are of great value and interest. As I see it, they suggest that improvements can be made in reporting at both high and low income levels.

According to Part IX, the Federal Reserve Board survey showed almost twice as high a percentage of families receiving incomes of $10,000 or over as were reported by the Census Bureau. In view of the inadequate reporting of dividends and interest which Mrs. Goldsmith demonstrates, and given Kuznets' estimate that the upper 5 percent of earners received half their income from these sources, it seems likely that field surveys could be improved at the upper income levels.

Improvements at the lower levels are no less essential. Half of the consumer money income missed by BLS in 1941, and about a fourth of that missed by the Census in 1945, according to Mrs. Goldsmith, was in wages and salaries. Further progress here is not chiefly a matter of willingness to report: in 1944 the proportion of wages and salaries covered was 78 percent for OASI, 86 percent for Census, and 95 percent for the BIR. The chief task is to improve methods of collection as much as possible within the confining but inevitable limitations of budget.

7) The differences indicated in these estimates between consumer money income, total money income, and total income (money plus nonmoney) underline the issues raised by Mrs. Brady and Miss Reid. Distributions of income excluding capital gains, of income before and after taxes, and of money income to both farm and nonfarm residents are available for use beyond the group of specialists in the field. They are inevitably

[1] This procedure implicitly assumes that the response to the December 1947 question had a 5.5 percent downward bias. Some respondents, however, probably stated that members of the household were in the labor force even though they would not have met Census requirements for inclusion. It therefore produces a slight and probably negligible overestimate.

put to many uses for which they are not suited. In the further development of the income distribution field we might profitably spend some time reviewing the basic purposes of income distributions. This is especially appropriate now that we have so admirable a collection of survey data and so comprehensive and excellent a survey as Mrs. Goldsmith's of the consumer money income aggregates covered by the various surveys.