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CHAPTER 3

Individual Taxes and the Distribution of Income

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Most economists agree that the most appropriate way to measure the burden or incidence of taxes is in terms of their effect on the distribution of income. There is so little dispute, in fact, that incidence is usually defined simply as the effect of taxes on the distribution of income available for private use.

In order to determine empirically the burden of any tax, some assumption must be made about whose real income it reduces and about the amount of before-tax income that would have been received in its absence. Since taxes affect the total level of economic output as well as the distribution of real income through their impact on both factor prices (the sources of income) and commodity prices (the uses of income), a full-fledged study of the overall burden of taxes is exceedingly complex.

In this paper, I am concerned only with the distributional effects of the personal income and employment taxes. Since these two levies amounted to more than 50 percent of total government tax receipts in 1966,[1] their incidence is of considerable importance for any overall study of tax burdens. In addition, there is

[1] Total government tax receipts in the study are equal to federal, state, and local government receipts as measured in the National Income Accounts, adjusted to exclude nontaxes, intergovernmental grants-in-aid, and social insurance contributions for civilian government retirement funds and veterans' life insurance.

little disagreement as to how these taxes should be allocated among persons.[2]

Once one has decided how a given tax should be allocated among individuals in the population, its incidence—or impact on the distribution of income—might be presumed to be a rather straightforward calculation. However, this is not necessarily the case, because there are a number of ways in which income might be defined. Although we prefer a particular income definition, at the beginning of the analysis some attention is given to alternative income concepts which might be used in an incidence study.

In addition to the overall distributions of before- and after-tax income, we also examine and compare the incidence of individual taxes for specific subgroups of the population. And since we interpret individual taxes broadly to include transfer payments received from the government as well as taxes paid, we assess the extent to which both individual taxes and transfers affect the distribution of income in our analysis.

METHODOLOGY AND DATA

The results presented are all based on the Brookings MERGE File which contains demographic and financial data for a sample of 72,000 families and single individuals in calendar year 1966. This file was created by combining information from the 1967 Survey of Economic Opportunity (SEO) and data from the 1966 Tax File, which contains income and tax information from federal individual income tax returns filed for 1966. The basic unit of analysis in the MERGE File is the Census family or unrelated individual.[3]

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[2] While it is possible that individuals might change their allocation of time between work and leisure because of the individual income tax, there are few economists who believe that this would be a significant factor. Therefore, we follow the traditional practice of allocating personal income taxes directly among individuals on the basis of their incomes under the assumption that we need not take account of tax-induced changes in the distribution of before-tax income. In the case of employment taxes, even though there is not unanimous agreement as to the incidence of such levies, we follow the prevalent modern practice of allocating both the employer and employee shares of these taxes among persons on the basis of their compensation from earnings. For a detailed discussion of the reasoning and various views on this subject, see John A. Brittain, *The Payroll Tax for Social Security* (Washington, D.C.: Brookings Institution, 1972).

[3] A detailed description of the MERGE File and how it was created is given in Benjamin A. Okner, "Constructing a New Data Base from Existing

Since all the calculations are based on microunit data in the MERGE File, the methodology used here differs considerably from previous empirical tax burden studies. In the past, individual taxes were allocated to broad income classes on the basis of a large number of statistical series which were used as proxies for the tax distributions.[4] The major disadvantage of such methodology is that it requires that taxes be distributed on the basis of the average income and behavior of all households in a particular income class, rather than on the basis of the income and behavior of the individual microunits in the class.

Although we could not make all the distinctions that are relevant for estimating tax liabilities, the MERGE File provides us with a very rich source of information for this purpose. Among the characteristics that are particularly important for estimating tax payments are sources of income, marital status and family composition, consumption patterns, and home ownership. Since this information is available for each unit in the file, whenever it is necessary to make assumptions about the economic behavior of households, we are not limited to a single assumption for all families in a given income class. This frees us from the uniformity assumption which has been the hallmark of all past studies.

In addition to this major improvement in methodology, the MERGE File permits us to prepare tax burden distributions on the basis of various alternative incidence assumptions and income definitions. In the past, these were impossible because of the sheer magnitude of the computational job. As illustrated below, the new file, along with present electronic computer capabilities, gives us great flexibility in this respect.

BEFORE-TAX DISTRIBUTION OF INCOME

There is no single concept of income that is acceptable and useful for all analytical purposes. However, for analyzing the incidence of taxes it is clearly inappropriate to compare tax payments with income subject to tax; we are interested in a comparison between taxes paid and total incomes. To provide this type of information, we adopted a comprehensive income defini-

Microdata Sets: The 1966 MERGE File," *Annals of Economic and Social Measurement* 1 (July 1972):325-42.

[4] The classic study along these lines is by Richard A. Musgrave and others, "Distribution of Tax Payments by Income Groups: A Case Study for 1948," *National Tax Journal* 4 (March 1951):1-54.

tion that is intended to correspond as closely as is practical to an economic concept of income, viz., consumption plus tax payments plus (or minus) the net increase (or decrease) in the value of assets during the year. This concept, called family income (FI), is the sum of national income (as defined in the National Income Accounts)[5] plus transfer payments plus accrued gains on farm assets and nonfarm real estate.[6] In keeping with the national income concept, FI includes corporation income before tax. This procedure has the advantage not only of consistency but also of providing a complete account of the accrued income claims of the household sector. Retained earnings of corporations, which are included in family income, may be regarded as an approximation of accrued capital gains on corporate stock during the year.[7] FI includes only income which accrues directly to families and individuals, and thus excludes the income received by fiduciaries and persons in the institutional population not represented in the SEO File.

Other income concepts that might be employed are money factor income, Census money income, and total money receipts. The relationship among these four concepts is illustrated in Table 1. Money factor income includes the $484 billion of money income received by individuals from production. To this we add wage supplements, net imputed rent, accrued capital gains on farm assets and nonfarm real estate, corporate retained earnings and the

[5] The major departure from the official definition of income is the omission of interest imputed to individuals for the services rendered to them by the banking system.

[6] For a detailed description, see Benjamin A. Okner, "Adjusted Family Income: Concept and Derivation," Brookings Technical Working Paper II, for the Distribution of Federal, State and Local Taxes Research Program, rev., processed (Washington, D.C.: Brookings Institution, August 1972), which is available on request.

[7] We used this approximation because the annual fluctuations in the value of corporate stock are very large and even three- to five-year averages may not give an adequate representation of accrued capital gains. Martin J. Bailey and Martin David have shown that over very long periods of time, capital gains on corporate securities are roughly equal to retained earnings. See Martin J. Bailey, "Capital Gains and Income Taxation," in Arnold C. Harberger and Martin J. Bailey, eds., *The Taxation of Income from Capital* (Washington, D.C.: Brookings Institution, 1969), pp. 15-26; and Martin David, *Alternative Approaches to Capital Gains Taxation* (Washington, D.C.: Brookings Institution, 1968), pp. 242-46.

TABLE 1   Comparison of Various Income Concepts, 1966

(billions of dollars)

Item	Amount
Money factor income[a]	484
Plus: Wage supplements[b]	41
Net imputed rent	11
Retained corporate profits	22
Corporation income tax	26
Accrued gains on farm assets and nonfarm real estate	37
Interest on life insurance policies	6
Subtotal	142
Equals family income before transfers	627
Less total nonmoney income	−142
Plus: Private pensions	6
Civilian and military government pensions	6
Other income	7
Subtotal	−124
Equals Census money income before transfers	503
Plus realized gains on asset sales	19
Equals total money receipts before transfers	523
Memorandum: transfer payments[c]	34

[a] Money factor income is the sum of wages and salaries, interest, dividends, rents and royalties, and farm and nonfarm proprietors' income.

[b] Wage supplements include employer contributions to private pension and welfare funds, Social Security, workmen's compensation, unemployment insurance, and civilian government retirement systems.

[c] Transfer payments include Social Security benefits, public assistance, veterans' disability compensation and pensions; workmen's compensation, and unemployment insurance payments received by individuals.

corporation income tax allocated to individual stockholders,[8] and interest on life insurance policies to obtain total FI before transfers of $624 billion. Since the Census income concept does not include nonmoney items, it is necessary to subtract the $141 billion of such income from FI before transfers and then add receipts from private pensions and civilian government and

[8] This excludes the portion of the tax attributable to fiduciaries and organizations not represented in the SEO universe.

military retirement pay to derive the $502 billion of Census money income before transfers.[9] Finally, because the Bureau of the Census does not include profits from the sale of assets in its income concept, we add $19 billion of realized capital gains to derive $521 billion of total money receipts before transfers.

These four different concepts vary considerably in their coverage. Family income is the most comprehensive concept, while money factor income is least inclusive. And as might be expected, the before tax and transfer distribution of income is quite different, depending on which concept is used. In Table 2 we present the distribution of income by size class under each of the four different definitions. (In Table 2, the income classes are defined in terms of each of the specific income definitions; therefore, the same family units *are not* included in the same income class under the various definitions.)

In Table 3, we show the same distributions by population quintiles under the different income definitions. Based on the data in Table 3, it is obvious that one can reach very different conclusions about the distribution of income depending upon what income concept is used. For example, under the FI concept, the lowest quintile includes families with incomes under $2,799; under the least comprehensive money factor income (MFI) concept, the lowest quintile includes those with incomes of less than $2,368, At the other end of the income distribution, the top quintile under the FI concept is comprised of families with incomes of $14,564 and over, whereas under the MFI definition, the highest quintile starts at $12,446. The absolute differences in income increase even more at the very highest levels; the top one percent of units are those with $44,318 of MFI while the top percentile under the FI concept begins at $50,000.

As measured by the Gini coefficient,[10] the distributions also

[9] Under our definition, only social insurance benefits financed by payroll taxes are treated as transfer payments. Benefits paid under government retirement programs are treated like private pensions and annuities and, therefore, are excluded from transfers. Government contributions, if any, to these programs are considered income during the current year and benefit payments received are viewed as representing only a change in the form of asset holding by individuals (i.e., cash is increased and a prepaid insurance asset is reduced).

[10] The Gini coefficient of inequality is a statistical measure of overall equality or inequality in the distribution of income. Pictorially, it is equal to the ratio of the area between the Lorenz curve and the line of equal distribution to the entire area below the line of equal distribution. The value

TABLE 2   Distribution of Income Before Taxes and Transfers Under Various Income Definitions, by Income Class, 1966

(millions of dollars and percent)

Income Classes[a] ($000)	Money Factor Income	'Family Income	Census Money Income	Total Money Receipts
Under 3[b]	10,724	10,784	11,386	11,286
3- 5	28,053	23,563	29,578	29,450
5- 10	151,516	133,594	152,566	151,284
10- 15	138,406	162,444	139,953	139,286
15- 20	61,959	101,637	68,538	69,924
20- 25	24,304	50,054	26,679	28,017
25- 50	43,712	72,894	46,784	51,782
50- 100	15,937	28,881	16,665	20,112
100- 500	8,153	29,470	8,643	14,224
500-1,000	655	4,854	681	2,051
1,000 and over	632	6,658	645	3,178
All classes	484,050	624,833	502,118	520,594

Percentage Distributions

Under 3[b]	2.2	1.7	2.3	2.2
3- 5	5.8	3.8	5.9	5.7
5- 10	31.3	21.4	30.4	29.1
10- 15	28.6	26.0	27.9	26.8
15- 20	12.8	16.3	13.6	13.4
20- 25	5.0	8.0	5.3	5.4
25- 50	9.0	11.7	9.3	9.9
50- 100	3.3	4.6	3.3	3.9
100- 500	1.7	4.7	1.7	2.7
500-1,000	0.1	0.8	0.1	0.4
1,000 and over	0.1	1.1	0.1	0.6
All classes	100.0	100.0	100.0	100.0

NOTE: Details may not add to totals because of rounding.

[a] The income class is defined in terms of the income distribution for each of the concepts.

[b] Includes negative incomes.

of the Gini coefficient varies between 0 (indicating perfect equality) and 1 (indicating perfect inequality). A decrease in the value of the coefficient signifies a more equal distribution; an increase signifies a more unequal distribution.

TABLE 3 Shares of Income Before Taxes and Transfers Received by Each Fifth of the Population Under Various Income Definitions, 1966

Population Quintile	Money Factor Income		Family Income		Census Money Income		Total Money Receipts	
	Income Range	Percent of Income Received	Income Range	Percent of Income Received	Income Range	Percent of Income Received	Income Range	Percent of Income Received
Lowest 5th	Under $2,368	1.41	Under $2,799	1.90	Under $2,482	2.05	Under $2,502	2.01
Second 5th	2,368- 5,389	9.50	2,799- 6,534	9.30	2,482- 5,582	9.79	2,502-5,630	9.54
Middle 5th	5,389- 8,383	17.07	6,534- 9,982	16.07	5,582- 8,567	17.00	5,630-8,634	16.53
Fourth 5th	8,383-12,446	24.57	9,982-14,564	23.29	8,567-12,736	24.22	8,634-12,884	23.72
Highest 5th	12,446 and over	47.39	14,564 and over	49.44	12,736 and over	46.94	12,884 and over	48.30
Top 5 percent	19,576 and over	20.23	24,459 and over	23.48	19,848 and over	20.05	20,714 and over	21.80
Top 1 percent	44,318 and over	7.56	50,000 and over	11.02	44,565 and over	7.42	46,152 and over	9.01
Gini coefficient of inequality[a]		.4601		.4746		.4489		.4622

[a] The Gini coefficient of inequality is a statistical measure of overall equality or inequality in the distribution of income. It may vary between 0 (indicating perfect equality) and 1 (indicating perfect inequality). A decrease in the value therefore signifies a more equal after-tax distribution of income and a more progressive tax structure.

differ substantially in the degree of inequality exhibited under the various income definitions. Census money income is distributed among families most nearly equal (Gini coefficient = .4489). In order of decreasing equality (increasing inequality), this is followed by money factor income (Gini coefficient = .4601); total money receipts (Gini coefficient = .4622); and finally, family income (Gini coefficient = .4746). All of the preceding coefficients refer to the distributions of income exclusive of transfer payments.

DISTRIBUTION OF INDIVIDUAL TAXES AND TRANSFERS

As has been indicated, the analysis is confined to the effects of personal income and employment taxes on the distribution of individual income. Since in this paper, we are dealing only with individual taxes, the amount of the corporation income tax allocated to each family is *excluded* from family income in all the effective tax-rate tables. However, in each table, families are classified by the amount of total income before taxes and transfers, i.e., total FI less transfer payments.

The income taxes include federal and state and local taxes. Payroll taxes include employee and employer Social Security contributions plus employer contributions for unemployment insurance and workmen's compensation. Other employer social insurance contributions—such as those for pension and health funds—are not considered taxes and are excluded from the analysis. Transfer payments include all benefits paid to individuals under government programs, regardless of whether they are financed by general revenue or by payroll taxes.[11]

Personal Income Taxes

The MERGE File contains the federal individual income tax reported by each taxpaying unit in 1966, so there is no need to allocate these taxes among families in the file.

State and local income taxes reported as itemized deductions on tax returns amounted to approximately 70 percent of the total collections reported for 1966. However, for units that did not

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[11] Business transfer payments, as defined in the National Income Accounts, are not included in our transfer payment (or income) definition.

itemize their deductions, we estimated the state and local income tax liability on the basis of income, family size, and place of residence.[12]

Total personal income tax collections (less refunds) in the National Income Accounts were $64.0 billion in 1966; this was comprised of $58.6 billion in federal collections and $5.4 billion in state and local government collections. The $55.4 billion of federal tax collections in the MERGE File amounts to about 90 percent of the national income amount. We did not attempt to adjust the MERGE figures to the national income total and accepted the amount reported.[13] State and local income taxes allocated to MERGE File units were $5.4 billion. The total amount of personal income taxes allocated among families in the file is therefore $60.8 billion.

Total federal income taxes amount to 9.2 percent of income, while total state and local income taxes equal 0.9 percent of FI. These taxes as a percentage of total FI in each income class are shown in Table 4.[14] As can be seen, both federal and state and local income taxes are progressive throughout most of the income distribution. However, for most families, total personal income tax rates are quite low. The federal income tax never exceeds 20.7 percent of total income, and the highest effective rate of state and local income taxes is only 1.9 percent. The effective tax rate is 10 percent or less for all families with incomes below $20,000 and exceeds 20 percent only for those with incomes of $100,000 and above. The highest effective rate of tax—22.7 percent—is reached in the $500,000 to $1 million FI class; beyond this income level, the effective income tax rate declines, because nontaxable income is highly concentrated among those with incomes at the very top of the income distribution.

[12] The last criterion is needed because not all states have an individual income tax. While it is used extensively, in 1966 there were still seventeen states that did not levy a personal income tax.

[13] An unknown, but probably small, part of the difference can be attributed to the fact that the SEO population differs from the national income covereage.

[14] Similar tables, with effective income tax rates based on the other income concepts, are presented in Appendix Tables A.1 to A.3. In order to aid the reader, families are classified by family income less transfers in all the Appendix Tables so that the effects of the income definition changes for the same families may be followed.

TABLE 4   Effective Rates of Federal and State and Local Individual
Income Taxes,[a] by Family Income Classes, 1966

(percent)

Family Income Before Transfers ($000)	Federal Individual Income Tax	State and Local Individual Income Taxes	Total Individual Income Taxes
0- 3[b]	2.7	0.2	3.0
3- 5	4.6	0.4	5.0
5- 10	6.7	0.6	7.2
10- 15	8.1	0.8	8.9
15- 20	9.1	0.9	10.0
20- 25	9.9	1.1	11.0
25- 50	11.4	1.2	12.6
50- 100	17.3	1.7	19.0
100- 500	19.6	1.9	21.5
500-1,000	20.7	1.9	22.7
1,000 and over	19.0	1.8	20.8
All classes	9.2	0.9	10.2

NOTE: Details may not add to totals because of rounding.

[a] Effective tax rates are calculated on the basis of family income before transfers, excluding the amount of corporation income tax allocated to families in the MERGE File.

[b] Excludes families with negative incomes.

It is well known that average effective rates, such as those shown in Table 4, often obscure large variations in taxes paid by different kinds of families within the same income class. The differences between those who derive their incomes primarily from wages and those who are primarily recipients of property income were reported in a recent paper by Joseph A. Pechman.[15] There are a very large number of other population subgroups that might be examined: two of these which are of particular interest are families of different size and those headed by aged and nonaged persons. The effective income tax rates for these subgroups are shown in Table 5.

[15] See Joseph A. Pechman, "Distribution of Federal and State Income Taxes by Income Classes," Papers and Proceedings of the Thirtieth Annual Meeting of the American Finance Association, *Journal of Finance* 27, no. 2 (May 1972):179-91. Brookings Reprint 234.

TABLE 5   Effective Rates of Individual Income Taxes[a] by Age of Family Head and Size of Family, by Family Income Classes, 1966
(percent)

Family Income Before Transfers ($000)	All Families						Nonaged Families[b]						Aged Families[b]					
	All Sizes	Family Size					All Sizes	Family Size					All Sizes	Family Size				
		1	2	3	4	5+		1	2	3	4	5+		1	2	3	4	5+
0- 3[c]	3.0	4.1	2.5	2.0	1.8	1.7	3.9	5.5	3.7	2.3	1.9	1.9	1.7	2.0	1.7	0.7	1.1	d
3- 5	5.0	8.5	4.3	4.2	2.9	1.6	5.6	10.0	5.4	4.4	2.7	1.5	3.1	3.8	2.7	2.8	4.8	2.2
5- 10	7.2	11.5	8.2	7.4	6.1	3.9	7.4	12.4	8.9	7.5	6.1	3.9	5.5	4.9	5.7	6.0	5.4	4.5
10- 15	8.9	13.8	10.6	9.7	8.2	6.7	9.0	15.1	10.9	9.7	8.2	6.7	8.2	7.4	8.3	8.8	8.7	6.1
15- 20	10.0	12.6	11.4	10.4	9.8	8.6	10.1	14.2	12.0	10.7	9.8	8.6	8.3	8.2	7.8	8.6	9.8	8.5
20- 25	11.0	12.7	12.7	11.1	10.8	9.9	11.3	16.8	13.5	11.6	10.9	9.9	7.6	5.0	7.7	6.9	9.2	10.5
25- 50	12.6	11.4	12.5	13.4	12.8	12.5	13.1	16.1	13.8	13.7	12.8	12.5	8.0	6.1	7.2	10.3	12.6	6.0
50- 100	19.0	21.7	17.1	18.9	20.2	20.0	20.2	23.3	20.7	19.0	20.3	20.0	4.6	9.6	4.3	d	3.5	–
100- 500	21.5	16.4	22.0	24.7	24.1	20.3	21.6	16.4	22.1	24.7	24.1	20.3	10.3	–	10.4	–	–	–
500-1,000	22.7	19.4	23.1	23.7	25.9	23.0	22.7	19.4	23.1	23.7	25.9	23.0	–	–	–	–	–	–
1,000 and over	20.8	19.8	20.3	23.8	21.0	21.7	20.8	19.8	20.3	23.8	21.0	21.7	–	–	–	–	–	–
All classes	10.2	11.6	11.3	10.5	9.8	8.7	10.5	13.3	12.5	10.7	9.8	8.7	6.2	5.0	5.8	7.7	8.5	6.6

a Effective tax rates are calculated on the basis of family income before transfers, excluding the amount of corporation income tax allocated to families in the MERGE File.
b Families headed by an individual age 64 or under are considered nonaged; those headed by an individual age 65 or over are classified as aged.
c Excludes families with negative incomes.
d Less than half of 1 percent.

For aged families, income taxes as a percentage of income are substantially below the rates paid by the nonaged at all income levels. On the average, the aged pay income taxes at about 60 percent of the rates paid by families headed by an individual under age 65.

While the same general pattern of lower tax rates is found by income class for each family-size group, we see a very different overall pattern of effective income tax rates among the aged and nonaged as family size increases. For nonaged families, effective tax rates fall as family size increases, whereas just the opposite occurs among aged families. This occurs because a large family headed by a person age 65 or over is very likely comprised of the head plus other, younger, family members still in the labor force, whereas an aged one-person family is likely to be a widow or widower. In general, as family size increases among aged families, there are likely to be more earners, larger incomes, and therefore higher tax payments.[16] On the other hand, among nonaged families, larger family size more typically represents more dependents and a lower likelihood of additional earners other than the family head (or head and spouse) than is the case among the aged.[17]

Employment Taxes

Employer and employee payroll taxes amounted to $31.8 billion in 1966. As indicated above, the employer payroll taxes are defined to include only the portion of social insurance contributions for Social Security and unemployment insurance in the National Income Accounts. In addition, employer workmen's compensation costs, which are excluded from wage supplements in the National Income Accounts, are included here as an employer payroll tax.

Since neither the employee nor employer payroll tax data were available from the SEO or Tax Files used in constructing the MERGE File, these amounts were allocated to workers on the

[16] The average income for aged single persons is about $2,400. This rises sharply as family size increases up to an average of almost $8,900 for aged families with five or more persons.

[17] The average income for nonaged single persons is about $5,800. This rises to about $11,200 for two-person families and then remains in the $11,500 to $12,600 range for all other family sizes.

basis of their earnings, industry and occupation, and the statutory requirements in effect in 1966.[18] Employer Social Security contributions for self-employed individuals were available directly from the federal individual income-tax data.

Since we accept the assumption that employer payroll taxes are ultimately borne by employees, we follow the national income procedure and include such levies as part of employee compensation in FI. The effective rate of such taxes is then correctly computed as the ratio of the tax to income before tax.[19] There is little disagreement over who pays the employee share of the payroll tax, and using the standard assumption, it was allocated among wage and salary earners. The effective payroll tax rates under these assumptions are shown in Table 6. As in the case of total individual income taxes, these are shown for all families and also by family size for aged and nonaged families.

The overall pattern of employment taxes shows the expected regressive pattern by income class. Although for both aged and nonaged families, tax rates ultimately fall as income rises, the effective tax rate is lower for those with incomes under $3,000 than it is at incomes of $3,000 to $5,000. Since the payroll taxes are essentially proportional to earnings in covered employment (up to the $6,600 maximum of taxable wages in 1966), the pattern of effective rates indicates that families in the lowest income class have a low proportion of covered earnings to total income. For the aged, this occurs because a large proportion of income is derived from property and is not subject to the payroll tax. Among nonaged families, low effective payroll tax rates at the bottom of the income scale result primarily from working in

[18] For details on the allocation process, see Benjamin A. Okner, "The Imputation of Missing Income Information," Technical Working Paper III, for the Distribution of Federal, State and Local Taxes Research Program, processed (Washington, D.C.: Brookings Institution, April 1971), which is available on request.

[19] Under this incidence assumption, employer payroll taxes should be added to reported money earnings in order to correctly assess the impact of these taxes under other income definitions. Alternative incidence assumptions are not included in this paper, since the distributional effects tend to become very complex. For example, if it is assumed that employer taxes are shifted forward in the form of higher commodity prices, it is necessary to move from the sources to the uses of income side in the analysis. This, in turn, requires that net national product (which includes indirect business taxes) be used as the tax base instead of the "national income" concept used here.

TABLE 6   Effective Rates of Employment Taxes[a] by Age of Family Head and Size of Family, by Family Income Classes, 1966

(percent)

Family Income Before Transfers ($000)	All Families							Nonaged Families[b]							Aged Families[b]						
	All Sizes	Family Size						All Sizes	Family Size						All Sizes	Family Size					
		1	2	3	4	5+			1	2	3	4	5+			1	2	3	4	5+
0- 3[c]	5.4	5.1	4.4	6.2	7.7	8.8		7.6	7.5	7.2	7.0	8.0	9.0		2.3	1.5	2.6	3.5	6.5	5.8
3- 5	7.1	6.9	6.3	7.5	8.1	8.0		8.2	8.4	8.3	7.9	8.2	8.0		3.3	2.2	3.2	5.3	6.7	7.1
5- 10	7.3	6.8	6.9	7.6	7.5	7.6		7.5	7.3	7.6	7.7	7.5	7.6		4.8	3.1	4.6	6.8	7.3	7.4
10- 15	6.2	4.4	6.4	6.8	6.2	6.2		6.4	5.0	6.6	6.8	6.2	6.2		4.6	1.3	4.4	6.0	6.9	7.2
15- 20	5.2	3.0	5.2	5.3	5.5	5.3		5.4	3.4	5.5	5.5	5.4	5.3		3.9	1.9	3.0	4.1	8.0	6.8
20- 25	4.6	1.9	3.8	5.3	4.9	4.7		4.7	2.9	4.0	5.4	4.8	4.7		3.0	d	2.4	3.7	5.9	4.4
25- 50	2.8	1.0	1.8	3.3	3.4	3.1		2.9	1.4	2.0	3.2	3.3	3.1		2.0	0.5	1.1	3.6	7.0	4.1
50- 100	0.9	0.5	0.7	0.8	1.2	1.0		0.9	0.6	0.8	0.8	1.2	1.0		0.3	d	0.4	d	2.2	—
100- 500	0.3	d	0.3	0.4	0.5	0.4		0.3	0.1	0.3	0.4	0.5	0.4		d	—	0.4	—	—	—
500-1,000	d	d	0.1	0.1	0.1	0.1		d	d	0.1	0.1	0.1	0.1		—	—	—	—	—	—
1,000 and over	d	d	d	d	d	d		d	d	d	d	d	d		—	—	—	—	—	—
All classes	5.3	4.9	4.9	5.8	5.5	5.3		5.5	5.7	5.2	5.8	5.5	5.3		3.6	1.8	3.2	5.0	7.0	6.4

a Effective tax rates are calculated on the basis of family income before transfers, excluding the amount of corporation income tax allocated to families in the MERGE File.

b Families headed by an individual age 64 or under are considered nonaged; those headed by an individual age 65 or over are classified as aged.

c Excludes families with negatives incomes.

d Less than hafl of 1 percent.

occupations not covered by Social Security and the other programs, which tends to lower the proportion of taxable wages to total income for these units. For nonaged families with incomes of $3,000 to $5,000, the effective tax rate on family income is about 8 percent, and this falls steadily as income rises above that level. There is very little difference in this pattern among nonaged families of different sizes. The burden of employment taxes among aged families is generally low, because a much smaller proportion of such units are in the labor force and subject to the payroll levies.

Because larger families in this category tend to have more earners, we find that effective payroll tax rates rise as family size increases for families headed by an aged person. Among nonaged families in the $10,000 to $20,000 income range, there is a sharp rise in effective payroll taxes paid by two-person families as compared with single individuals. This undoubtedly represents a move from single-earner to two-earner status for units in this income range.

Total Individual Taxes

When we examine the combined effect of the regressive employment taxes and the progressive income taxes, we find that the overall pattern of total tax burdens is slightly progressive. The effective tax rates by income classes for both taxes combined are given in Table 7. Those figures suggest that the progressivity involved in the combined data comes almost totally from the effect of the individual income tax near the top of the income distribution.

For the vast bulk of families, the combined effect of the individual income and employment taxes is pretty much proportional with respect to income. For example, among families headed by a nonaged individual, the combined effective tax rate is between 15 percent and 16 percent for all income levels between $5,000 and $50,000. This group comprises about 68 percent of all family units and receives almost 80 percent of all income (before taxes and transfers).

Families headed by a person age 65 and over pay lower tax rates on the average, but again there is not a great deal of variation in the combined effective rates of tax. Among the aged families, the effective tax rate ranges from about 10 percent to 13 percent of

TABLE 7 Combined Effective Rates of Individual Income and Employ-
ment Taxes[a] by Age of Family Head and Family Income
Classes, 1966

(percent)

Family Income Before Transfers ($000)	All Families	Nonaged Families[b]	Aged Families[b]
0- 3[c]	8.4	11.5	4.0
3- 5	12.1	13.8	6.4
5- 10	14.5	15.0	10.3
10- 15	15.2	15.3	12.8
15- 20	15.2	15.5	12.2
20- 25	15.6	16.0	10.6
25- 50	15.5	16.0	9.9
50- 100	19.8	21.1	4.9
100- 500	21.8	21.9	11.2
500-1,000	22.7	22.7	—
1,000 and over	20.8	20.8	—
All classes	15.4	16.0	9.8

[a] Effective tax rates are calculated on the basis of family income before transfers, excluding the amount of corporation income tax allocated to families in the MERGE File.

[b] Families headed by an individual age 64 or under are considered nonaged; those headed by an individual age 65 or over are classified as aged.

[c] Excludes families with negative incomes.

income for all units between the $5,000 and $50,000 income
levels. Since there are no aged families at the very top of the
income distribution in the MERGE File sample, the small degree
of progressivity for the aged all comes from the lower taxes paid
by those near the bottom of the income distribution.

Transfer Payments

Since transfer payments have a direct impact on the distribution
of income available for private use, it seems clear that they should
also be included in this analysis. Our definition of transfers is quite
similar to that used in the National Income Accounts. The major
differences are that we do not count either civilian or government

retirement receipts as transfers but we do include workmen's compensation benefits in transfer income.

Under this definition, total transfers to individuals amounted to $34 billion in 1966. This was primarily comprised of the $21.5 billion of Social Security benefits paid; it also included unemployment insurance, public assistance, veterans' disability compensation and pensions, and workmen's compensation receipts.

Since the most relevant distinctions among families with transfer receipts are age and income, we omit the family-size classification in showing the effect of transfer payments in Table 8. Transfer payments have their greatest impact on low-income families and especially the aged. In fact, for aged persons with incomes below $3,000, transfers average more than double the amount of income from production. Transfer income amounts to

TABLE 8   Transfer Payments as a Percentage of Income[a] by Age of Family Head and Family Income, 1966

(percent)

Family Income Before Transfers ($000)	All Families	Nonaged Families[b]	Aged Families[b]
0- 3[c]	124.2	74.4	203.0
3- 5	17.9	11.5	39.6
5- 10	5.1	3.5	19.9
10- 15	2.2	1.6	10.9
15- 20	1.8	1.3	9.0
20- 25	1.4	1.1	5.2
25- 50	0.9	0.6	4.2
50- 100	0.2	d	2.6
100- 500	d	—	1.9
500-1,000	—	—	—
1,000 and over	—	—	—
All classes	5.7	3.0	33.3

[a] Percentages are calculated on the basis of family income before transfers, excluding the amount of corporation income tax allocated to families in the MERGE File.

[b] Families headed by an individual age 64 or under are considered nonaged; those headed by an individual 65 or over are classified as aged.

[c] Excludes families with negative incomes.

[d] Less than half of 1 percent.

almost 40 percent of before-transfer income for the aged with incomes of $3,000 to $5,000 and close to 20 percent of FI for those with incomes of $5,000 to $10,000. As expected, transfers are much less important in influencing the distribution of income among nonaged families except at the very bottom of the income scale. Transfer payments are a very small proportion of total income for nonaged families with incomes of $5,000 or more.

DISTRIBUTION OF INCOME AFTER TAXES AND TRANSFERS

In this section, we combine the partial results discussed above to assess the overall impact of individual taxes and transfers on the distribution of before-tax income. The most expeditious way to summarize the large amount of information already presented is in terms of Lorenz curves showing the various income distributions. The before-tax and after-tax and transfer Lorenz curves for all families are shown in Chart 1[20] and the Gini coefficients and percentage reductions in the areas of inequality for each of the population subgroups examined are given in Table 9.[21] (The cumulative distributions of before- and after-tax income for all families and for each of the population subgroups are given in Appendix Tables A.5 to A.7.)

For all families, the Gini coefficient computed on the basis of the before-tax distribution of income is .4595; the coefficient for income after transfer payments is .4155; for income less transfers and income taxes, it is .3959; for income less transfers and employment taxes combined, it is .4200; and the Gini coefficient for the income distribution after both taxes and transfers is .3998. Translating these figures into more commonly used terms, they

[20] Before-tax income for the distribution in Chart 1 is equal to FI before transfers and excluding the amount of corporation income tax allocated to each family in the MERGE File. This is also the basis used for computing the before-tax and transfer Gini coefficients in Table 9.

[21] The percentage reduction in the area of inequality is equal to the ratio of the area between the before- and after-tax Lorenz curves (B) to the total area of inequality, i.e., the area between the line of equal distribution and the before-tax Lorenz curve (A). This ratio can be computed directly from the Gini coefficients associated with the before- and after-tax Lorenz curves. If the before-tax Gini coefficient is equal to G, and the after-tax Gini coefficient equals G', the percentage reduction in the area of inequality is equal to $(G - G')/G$.

Cumulative percentage of income
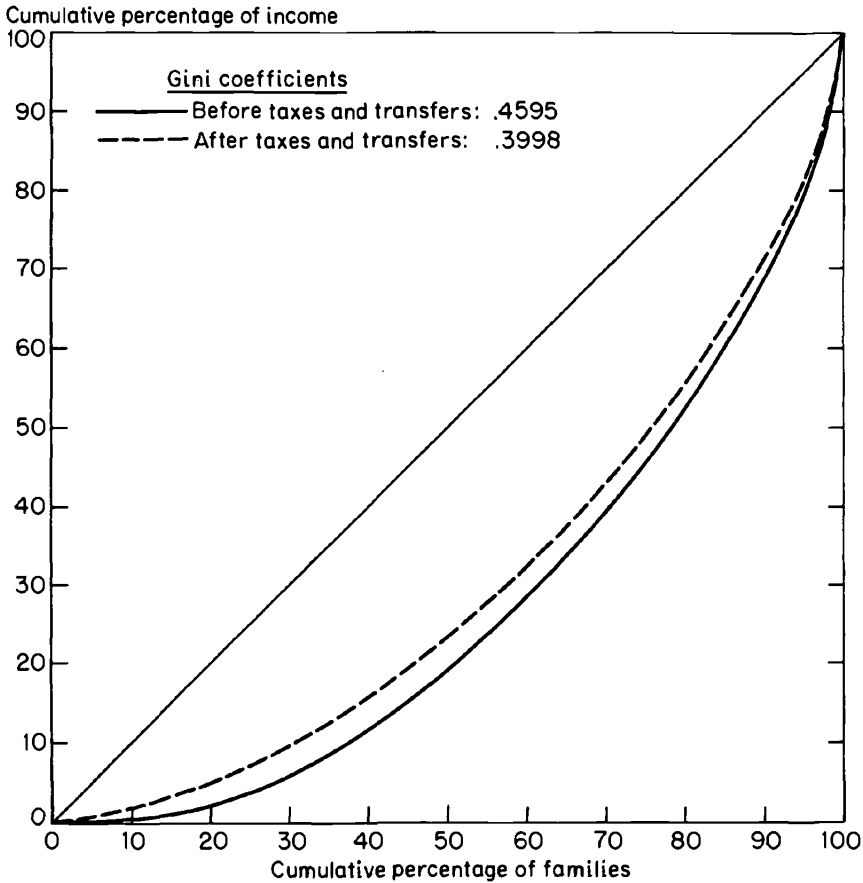
CHART 1: Comparison of the Distribution of Family Income Before and After Individual Taxes and Transfers, All Families, 1966

indicate that in the aggregate, income taxes are progressive; employment taxes are regressive; the total of income and employment taxes is progressive; and that transfer payments are very progressive.

In general, income before taxes and transfers is more equally distributed among nonaged families than among those headed by someone age 65 or over. The group with the most unequal distribution of before-tax income consists of aged single individuals; they are closely followed by aged couples. At the other end of "the equality scale" are the "standard" four-person families headed by a person under age 65.

Based on the changes in the area of inequality shown in Table 9,

TABLE 9 Gini Coefficients for the Distributions of Income Before Taxes and Transfers, Income After Transfers, and Income After Taxes and Transfers, 1966

Population Group	Gini Coefficient[a]			Percentage Change in Area of Inequality[b] Due to:	
	Income Before Taxes[c]	Income After Transfers	Income After Taxes and Transfers	Transfers	Individual Taxes and Transfers
All families	.4595	.4155	.3998	9.6	13.0
Nonaged families[d]	.4099	.3886	.3774	5.2	7.9
1 person	.5102	.4717	.4570	7.5	10.4
2 persons	.4310	.4059	.3919	5.8	9.1
3 persons	.3628	.3427	.3297	5.5	9.1
4 persons	.3385	.3255	.3126	3.8	7.6
5+ persons	.3639	.3433	.3277	5.2	9.9
Aged families[d]	.6278	.4573	.4367	27.2	30.4
1 person	.6799	.4263	.4097	37.3	39.7
2 persons	.5842	.4129	.3944	29.3	32.5
3 persons	.4598	.3744	.3595	18.6	21.8
4 persons	.4869	.3916	.3647	19.6	25.1
5+ persons	.4231	.3470	.3309	18.0	21.8

[a] The Gini coefficient of inequality is a statistical measure of overall equality or inequality in the distribution of income. It may vary between 0 (indicating perfect equality) and 1 (indicating perfect inequality). A decrease in the value therefore signifies a more equal after-tax distribution of income and a more progressive tax structure.

[b] The percentage reduction in the area of inequality is equal to the ratio of the area between the before-tax and the after-tax (after-transfer) Lorenz curves to the total area of inequality, i.e., the area between the line of equal distribution and the before-tax Lorenz curve.

[c] Income before taxes is equal to family income less transfers, excluding the amount of corporation income tax allocated to families in the MERGE File.

[d] Families headed by an individual age 64 or under are considered nonaged; those headed by an individual age 65 or over are classified as aged.

we find that transfer payments have a much greater effect on the after-tax and transfer distribution of income than do tax payments. For all families, transfer payments account for about three-quarters of the reduction in the area of inequality, whereas taxes account for one-fourth of the total change. Approximately the same proportions of total change are also attributable to the

effects of transfers and taxes for one-person nonaged families. For two- and three-person nonaged families, about 60 percent of the total reduction in inequality can be attributed to transfers and 40 percent to taxes; the proportions are about 50 percent each for taxes and transfers among larger nonaged families.

Transfer payments are extremely important in reducing inequality in the distribution of income among the aged. For such units, transfers account for a minimum of about 80 percent of the total reudction in the area of inequality (among four-person families) and they are responsible for 94 percent of the total change among single individuals over age 65. It should also be noted that the total percentage changes in inequality between the before-tax and the after-tax and transfer distributions for aged families are all substantially larger than they are for the nonaged group.

CONCLUSIONS

On the basis of the data presented here, it is clear that (1) the net effect of direct federal taxes and transfers has an important impact on the distribution of individual incomes in the economy; and (2) of the two parts, transfers play a far more important role in redistributing income among families than do taxes.[22] Since there have been two federal income tax reductions since 1966, it is possible that we are understating the redistributive effects of taxes in this analysis. However, there have also been significant increases in public assistance and Social Security benefits (plus payroll tax increases) during the period which would tend to offset some of the tax reduction effects. The data needed to assess the impact of these changes are not available, but I do not believe that the major conclusions would be very different if these new features were taken into account. On balance, I would guess that taxes now account for a little bit more of the total redistribution, while transfers account for a slightly smaller degree of redistribution. Thus, if further income redistribution is an important national

[22] The major finding of a study of overall tax burdens in 1966 was that total taxes—federal, state, and local—are proportional to income for almost 90 percent of all U.S. families. (See Joseph A. Pechman and Benjamin A. Okner, *Who Bears the Tax Burden* [Washington, D.C.: Brookings Institution, 1974]). As a result, the total tax system had a very small effect on the overall distribution of income.

objective, we must either adopt changes that will increase the progressivity of existing taxes.[23] and/or expand transfer payments to individuals using financing arrangements which are not regressive.

APPENDIX

TABLE A.1   Effective Rates of Total Individual Income Taxes Based on Census Money Income[a] by Age of Head and Family Income Classes, 1966

(percent)

Family Income Before Transfers ($000)	All Families	Nonaged Families[b]	Aged Families[b]
0- 3[c]	3.0	4.2	1.6
3- 5	6.0	6.6	3.8
5- 10	8.6	8.8	6.8
10- 15	10.6	10.6	10.0
15- 20	11.8	12.0	10.2
20- 25	13.1	13.4	9.5
25- 50	15.6	16.0	11.5
50- 100	24.5	25.8	6.8
100- 500	33.8	33.9	18.6
500-1,000	45.5	45.5	—
1,000 and over	47.4	47.4	—
All classes	12.1	12.6	7.4

[a] Effective tax rates computed on the basis of Census money income excluding transfers.

[b] Families headed by an individual age 64 or under are considered nonaged; those headed by an individual age 65 or over are classified as aged.

[c] Excludes families with negative income.

[23] For ways to increase federal income tax progressivity, see Joseph A. Pechman and Benjamin A. Okner, "Individual Income Tax Erosion by Income Classes," in *The Economics of Federal Subsidy Programs,* A Compendium of Papers submitted to the Joint Economic Committee, Part 1, *General Study Papers,* 92 Cong., 2 sess., 1972, pp. 13-40. Brookings Reprint 230. For a discussion of measures that would reduce the regressivity of payroll taxes, see Joseph A. Pechman, Henry J. Aaron, and Michael K. Taussig, *Social Security: Perspectives for Reform* (Washington, D.C.: Brookings Institution, 1968), pp. 214-27.

TABLE A.2   Effective Rates of Total Individual Income Taxes Based on Money Factor Income, by Age of Head and Family Income Classes, 1966

(percent)

Family Income Before Transfers ($000)	All Families	Nonaged Families[a]	Aged Families[a]
0- 3[b]	4.7	5.3	3.4
3- 5	6.5	6.9	4.8
5- 10	8.8	9.0	7.6
10- 15	10.8	10.8	10.7
15- 20	12.1	12.2	10.8
20- 25	13.4	13.7	10.1
25- 50	16.0	16.3	12.0
50- 100	24.9	26.3	7.0
100- 500	34.6	34.7	18.6
500-1,000	46.4	46.4	—
1,000 and over	47.9	47.9	—
All classes	12.6	12.9	8.7

[a] Families headed by an individual age 64 or under are considered nonaged; those headed by an individual age 65 or over are classified as aged.

[b] Excludes families with negative income.

TABLE A.3   Effective Rates of Total Individual Income Taxes Based on Total Money Receipts,[a] by Age of Head and Family Income Classes, 1966

(percent)

Family Income Before Transfers ($000)	*All Families*	*Nonaged Families*[b]	*Aged Families*[b]
0- 3[c]	2.3	4.0	1.5
3- 5	5.9	6.5	3.6
5- 10	8.5	8.7	6.3
10- 15	10.5	10.5	9.3
15- 20	11.6	11.8	9.6
20- 25	12.6	12.9	9.1
25- 50	14.9	15.2	10.8
50- 100	22.1	23.2	6.6
100- 500	27.3	27.4	18.6
500-1,000	32.8	32.8	—
1,000 and over	32.2	32.2	—
All classes	11.7	12.1	7.0

[a] Effective tax rates computed on the basis of total money receipts excluding transfers.

[b] Families headed by an individual age 64 or under are considered nonaged; those headed by an individual age 65 or over are classified as aged.

[c] Excludes families with negative income.

TABLE A.4   Combined Effective Rates of Individual Income and Employment Taxes[a] by Age of Family Head and Size of Family, by Family Income Classes, 1966

(percent)

Family Income Transfers ($000)	All Families							Nonaged Families[b]							Aged Families[b]						
	All Sizes	Family Size						All Sizes	Family Size						All Sizes	Family Size					
		1	2	3	4	5+			1	2	3	4	5+			1	2	3	4	5+	
0- 3[c]	8.4	9.1	6.9	8.2	9.5	10.5		11.5	13.0	10.9	9.4	9.9	10.9		4.0	3.4	4.3	4.2	7.6	5.8	
3- 5	12.1	15.3	10.6	11.7	11.0	9.6		13.8	18.4	13.7	12.2	11.0	9.6		6.4	6.0	5.8	8.1	11.5	9.3	
5- 10	14.5	18.2	15.1	15.0	13.6	11.5		15.0	19.7	16.4	15.2	13.6	11.5		10.3	8.0	10.3	12.9	12.7	11.8	
10- 15	15.2	18.3	17.0	16.4	14.4	12.9		15.3	20.1	17.6	16.6	14.4	12.9		12.8	8.7	12.7	14.8	15.6	13.3	
15- 20	15.2	15.6	16.5	15.8	15.3	13.9		15.5	17.6	17.5	16.2	15.3	13.9		12.2	10.1	10.9	12.8	17.8	15.3	
20- 25	15.6	14.6	16.5	16.4	15.7	14.6		16.0	19.6	17.6	17.0	15.7	14.5		10.6	5.0	10.1	10.6	15.1	14.8	
25- 50	15.5	12.4	14.3	16.6	16.2	15.6		16.0	17.5	15.8	16.9	16.0	15.6		9.9	6.7	8.3	13.9	19.6	10.1	
50- 100	19.8	22.2	17.8	19.7	21.4	21.0		21.1	23.9	21.5	19.9	21.4	21.0		4.9	9.6	4.6	d	5.7	–	
100- 500	21.8	16.5	22.3	25.1	24.6	20.7		21.9	16.5	22.5	25.1	24.6	20.7		11.2	–	10.9	–	–	–	
500-1,000	22.7	19.4	23.2	23.8	26.0	23.1		22.7	19.4	23.2	23.8	26.0	23.1		–	–	–	–	–	–	
1,000 and over	20.8	19.8	20.3	23.8	21.1	21.7		20.8	19.8	20.3	23.8	21.1	21.7		–	–	–	–	–	–	
All classes	15.4	16.5	16.1	16.2	15.4	14.0		16.0	18.9	17.7	16.6	15.4	14.0		9.8	6.7	9.1	12.7	15.5	13.0	

a Effective tax rates are calculated on the basis of family income before transfers, excluding the amount of corporation income tax allocated to families in the MERGE File.

b Families headed by an individual age 64 or under are considered nonaged; those headed by an individual age 65 or over are classified as aged.

c Excludes families with negative incomes.

d Less than half of 1 percent.

TABLE A.5   Cumulative Distribution of Before-Tax[a] and After-Tax[b] Income for All Families, 1966

(in cumulative percentages of income)

Income Decile[a]	All Sizes		1-Person Family		2-Person Family		3-Person Family		4-Person Family		5+-Person Family	
	Before-Tax	After-Tax	Before-Tax	After-Tax	Before-Tax	After-Tax	Before-Tax	After-Tax	Before-Tax	After-Tax	Before-Tax	After-Tax
Lowest	0.31	1.98	0.59	3.13	0.39	2.54	1.05	2.67	1.79	2.85	1.34	2.63
Second	1.96	4.93	1.19	6.26	1.79	5.80	4.74	7.06	6.16	7.61	5.45	7.23
Third	5.74	9.48	1.78	9.39	5.01	10.37	10.06	12.64	11.99	13.63	11.01	13.10
Fourth	11.49	15.51	4.84	13.85	10.03	16.28	16.86	19.57	19.03	20.75	17.96	20.21
Fifth	18.96	23.02	9.81	19.86	16.97	23.45	25.00	27.69	27.09	28.83	25.90	28.22
Sixth	28.11	31.96	17.31	27.63	25.61	31.88	34.37	36.92	36.42	38.13	35.12	37.43
Seventh	39.04	42.50	27.94	37.47	36.15	41.80	45.10	47.37	46.97	48.68	45.51	47.76
Eighth	52.15	55.13	41.47	49.49	48.74	53.48	57.80	59.73	59.26	60.88	57.67	59.74
Ninth	68.36	70.67	59.61	65.13	64.69	68.12	72.87	74.45	73.93	75.34	72.23	74.02
Highest	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Lowest 95 percent	78.70	80.52	71.58	75.37	75.09	77.72	82.18	83.45	82.96	84.14	81.48	82.99
Lowest 99 percent	91.03	92.16	85.56	87.66	88.49	90.19	92.88	93.70	93.38	94.17	92.83	93.67
Gini coefficient of inequality	.4595	.3998	.5875	.4496	.4958	.4049	.3740	.3322	.3439	.3145	.3656	.3279
Percentage reduction in area of inequality		13.0		23.5		18.3		11.2		8.5		10.3

a Based on distribution of family income before transfers, excluding the amount of corporation income tax allocated to families in the MERGE File.
b Based on family income including transfers and excluding corporation income tax and after individual income and payroll taxes.

TABLE A.6 Cumulative Distributions of Before-Tax[a] and After-Tax Incomes[b] for Nonaged[c] Families, 1966

(in cumulative percentages of income)

Income Decile[a]	All Sizes		1-Person Family		2-Person Family		3-Person Family		4-Person Family		5+-Person Family	
	Before-Tax[b]	After-Tax[c]	Before-Tax	After-Tax	Before-Tax	After-Tax	Before-Tax	After-Tax	Before-Tax	After-Tax	Before-Tax	After-Tax
Lowest	0.78	1.85	0.49	1.81	0.92	2.04	1.42	2.65	1.99	2.88	1.41	2.64
Second	3.91	5.48	1.66	4.11	3.99	5.83	5.47	7.15	6.48	7.71	5.59	7.29
Third	8.83	10.66	4.58	7.77	8.77	11.02	10.96	12.88	12.40	13.80	11.18	13.17
Fourth	15.16	17.14	9.42	13.08	14.94	17.39	17.84	19.91	19.43	20.91	18.12	20.26
Fifth	22.95	24.95	16.15	19.97	22.31	24.84	25.95	28.07	27.48	29.00	26.04	28.27
Sixth	31.95	33.95	24.77	28.48	30.95	33.46	35.20	37.27	36.80	38.31	35.23	37.45
Seventh	42.48	44.38	35.08	38.41	40.75	43.09	45.71	47.59	47.29	48.83	45.58	47.73
Eighth	54.79	56.54	47.86	50.49	52.41	54.50	58.12	59.77	59.47	60.95	57.69	59.69
Ninth	69.92	71.44	63.64	65.49	66.71	68.41	72.87	74.20	74.00	75.33	72.20	73.94
Highest	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Lowest 95 percent	79.44	80.74	73.76	75.06	75.81	77.25	81.99	83.10	82.98	84.05	81.44	82.92
Lowest 99 percent	91.06	91.99	85.23	86.04	88.74	89.81	92.61	93.37	93.33	94.11	92.84	93.65
Gini coefficient of inequality	.4099	.3774	.5102	.4570	.4310	.3919	.3628	.3297	.3385	.3126	.3639	.3277
Percentage reduction in area of inequality		7.9		10.4		9.1		9.1		7.7		9.9

[a] Based on distribution of family income before transfers, excluding the amount of corporation income tax allocated to families in the MERGE File.

[b] Based on family income including transfers and excluding corporation income tax and after individual income and payroll taxes.

[c] Families headed by an individual age 64 or under.

TABLE A.7 Cumulative Distributions of Before-Tax[a] and After-Tax Incomes[b] for Aged Families,[c] 1966

(in cumulative percentages of income)

Income Decile[d]	All Sizes		1-Person Family		2-Person Family		3-Person Family		4-Person Family		5+-Person Family	
	Before-Tax	After-Tax	Before-Tax	After-Tax	Before-Tax	After-Tax	Before-Tax	After-Tax	Before-Tax	After-Tax	Before-Tax	After-Tax
Lowest	0.69	3.48	1.09	4.68	0.77	3.78	0.53	2.83	0.26	2.78	0.39	2.70
Second	1.39	7.00	2.18	9.36	1.54	7.62	1.53	6.06	1.55	6.22	2.32	6.12
Third	2.08	10.52	3.27	14.05	2.89	11.83	4.24	10.48	4.32	11.08	5.86	11.32
Fourth	3.73	14.73	4.36	18.73	5.76	17.04	9.39	16.70	8.88	16.72	10.88	17.27
Fifth	7.30	20.35	5.45	23.42	10.27	23.52	16.09	23.75	14.99	23.80	18.73	25.53
Sixth	13.25	27.65	9.45	29.69	17.18	31.38	25.82	33.24	23.59	32.69	28.71	35.41
Seventh	22.05	36.98	17.07	38.06	26.69	41.16	38.55	44.74	34.69	43.34	42.12	47.99
Eighth	35.57	49.38	29.01	48.99	40.05	53.02	54.24	58.93	50.39	57.77	56.86	62.33
Ninth	56.77	66.48	48.11	64.34	59.27	68.25	72.99	76.07	71.03	75.81	74.94	78.11
Highest	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Lowest 95 percent	72.60	78.92	63.97	75.87	73.08	79.07	84.27	86.32	84.39	87.07	86.35	88.00
Lowest 99 percent	91.01	93.01	87.21	91.60	90.90	92.89	95.98	96.40	96.45	96.91	96.48	96.95
Gini coefficient of inequality	.6287	.4367	.6799	.4097	.5842	.3944	.4598	.3595	.4869	.3647	.4231	.3309
Percentage reduction in area of inequality		30.5		39.7		32.5		21.8		25.1		21.8

[a] Based on distribution of family income before transfers, excluding the amount of corporation income tax allocated to families in the MERGE File.
[b] Based on family income including transfers and excluding corporation income tax and after individual income and payroll taxes.
[c] Families headed by an individual age 65 or over.