

**Table 14**  
**Redistribution Through Public Finance for all Families**  
**By Income Class — 1961**

| RATIO   | Income class (a)   |                        |                        |                        |                        |                        |                        |                          |                         | TOTAL |
|---|--|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------|-------------------------|-------|
|   | Under<br>\$2,000   | \$2,000<br>to<br>2,999 | \$3,000<br>to<br>3,999 | \$4,000<br>to<br>4,999 | \$5,000<br>to<br>5,999 | \$6,000<br>to<br>7,499 | \$7,500<br>to<br>9,999 | \$10,000<br>to<br>14,999 | \$15,000<br>and<br>over |       |
| <b>Total expenditures</b>                                   | <b>Ratio of government expenditure benefits to tax burdens</b> |                        |                        |                        |                        |                        |                        |                          |                         |       |
| <b>Total taxes</b>  |  |                        |                        |                        |                        |                        |                        |                          |                         |       |
| (1) Standard assumptions <sup>b</sup>                       | 4.1  | 2.6                    | 1.7                    | 1.2                    | 1.1                    | .9                     | .8                     | .7                       | .4                      | 1.0   |
| (2) General benefits allocated<br>all on number of families | 5.3  | 3.0                    | 1.9                    | 1.3                    | 1.0                    | .9                     | .7                     | .5                       | .2                      | 1.0   |
| (3) Excluding general benefits <sup>c</sup>                 | 4.8  | 3.1                    | 1.8                    | 1.2                    | 1.0                    | .8                     | .7                     | .6                       | .3                      | 1.0   |
| <b>Federal expenditures</b>                                 |  |                        |                        |                        |                        |                        |                        |                          |                         |       |
| <b>Federal Taxes</b>  | 6.1  | 3.3                    | 1.9                    | 1.3                    | 1.1                    | .9                     | .8                     | .6                       | .3                      | 1.0   |
| <b>State-local expenditures<sup>d</sup></b>                 |  |                        |                        |                        |                        |                        |                        |                          |                         |       |
| <b>State-local taxes</b>                                    | 2.4  | 1.8                    | 1.3                    | 1.1                    | 1.0                    | 1.0                    | .9                     | .8                       | .6                      | 1.0   |
| <b>Social insurance benefits</b>                            |  |                        |                        |                        |                        |                        |                        |                          |                         |       |
| <b>Social insurance contributions<sup>e</sup></b>           | 7.4  | 4.3                    | 2.4                    | .9                     | .7                     | .5                     | .4                     | .3                       | .1                      | 1.0   |
| <b>Education expenditures<sup>e</sup></b>                   |  |                        |                        |                        |                        |                        |                        |                          |                         |       |
| <b>Property tax burden<sup>e</sup></b>                      | 1.0  | 1.4                    | 1.2                    | 1.3                    | 1.2                    | 1.1                    | .9                     | .6                       | .3                      | 1.0   |

a. The income class limits are expressed in money income after personal taxes.

b. General benefit expenditures allocated half on the basis of number of families and half on the basis of family money income; corporation taxes allocated half on the basis of consumption and half on the basis of dividends.

c. Ratio compares the tax distribution after adjustment of the aggregate amount to equal the total expenditures in the category shown.

d. After deduction of Federal grants-in-aid.

e. Elementary and secondary.

Source: Appendix Tables B-9 and B-10.

**Table 15**  
**Percentage of Urban Families in the**  
**BLS Survey Reporting Social**  
**Insurance Contributions and Benefits**  
**By Income Class — 1961**

| Income class<br>(Money income after<br>personal taxes) | Percentage reporting<br>social insurance |          |
|--|--|----------|
|  | Contributions (a)                        | Benefits |
| Under \$1,000  | 10                                       | 44       |
| \$1,000 to 1,999                                       | 25                                       | 67       |
| 2,000 to 2,999   | 61                                       | 52       |
| 3,000 to 3,999   | 77                                       | 41       |
| 4,000 to 4,999   | 92                                       | 27       |
| 5,000 to 5,999   | 94                                       | 25       |
| 6,000 to 7,499   | 98                                       | 22       |
| 7,500 to 9,999   | 96                                       | 19       |
| 10,000 to 14,999                                       | 95                                       | 16       |
| 15,000 and over  | 91                                       | 13       |
| Total  | 81                                       | 31       |

a. Does not include employer contributions.

Source: U.S. Department of Labor, Bureau of Labor Statistics, *Survey of Consumer Expenditures 1960-61*.

### **Property Taxes and Education Expenditures**

Although it is difficult to relate most taxes to specific expenditures, a comparison can be made between property tax burdens and benefits of education expenditures. Most primary and secondary education expenditures are financed by property taxes; property taxes provide approximately 98 percent of school district tax collections and approximately 85 percent of their total revenues excluding intergovernmental aid.<sup>2</sup> Although not all revenues from property taxes go towards primary and secondary education expenditures, it is possible to adjust for the difference between total property taxes and total primary and secondary education expenditures by equating the totals to compare their combined effects

on the redistribution of income. In other words, the amount of education expenditures financed by the property tax can be compared with estimated distribution of property tax burdens for schools.

The benefits from government expenditures on primary and secondary education, when related to property taxes, show some redistribution in favor of families with incomes in 1961 from \$2,000 to \$7,500. However, the difference between benefits and tax burdens is much less than in the case of most other functions of government. On the estimates shown here, no income group received benefits of even as much as twice its property tax, and no income group received benefits of less than one-third of its property tax burden for schools.

2. U. S. Department of Commerce, Bureau of the Census, *Government Finances in 1963-64*, (Washington, D. C.: U. S. Government Printing Office, 1965) p. 30.



# Appendix A

## Nature and Limitations of Family Survey Data For Estimating Tax Burdens

The bases of allocation used in this study were derived from the Bureau of Labor Statistics, *Survey of Consumer Expenditures 1960-61*. This survey is a decennial one designed primarily to provide information for the Consumer Price Index. The BLS data were gathered from interviews of a sample of nearly 14,000 families and covering over 4,000 items of receipts and expenditures.<sup>1</sup> The reliability of such a survey mainly depends on two things: (a) the accuracy of the information supplied by respondents, and (b) the size of the sample used.

In some cases families will refuse, or be unable, to give the information requested. The BLS attempted to adjust for this problem by cross-checking the data for consistency. However, the BLS was interested more in the accuracy of the reporting of expenditures than of the reporting of income. Therefore, if expenditures did not equal receipts-less-savings, but expenditure items showed consistency and completeness, the data were still used. The detail of data on income by source may thus be less reliable than that on expenditures.

The difference between total reported receipts, disbursements, and net change in assets is shown by the account balancing difference. It is relatively smaller at higher income levels (Table A-1). In other words, the larger the money income, the greater the balancing accuracy of reported income, expenditures, and changes in assets.

The sample size also acts as a determinant of the reliability of a survey's results. As the size of the survey sample is increased, the "sampling variability" in the results grows smaller.

1. U. S. Department of Labor, *Consumer Expenditures and Income, Survey of Consumer Expenditures 1960-61*, (Supplement 3 to BLS Report No. 237-38; Washington, D. C.: U. S. Government Printing Office, 1965). For a comparison with other surveys, see U. S. Bureau of the Budget, *Family Income Distribution Statistics Published by Federal Agencies*, (Statistical Evaluation Report No. 5; Washington, D. C.: December 1964, 15 pp. mimeo.); and T. P. Schultz, *The Distribution of Personal Income*, (Washington, D. C.: U. S. Congress, Joint Economic Committee, December 1964).
2. The University of Michigan, *Survey of Consumer Finances*, series of monographs of the Survey Research Center, Institute for Social Research, Ann Arbor.

The BLS sample covered 13,728 families. Compared with the size of other consumer surveys such as the Michigan *Survey of Consumer Finances*,<sup>2</sup> which covers about 3,000 families, the BLS sample is large.

Many families, however, did not report receipts of one or more types of income or expenditures on particular items in the questionnaire. The greater the subdivision of income or expenditure categories, the smaller usually was the number of families in each cell reporting, and therefore, the greater the sampling variability in the average figures obtained.

An illustration of this point is the BLS distribution of dividend income. The percentage of urban families (comprising approximately two-thirds of the total sample) reporting dividend income varied from six percent in the under \$2,000 income class to thirty-four percent in the \$15,000 and over income class. The absolute number of families reporting dividend income in the under \$2,000 income group was only forty-nine. Therefore, the probability is large that the dollar amounts of dividend income reported in this class were unrepresentative.

Other examples of items which were reported by relatively few urban families in a particular income class, were automobile purchases (twenty-four families in the under \$2,000 income class in 1961), and education expenditures (forty-eight families in the under \$2,000 income class).

The BLS Survey provides data by income class for single person families and for families of other sizes. It would be possible to produce

**Table A-1**  
**Account Balancing Difference as a Percentage of Money Income**  
**Before Taxes by Income Class**  
**1960—1961**

|   | Income class (Money income after personal taxes) |                        |                        |                        |                        |                        |                        |                          |                         |
|---|--|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------|-------------------------|
|   | Under<br>\$2,000                                 | \$2,000<br>to<br>2,999 | \$3,000<br>to<br>3,999 | \$4,000<br>to<br>4,999 | \$5,000<br>to<br>5,999 | \$6,000<br>to<br>7,499 | \$7,500<br>to<br>9,999 | \$10,000<br>to<br>14,999 | \$15,000<br>and<br>over |
| Average account balancing difference(a)   | \$ 80  | \$ 130                 | \$ 179                 | \$ 239                 | \$ 229                 | \$ 253                 | \$ 245                 | \$ 112                   | \$ 14                   |
| Average money income before personal taxes(b)   | 1,285  | 2,618                  | 3,746                  | 4,922                  | 6,045                  | 7,499                  | 9,716                  | 13,583                   | 27,573                  |
| Account balancing difference as a percentage<br>of money income before personal taxes | 6.2%   | 5.0%                   | 4.8%                   | 4.9%                   | 3.8%                   | 3.4%                   | 2.5%                   | 0.8%                     | 0.1%                    |

a. The account balancing difference is the difference between reported expenditures, reported income and other money receipts, and reported net changes in assets.

b. Personal taxes comprise Federal, state and income taxes, poll taxes, and taxes on personal property.

Source: U. S. Bureau of Labor Statistics, Survey of Consumer Expenditures 1960-61, Report No. 237-93, February 1965, p. 11.



tax burden estimates for families of the same size at different income levels. However, preliminary calculations of tax burdens for two or more person families showed little difference from those for all families. Consequently, the results are not included here.

Nevertheless, the large percentage of single person families at low income levels should be noted. About half of the "families" with incomes under \$2,000 and about one quarter of the families with incomes from \$2,000 to \$3,000 were single person units. These data are shown in Table A-2 together with the average size of family by income class.

**Table A-2**

**Number of Families, Single Person Units, and Average Size of Families By Income Class—1961**

| Income class (a)  | All families  | Single person families | Average size, all families |
|-------------------|---------------|------------------------|----------------------------|
|                   |               |                        |                            |
| Under... \$ 2,000 | 7,860         | 3,973                  | 1.9                        |
| 2,000- 2,999      | 6,077         | 1,514                  | 2.7                        |
| 3,000- 3,999      | 6,334         | 1,152                  | 2.9                        |
| 4,000- 4,999      | 6,972         | 823                    | 3.2                        |
| 5,000- 5,999      | 7,018         | 388                    | 3.5                        |
| 6,000- 7,499      | 8,399         | 392                    | 3.7                        |
| 7,500- 9,999      | 7,585         | 173                    | 3.9                        |
| 10,000- 14,999    | 3,962         | 59                     | 4.1                        |
| 15,000 and over   | 1,100         | 15                     | 3.9                        |
| <b>Total</b>      | <b>55,306</b> | <b>8,487</b>           | <b>3.2</b>                 |

a. Money income after personal taxes.

Source: U.S. Bureau of Labor Statistics, Survey of Consumer Expenditures 1950-61, Report No. 237-93, February 1965, p. 16.

# Appendix B

## The Income Concept, Methods and Bases of Allocation

The definition of the income base on which to measure "effective rates" of taxation presents a difficult problem. It involves various assumptions, just as does the choice of methods of allocating tax burdens and expenditure benefits.

### The Income Concept

The broadest official measure of total "income" or output of the economy is the gross national product. In general social accounting terms, total "income" equals the value of output in the sense that all of the items on the income side of the accounts must add up to the value of goods and services produced. In the U. S. Department of Commerce definitions and concepts, however, the broadest series to which the term "income" is given is the *national income*. In summary form, the relationship between gross national product and national income was as follows for the calendar year 1965:

|  | (Billions) |
|--|------------|
| Gross national product                                       | \$681.2    |
| Less: Capital consumption allowances                         | 59.6       |
| Equals: Net national product                                 | 621.6      |
| Less: Indirect business taxes                                | 62.7       |
| Current surplus of government enterprises minus subsidies(a) | -1.0       |
| Business transfer payments(a)                                | 2.6        |
| Statistical discrepancy(a)                                   | -1.6       |
| Equals: National Income                                      | 559.0      |

a. For explanation of these items, see U.S. Department of Commerce, *National Income* (Washington, D.C.: Government Printing Office, 1954 edition), pp. 58-60.

The total tax burden could reasonably be related to the GNP as the most inclusive measure of output in the economy. Yet we do not know how taxes affect different elements of national output — we cannot say what parts of the tax burden "come out of" any particular portions of national income or output. In the present study, we assume that the tax burden would

not come out of "capital consumption allowances," i.e., the portion of output which is required to replace capital equipment. In wartime, however, through taxation and other measures the government is able to divert resources from maintaining capital equipment to war purposes, and it would then be reasonable to relate the tax burden to gross national product. In peacetime, it seems more reasonable to assume that the tax burden comes out of national output over and above what is required to replace capital equipment. Consequently, we take net national product (NNP) as the most appropriate base against which to measure effective rates of the total tax burden.<sup>1</sup>

It has been argued that narrower bases, such as national income, personal income, or some modification of these Department of Commerce series, would be better bases for measuring effective tax rates of the total tax burden. The argument for the use of net national product is essentially that this is the broadest measure of net output available.<sup>2</sup> If we are to deal with *all* taxes, we should relate the tax burden to the total output from which the taxes come.

This aggregative argument requires modification when the purpose is to estimate effective rates of tax for families grouped by size of income. For example, how should capital gains be treated? Should they be added to the income base for the purpose of measuring effective rates? From the point of view of the economy as a whole, capital gains do not represent current output and so are excluded from the net national product. From the point of view of the individual family, however, capital gains may represent a very important source of income and be quite relevant in measuring this family's effective tax rate. In fact, however, realized capital gains are, on the average, an insignificant portion of family incomes except at high income levels. This is shown in Table B-1 in which effective rates of tax to personal income including and excluding capital gains are compared. Moreover, undistributed corporate

1. See Tax Foundation, Research Aid No. 4. *The Tax Burden in Relation to National Income and Product*, for a fuller discussion of this subject.
2. Some question whether there should be further "netting" of certain items, particularly indirect taxes, in arriving at a total income base. For further analysis, see George A. Bishop, "Income Redistribution in the Framework of the National Income Accounts," *National Tax Journal*, Vol. 19, No. 4, December 1966, pp. 378-390.

**Table B-1**  
**Total Taxes as a Percentage of Various Income Bases by Income Class**  
**Calendar Year 1961**

|   | Income class (Money income after personal taxes) |                        |                        |                        |                        |                        |                        |                          |                         | TOTAL |
|---|--|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------|-------------------------|-------|
|   | Under<br>\$2,000                                 | \$2,000<br>to<br>2,999 | \$3,000<br>to<br>3,999 | \$4,000<br>to<br>4,999 | \$5,000<br>to<br>5,999 | \$6,000<br>to<br>7,499 | \$7,500<br>to<br>9,999 | \$10,000<br>to<br>14,999 | \$15,000<br>and<br>over |       |
| <b>Total taxes, including social insurance, as a percent of:</b>              |  |                        |                        |                        |                        |                        |                        |                          |                         |       |
| <b>Net national product</b>   |  |                        |                        |                        |                        |                        |                        |                          |                         |       |
| Product side  | 15.1   | 19.5                   | 24.0                   | 26.1                   | 27.7                   | 29.1                   | 31.1                   | 36.1                     | 66.1                    | 30.5  |
| Factor income side(a)   | 45.5(b)  | 33.2                   | 31.5                   | 29.3                   | 28.9                   | 28.3                   | 28.4                   | 29.6                     | 38.9                    | 30.5  |
| Personal income & capital gains   | 30.5   | 29.4                   | 32.9                   | 32.7                   | 33.1                   | 32.2                   | 32.2                   | 34.2                     | 42.2                    | 33.6  |
| Personal income   | 31.0   | 30.0                   | 33.5                   | 33.1                   | 33.5                   | 32.6                   | 32.7                   | 35.2                     | 50.2                    | 34.7  |
| Money income (BLS)  | 36.8   | 35.5                   | 39.5                   | 39.1                   | 39.9                   | 39.3                   | 39.4                   | 42.3                     | 61.0                    | 41.6  |
| <b>Percentage adjusted to the same effective rate level in the aggregate:</b> |  |                        |                        |                        |                        |                        |                        |                          |                         |       |
| <b>Net national product</b>   |  |                        |                        |                        |                        |                        |                        |                          |                         |       |
| Product side  | 15.1   | 19.5                   | 24.0                   | 26.0                   | 27.7                   | 29.1                   | 31.1                   | 36.1                     | 66.1                    | 30.5  |
| Factor income side(a)   | 45.5(b)  | 33.2                   | 31.5                   | 29.3                   | 28.9                   | 28.3                   | 28.4                   | 29.6                     | 38.9                    | 30.5  |
| Personal income & capital gains   | 27.7   | 26.7                   | 29.9                   | 29.7                   | 30.0                   | 29.2                   | 29.2                   | 31.0                     | 38.3                    | 30.5  |
| Personal income   | 27.3   | 26.3                   | 29.4                   | 29.1                   | 29.4                   | 28.6                   | 28.7                   | 30.9                     | 44.1                    | 30.5  |
| Money income (BLS)  | 27.0   | 26.0                   | 29.0                   | 28.7                   | 29.3                   | 28.8                   | 28.9                   | 31.0                     | 44.7                    | 30.5  |

a. Equivalent to "national income," i.e., the sum of incomes received in exchange for productive services, plus indirect business taxes.

b. The percentage in the lowest income class is high because the net national product base as the equivalent of factor incomes excludes transfer payments, which make up a sizeable part of the money income of families in this class.

Source: Appendix Tables B-9 and B-11.



**Table B-2**  
**Bases of Allocation for Net National Product**  
**Income Side**

| Relation of Money Income to NNP  | Basis of Allocation (a)                            |
|--|--|
| BLS money income before taxes  | BLS money income                                   |
| Plus: "Other labor income"   | Wages and salaries                                 |
| Net rent, owner-occupied dwellings   | Homeowners' housing expenditures                   |
| Services furnished by financial intermediaries   | Interest receipts                                  |
| Food grown and consumed on farms   | Value of farm consumed food                        |
| Food furnished employees   | Number of full-time earners                        |
| Difference between personal taxes in BLS survey and<br>in national income accounts             | Personal taxes                                     |
| Imputed items in personal saving (b)   | Homeowners' housing expenditure                    |
| Other and unaccounted  | Money income                                       |
| [Capital gains]  | Profits on sale of assets                          |
| Equals: Personal income  |  |
| Less: Transfer to persons  |  |
| Social insurance benefits  | Social insurance benefits                          |
| Civilian government pensions   | Private pensions                                   |
| Veterans benefits  | Military allotments and pensions                   |
| Relief and other   | Public assistance and private relief               |
| Net interest paid by government  | Interest receipts                                  |
| Net interest paid by consumers and subsidies less<br>current surplus of government enterprises | Total current consumption                          |
| Plus: Non-personal taxes   |  |
| Corporate profits tax  | Half on consumption and half on dividend<br>income |
| Contributions for social insurance   | Social insurance contributions                     |
| Personal contributions   | Total current consumption                          |
| Employer contributions   | Total current consumption                          |
| Indirect business taxes  | Dividend income                                    |
| Undistributed corporate profits  |  |
| Equals: Net national product   |  |

a. Items reported in U.S. Bureau of Labor Statistics, *Survey of Consumer Expenditures 1960-61*, Report No. 237-38 and Supplement 3 (Washington, D.C.: 1965).  
b. Consists largely of investment in housing.

profits, which constitute much of the base for capital gains, are here imputed as income to families.

Similarly, transfer payments received by families, such as veterans benefits, social security payments, welfare payments (see Table B-8 for 1961 amounts), are part of the family's money income out of which it may pay direct taxes or taxes shifted forward in the prices of consumer goods and services. Thus, an income concept equivalent to "national income," which is a total of income payments made in exchange for productive services rendered would not be appropriate for measuring the effective total tax rate on a family with a substantial amount of income from transfers. Of course, it may be argued that since such a family received the

transfer *gratis*, the family cannot be said to bear the burden of taxes paid out of such transfer payments. To measure the "true" burden we should perhaps include only the taxes borne out of income received in exchange for productive services. However, to conform more closely to everyday usage of the term income, it seems better to relate the total tax burden by income class to an income concept that includes transfers.

"Personal income" as defined in the national income accounts includes transfers, but it excludes indirect business taxes, contributions for social insurance, and the corporate profits tax. The exclusion of these taxes from "personal income" makes it an inappropriate aggregate income base, even though it would be one



appropriate concept for families in a given income class. As a way of meeting the problem of an appropriate income base both in the aggregate and for families by income class, the net national product is used as the total income base, but it is allocated by income class in proportion to the estimated distribution of personal income.<sup>3</sup> The result is the standard base used in the present study. It provides a definition of income that is probably close to the average person's concept of his income and at the same time avoids the overstatement of the effective rate of taxation that results from using an income base that is too narrowly defined.

The alternative income base used here, namely, income-after-taxes-plus-government-expenditures, is a departure from common sense notions of income when we go beyond cash transfer payments and include the benefits of government expenditures received in

kind. Thus, "income" would include the benefits of police and fire protection, education, highways, defense, etc., but would exclude the direct and indirect taxes paid to support these expenditures. On this concept, the family's "real" income does not include what is taken from it in taxes but what it receives from government in expenditure benefits. In the broadest sense, this means including in the family's income base all "income-in-kind," while excluding all taxes, which are not intended to reflect an equivalent amount of economic welfare or real goods and services provided the individual taxpayer.

The effect of such a change in the definition of income is to increase substantially the income base for families at the low end of the income scale because they receive relatively more in expenditure benefits than they pay in taxes. Similarly, the effect is to reduce the in-

3. This is equivalent to allocating the net difference between personal income and net national product (\$58 billion in 1961) in proportion to the distribution of personal income. The difference between personal income and net national product is equal to the excess of non-personal taxes and undistributed profits over government transfers and interest payments. An allocation of total output is also included (Table B-4) in which each major item accounting for the difference between net national product and personal income is distributed on an appropriate item of family income or expenditure; the result is a "factor income" distribution of net national product, that is, one reflecting incomes from productive services.

**Table B-3**

**Bases of Allocation for Net National Product  
Product Side**

| Components of NNP                               | Basis of Allocation (a)   |
|---|---|
| Government purchases of goods and services      |   |
| National defense and international affairs      | Half on number of families and half on family money income  |
| Other general benefit expenditures (b)          | Half on number of families and half on family money income  |
| Elementary and secondary education              | Number of children under 18   |
| Higher education                                | Family expenditures for higher education  |
| Public assistance and other welfare             | Income from public social assistance and private relief   |
| Labor   | Wages and salaries  |
| Veterans  | Military allotments and pensions  |
| Highways  | Half on auto operation expenditures<br>Half on total consumption  |
| Interest  | Interest receipts   |
| Agriculture                                     | Money income of farm families   |
| Social insurance                                | Unemployment and social security benefits   |
| Personal consumption expenditures               | Total current consumption   |
| Net private domestic investment and net exports | The portion equal to personal money savings (c) on personal savings in BLS survey (about one-fifth of total); the remainder on total family money income. |

a. Items reported in U.S. Bureau of Labor Statistics, Survey of Consumer Expenditures 1960-61, Report No. 237-38 (Washington, D.C.: 1965).

b. Includes general government, civilian safety, transportation excluding highways, commerce and finance, health and sanitation, natural resources, and miscellaneous.

c. Total personal saving as shown in national income accounts less imputed items included.

**Table B-4**  
**Relation of BLS Money Income to Net National Product:**  
**Amounts to Be Allocated on Income Side<sup>(a)</sup>**  
**Calendar Years 1961 and 1965**  
**(Millions)**

|  | 1961      | 1965                     |
|--|-----------|--------------------------|
| BLS money income before taxes  | \$348,041 | \$447,444 <sup>(b)</sup> |
| Plus: "Other labor income"   | 12,746    | 18,539                   |
| Net rent, owner-occupied dwellings   | 6,992     | 10,400                   |
| Services furnished by financial institutions <sup>(c)</sup>                                    | 5,296     | 7,800                    |
| Food grown and consumed on farms   | 1,105     | 900                      |
| Food furnished employees   | 2,113     | 1,900                    |
| Difference between personal taxes in BLS survey<br>and in national income accounts             | 13,731    | 17,300                   |
| Imputed items in personal saving   | 15,500    | 16,000                   |
| Other and unaccounted  | 11,290    | 14,800                   |
| Capital gains  | 13,837    | 14,000                   |
| Equals: Personal income and capital gains  | 430,651   | 549,083                  |
| Personal income excluding capital gains  | 416,814   | 535,083                  |
| Less: Transfers to persons   |           |                          |
| Social insurance benefits  | 18,034    | 22,408                   |
| Civilian government pensions   | 2,499     | 3,618                    |
| Veterans benefits and pensions   | 5,544     | 5,625                    |
| Relief and other   | 4,344     | 5,486                    |
| Net interest paid by government  | 7,390     | 9,289                    |
| Net interest paid by consumers and subsidies less<br>current surplus of government enterprises | 9,067     | 12,324                   |
| Plus: Non-personal taxes   |           |                          |
| Corporate profits tax liabilities  |           |                          |
| Half on consumption  | 11,552    | 15,591                   |
| Half on dividends  | 11,552    | 15,591                   |
| Contributions for social insurance   |           |                          |
| Personal contributions   | 9,598     | 13,212                   |
| Employer contributions   | 11,843    | 16,002                   |
| Indirect business tax & non-tax liability  | 47,699    | 61,043                   |
| Undistributed corporate profits <sup>(d)</sup>   | 12,687    | 23,845                   |
| Equals: Net national product   | 474,865   | 621,618                  |

a. Details of several income items are not comparable in 1961 and 1965 because of revisions in the national income accounts.

b. Estimated.

c. Excludes insurance companies.

d. Includes inventory valuation adjustment.

Source: U.S. Department of Commerce, Office of Business Economics, *Survey of Current Business*, July 1964, pp. 8 and 35, and July 1966, pp. 13 and 36; U.S. Treasury Department, *Statistics of Income, Individual Returns, 1961* (for capital gains); U.S. Bureau of Labor Statistics, *Survey of Consumer Expenditures 1960-61* (for money income before taxes); money income and certain other items for 1965 are Tax Foundation estimates.

come base for families at the high end of the income scale because they pay relatively more in taxes than they receive in government expenditure benefits. Consequently, any allocation of taxes by income class will be more progressive when related to the income-after-

taxes-plus-government-expenditures base than when related to the income-before-taxes base.<sup>4</sup>

The effect of different definitions of income on effective tax rates by income class (on the allocation bases used here) is shown in Table B-1.

4. A national income base (i.e., a total of income received in exchange for productive services) would be more relevant if we were primarily concerned with the prices paid for the factors of production and with effects of taxes on the allocation of resources. The income-after-taxes-plus-government expenditures base is more relevant if we are primarily concerned (as in this study) with the real welfare position of families as directly affected by government operations.



### Income Allocations

The imputation of various forms of income other than money income to families by income class follows assumptions of incidence similar to those used for the tax and expenditure allocations. On the income side, the choice of appropriate bases for imputing income was straightforward for most of items accounting for the difference between family money income and net national product—straightforward at least in the choice of bases available in the BLS Survey. The items used are listed in Tables B-2 and B-3. For most kinds of income to be imputed there were corresponding money items which provided suitable bases of allocation.

The doubtful items, of course, are the non-personal taxes. In accordance with the assumptions used in the tax burden allocation, the corporate profits tax was imputed and allocated half on the basis of consumption expenditures and half in proportion to dividend income. Employers social insurance contributions similarly were allocated on the basis of consump-

tion expenditures. In other words, where the tax burden of non-personal taxes was assumed to be shifted forward, a corresponding amount of "income" was also imputed to those assumed to be bearing the tax. This is analogous to the procedure of imputing to stockholders as income the portion of the corporate tax which they are assumed to bear. Presumably, in the absence of the tax, their incomes would be correspondingly larger.

On the product side, government expenditures were allocated as income on the same bases as expenditures were allocated as benefits. (Tables B-3 and B-5.) Net private domestic investment and net exports (which together equal total private investment) were allocated on two bases. First, a portion of the total equal to personal money savings in the national income accounts was allocated on a modified set of savings data from the BLS Survey of Consumer Expenditures. The modification consisted of eliminating the negative savings shown for the lowest income classes. Money

**Table B-5**  
**Net National Product Components to Be Allocated on Product Side**  
**Calendar Year 1961**  
**(Millions)**

|   | Amount    |
|---|-----------|
| Government purchases of goods and services      |           |
| National defense & international affairs        |           |
| Half on number of families                      | \$ 24,288 |
| Half on money income before taxes               | 24,288    |
| Other general benefit expenditures              |           |
| Half on number of families                      | 12,486    |
| Half on money income before taxes               | 12,486    |
| Elementary & secondary education                | 16,606    |
| Higher education                                | 3,161     |
| Public assistance and other welfare             | 1,494     |
| Labor and manpower                              | 590       |
| Veterans  | 1,307     |
| Highways  |           |
| Half on auto operation expenditures             | 4,696     |
| Half on total consumption                       | 4,697     |
| Agriculture                                     | 1,250     |
| Social insurance                                | 286       |
| Personal consumption expenditures               | 335,152   |
| Net private domestic investment and net exports |           |
| Portion on personal savings                     | 6,000 (a) |
| Portion on money-income before taxes            | 26,088    |
| Net national product                            | 474,865   |

a. Estimated as equal to the 1962 figure for personal savings excluding imputed items (see *Survey of Current Business*, July 1966, Table 7.3, p. 36).

Source: U.S. Department of Commerce, Office of Business Economics, *Survey of Current Business*, July 1966 (and detail by function as yet unpublished).

**Table B-6**  
**Tax Amounts to Be Allocated by Income Class<sup>(a)</sup>**  
**1961 and 1965**  
**(Millions)**

|  | 1961      | 1965      |
|--|-----------|-----------|
| <b>Federal:</b>                                    |           |           |
| Individual income                                  | \$ 42,668 | \$ 51,336 |
| Corporation income                                 |           |           |
| Half on consumption                                | 10,875    | 14,573    |
| Half on dividends                                  | 10,876    | 14,574    |
| Estate and gift                                    | 1,814     | 2,820     |
| Alcoholic beverage                                 | 3,212     | 3,722     |
| Tobacco  | 2,015     | 2,084     |
| Telephone and telegraph                            | 836       | 390       |
| Auto purchase                                      | 1,859     | 1,724     |
| Auto operation                                     | 2,323     | 2,532     |
| Other excises, etc. (b)                            | 3,561     | 6,415     |
| Social insurance                                   |           |           |
| Personal contributions                             | 8,228     | 11,272    |
| Employer contributions(c)                          | 7,528     | 10,431    |
| <b>State and local:</b>                            |           |           |
| Individual income                                  | 2,648     | 4,417     |
| Corporation income                                 |           |           |
| Half on consumption                                | 676       | 1,018     |
| Half on dividends                                  | 677       | 1,018     |
| Gift and inheritance                               | 489       | 781       |
| Alcoholic beverage                                 | 701       | 946       |
| Tobacco  | 1,038     | 1,425     |
| Auto purchase                                      | 550(d)    | 864(d)    |
| Auto operation                                     | 5,178     | 6,493     |
| General sales (excluding auto purchase)            | 4,192     | 6,429     |
| Other excises, etc. (b)                            | 9,067     | 12,389    |
| Property tax                                       |           |           |
| Half on consumption                                | 8,969     | 11,938    |
| Half on housing expenditures                       | 8,969     | 11,938    |
| Social insurance                                   |           |           |
| Personal contributions                             | 1,370     | 1,940     |
| Employers contributions(c)                         | 4,315     | 5,571     |
| Total Federal taxes excluding social insurance     | 80,039    | 100,170   |
| Total Federal taxes including social insurance     | 95,795    | 121,873   |
| Total State-local taxes excluding social insurance | 43,154    | 59,656    |
| Total State-local taxes including social insurance | 48,839    | 67,167    |
| All governments, excluding social insurance        | 123,193   | 159,826   |
| All governments, including social insurance        | 144,634   | 189,040   |

- a. Net of refunds estimated by type of tax.  
b. Includes nontax receipts.  
c. Unemployment insurance classified as a state tax.  
d. Estimate based on Bureau of the Census data.

Source: U.S. Department of Commerce, Office of Business Economics, *Survey of Current Business*, August 1965, pp. 36-39, and July 1966, pp. 21, 22.

savings are only about one-fifth of total personal saving as defined in the national income accounts<sup>5</sup>, and the definition of personal money saving in the national income accounts differs considerably from saving as used in the BLS

Survey. The remaining portion of total investment was allocated by income class in proportion to family money income. In other words, this portion of investment, which is financed from various sources of savings in addition to

5. The remainder of personal saving consists largely of imputed saving reflecting residential construction. (See *Survey of Current Business*, July 1966, p. 36.)



personal money savings, was imputed to families as a general form of income, in which families could be presumed to participate in proportion to their money incomes.

#### **Tax and Expenditure Allocations**

For consistency with the national income accounts, the total tax and expenditure amounts allocated are total government receipts and expenditures as shown in these accounts. (Tables

B-6 and B-7) This means that a small amount of "nontaxes" is included in the tax totals. The amount at the Federal level is negligible, but at the state and local level the total of nontaxes was \$3.8 billion in 1961; this is enough to raise substantially the total of "other excises" shown in Table 3 in the text above. Since this amount was allocated on the basis of consumption expenditures, the inclusion of nontaxes also tends slightly to increase the appar-

**Table B-7**  
**Expenditure Amounts to Be Allocated by Income Class**  
**Calendar Years 1961 and 1965**  
**(Millions of dollars)**

|   | 1961      | 1965      |
|---|-----------|-----------|
| <b>Federal</b>                                |           |           |
| National defense and international affairs    |           |           |
| Half on number of families                    | \$ 25,713 | \$ 27,261 |
| Half on money income before taxes             | 25,713    | 27,262    |
| Other general benefit                         |           |           |
| Half on number of families                    | 4,634     | 8,673     |
| Half on money income before taxes             | 4,634     | 8,673     |
| Elementary & secondary education              | 305       | 406       |
| Higher education                              | 211       | 447       |
| Public assistance & other welfare             | 2,862     | 4,829     |
| Labor & manpower                              | 595       | 890       |
| Veterans benefits                             | 6,143     | 6,365     |
| Highways                                      |           |           |
| Half on auto operation expenditures           | 1,369     | 1,954     |
| Half on total consumption                     | 1,369     | 1,954     |
| Net interest                                  | 6,366     | 8,306     |
| Agriculture                                   | 3,980     | 4,410     |
| Social insurance benefits(a)                  | 13,948    | 19,667    |
| <b>State and local(b)</b>                     |           |           |
| General benefit                               |           |           |
| Half on number of families                    | 8,848     | 12,245    |
| Half on total income                          | 8,848     | 12,245    |
| Elementary & secondary education              | 16,321    | 22,230    |
| Higher education                              | 2,951     | 4,599     |
| Public assistance & other welfare             | 2,222     | 2,472     |
| Labor and manpower                            | 10        | 69        |
| Veterans benefits                             | 113       | 20        |
| Highway transportation                        |           |           |
| Half on auto operation expenditures           | 3,144     | 3,718     |
| Half on total consumption                     | 3,145     | 3,718     |
| Net interest                                  | 766       | 553       |
| Agriculture                                   | 524       | 598       |
| Social insurance benefits(a)                  | 4,244     | 2,260     |
| <b>Totals</b>                                 |           |           |
| Total Federal, excluding social insurance     | 83,894    | 101,430   |
| Total Federal, including social insurance     | 97,842    | 121,097   |
| Total State-local, excluding social insurance | 46,882    | 62,471    |
| Total State-local, including social insurance | 51,126    | 64,731    |
| All governments, excluding social insurance   | 130,776   | 163,901   |
| All governments, including social insurance   | 148,968   | 185,828   |

a. Unemployment insurance classified as a state-local program.

b. After deduction of Federal grants-in-aid.

Source: U.S. Department of Commerce, Office of Business Economics, *Survey of Current Business*, July 1966, p. 25, and unpublished detail for 1961.

ent degree of regressivity in the total state and local tax burden.

Maintaining consistency with the totals in the national income accounts makes the difference between total "taxes" and total expenditures equal to the government surplus or deficit in these accounts.<sup>6</sup> Consistency with the national income accounts is useful for theoretical purposes as well as statistically in making allocations of the differences between family money income and net national product.

On the expenditure side, Federal grants-in-aid by function were deducted from state-local expenditures in obtaining amounts to be allocated by income class. This procedure puts the expenditures at the governmental level where the corresponding tax burdens are levied.

The most crucial assumption in the tax allocations is that the burden of most business, excise, and sales taxes is shifted forward to the consumer. This assumption is most easily justified where the tax in question applies to only one product, e.g., cigarettes, or a relatively narrow range of products, e.g., automobiles and parts. However, where taxes become more general, as in the case of state sales taxes and business property taxes, the question of forward shifting is subject to more doubt. Some economists have argued that general sales taxes are shifted backward to the owners of the factors of production.

Such an assumption would change the apparent distribution of the tax burden by reducing the estimated burden for low income groups, where consumption substantially exceeds income from productive services, and increase the burden for high income groups, where consumption is a smaller percentage of income from productive services. Chart B-1 shows the difference between the distribution of consumption and wages and salaries in the BLS Survey. Although there is a difference between the distribution of wages and salaries and total income from productive services (including interest, dividends, and rent), it is evident that an assumption of backward shifting of general sales and business taxes would substantially reduce the tax burden estimates for income classes below \$4,000. However, the differences in resulting tax burden estimates would be smaller than is suggested by Chart B-1 because consistency would require a corresponding allocation of indirect business taxes as income on the basis of income from productive services rather than on the basis of consumption.

The various statistical bases of allocation are shown in Table B-8. The resulting amounts of estimated tax burdens and expenditure benefits are shown in Tables B-9 and B-10. The amounts of net national product allocated on various bases by income class are shown in Table B-11.

6. An alternative procedure would have been to eliminate from total expenditures an amount equal to nontax receipts.



**Table B-8**  
**Statistical Bases of Allocations by Income Class, 1960-61**  
(Dollar amounts in millions)

|                                      | Income class (Money income after personal taxes) |                        |                        |                        |                        |                        |                        |                          |                         | TOTAL     |
|--------------------------------------|--|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------|-------------------------|-----------|
|                                      | Under<br>\$2,000                                 | \$2,000<br>to<br>2,999 | \$3,000<br>to<br>3,999 | \$4,000<br>to<br>4,999 | \$5,000<br>to<br>5,999 | \$6,000<br>to<br>7,499 | \$7,500<br>to<br>9,999 | \$10,000<br>to<br>14,999 | \$15,000<br>and<br>over |           |
| Money income before taxes            | \$10,170   | \$15,928               | \$23,613               | \$34,260               | \$42,389               | \$63,001               | \$73,620               | \$53,863                 | \$31,239                | \$348,083 |
| Personal taxes                       | 251  | 662                    | 1,412                  | 2,928                  | 3,895                  | 6,585                  | 8,730                  | 7,266                    | 6,880                   | 38,609    |
| Total current consumption            | 12,884   | 16,280                 | 22,625                 | 30,300                 | 36,346                 | 50,839                 | 55,992                 | 37,667                   | 15,700                  | 278,633   |
| Dividends                            | 50   | 138                    | 398                    | 230                    | 407                    | 442                    | 590                    | 1,205                    | 2,018                   | 5,478     |
| Capital gains(a)                     | 186  | 297                    | 410                    | 465                    | 465                    | 788                    | 1,188                  | 1,613                    | 5,971                   | 11,382    |
| Estate and gift                      | —  | —                      | —                      | —                      | —                      | —                      | —                      | —                        | 100                     | 100       |
| Alcoholic beverages                  | 101  | 158                    | 336                    | 411                    | 484                    | 790                    | 933                    | 713                      | 261                     | 4,187     |
| Tobacco                              | 242  | 371                    | 488                    | 627                    | 702                    | 957                    | 941                    | 475                      | 161                     | 4,964     |
| Telephone and Telegraph              | 262  | 276                    | 396                    | 497                    | 593                    | 836                    | 856                    | 551                      | 216                     | 4,483     |
| Auto purchase                        | 204  | 470                    | 1,041                  | 1,890                  | 2,478                  | 3,023                  | 3,476                  | 2,476                    | 723                     | 15,781    |
| Auto operation                       | 412  | 969                    | 1,802                  | 2,621                  | 3,155                  | 4,503                  | 4,575                  | 2,926                    | 902                     | 21,865    |
| Housing expenditures                 | 4,626  | 5,129                  | 6,746                  | 2,583                  | 10,604                 | 14,488                 | 15,564                 | 10,270                   | 4,690                   | 80,700    |
| Home owners' housing expenditures    | 705  | 868                    | 1,130                  | 1,644                  | 2,405                  | 4,143                  | 4,408                  | 2,896                    | 1,394                   | 19,593    |
| Higher education                     | 41   | 61                     | 101                    | 195                    | 295                    | 462                    | 607                    | 745                      | 432                     | 2,939     |
| Military allotments and pensions     | 397  | 507                    | 687                    | 510                    | 491                    | 692                    | 572                    | 380                      | 137                     | 4,373     |
| Private pensions                     | 69   | 205                    | 353                    | 237                    | 145                    | 137                    | 112                    | 211                      | 213                     | 1,682     |
| Public assistance                    | 1,363  | 680                    | 222                    | 146                    | 141                    | 78                     | 48                     | 61                       | 1                       | 2,740     |
| Value of farm consumed food          | 290  | 218                    | 253                    | 171                    | 167                    | 183                    | 134                    | 94                       | 20                      | 1,530     |
| Interest                             | 217  | 448                    | 450                    | 401                    | 372                    | 519                    | 737                    | 667                      | 681                     | 4,494     |
| Farm money income                    | 910  | 1,416                  | 1,911                  | 1,820                  | 2,066                  | 2,384                  | 2,486                  | 1,880                    | 1,548                   | 16,421    |
| Social insurance contributions       | 62   | 245                    | 494                    | 923                    | 1,157                  | 1,664                  | 1,790                  | 1,203                    | 280                     | 7,818     |
| Social insurance benefits            | 4,131  | 3,853                  | 3,326                  | 1,862                  | 1,782                  | 1,802                  | 1,506                  | 910                      | 121                     | 19,293    |
| Wages and salaries                   | 2,661  | 8,091                  | 15,302                 | 27,642                 | 35,715                 | 54,164                 | 63,210                 | 43,707                   | 15,993                  | 266,485   |
| Personal savings(b)                  | —  | —                      | —                      | —                      | 346                    | 1,211                  | 2,673                  | 2,823                    | 3,944                   | 10,998    |
| Number of families(c) (Thous.)       | 7,860  | 6,077                  | 6,334                  | 6,972                  | 7,018                  | 8,399                  | 7,585                  | 3,962                    | 1,100                   | 55,307    |
| Number of full-time earners (Thous.) | 1,536  | 2,445                  | 3,917                  | 5,870                  | 6,311                  | 9,187                  | 8,905                  | 5,239                    | 1,342                   | 44,752    |
| Number of children under 18 (Thous.) | 3,443  | 5,467                  | 6,912                  | 9,744                  | 10,627                 | 13,619                 | 11,654                 | 5,524                    | 1,325                   | 68,315    |

a. Based on income tax return data adjusted on a money-income-after-tax class distribution.

b. Based on net change in assets and liabilities in BLS Survey for income classes which showed a positive amount of saving.

c. Includes single person units.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Survey of Consumer Expenditures 1960-61, Report No. 237-93, February 1965, and Supplement 2, June 1966; Treasury Department, Statistics of Income, Individual Returns 1961 (for capital gains).

**Table B-9**  
**Allocated Federal, State and Local Tax Burdens by Income Class, 1961**  
 (Millions)

|                               | Income class (Money income after personal taxes) |                        |                        |                        |                        |                        |                        |                          |                         | TOTAL    |
|-------------------------------|--|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------|-------------------------|----------|
|                               | Under<br>\$2,000                                 | \$2,000<br>to<br>2,999 | \$3,000<br>to<br>3,999 | \$4,000<br>to<br>4,999 | \$5,000<br>to<br>5,999 | \$6,000<br>to<br>7,499 | \$7,500<br>to<br>9,999 | \$10,000<br>to<br>14,999 | \$15,000<br>and<br>over |          |
| <b>Federal, total</b>         | \$1,762  | \$3,039                | \$5,505                | \$8,218                | \$10,588               | \$15,889               | \$19,258               | \$16,101                 | \$15,434                | \$95,795 |
| Individual income             | 277  | 732                    | 1,560                  | 3,236                  | 4,304                  | 7,277                  | 9,648                  | 8,030                    | 7,603                   | 42,668   |
| Corporate income              | 602  | 909                    | 1,673                  | 1,640                  | 2,227                  | 2,862                  | 3,356                  | 3,862                    | 4,620                   | 21,751   |
| Half on consumption           | 503  | 635                    | 883                    | 1,183                  | 1,419                  | 1,984                  | 2,185                  | 1,470                    | 613                     | 10,875   |
| Half on dividends             | 99   | 274                    | 790                    | 457                    | 808                    | 878                    | 1,171                  | 2,392                    | 4,007                   | 10,876   |
| Estate and gift               | —  | —                      | —                      | —                      | —                      | —                      | —                      | —                        | 1,814                   | 1,814    |
| Excises, customs, and other   | 469  | 700                    | 1,139                  | 1,553                  | 1,857                  | 2,624                  | 2,855                  | 1,924                    | 678                     | 13,806   |
| Alcoholic beverage            | 77   | 121                    | 258                    | 315                    | 371                    | 606                    | 716                    | 547                      | 200                     | 3,212    |
| Tobacco                       | 98   | 151                    | 198                    | 255                    | 285                    | 388                    | 382                    | 193                      | 65                      | 2,015    |
| Telephone and telegraph       | 49   | 51                     | 74                     | 93                     | 111                    | 156                    | 160                    | 103                      | 40                      | 836      |
| Auto purchase                 | 24   | 55                     | 123                    | 223                    | 292                    | 356                    | 409                    | 292                      | 85                      | 1,859    |
| Auto operation                | 44   | 103                    | 191                    | 278                    | 335                    | 478                    | 486                    | 311                      | 96                      | 2,323    |
| Other taxes (a)               | 156  | 193                    | 260                    | 343                    | 406                    | 561                    | 615                    | 420                      | 167                     | 3,120    |
| Nontax receipts               | 20   | 26                     | 36                     | 48                     | 58                     | 80                     | 89                     | 60                       | 25                      | 441      |
| Social insurance              | 413  | 698                    | 1,131                  | 1,790                  | 2,200                  | 3,125                  | 3,397                  | 2,284                    | 719                     | 15,756   |
| Personal contributions        | 65   | 258                    | 520                    | 971                    | 1,218                  | 1,751                  | 1,884                  | 1,266                    | 295                     | 8,228    |
| Employer contributions        | 348  | 440                    | 611                    | 819                    | 982                    | 1,374                  | 1,513                  | 1,018                    | 424                     | 7,528    |
| <b>State and local, total</b> | 1,983  | 2,619                  | 3,816                  | 5,192                  | 6,310                  | 8,876                  | 9,739                  | 6,676                    | 3,628                   | 48,839   |
| Individual income             | 17   | 45                     | 97                     | 201                    | 267                    | 452                    | 599                    | 498                      | 472                     | 2,642    |
| Corporation income            | 37   | 56                     | 104                    | 102                    | 138                    | 178                    | 209                    | 240                      | 287                     | 1,353    |
| Half on consumption           | 31   | 39                     | 55                     | 74                     | 88                     | 123                    | 136                    | 91                       | 38                      | 676      |
| Half on dividends             | 6  | 17                     | 49                     | 28                     | 50                     | 55                     | 73                     | 149                      | 249                     | 677      |
| Gift and inheritance          | —  | —                      | —                      | —                      | —                      | —                      | —                      | —                        | 489                     | 489      |

(continued)