

TRENDS IN FEDERAL TAXATION SINCE 1950

William E. Cullison

This article is part of a forthcoming Federal Reserve System study of the Federal tax structure.

Federal government tax revenues in 1978 equaled 20 percent of the Gross National Product (GNP). In 1930, by contrast, Federal tax revenues equaled only 3.2 percent of GNP. This contrast illustrates the major trend in Federal tax policy over the past four decades, namely the trend toward ever-higher taxes to finance ever-larger expenditures.

This paper examines the changes that have taken place in the three major Federal taxes—individual income taxes, corporate income taxes, and payroll taxes—in some detail. Post-1950 changes are emphasized with particular emphasis being devoted to major implications of the changes in Federal tax policy for the economy.

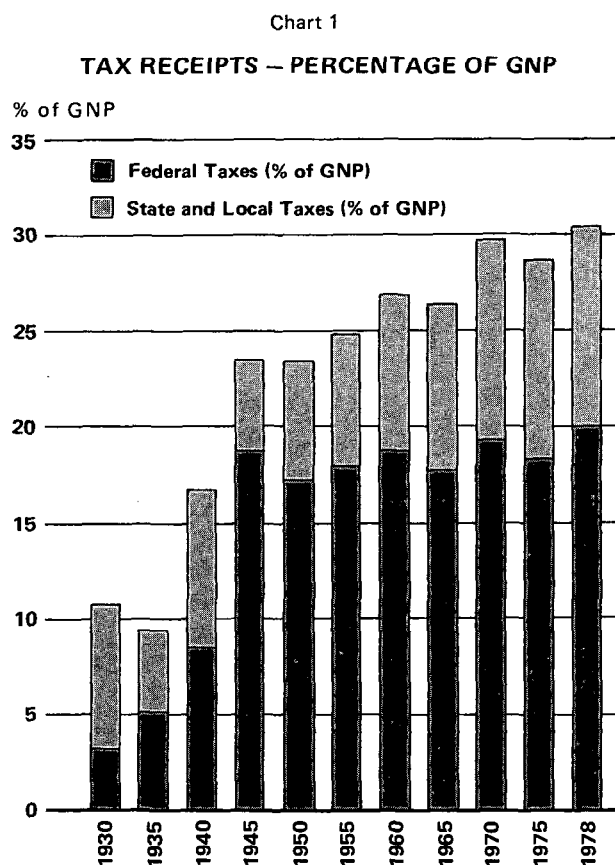
As shown in Chart 1, the bulk of the increase in Federal taxes relative to GNP was completed by 1950. In that year, Federal taxes equaled 17.5 percent of GNP. The subsequent rate of increase of Federal taxes, to approximately 20 percent of GNP by 1978, was relatively slower. Nevertheless, Federal taxes have slightly outpaced GNP growth.

Chart 1 also shows state and local taxes as a percentage of GNP. Although these taxes will not be discussed in detail in this paper, it is worth noting that their size relative to GNP has also been rising during the past two decades. The ratio of state and local taxes to GNP increased from 6.1 percent in 1950 to 10.8 percent in 1978. Tax revenues for all levels of government, therefore, amounted to 30 percent of GNP in 1978.

The relative importance of different types of Federal taxes has also changed dramatically over time. As Chart 2 illustrates, almost 50 percent of Federal government tax revenue was raised from sales and excise taxes at the turn of the century, and most of the remainder came from customs duties. By 1927, fourteen years after the ratification of the Constitutional amendment that authorized the income tax, 63 percent of Federal tax revenues was raised from corporate and individual income taxes. Sales and excise taxes and customs duties provided only 30 percent of the tax bill.

The share of tax revenue raised from income taxes was reduced to 36 percent by 1940. In that year, funds raised by sales and excise taxes amounted to approximately 40 percent of Federal tax revenues. Payroll taxes, which were inconsequential in 1927, provided almost 13 percent of the tax revenue in 1940, a result that may be largely attributed to the initiation of the Old-Age and Survivors Insurance Program in the 1930's.

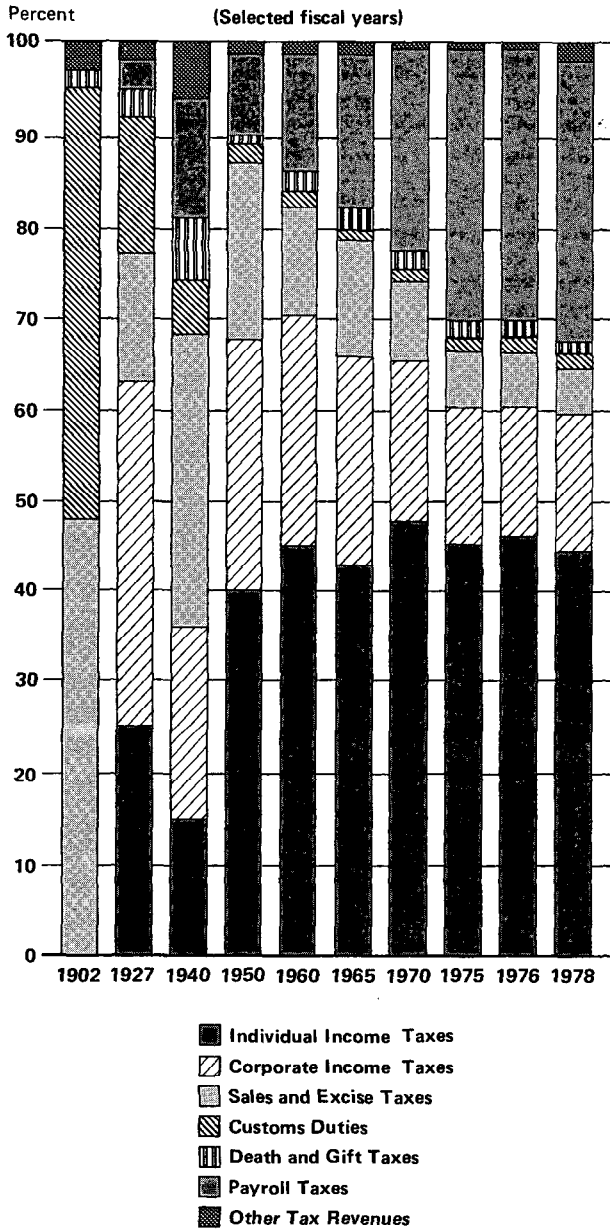
The share of Federal taxes raised through the individual income tax rose between 1940 and 1950, from 15 to 40 percent. It has since leveled off at around 45 percent. The share of Federal revenue raised by the corporate income tax rose from approximately 21 percent in 1940 to 28 percent in 1950. Since 1950, corporate income taxes have provided a generally declining share of Federal taxes. By 1978, the corporate income tax provided only 15 percent of the total tax bill.



Source: U.S. Department of Commerce.

Chart 2

PERCENTAGE COMPOSITION OF FEDERAL TAX REVENUE



Source: U.S. Department of Commerce.

Funds for the Old-Age, Survivors, Disability, and Health Insurance and the Unemployment Compensation programs are mostly raised by payroll taxes, which declined slightly in relative importance between 1940 and 1950. Since 1950, however, the relative share of payroll taxes has risen sharply, so that by 1979 they provided 31 percent of Federal

tax revenues. By contrast, sales and excise taxes and customs duties have continued to decline in relative importance, providing approximately 4 percent of the 1979 tax revenue.

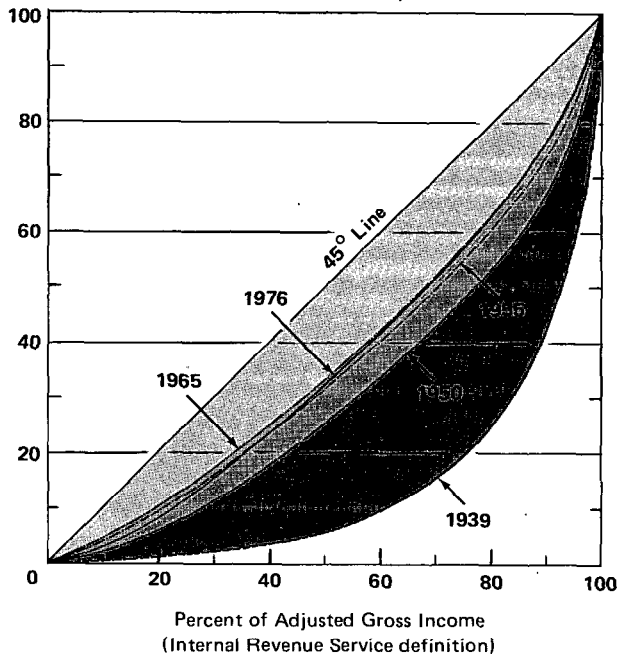
Individual Income Taxation, 1950-1978 The individual income tax has provided approximately 40 to 45 percent of Federal government revenue since 1950. The tax is widely believed to be steeply graduated or progressive, in the sense that the higher an individual's income, the larger the percentage of it that he pays in taxes. The rate structure is indeed steeply progressive, and the ceilings for personal exemptions and standard deductions also insure progressivity for relatively low levels of income. The overall degree of progressivity of the tax, however, is considerably less than that implied by the rate structure. The difference between the tax's actual progressivity and the progressivity implied by the rate structure, of course, stems from the definition of items included in taxable income and from the deductions and credits allowed.

Chart 3 shows the percentage of total adjusted gross income corresponding to the percentage of total

Chart 3

**LORENZ-TYPE CURVES
ILLUSTRATING RELATIVE PROGRESSIVITY OF
U.S. INDIVIDUAL INCOME TAX RATE STRUCTURE**

Percent of Total Individual Income Tax (Selected Years)



Source: U.S. Department of the Treasury.

individual income taxes paid by taxpayers in various income groupings for selected years. This device, called a Lorenz curve, provides an indication of the degree of disproportionality of the tax burden. In cases where everyone pays taxes in equal proportion to income, the Lorenz curve coincides with the 45 degree line. By definition, the more progressive the tax, the more the curve lies below the line. A curve representing a regressive tax would lie above the 45 degree line. The graphs are based on published IRS data. The published figures are classified into fewer income brackets, particularly in the higher income categories, than is ideal for graphing the Lorenz curves. Even so, Chart 3 illustrates some of the changes in the progressivity of the individual income tax over time. It shows that the tax became considerably less progressive between 1939 and 1950, but that the largest part of the reduction in progressivity was completed by 1955. The tax was only slightly less progressive in 1976 than in 1955.

Although the Lorenz curves indicate relatively little change in the progressivity of individual income taxes between 1965 and 1976, progressivity actually increased slightly over that span. Much of the increase involved a movement of the tax burden from lower income classes to the upper middle and upper income classes. Examples of the effects of these changes in progressivity between 1965 and 1976 are shown in Table I.

Progressivity changes since 1965 largely reflect the effect of increases in the standard deduction (now termed the zero-rate bracket). The standard deduction for a single return was raised in stages from 10 percent (\$1000 maximum) in 1965 to 13 percent (\$1500 maximum) in 1971, and finally, to 16 percent (\$2400 maximum) in 1976. As a result, aggregated standard deductions (or low income allowances) increased rapidly during the seventies, from \$20 billion in 1970 to \$78.5 billion in 1976. The personal exemption was also increased from \$600 to \$750 per person during the 1965-1976 period, but that increase amounted to very little in constant dollar terms.

The minimum tax provision, which became effective in 1970, may also have had some impact upon the progressivity of the tax structure since 1965, although it is difficult to estimate its extent. This provision was intended to increase taxes on selected income and deduction items that were afforded special tax treatment. The 1976 Act, effective for 1977, increased the effective tax on such tax preferences nearly seven fold. These minimum tax provisions thus increased the taxes paid by the upper income groups, who had in the past been able to receive more of their income from less taxable (or nontaxable) sources.

Some other major changes in individual income taxes over the 1950-1978 time period are shown in Box I. As indicated, tax credits of various kinds

Table I

INDIVIDUAL INCOME TAXES PAID BY INCOME* GROUP

	Income Levels (in 1976 dollars)**	Percent of Total Adjusted Gross Income Received	Percent of Total Individual Income Tax Bill
Lower Income Group			
Year of 1976	\$9000 or less	16.2	5.2
Year of 1965	\$9021 or less	17.9	8.8
Selected Middle Income Group			
Year of 1976	\$20,000 to \$30,000	23.4	24.4
Year of 1965	\$18,042 to \$27,063	21.3	21.6
Upper Income Group			
Year of 1976	\$200,000 or more	1.5	7.8
Year of 1965	\$180,423 or more	2.2	7.6

* Adjusted Gross Income as reported to the IRS.

** Based upon the Consumer Price Index for Urban Wage Earners and Clerical Workers, the price level rose 80.4 percent between 1965 and 1976. The 1965 figures are adjusted accordingly.

Source: U. S. Department of the Treasury.

proliferated during the 1965-1976 period. The general tax credit, an item that supplemented the personal exemption until 1979 when the latter was raised, reduced revenue by the largest amount in 1976, \$9.3 billion. The investment tax credit, which

is far more important for corporate taxes, lowered personal tax revenues by \$1.9 billion in 1976, whereas the childcare and the purchase of new principal residence credits together totaled slightly over \$0.5 billion.

Box 1

SUMMARY OF MAJOR LEGISLATION CONCERNING INDIVIDUAL INCOME TAXES, 1950-1978

1950 Tax rates comprised a 3 percent normal rate plus a graduated surtax ranging from 17 to 88 percent. The Revenue Act of 1950 increased tax rates by eliminating a series of percentage reductions in "tentative taxes" that were in effect during 1948 and 1949. This change became effective as of October 1. The net combined taxes (normal plus surcharge) were limited to 87 percent of net income, compared to 77 percent in the previous year. The withholding tax rate was 18 percent.

1951 To help finance the war in Korea marginal surtax rates were increased effective November 1, 1951 to a range of 19.2 to 89 percent, making marginal tax rates as high as 92 percent. Statutory reductions on the combined normal tax and surtax were eliminated, and the ceiling on combined taxes was raised to 89 percent of net income. Withholding tax rates were increased to 20 percent.

1954 The normal tax and surtax were combined into one rate structure. Marginal tax rates were lowered to a range of 20 to 91 percent. The level of earnings required for filing a return was raised from \$600 to \$1200, and the definitions of dependent and head of household were broadened. The retirement income credit, credits for dividends received and for partially tax-exempt interest, and the deduction for dependent childcare were introduced. The withholding tax rate was reduced to 18 percent.

1962 The tax credit for investment in certain depreciable property was introduced. The rate was 7 percent of the qualified investment.

1964 The Revenue Act of 1964 lowered the tax range significantly, to 16-77 percent. It also introduced the income-averaging provision, and reduced withholding rates to 14 percent.

1965 The further lowering of the tax rate range to 14-70 percent, legislated in 1964, became effective in 1965.

1966 Graduated withholding was initiated. Withholding rates ranged from 14 to 30 percent.

1968 A 10 percent surcharge on income taxes was imposed, effective April 1, at a time when U. S. involvement in Vietnam was nearing its peak.

1969 The investment tax credit began to be phased out. The 10 percent surcharge was extended to cover calendar year 1969. The maximum withholding rate was raised to 33 percent.

1970 An Additional Tax for Tax Preferences ("Minimum Tax") of 10 percent was introduced, primarily increasing capital gains taxes. Depletion allowances were reduced, deductions for capital losses were limited, exemptions were increased, and the maximum withholding rate was reduced to 25 percent. In addition, a new minimum standard de-

duction (or low income allowance) was allowed, and the surcharge was continued at a 5 percent rate through June 30.

1971 The investment tax credit was revived. The standard deduction was increased to 13 percent (\$1500 maximum). Taxes were lowered for single persons, and a maximum marginal tax of 60 percent was placed on earned income.

1972 The maximum tax rate on earned income was lowered to 50 percent.

1974 A tax rebate was approved.

1975 Primarily as temporary anti-recessionary measures, a series of tax reduction measures were adopted. The standard deduction was increased to 16 percent (\$2300 maximum for a single return) and a credit of \$30 per exemption was allowed. In addition, Congress approved earned income credits of up to \$400 for heads of households (with dependents) receiving less than \$8000 in adjusted gross income. Purchase-of-residence credits of up to \$2000 were also approved, as was an increase in the investment tax credit from 7 to 10 percent.

1976 Some of the 1975 tax reductions were extended or modified. Childcare credits (instead of the childcare deduction) were allowed. The personal exemption credit became a general tax credit (the larger of \$35 per exemption or 2 percent of the first \$9000 of taxable income). The "Minimum Tax" was expanded through broadened definitions, reductions in deductions, and an increase in the rate to 15 percent.

1977 The general tax credit was broadened to include exemptions for age or blindness. The standard deduction was made independent of income, renamed the "zero bracket amount," and incorporated in the tax table, allowing many taxpayers to benefit.

1978 A gain of up to \$100,000 on the sale of a principal residence was made tax free for persons 55 or older. The personal exemption was increased to \$1000 and the zero bracket amount to \$2300 for single and \$3400 for married taxpayers filing joint returns. The general tax credit was repealed. The earned income credit was increased to 10 percent of the first \$5000 of income, state and local gasoline taxes were ruled nondeductible, and unemployment compensation was made taxable for single persons whose income exceeded \$20,000 and married couples with incomes over \$25,000. An alternative minimum tax, designed to insure that taxpayers with large capital gains and certain substantial itemized deductions would pay at least a basic tax, was passed (effective in 1979). Sixty percent of long-term capital gains could be deducted, however, and the basis for figuring the 50 percent maximum tax on personal service income was not to be reduced by capital gain preference items any longer.

The earned income credit, instituted in 1976, amounted to \$0.25 billion in that year. Although post-1976 data are presently unavailable because of the publication lags of IRS figures, the amount deducted for the earned income credit has undoubtedly increased since 1976, as more taxpayers became aware of it. It originally allowed individuals who qualified by having at least one dependent to reduce their tax payments by as much as \$400 (10 percent of the first \$4000 of income). Moreover, the credit was refundable in cash for individuals whose tax was less than the credit. The credit diminished rapidly as taxpayers' incomes rose above \$4000. The 1978 Revenue Act increased to \$500 (10 percent on the first \$5000) the maximum earned income credit and raised to \$6000 the level of income at which the credit began to be phased out. The 1978 Revenue Act also allowed the general tax credit to expire and raised the personal exemption to \$1000.

In conclusion, the changes in individual income taxes since 1965 have produced a *slightly* more progressive tax structure. This greater progressivity has been implemented mainly by changes in the taxation of the high and low income extremes. The changes in exemptions, the standard deduction, and the earned income credit were the principal means of reducing taxes on lower incomes. The maximum tax rate on earned income was reduced to 50 percent in 1972. In spite of this change in the rate structure, higher income groups ended up paying a larger percentage of the individual income tax bill than they did in 1965.

One of the rationalizations for lowering the effective tax rate on lower-income taxpayers was that lower taxes would encourage labor force participation among the unemployed (unemployment defined in the broad sense of the term). The childcare credit was specifically designed to assist working parents, but the earned income credits and the increases in the standard deduction were also expected to improve work incentives. That idea illustrates the tendency in evidence throughout the 1950-1978 time period, to use the personal income tax to promote social or economic goals that do not necessarily spring from a need to raise Federal government revenue.

Corporate Income Taxation, 1950-1978 The corporate income tax, as shown in Chart 2, provided 28 percent of the Federal tax revenue in 1950, but only 15 percent in 1977. About half of this decline took place between 1950 and 1965; the remainder of it occurred in the 1965-1976 period. Between 1965 and 1976, the share of revenue raised from the corporate income tax fell from 21 to 14 percent. The

share of taxes raised from the individual income tax, in contrast, remained relatively constant over that period.

The apparent shifting of the tax burden from corporations to individuals merits some discussion. One possible explanation for the shift is a relative decline in corporate income. The figures based upon the Internal Revenue Service's (IRS) measure of corporate income (corporate net income), however, show no such decline. On the contrary, corporate net income rose at an average annual rate of 8.7 percent per year from 1965 to 1976, while adjusted gross income of individual taxpayers rose only 8.5 percent per year.¹ In contrast, corporate profits before taxes, the measure of profits used in the National Income and Product Accounts (NIPA), rose only 6.9 percent per year between 1965 and 1976.

This latter measure of corporate profits is widely considered to be an appropriate estimate of the state of domestic corporate business. The relatively more rapid rate of growth of corporate net income (IRS) stems mostly from a relatively rapid growth of earnings in foreign branches of U. S. corporations. These foreign earnings also provide returns to owners of corporations, however, so both corporate net income and corporate profits before taxes can be interpreted as alternative measures of such returns.

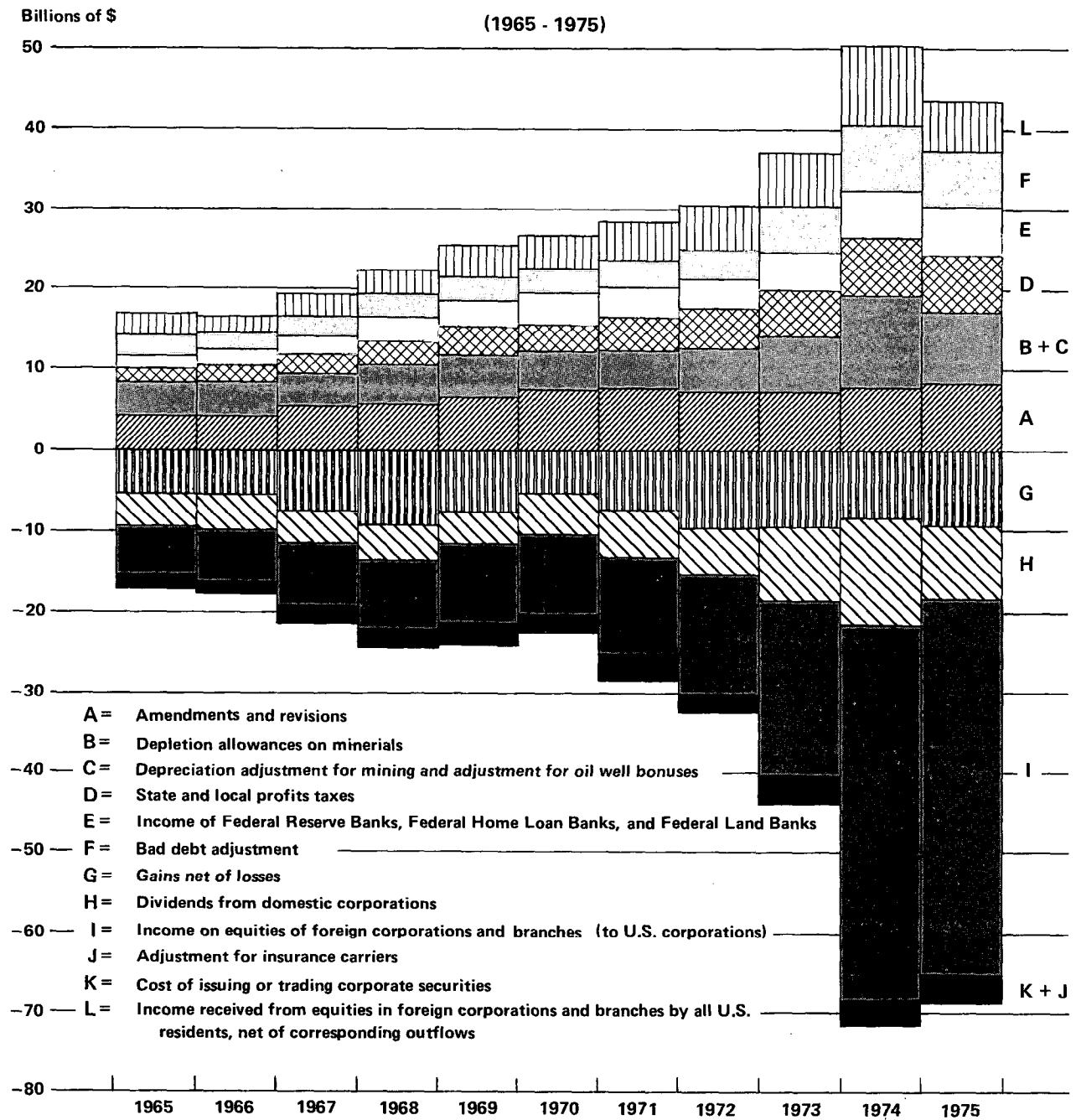
The detailed differences in the two measures of corporate profit are shown in Chart 4, which reveals that the largest source of discrepancy is the treatment of foreign revenue. To compute NIPA corporate profits, income from equities in foreign corporations is deducted from corporate net income (IRS measure), and income actually received from equities in foreign corporations by all branches net of corresponding outflows (NIPA measure) is added back in. The difference between these two figures is quite large—\$47.1 billion was deducted and \$6.1 billion was added back in 1975. The major difference in the two accounts is that the smaller number does not include retained earnings of foreign branches of U. S. corporations and is measured after payment of foreign taxes.² To get a measure of the before-tax

¹ It might be argued, moreover, that this comparison of the tax base of individuals to that of corporations is misleading, for it compares gross revenue to net revenue. If so, adjusted gross income of individuals should be compared to corporate net income plus depreciation allowances. Using this figure, the corporate tax base rose at an average rate of 9 percent per year.

² Because retained earnings of foreign branches do provide returns to U. S. capital; however, the U. S. Department of Commerce plans to include them in NIPA corporate profits with the next benchmark revision of the data.

Chart 4

DEDUCTIONS FROM AND ADDITIONS TO CORPORATE NET INCOME (IRS) NECESSARY TO DERIVE CORPORATE PROFITS BEFORE TAXES (NIPA)



Source: U.S. Department of Commerce.

return on U. S. capital, one can adjust the NIPA corporate profits figure, adding back foreign taxes and retained earnings. This adjustment adds \$41.0 billion to 1975 corporate profits before tax. An equivalent adjustment adds only \$2.8 billion to 1965 corporate profits. Corporate profits before tax, so adjusted, increased at an average annual rate of 7.5 percent per year between 1965 and 1975.

Looking at the other side of the coin, if corporations had paid U. S. taxes on their increased foreign earnings, the decline in the corporate share of the Federal income tax bill would have been considerably smaller. As noted earlier, the corporate income tax raised 14 percent of the total Federal tax bill in 1976 compared to 21 percent in 1965. Including foreign taxes credited, however, reduces the decline

in the corporate share by almost half. This information is shown in detail in Table II.

Foreign tax credits may be claimed by U. S. corporations for taxes paid by their foreign subsidiaries to foreign governments. The amount of such tax credits claimed, only \$2.6 billion in 1965, began to rise rapidly in 1974, jumping from \$9.6 billion in 1973 to \$20.8 billion. The credits amounted to \$23.5 billion in 1976, the last year for which data are available. If the foreign tax payments were included in corporate profits taxes, the relative share of total tax revenue raised in 1976 would have been 19.5 percent rather than the 14 percent figure shown in Chart 2.

Table II
**ACTUAL AND RELATIVE AMOUNTS OF
CORPORATE INCOME TAX — 1965 AND 1976**

	(calendar years)	
	1965	1976
	\$ billions	
(1) Total Federal taxes collected	\$124.7	\$318.5
(2) Corporation income taxes	26.0	43.2
(3) Foreign tax credit	2.6	23.5
(4) Extra write-off for accelerated depreciation	7.7	21.9
(5) Lower tax from accelerated depreciation	3.7	10.5
(6) Investment tax credit	1.7	6.5
(7) Total Federal taxes plus foreign taxes credited (line 1 plus line 3)	127.3	342.0
(8) Line 7 plus amount taxes reduced by accelerated depreciation	131.0	352.5
(9) Line 8 plus investment tax credit	132.7	359.0
(10) Corporation income taxes plus foreign tax credit (line 2 plus line 3)	28.5	66.7
(11) Line 10 plus amount taxes lowered through accelerated depreciation	32.2	77.2
(12) Line 11 plus investment tax credit	33.9	83.7
	Percent	
Corporate income taxes as percent of total Federal taxes (line 2 divided by line 1)	20.8	13.6
Corporate income taxes as percent of total, including foreign (line 10 divided by line 7)	22.4	19.5
Corporate income taxes as percent of total, including foreign, and adjusting for accelerated depreciation (line 11 divided by line 8)	24.6	21.9
Corporate income taxes as percent of total, including foreign, and adjusting for accelerated depreciation and the investment tax credit (line 12 divided by line 9)	25.5	23.3

Source: U. S. Department of the Treasury.

Table II also shows the effects of liberalized depreciation accounting and the investment tax credit on the corporate tax bill. If these changes had not taken place and if corporations had paid U. S. taxes on foreign earnings, the corporate income tax would have raised 23.3 percent of the total Federal tax bill in 1976, only slightly less than the 25.5 percent that would have been raised in 1965.

Thus, the reduction in the relative share of corporate taxes stem from a number of factors. Corporate profits and taxes, including profits and taxes in foreign countries, grew rapidly. Profits from domestic operations grew less rapidly and taxes still less rapidly, due to allowances for accelerated depreciation and the investment tax credit.

The foregoing findings about the decline in the relative share of taxes raised from corporate taxes may appear to be at odds with the oft-repeated assertion that corporate tax burdens have become increasingly onerous since the midsixties, but there is really little conflict between the two. The findings of Feldstein and Summers [1] illustrate this point. Feldstein and Summers show that if the tax rate on returns to nonfinancial corporate capital were measured properly, it would have been 52.5 percent in 1965 and 64.9 percent in 1976.³

Feldstein and Summers begin their analysis using corporate profits (NIPA) with inventory valuation adjustments (IVA) and capital consumption allowances (CCA).⁴ To find total tax paid on the total return to capital, they first add corporate interest payments to corporate profits before tax with IVA and CCA. This sum, which they term corporate source income, provides them with a measure of corporate income available to shareholders and creditors. To estimate total taxes collected on corporate source income, they add individual income taxes paid on dividends, interest, and realized capital gains—and poten-

³ This rate fluctuates widely. It was calculated to be 70 percent in 1973 and 95 percent in 1974.

⁴ The inventory valuation adjustment removes "inventory profits," which arise in an inflationary environment whenever inventories are valued at historical rather than replacement cost. The capital consumption adjustment adjusts depreciation allowances to a consistent (straight-line) accounting method, with the depreciated item valued at replacement rather than historical cost. Economists generally believe that corporate profits with IVA and CCA is a better measure of real profit than is the unadjusted figure. They come to this conclusion because "inventory profits" earned by a normal operating business enterprise must be spent immediately in replacing the old inventory, so the gain is illusory. The capital consumption allowance is considered to be a proper adjustment for normal business enterprises because firms will eventually need to replace their investment so they should be allowed to deduct the entire replacement expense from their profits.

tial taxes accrued yearly on unrealized gains—to corporate profits taxes. Their results, which are shown in Table III, indicate that corporate source income has often been subject to very high rates of taxation, the highest being 95 percent in 1974. At that time, a high rate of inflation coupled with the then-extensive use of first-in-first-out (FIFO) inventory valuation methods to produce a large difference between taxable and economic profits.

In using the NIPA definition of corporate profits, however, Feldstein and Summers ignore a large source of corporate revenue, namely foreign operations. Table III also includes a row in which the Feldstein and Summers figures are adjusted to include income from foreign equities and foreign taxes.⁵ These adjustments recognize that foreign income provides a return to domestic capital. Inclu-

⁵ Adding the income from foreign equities and the foreign tax credit to the Feldstein and Summers figures is not strictly correct, because their estimates relate only to nonfinancial corporations and the foreign numbers relate to all corporations, but data were not available on the relative amounts of income and tax credits of the foreign sector received (claimed) by financial and nonfinancial corporations.

sion of the expanded foreign sector can make a substantial difference. Most dramatically, the tax rate in 1974 is lowered from 95 to 82.4 percent.⁶

In summary, the tax burden placed upon returns to corporate capital can, indeed, be quite onerous and much of the burden is attributable to the corporate income tax. Critics have argued for decades that corporations are treated unfairly in that their stockholders are subjected to “double taxation.” The implication of this argument, that corporate enterprise is taxed relatively more heavily than unincorporated enterprise, however, is quite debatable.

Corporations enjoy certain advantages that may outweigh the burden of “double taxation.” The other side of the “double taxation” coin is that cor-

⁶ While not relevant to these figures because Feldstein and Summers examine only nonfinancial corporations, the treatment of income and taxes on income from Federal Reserve Banks can also cause difficulties in interpreting the NIPA corporate profits data. The National Income and Products Accounts treats earnings of these institutions as part of corporate profits, but treats most of it as being taxed away as corporate profits tax. Since the Federal Reserve Banks return rather large percentages of their earnings to the Treasury, their tax rate is of course much larger than that of other corporations.

Table III

THE EFFECTIVE TAX RATE ON CAPITAL INCOME OF THE NONFINANCIAL CORPORATE SECTOR

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
	Billions of Dollars											
Total Real Income	70.9	76.2	73.8	78.7	74.9	64.2	73.7	88.0	90.2	76.2	100.2	126.3
	Percent of Total Real Income											
Corporate Income Tax	38.3	38.7	37.5	42.7	44.5	42.5	40.5	38.0	43.9	56.0	40.8	42.5
Taxes on Shareholders and Creditors												
Dividends	7.1	6.9	7.4	7.6	8.0	9.0	7.9	7.2	7.7	10.0	8.4	7.4
Real Retained Earnings	2.7	2.8	2.8	2.8	2.8	1.2	1.1	1.4	2.1	2.1	1.7	1.4
Nominal Capital Appreciation (accrued capital gains taxes)	0.7	1.2	1.3	2.0	3.0	3.5	2.1	1.8	5.0	9.4	4.8	2.9
Interest Income	3.8	4.3	5.2	5.6	7.7	11.7	10.7	9.6	11.3	17.2	13.6	10.7
Total Taxes	52.5	53.9	54.2	60.8	66.0	67.8	62.3	58.0	70.0	94.9	69.3	64.9
	Billions of Dollars											
Foreign Income and Tax Credit												
Tax Credits Claimed for Foreign Taxes Paid	2.6	2.9	3.2	3.7	4.0	4.5	5.7	6.3	9.6	20.8	20.0	23.5
Income on Equities in Foreign Corporations and Branches*	2.8	3.8	4.4	5.0	5.2	6.0	7.6	9.2	15.6	36.8	41.0	n.a.
	Percent of Total Income (including foreign)											
Total Tax (including foreign taxes)	54.0	55.0	55.2	61.6	66.7	68.2	63.5	59.0	68.8	82.4	63.3	n.a.

* Portion not otherwise included in corporate profits before taxes.

Sources: Feldstein and Summers [1] and U. S. Department of Commerce.

porations may retain earnings, thus allowing shareholders to defer taxes on these earnings until they sell their shares—at which time the increase in the value of the shares is treated as a capital gain. Corporations also enjoy certain advantages in setting up pension plans, as well as the widely-known legal advantages of limited liability (which is less of an advantage nowadays than it once was, for limited liability can be conferred to “limited partners”) and immortality. Advantages such as these may partially account for the continued rapid growth of the corporate form of business relative to the noncorporate form.

The three sets of data available that allow comparisons of corporate and noncorporate growth are total receipts, number of firms organized, and income originating by form of organization. Total receipts of corporations increased at a 10.6 percent average annual rate between 1965 and 1976 while receipts of partnerships and proprietorships increased at only a 6.3 percent rate. Between 1973 and 1976, corporate receipts increased at a 12 percent average annual rate compared to 7 percent for noncorporate receipts.

The same picture emerges when the relative change in the *number* of corporations is studied. The number of corporations increased at an average annual rate of 3.6 percent between 1965 and 1976. The number of proprietorships and partnerships increased only 2.0 percent per year over the same period. Over the more recent 1973-1976 time period, corporations grew 3.4 percent per year while the number of proprietorships and partnerships increased only 0.6 percent per year. Likewise, national income originating in the corporate sector rose 10.6 percent per year between 1965 and 1976, while income originating in noncorporate business increased only 6.3 percent. Between 1975 and 1978, income originating in corporations rose 13.6 percent, whereas income originating in proprietorships and partnerships rose only 10.9 percent.

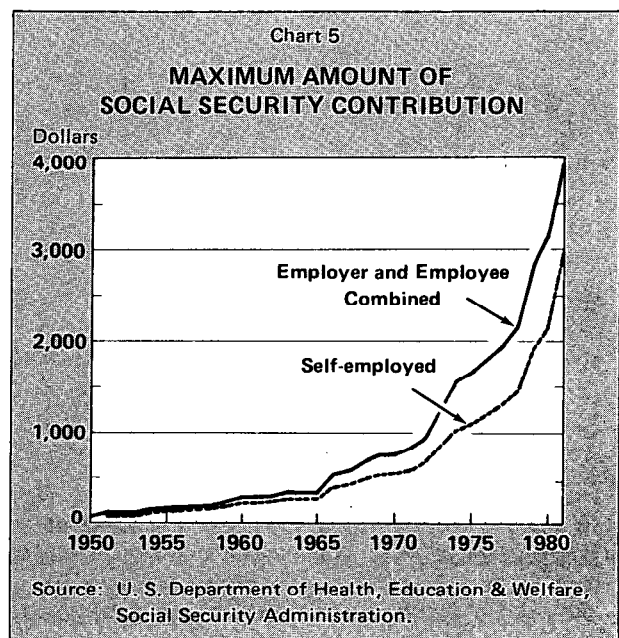
None of these statistics is completely satisfactory, of course, but taken together they indicate that the extra burden of taxes on the corporation is not so onerous that entrepreneurs view the corporate form as a relatively undesirable form of business organization.

Federal Payroll Taxes, 1950-1978 Federal revenue from payroll taxes, as illustrated in Chart 2, has been rising more rapidly than revenue from any other source. In 1950, payroll taxes provided less than 10 percent of Federal tax revenue. By 1975, they provided almost 30 percent; and by 1980 they

will provide an estimated 32 percent of all Federal tax revenue. Most of these payroll taxes are used to finance the Old-Age, Survivors, Disability, and Health Insurance (the so-called “social security” system). These taxes are thus tied to certain benefit payments. The payroll tax schedules are therefore designed to allow the various social security trust funds to meet their projected benefit needs. As a result, payroll tax revenue increased from \$19 billion in 1965 to \$123 billion in 1978 (an average annual rate of increase of 15.4 percent, while other Federal taxes were increasing at an average rate of 8.7 percent). The payroll tax revenue is estimated to be \$161.5 billion in 1980, thus registering a 14.6 percent annual growth rate from 1978.

Payroll Tax Rate Changes Since 1937 In 1937 employers and employees were each required to pay 1 percent of an individual’s wages and salaries, up to \$3000, in the form of a payroll tax. In 1950, the rate was increased to 1.5 percent each, and in 1951 the maximum wage base was raised to \$3600. The rates and the base continued to be raised periodically until, by 1970, individuals and employers were required to pay 4.8 percent each up to the maximum taxable earnings of \$7800 per worker. During the seventies through a series of steps, the rate was raised to 6.13 percent, and the maximum taxable earnings base was increased from \$7800 to \$22,900. The maximum base is \$25,900 in 1980.

Chart 5 shows the maximum payroll tax per wage earner in the 1950-1981 time period. The sharp



increases in recent years illustrate vividly the increasing relative burden of the payroll taxes on middle and upper income groups (the data are shown in nominal terms; converted into constant dollars the burden would appear to be lower). These increases have unfortunately coincided with the worst decade of stagflation in American experience. The burden of paying for social security benefits, of course, increases during stagflation, which partly explains the sharp increases in payroll taxes over the past decade. In addition, many economists would argue that payroll taxes contribute more to stagflation than other types of taxes (see discussion below).

A Digression on Economic Effects of Payroll Taxes The rapid increases in payroll taxes have been viewed with alarm by many economists, who fear their possible adverse effects on the accumulation of capital and on the wage and price structure of the economy. Theoretically, in a competitive economy the wage earner bears the burden of the payroll tax and it makes no difference whether the tax is nominally levied on the employer or the employee. This argument is illustrated algebraically in Box II. As this exhibit shows, the tax reduces the quantity of labor demanded and supplied by the same amount regardless of whether it is the "employer's share" or the "employee's share." In this example, the wage earner, who receives the eventual benefits of the OASDHI system, pays the tax.

The argument in Box II, however, depends crucially upon the assumption of competition in product and labor markets. As Richard and Peggy Musgrave argue in *Public Finance in Theory and Practice* [3], however, market power allows wage earners to pass along the burden of a payroll tax to the general public. They also argue that, in reality, it can make a difference if the tax is paid by the employer rather than the employee.

In particular, the Musgraves state that:

If payroll taxes are increased, unions may accept an increase in the employer contribution without demanding a wage increase, but they will hardly agree to a reduction in their wage rate in order to offset an increase in the employer contribution. Firms, in turn, will not absorb the increase in their contribution in reduced profits, but will make it an occasion to raise prices. [3, pp. 392-393].

Wage earners will, therefore, not bear the entire burden of the tax, for through the price effect, the tax lowers real incomes generally. The Musgraves conclude that the price effect will be particularly strong when increases in payroll taxes are designated to be paid by employers rather than employees. Thus, in a noncompetitive world, actions designed to in-

crease the payroll tax can have an inflationary impact upon the economy, and the inflationary effect can be larger if the tax increase is stipulated to come from the "employer's share."

This conception of the effects of the payroll tax is a source of the argument that increases in payroll taxes promote inflation. Arthur Okun [4, p. 351] and Robert Gordon [2, p. 339], among other influential economists, argue that a reduction in payroll taxes can be useful in coping with stagflation. Gordon also points out that

... the prospective increases in payroll taxes in the late 1970's and early 1980's amount to a series of 'mini supply shocks.' A monetary authority adhering to a [constant growth rate rule for the money supply] would find that these cost increases would increase unemployment. An accommodative money supply would shift the burden of the [tax] ... from unemployment to real income losses for those holding assets yielding nominal-fixed returns [2, p. 338].

Summary Federal taxes have risen precipitously in the U. S. during the past half century. Between 1930 and 1950, Federal tax receipts rose from approximately 3.2 percent of GNP to 17.5 percent. Since 1950, the share of GNP going to Federal taxes has leveled off at around 20 percent.

The method of raising Federal tax revenues has also changed dramatically. In 1927, individual income taxes provided approximately 25 percent of Federal tax revenues; corporate income taxes approximately 37 percent; sales and excises, 12 percent; customs duties, 19 percent; and payroll taxes, 5 percent. By 1950, individual income tax receipts were a greatly enlarged 40 percent of all Federal tax receipts; corporation income taxes, 32 percent; sales and excises, 20 percent; customs duties, 3 percent; and payroll taxes, 9 percent. By 1977, individual income taxes provided 45 percent of total Federal revenue; payroll taxes, 29 percent; corporate income taxes, 15 percent; and sales and excises, 8 percent.

The major changes in taxation since 1950, therefore, have been the relative decline in the corporate income tax and the rise of the payroll tax. The decline in the share of the corporate income tax is somewhat illusory because of the tax treatment of foreign earnings and the foreign tax credit. The implication that one might draw from the reduction in the share of tax revenues raised from corporate income taxes, however, that the corporate tax burden is less onerous than in earlier years, is also illusory. The effective tax rate on corporate capital, according to the calculations of Feldstein and Summers, increased considerably between the late sixties and early seventies, primarily because of inflation.

Payroll taxes, have increased more rapidly than any other source of Federal tax revenue since 1950. Payroll tax revenues, moreover, are projected to increase at the same rapid rate (approximately 15 percent per year) in 1980. This meteoric rise has been viewed with alarm by many economists who think that payroll taxes have more undesirable social and economic effects than other types of taxes.

References

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3. Musgrave, Richard A., and Musgrave, Peggy B. *Public Finance in Theory and Practice*. New York: McGraw-Hill Book Company, Inc., 1973.
4. Okun, Arthur M. "Efficient Disinflationary Policies." *American Economic Review Proceedings* 68 (May 1978) 348-352.
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Box II

Assume

$Q^D = f(W)$ is a labor demand function,

$f' < 0$, continuous; and

$Q^S = h(W)$ is a labor supply function,

$h' > 0$, continuous;

and $Q^D \equiv Q^S$ is the equilibrium condition, where W is the wage rate, Q^D is the quantity of labor demanded and Q^S is the quantity of labor supplied. Assume also that Q_0 is the equilibrium quantity of labor exchanged at the equilibrium wage W_0 . A payroll tax paid by employers changes their demand for labor as follows:

$$Q_1^D = f(W/(1-t)),$$

where t is the tax rate on the hourly wage. A payroll tax paid by employees changes their supply function as follows:

$$Q_1^S = h(W \cdot (1-t)).$$

Case 1—Employers pay the tax

$Q_1^D \equiv Q^S$. Thus, there exists a $W_1 < W_0$ such that $f(W_1/(1-t)) = h(W_1) = Q_1$.

Case 2—Employees pay the tax

$Q^D \equiv Q_1^S$. Thus, there exists a $W_2 > W_0$ such that $f(W_2) = h(W_2 \cdot (1-t)) = Q_2$.

$W_1/(1-t)$ is the after-tax wage paid by employers when they pay the tax and $W_2 \cdot (1-t)$ is the after-tax hourly wage received by employees when they pay the tax, so $W_1/(1-t)$ is equal to $W_2 \cdot (1-t)$ and $Q_1 = Q_2$. Thus, whether the tax is paid by employer or employee is irrelevant to the case at hand. $Q_1 = Q_2 < Q_0$, however, and $W_1 < W_0 < W_2$. Thus, assuming that the labor supply is not perfectly inelastic, the imposition of a payroll tax does reduce the equilibrium quantity of labor exchanged.