Paying More Taxes and Affording It Less

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ONE of the many side effects of inflation is that it results in a transfer of resource command from the private sector to the public sector of the economy. The Government's status as a net monetary debtor and the progressive income tax structure are the vehicles by which this resource transfer occurs. This article discusses how inflation and the progressive tax structure interact to generate Government revenue and reduce the take-home pay of taxpayers.[1]

Figures from the Bureau of Labor Statistics show that from the fall of 1973 to the fall of 1974, personal income taxes for a family of intermediate income rose by 25.1 percent, while the budget necessary to maintain their standard of living rose by 13.5 percent.[2] Thus, even if a family's income before taxes kept pace with inflation, their disposable income (total income less taxes) decreased as taxes took up an increasing proportion of their budget.

How and why did taxes increase faster than income? What are the economic consequences of this resource transfer and are there possible remedies? In order to answer these questions, the tax liabilities of an individual family over a number of years are examined. Next, the aggregate effects of increased taxation are discussed. Finally, possible remedies for these tax increases are presented.

One Family's Experience

In 1967 the Bureau of Labor Statistics calculated that an income of $9,076 would be required to maintain a family of four at an intermediate standard of living. From this budget $1,365, or 15 percent, would be paid as personal taxes (social insurance contributions and personal income taxes). In 1974 the same family would require a budget of $14,333 to maintain an intermediate standard of living. Of this amount $2,790, or 19.5 percent, would be paid as personal taxes.

In order to understand why taxes have taken up an increasing proportion of the family budget, the income and tax liabilities of a typical family are examined over a number of years. The examination consists of comparing the rise in actual tax liabilities with the rise in income, assuming income increases equal the rate of inflation. The Bureau of Labor Statistics (BLS) provides budget information for a hypothetical family of four which consists of a husband, employed full-time; a wife, not employed outside the home; a boy, 13; and a girl, 8. The BLS constructs budgets for this family at three standards of living — low, intermediate, and high. This study considers the intermediate level family budget. In the spring of 1967, which is regarded as the base year, this budget equalled $9,076.[3]

For illustrative purposes, this base period budget is increased each year at the same rate as the consumer price index (CPI). This increase would allow pre-tax income to keep pace in some measure with the rate of inflation. The CPI is not a complete measure of increases in the cost of living, but it has several attributes which make it suitable for the purposes of this analysis.[4] The CPI is frequently used in union contracts as the measure of changes in the cost of living, activating wage increases for workers covered by the contract. The effects of increases in income and social security taxes are not included in the CPI, but increases in excise, sales, and real estate taxes are included. For this reason only the effects of Federal and state income taxes and social security contributions are considered here.

It is assumed that by increasing the family income each year at the same rate as the increase in the CPI, the pre-tax *real* income of the family remains constant in terms of 1967 purchasing power. On this basis the family's money income before taxes rose from $9,076 in 1967 to $13,407 in 1974.[5]

[1]For another aspect of inflation serving to finance the government, see Charlotte E. Ruebling, "Financing Government Through Monetary Expansion and Inflation," this *Review* (February 1975), pp. 15-23.

[2]A family budget for an intermediate income level totaled $14,333 in autumn 1974, according to BLS figures. See U.S. Department of Labor, Bureau of Labor Statistics, *Autumn 1974 Urban Family Budgets and Comparative Indexes for Selected Urban Areas,* No. 75-190 (April 9, 1975).

[3]Jean C. Brackett, "New BLS Budgets," *Monthly Labor Review* (April 1969), pp. 3-16.

[4]For a review of the adequacies and shortcomings of the CPI, see Denis S. Karnosky, "A Primer on the Consumer Price Index," this *Review* (July 1974), pp. 2-7.

[5]This figure differs from the 1974 BLS budget of $14,333 because the BLS budget includes not only those cost-of-living increases included in the CPI, but also allowances for increased personal income and social security taxes.

Exhibit I

FEDERAL TAXES

Year	Real Family Income	Money Family Income[1]	Taxable Income	Federal Tax Liability	After-Tax Money Income	After-Tax Real Income[3]	Tax as a Percent of Money Income
1967	$9,076	$ 9,076	$5,768	$ 956	$ 8,120	$8,120	10.5%
1968	9,076	9,457	6,111	1,098[2]	8,359	8,022	11.6
1969	9,076	9,968	6,571	1,219[2]	8,749	7,968	12.2
1970	9,076	10,556	7,056	1,231[2]	9,325	8,018	11.7
1971	9,076	11,010	6,879	1,167	9,843	8,115	10.6
1972	9,076	11,373	6,667	1,127	10,246	8,177	9.9
1973	9,076	12,078	7,266	1,241	10,837	8,142	10.3
1974	9,076	13,407	8,407	1,470[4]	11,937	8,082	11.0

[1]Inflated by the annual growth rate in the consumer price index.
[2]Includes surcharge.
[3]Deflated by the annual average consumer price index for each year.
[4]Excludes rebate.

Federal Income Tax

The family's Federal income tax liability is calculated using the status of "married filing jointly," claiming four exemptions and using the standard deduction, actual tax rates, exemptions, and deductions applicable from 1967 through 1974.[6] During this period there were several changes in the Federal income tax structure: income tax surcharges were implemented during 1968, 1969, and 1970, and there were changes in the value of allowable exemptions and the standard deduction in 1970, 1971, and 1972. Tax rates and tax brackets, however, did not change during this period. The 1974 tax rebate is excluded from consideration in this article since it was not paid until 1975.

The family's Federal income tax liability increased every year except for 1971 and 1972 (see Exhibit I). In 1974, for example, the family paid $229 more in Federal income taxes than in 1973, even though the family's real income before taxes was held constant. Their real income after Federal income taxes actually decreased from $8,120 in 1967 to $8,082 in 1974.

Despite tax cuts in 1970 through 1972, the portion of family income paid in Federal income taxes increased from 10.5 percent in 1967 to 11 percent in 1974. The increases were much sharper in the periods when tax laws remained the same. For example, from 1967 to 1969, Federal income taxes as a percent of the family income increased from 10.5 to 12.2.

The progressive tax structure in combination with inflation was a major cause of taxes accounting for an increasing share of the family budget. Taxes are paid on money income, and as money income increases, the taxpayer can be pushed into a higher tax bracket. The hypothetical family was pushed into a higher bracket in 1974 when its taxable income rose above $8,000. Prior to this, 19 cents of the marginal dollar of taxable income was collected as tax, whereas in 1974, 22 cents of the marginal dollar was paid in taxes. Therefore, the effect of the progressive tax structure is to tax more than a proportional share of income increases, even if these increases do not result in increased purchasing power.

Social Security Taxes

The family's social security tax liability is calculated by applying the rates in effect from 1967 to 1974 to the family's money income (see Exhibit II). This family's income is above the taxable ceiling in every year and, therefore, the maximum contribution is paid each year.

In every year from 1967 through 1974, except 1970, the family's social security tax liability increased. This is because in every year, except 1970, the taxable income ceiling and/or the rate of employee contribution was raised. The family's social security liability increased from $290 in 1967 to $772 in 1974. Social security taxes as a percent of the hypothetical family's money income rose from 3.2 percent in 1967 to 5.8 percent in 1974. Increases in social security taxes were much greater than increases in family income. The family's money income rose by 48 percent in the period from 1967 to 1974 while social security contributions increased by 166 percent. Real income, after social security contributions were deducted, fell from $8,786 to $8,555. This was a loss of $231 of 1967 purchasing power due to this tax alone.

[6]If applicable exemptions and deductions in either 1967 or 1974 had been used for all years, the conclusions reached would have been the same, but the real income lost through the combination of inflation and taxes would have been greater.

Exhibit II

SOCIAL SECURITY CONTRIBUTIONS

Year	Real Family Income	Money Family Income[1]	Social Security Income Ceiling	Percent Social Security Employee Contribution	Social Security Tax Liability	After-Tax Money Income	After-Tax Real Income[2]	Tax as a Percent of Money Income
1967	$9,076	$ 9,076	$ 6,600	4.4 %	$290	$ 8,786	$8,786	3.2%
1968	9,076	9,457	7,800	4.4	343	9,114	8,747	3.6
1969	9,076	9,968	7,800	4.8	374	9,594	8,738	3.8
1970	9,076	10,556	7,800	4.8	374	10,182	8,755	3.5
1971	9,076	11,010	7,800	5.2	406	10,604	8,742	3.7
1972	9,076	11,373	9,000	5.2	468	10,905	8,703	4.1
1973	9,076	12,078	10,800	5.85	632	11,446	8,600	5.2
1974	9,076	13,407	13,200	5.85	772	12,635	8,555	5.8

[1]Inflated by the annual growth rate in the consumer price index.
[2]Deflated by the annual average consumer price index for each year.
Source: *Social Security Bulletin*

The social security tax changes were implemented in order to finance increased benefits which were legislated in an attempt to help recipients keep pace with the rising cost of living. Therefore, inflation was a major factor necessitating increased social security taxes.[7] Beginning in January 1975, increases in social security benefits are linked directly to changes in the consumer price index, making the inflation-social security tax relationship more direct.

State Income Taxes

The family's state personal income tax liability is calculated by assuming that they lived in Missouri, filed a "joint-married" return, claimed four exemptions and used the standard deduction. The Federal income tax calculated in Exhibit I, as well as the standard deduction and personal exemptions applicable, were deducted from income in order to obtain a figure for income taxable by the state. Missouri tax rates were increased in 1971. The structure of the Missouri personal income tax was changed in 1973 to conform with the Federal income tax structure.

State personal income taxes affected the family's budget in a manner very similar to Federal personal income taxes (see Exhibit III): the state tax liability increased from $82 in 1967 to $198 in 1974; the percentage of the family's money income paid in the form of state income taxes increased from 0.9 percent in 1967 to 1.5 percent in 1974; and after-tax real income fell from $8,994 to $8,943 over the period. Since Missouri state tax rates are lower than Federal tax rates, the dollar increase in state tax liabilities was not as great as for the Federal tax.[8] However, Missouri brackets are narrower than Federal brackets so that the family was pushed into higher brackets more frequently.

The family did receive some relief from increased state income taxes as a result of their increased Federal tax liability. Federal income taxes are deductible items in calculating Missouri state income tax, and thus the increasing Federal tax reduced to a certain degree the amount of income taxable by the state. Nevertheless, the family lost purchasing power over the period as a result of increasing state taxes.

Combined Tax Burden

A look at the composite effect of Federal and state income taxes and social security contributions shows that in every year taxes increased above the previous year's level (see Exhibit IV). The hypothetical family's combined tax liability increased from $1,328 to $2,440. In terms of 1967 purchasing power, the family's income remained unchanged at $9,076, while their tax liability, also in terms of 1967 purchasing power, increased by $324. In 1967, taxes took 14.6 percent of the family budget. By 1974 the figure had climbed to 18.2 percent. Inflation and taxes had combined to erode their income despite the fact that they received annual cost-of-living increases.

[7]The changing age distribution of the population and expanded programs were also contributory factors. For a further discussion of the social security system, see Richard A. Musgrave and Peggy B. Musgrave, *Public Finance in Theory and Practice* (New York: McGraw-Hill Book Company, 1973), pp. 346-350, 390-395, 666-676.

[8]The family's income was in the 4.5 percent bracket for 1974 Missouri state income taxes, compared to the 22 percent bracket for Federal income taxes.

Exhibit III

STATE TAXES

Year	Real Family Income	Money Family Income[1]	Taxable Income	State Tax Liability	After-Tax Money Income	After-Tax Real Income[2]	Tax as a Percent of Money Income
1967	$9,076	$ 9,076	$4,466	$ 82	$ 8,994	$8,994	0.9%
1968	9,076	9,457	4,686	87	9,370	8,992	0.9
1969	9,076	9,968	5,051	97	9,871	8,990	1.0
1970	9,076	10,556	5,625	114	10,442	8,979	1.1
1971	9,076	11,010	6,143	171	10,839	8,936	1.6
1972	9,076	11,373	6,546	190	11,183	8,925	1.7
1973	9,076	12,078	5,825	158	11,920	8,956	1.3
1974	9,076	13,407	6,737	198	13,209	8,943	1.5

[1]Inflated by the annual growth rate in the consumer price index.
[2]Deflated by the annual average consumer price index for each year.

The Aggregate Experience

Inflation in combination with the progressive tax structure serves to increase the government's share of national income. The increase is more than proportional to the increase in household incomes because as incomes rise, some people whose incomes were too low to be taxed are now taxed, and others, as in the previous example, are pushed into higher marginal tax brackets. Inflation has the effect of an "unauthorized" (in contrast to a legislated change in the tax structure) tax rate increase. This increase in taxes shifts command over resources from the private sector to the government sector, and thus dampens private demand.

The tax system, as currently formulated, has what is often referred to as a "built-in stabilizing" feature.[9] In times of inflation, the tax system generates an automatic restraint on private spending by increasing the government's proportion of private income. Likewise, in times of demand-induced recessions, the tax structure is intended to exhibit a stabilizing influence on private incomes by reducing the proportion of income which is transferred from the private sector to the public sector by taxes. In all previous postwar recessions, personal taxes as a percent of personal income declined or remained constant (see accompanying chart). However, the recent recession, which in its early stages was supply-induced rather than demand-induced, was accompanied by severe inflation.[10] Taxes as a percent of personal income increased from 14.3 percent in 1973 to 14.8 percent in 1974. Rather than cushioning the recessionary tendencies, the "built-in stabilizers" associated with taxes

Exhibit IV

COMBINED TAX LIABILITY — FEDERAL, STATE, AND SOCIAL SECURITY

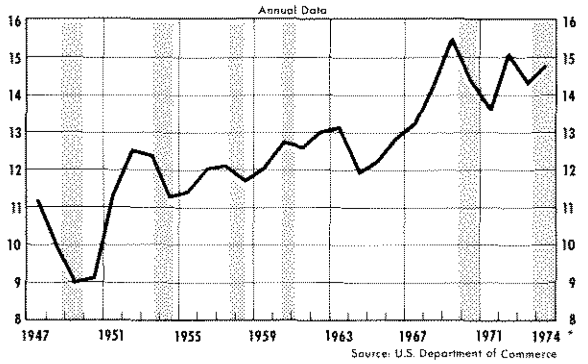
Year	Real Family Income	Money Family Income[1]	Federal Tax Liability	Social Security Liability	State Tax Liability	Combined Tax Liability	After-Tax Money Income	After-Tax Real Income[2]	Taxes as a Percent of Money Income
1967	$9,076	$ 9,076	$ 956	$290	$ 82	$1,328	$ 7,748	$7,748	14.6%
1968	9,076	9,457	1,098[3]	343	87	1,528	7,929	7,609	16.2
1969	9,076	9,968	1,219[3]	374	97	1,690	8,278	7,539	17.0
1970	9,076	10,556	1,231[3]	374	114	1,719	8,837	7,598	16.3
1971	9,076	11,010	1,167	406	171	1,744	9,266	7,639	15.8
1972	9,076	11,373	1,127	468	190	1,785	9,588	7,652	15.7
1973	9,076	12,078	1,241	632	158	2,031	10,047	7,548	16.8
1974	9,076	13,407	1,470[4]	772	198	2,440	10,967	7,425	18.2

[1]Inflated by the annual growth rate in the consumer price index.
[2]Deflated by the annual average consumer price index for each year.
[3]Includes surcharge.
[4]Excludes rebate.

[9]For a theoretical discussion of built-in stabilizers, see Armen A. Alchian and William R. Allen, *University Economics: Elements of Inquiry*, 3rd ed. (Belmont, California: Wadsworth Publishing Company, Inc., 1972), pp. 716-718.

[10]See Norman N. Bowsher, "Two Stages to the Current Recession," this *Review* (June 1975), pp. 2-8.

Personal Taxes as a Percent of Personal Income



Source: U.S. Department of Commerce

Shaded areas represent periods of business recessions as defined by the National Bureau of Economic Research, except the 1974-75 period which is preliminary.

*Data for 1974 do not include tax rebates.

served to amplify this cyclical downswing in private spending.

Some Possible Remedies

There are several ways that "unauthorized" tax increases resulting from inflation could be controlled. A tax rebate system could return to the taxpayer precisely the amount of inflation-induced tax collections. The Committee on Internal Revenue Taxation has estimated that $7 billion of the $15 billion increase in 1974 Federal income taxes resulted from the interaction of inflation and the tax structure. It also estimated the average inflation-induced tax per return by income brackets (see Table I). Using these estimates of the impact of inflation on Federal income taxes, the hypothetical family would have received a $75 rebate.[11] Rebates would be higher for higher income families, but a greater *percentage* of the taxes paid by lower income families would be returned.

As the examples of the hypothetical family's tax liabilities indicated, increased deductions and exemptions gave the family some short-term relief from inflationary tax increases. An annual increase in the size of the standard deduction, exemptions, and tax bracket ceilings could offer a long-term solution. The increases could be based on the increase of a particular price index in a manner similar to the treatment of family income in Exhibits I-IV. This indexation would help to eliminate "unlegislated" tax increases.[12]

[11]It should be noted that the rebate system described in this case would be used only to return inflation-induced taxes, not to stimulate economic activity.

[12]For a more complete discussion of indexation, see Jai-Hoon Yang, "The Case For and Against Indexation; An Attempt at Perspective," this *Review* (October 1974), pp. 2-11.

Table I

TAX INCREASES RESULTING FROM INFLATION

Income	Excess Taxes in 1974, Average Per Return	Excess Tax as a Percent of Present-Law Tax
$ 0 — $ 3,000	$ 31	44%
$ 3,000 — $ 5,000	37	16
$ 5,000 — $ 7,000	46	9
$ 7,000 — $ 10,000	54	7
$ 10,000 — $ 15,000	75	6
$ 15,000 — $ 20,000	118	6
$ 20,000 — $ 50,000	243	6
$ 50,000 — $100,000	934	5
$100,000 and over	1,738	3

Source: Joint Committee on Internal Revenue Taxation

An alternative method of indexation would be to deflate family income and itemized deductions by the price index rather than inflate the exemptions and the standard deductions. The tax calculated in this manner would then have to be reinflated so that payments would be in current dollars. The tax system would then approach a system of taxing real income rather than money income.

Conclusion

The most effective method to avoid inflation-induced increases in tax payments is to attack the problem at the core. It is the interaction of inflation and the tax structure which results in the more than proportional increase in taxes. Either stabilizing the price level or changing the progressive structure of the tax rates could relieve the taxpayer of the burden of inflation-induced tax increases.

By using tax rebates, indexing the tax structure, or stabilizing prices, inflation-induced tax increases could be avoided, but such schemes deal with symptoms, not the disease of inflation itself. Since 1967, a taxpayer whose income kept pace with inflation actually lost purchasing power, and inflation in combination with the progressive tax structure served as a vehicle to transfer resources from the private sector to the public sector. Stabilization policy takes on even greater importance when not only the obvious consequences of a changing price level are noted, but also when the less apparent consequences, such as the "unauthorized" tax increases resulting from inflation, are recognized.