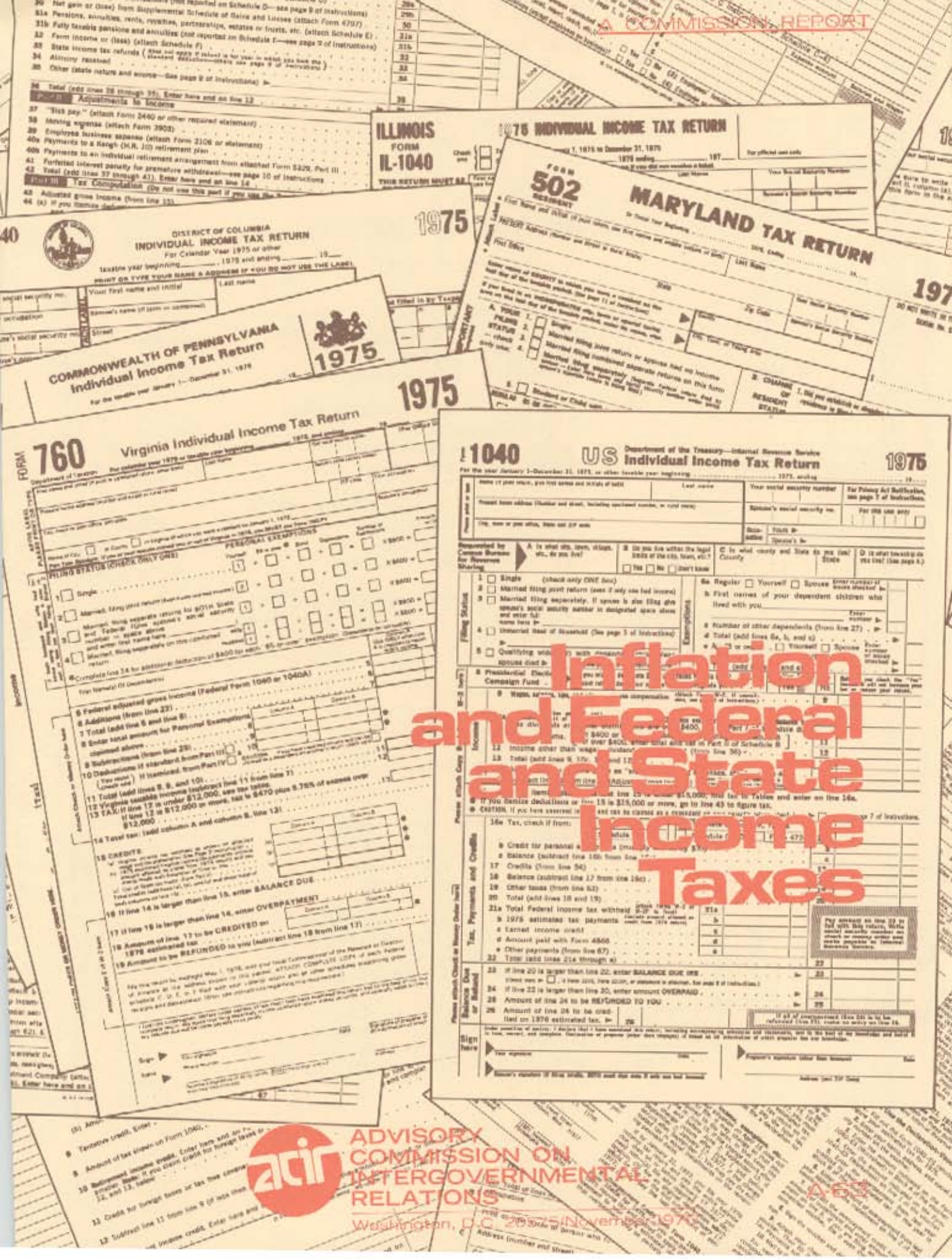
A COMMISSION REPORT
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Inflation and Federal and State Income Taxes
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS
Washington, D.C. 20575/November 1976
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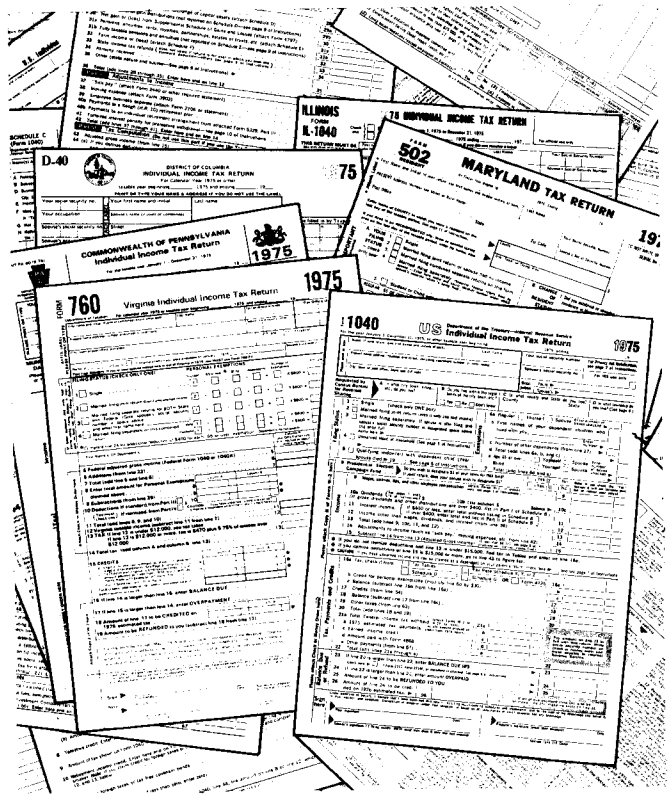
A COMMISSION REPORT

Inflation and Federal and State Income Taxes



ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS

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Preface

The Commission's statutory responsibilities include discussion at an early stage of emerging public problems that are likely to require remedial legislative action. The interplay of inflation and progressive Federal and state personal income tax systems clearly stands out as one such problem.

Inflation automatically boosts income taxpayers into higher brackets by cheapening the value of their personal exemptions and by narrowing the size of the tax brackets. As a result, it also raises serious questions with respect to interpersonal tax equity, legislative accountability, public sector growth, and intergovernmental fiscal balance.

Consideration of these four issues was illuminated by a review of recent Canadian efforts to deal with the "inflation tax" through the indexation of Federal and provincial income taxes.

This report and its accompanying recommendations were adopted and approved for publication by the Commission at its August 30, 1976 meeting.

Robert E. Merriam
Chairman

Acknowledgments

This report was co-authored by Robert D. Ebel and Ronald C. Fisher and prepared under the general supervision of John Shannon, assistant director.

The authors wish to especially acknowledge the assistance of ACIR senior analyst Will Myers, who participated in the final preparation of the report, and ACIR statistician Frank Tippett.

The Commission and staff received helpful comments and assistance from a variety of persons too numerous to completely list here. However, special thanks must go to the Brookings Institution, for the exchange of views presented at their Conference on Inflation and Income Taxes, to Emil Sunley of the Brookings staff, to John Allan of the Canadian Department of Finance, to Brian Hull of the Ontario Ministry of Treasury, and to William Forst, Barry Lipman, and Robert Benton of the Virginia Department of Taxation.

We appreciate the comments and help of all our colleagues and critics. Of course, as usual, the Commission and its staff assume full responsibility for any remaining errors or omissions.

Wayne F. Anderson
Executive Director

John Shannon
Assistant Director
Taxation and Finance

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Chapter I

Inflation and the Individual Income Tax Introduction to the Issues—Findings and Recommendations

INTRODUCTION

The United States is currently experiencing its most prolonged, severe inflation in the last quarter century. Indeed, since 1972, the Consumer Price Index (CPI) has risen by an average of 9.6 percent annually—a clear departure from the historically mild 2–3 percent for the U.S. since 1950. Moreover, rates of inflation well above the historical average are expected to continue, at least for the next five or six years. Both the Congressional Budget Office (CBO) and the President project an increase in the Gross National Product (GNP) implicit price deflator of somewhat over 6 percent in 1977 and an average annual increase of 5–6 percent over the period 1977–81.

There are several undesirable economic effects of such a sustained, high rate of increase in the general price level. One of the most important of these effects, and one which is gaining an increasing amount of attention from economists and policymakers at all levels of government, is the distorting effect on the personal tax burden which results from the interplay of inflation and any progressive individual income tax.[1]

When most of the current *U.S. Internal Revenue Code* provisions were enacted, inflation was not a serious problem. As a result, most major tax code provisions are specified in nominal dollar amounts—e.g., tax bracket boundaries, exclusions, exemptions, the standard deduction maximum, the low-income allowance, and various other deductions or credits, such as the child care expense deduction

and the per capita credit in 1975. Inflation, however, decreases the real value of these exemptions, deductions, and credits that are specified in fixed dollar amounts, causing taxable income to rise more rapidly than total income. In addition, since the tax rate brackets are stated in fixed dollar incomes, the increase in taxable income—regardless of whether there is an increase in real income—is subject to taxation at higher marginal rates.[2] It is the impact of inflation on individual income taxes because of these problems that is considered in this report.

IMPACT OF INFLATION ON INCOME TAXES

Inflation interacts with a progressive individual income tax to distort real tax burdens in two ways. First, if a taxpayer's nominal (money) income increases, the share of income paid as tax rises even though there may be no increase—or even a decline—in real income or purchasing power. Second, the response of the tax structure to changing real income is asymmetric: if nominal income is constant so that real income falls by the inflation rate, income taxes do not fall to reflect this taxpayer's decline in purchasing power. In short, inflation causes individual income tax burdens for any given real income to increase.

The effects of an assumed 6 percent inflation on both Federal and state income taxes for families with differing money income changes are demonstrated in Table I-1. One sees that if a family's income increases sufficiently to just offset the increase in prices, income taxes claim a larger share of that constant real income—generating a decrease in disposable real income. Similarly, if this family receives no increase in money income, real income declines by 6 percent, but this family's income tax liability does not fall to reflect this fact. Finally, even if the family manages a gain in income more than enough to offset the inflation, income taxes rise in response to the growth of nominal income rather than real income and thus erode the real income gain.

SCOPE OF THE STUDY

This study focuses on the increases in real individual income tax liabilities that result from the reduction in the real value of tax exemptions, deductions, credits, and rate brackets due to inflation. It is important to note that there are several other issues regarding the effects of inflation and income growth on individual income taxes that are *not* included in this report.

It is an inherent trait of any progressive tax, a trait which has been historically recognized and

Table I-1

INDIVIDUAL INCOME TAXES FOR VARIOUS CHANGES IN FAMILY INCOME, ACTUAL AND INDEXED 1975 TAX LAWS

			FEDERAL				STATE[1]			
			Actual 1975 Law		Indexed 1975 Law		Actual 1975 Law		Indexed 1975 Law	
	Nominal Income	Percent Growth of Income	Income Tax[2]	Effective Rate	Income Tax[3]	Effective Rate	Income Tax[2]	Effective Rate	Income Tax[3]	Effective Rate
1975 Families A, B, and C	$12,000	—	$1089	9.08%	—	—	$305	2.54%	—	—
1976—After 6 percent Inflation										
Family A	12,000	0	1089	9.08	$1018	8.48%	305	2.54	$284	2.37%
Family B	12,720	6%	1201	9.44	1155	9.08	341	2.68	323	2.54
Family C	13,440	12	1321	9.83	1265	9.41	379	2.82	359	2.67

[1]New York
[2]Married couple with two dependents, all income is wages and salaries of one spouse, joint return claiming the standard deduction.
[3]Calculated as [1.06 x 1975 tax on $\frac{\text{(nominal income)}}{1.06}$].
Source: ACIR staff.

applauded, that tax revenues will increase more than proportionately to increases in income. This concept of "revenue elasticity" has been supported both because it provides revenue to governments to meet rising demand for public services and because it enhances the built-in, macroeconomic, stabilizing influence of the tax. Any progressive individual income tax will provide greater percentage revenue increases than income increases regardless of whether the rise in incomes occurs as the result of real increases in output or from inflation.

REAL VERSUS INFLATION GROWTH

There are several important reasons why the elasticity of income taxes with respect to real growth must be differentiated from the elastic response of revenue to inflation-induced increases in income.

First, real economic growth in the U.S. is a continuing, long-term feature that has been anticipated. Thus, income tax elasticity with respect to that real growth must also be an expected impact of the use of progressive income taxes. However, we have already noted that the inflation rates of the last several years have few parallels in U.S. economic history, leading to the plausible interpretation that substantial real income tax growth due to inflation was not explicitly intended.

Second, there is a fundamental difference between inflation-induced and real growth-induced income tax elasticity, at least from the viewpoint of taxpayers. With real increases in income, taxpayers have greater after-tax purchasing power—they are wealthier—and thus adjust their consumption demands, including the demand for public services. If the desire for public services also rises more than proportionately to an increase in real income, as is likely for at least some public services, then revenue elasticity provides the funds to satisfy these demands. However, when income changes occur simultaneously with general price-level increases, taxpayers are not necessarily made any "better" off—and, in fact, after-tax real income may decline. In short, income taxes and the growth of tax liabilities under an "ability-to-pay" concept must respond to real purchasing power and not nominal incomes.

Therefore, for any progressive individual income tax, the elasticity of revenue with respect to both real income growth and inflation is greater than one. The concern in this report—and the object of indexation—is the component of income tax growth that occurs because of inflation and is more than proportionate to the increase in the price level. While it is possible to make a case for income taxes of unitary elasticity with respect to all income growth, the response of income taxes to inflation is in large measure a new issue due to the current, historically high rates of inflation. Accordingly, this study examines (1) the impact of inflation in increasing real income tax burdens irrespective of the amount of real economic growth and (2) indexation as a mechanism to set automatically the elasticity of income taxes with respect to inflation equal to one (without altering income tax elasticity with respect to real income growth).

PROPERTY INCOME

The scope of this report is further limited to only a portion of the inflation impact on individual income taxes. Specifically, we exclude the issues of the proper definition of property income. Of particular importance are capital gains and interest income.

First, a capital gain (or loss) for income tax purposes is defined to be the difference between the purchase and sales price of an asset. If the general price level has increased during the period the asset is held, only a portion—if any—of the gain in value of the asset is real. Therefore, taxpayers incur an increase in taxable income from the capital gain greater than the increase in the real value of the asset.

Second, depending upon the degree to which an inflation is anticipated by lenders and borrowers of money, nominal interest rates adjust to correct for inflation. Thus, if the inflation is fully anticipated, lenders may receive and borrowers pay an interest rate that can be thought of in two parts: real interest representing the return or cost of the loan and an interest adjustment for inflation which serves to just maintain the real value of the loan (the principal).

This inflation response of interest rates would pose no problem if interest income were not taxable and interest payments were not tax deductible. However, since interest income is taxable, lenders must pay tax on the inflation adjustment component of interest which reduces the real after-tax rate of return. In fact, since the inflation component of an interest payment is designed to keep the real value of the principal intact, taxation of that interest income can be thought of as a tax on capital. For borrowers who can deduct interest payments, deduction of the inflation interest component means he or she pays a lower real rate of interest than intended (the real market rate). Deduction of the inflation component of interest can in fact reduce the borrower's repay-

ment below the original amount borrowed.

These problems arise irrespective of the degree of progressivity of the tax; in fact these problems exist even if the tax were proportional or regressive. Consequently, these issues are not solved by indexation of exemptions, credits, the standard deduction, and tax rate brackets. The inflation effect on the tax treatment of capital gains, interest, and debt arises not only because the tax structure may lead to an inflation-induced increase in tax, but also because the definition of income does not allow for the impact of inflation. Of course, even if the definition of these types of income were corrected, the structure effects with a progressive income tax remain.

This report is concerned only with the increase in effective income tax rates that occurs because of the interaction of inflation with the structure of the income tax and not with the definition of property income. This limitation can be made because of the very different and separate nature of these inflation-income tax issues. First, the property income issue exists not only for the individual income tax, but also for the corporate income tax. As such, it can better be examined as an integral part of broader discussions regarding revisions in accounting standards and practices. Second, from a policy standpoint, the adjustment of the tax structure for inflation can be properly viewed as a prerequisite to the issue of the definition of income since the tax structure problems impact on all income. Third, as a practical matter, the inflation impact and correction we are examining in this report relates to wages and salaries—a component which accounts for the bulk (83.5%) of the Federal tax base—Adjusted Gross Income (AGI). In contrast, interest income was 3.7 percent and sales of capital assets 2.3 percent of AGI.[3]

Accordingly, the remaining sections of this chapter highlight the implications of only the tax structure problems in an inflationary period and the advantages and disadvantages of indexing personal exemptions, major fixed-dollar deductions and the tax rate brackets of progressive individual income taxes.

POLICY IMPLICATIONS

Clearly, one effect of the interaction of inflation and a progressive income tax is to increase the real income tax burdens of taxpayers. Moreover, since both inflation and its income tax effects do not impinge equally on all taxpayers, the legislated distribution of income tax burdens is altered. Because inflation generates increases in individual income tax liabilities, inflation also provides an automatic increase in income tax revenue to any government using a progressive income tax.

Although these automatic, real revenue increases generated by inflation are only potential gains (i.e., they can be eliminated by enacting tax reductions), one school of thought argues that they bias the political process in favor of a larger public sector than otherwise would be legislated. This can occur for either or both of two reasons: (1) individuals may not perceive this automatic increase in taxes from inflation because it does not result from lengthy and detailed public debate of the type that surrounds legislated tax changes, and/or (2) individuals cannot easily pinpoint a particular public official who is a source of the tax increase upon whom they can impose a political penalty for the tax hike.

In addition, the inflation-personal income tax interaction will affect intergovernmental fiscal relations since it will impact differentially on the various levels of government. Thus, the level of government for which these automatic tax increases are larger can be favored by inflation. Alternatively, any move to force legislative action or accountability for these real tax increases might cause greater fiscal stress at one level of government than another. Each of these issues—the inflation and income tax effects on individual taxes, and the fairness of the system on public revenues, public sector growth, and intergovernmental fiscal relations—is considered in subsequent chapters of this report.

POLICY ALTERNATIVES

INDEXATION

Recognizing that inflation does have the effect of increasing real individual income tax burdens, many individuals have suggested, and some governments have implemented, a procedure to index progressive individual income taxes to eliminate automatic tax increases due to inflation. The procedure is to adjust rate brackets, personal exemptions, deductions, and credits for changes in the general price level.[4] These adjustments mitigate the effects of inflation that are generated through the income tax structure. While full indexation would thus maintain a constant real individual income tax burden on a constant real income, this type of indexing, while only partial, is a step in that direction. From the point of view of a government, "for an indexed (individual income tax) system, the elasticity of revenues with respect to price inflation is one."[5]

Again referring to Table I-1, one can see how

indexation of the individual income tax would affect tax liabilities. Under an indexed system, those families whose income gains just offset inflation would incur no change in effective tax rate. However, it is also important to note that the nominal amount of income tax paid by such families does increase; taxes increase by the inflation rate and thus continue as a constant share of income. Similarly, those families whose income gains outpace inflation would experience a smaller increase in income tax liabilities with indexation than under current law, although the effective income tax rate now would rise in response to the gain in real income. Finally, those families who experience no increase in nominal income would have both the tax liability and the effective rate reduced by indexation. In that way, the decline in real disposable income for such families would be reduced.

It should be recognized that some features of individual income taxes are already, in effect, indexed. All deductions, exemptions, and credits that are measured in current dollars (such as the itemized deductions) or as a percentage of income (such as the standard deduction below the maximum) are automatically adjusted for inflation by their definition.

A number of other countries have adopted income tax indexation, including France, the Netherlands, and Canada. Since indexation was introduced in Canada in 1974, the rate brackets and personal exemptions have been adjusted upward annually by the previous year's inflation rate. Because the Canadian experience is perhaps most relevant to the U.S., it is considered in detail in Chapter VI.

DISCLOSURE OF THE "INFLATION TAX"

While recognizing that inflation impacts on the individual income tax, some individuals would not go so far as to advocate indexation. Rather, viewing the problem as a misconception or lack of information about tax increases, they propose that the amount of the increase in real taxes due to inflation be calculated and be publicly disclosed annually. Whether this adjustment to the *status quo* would be sufficient to cause elimination of the inflation tax is not known.

One should recognize that either indexation or public disclosure—to the extent that they eliminate the inflation tax and that it is not restored by legislative action—would have effects on other economic variables. Specifically, one must determine the potential effects of indexation on the automatic stabilizing impact of the Federal personal income tax, on the value of Federal deductibility of state-local taxes, and on the impact of state deductibility of Federal income tax liability. These issues, too, are examined in the course of our consideration of the process of indexing individual income taxes.

A SUMMARY OF FINDINGS OF THE REPORT

Several findings relevant to public policy deliberations can be derived from this report. Before summarizing these, however, two important points must be emphasized. First, the issue of inflation-induced, progressive personal income tax increases deals with the rise in effective income tax rates due to a tax increase in nominal dollars. Personal income tax increases in nominal dollars which either are just proportionate to inflation and/or which result from real income growth are not of concern in this report. Second, the benefits and costs of personal income tax indexation are directly related to the rate of inflation. Thus, one's view of the desirability (or undesirability) of indexation depends in large part on the inflation rate.

The major findings of this report are as follows:

FISCAL ACCOUNTABILITY

- *Inflation interacts with any progressive individual income tax to generate increases in tax revenue more than proportionate to the rate of inflation. These increases occur with practically no public debate or disclosure of the fact.* Although progressive income taxes also exhibit elasticity with respect to real income growth, that property is inherent in a progressive tax and can be considered intended. Since recent inflation rates and those projected for the immediate future are well above the historical average, the automatic increase in aggregate, effective, personal income tax rates due to inflation is a significantly new and different issue.

TAX EQUITY

- *Among the different taxpayers, the inflation induced increases in personal income taxes without legislated tax cuts are arbitrary.* They depend on differences among taxpayers as to family size, level of gross income, type of income received, and the degree to which the various dollar limitations in the tax code affect tax liabilities.

- *Inflation is especially hard on low-income families and all families with many dependents because it erodes the value of personal exemptions, the low-income allowance, the maximum limit of the standard deduction and per capita credits.* After one year of 7 percent inflation, the value (in constant dollars) of a $750 personal exemption falls to $701, the $1,600 low income allowance falls to $1,495, the $2,600 maximum standard deduction for married persons falls to $2,430. The income tax impact of the decline in the real value of personal exemptions increases with family size. The relative increase in tax liability because of the effect of inflation on all these variables will be greater for lower income taxpayers (with the exception that those with very low income may still owe no tax even after inflation erodes the value of these tax features).

- *On the average, increases in tax liabilities due to the inflation erosion of income tax brackets will be greater for taxpayers in the upper income range where brackets are narrow and the rise in tax rates between brackets is fastest.* For the Federal personal income tax, this occurs in the $28,000 to $200,000 income range.

- *The middle-income taxpayers, those with income between $10,000 and $15,000, incur the smallest decline in real, after-tax purchasing power due to the inflation-income tax interplay.* This occurs because the exemption-credit-deduction effect diminishes in importance faster than the bracket effect grows in importance.

- *On balance, the four major tax cuts enacted since 1960 have introduced a greater element of progressivity into the income tax structure than would have been the case under an indexed system.* This inference can be drawn from the fact that classes of taxpayers below $25,000 generally have lower 1975 effective tax rates than they would have had if the 1960 law had been indexed and no other changes had been made. Taxpayers with incomes above $200,000 also had lower 1975 effective tax rates than they would have had under an indexed system.

- *Both the magnitude and the differential impacts of the inflation-induced individual tax increases, in the absence of indexation and enacted tax cuts, can be substantial.* For example, after five years of 7 percent inflation, the inflation-induced tax increase in the fifth year is $352 for an average family with constant real income of $6,000, $602 for a real income of $15,000, and $1,743 for a real income of $30,000. From another viewpoint, the decreases in real disposable income over this five-year period for families with these real incomes are: $6,000 income—a $449 or 7.4 percent decrease in disposal income, $15,000 income—a $420 or a 3.1 percent decrease, and $30,000 income—a $1,235 or 4.9 percent decline.

PUBLIC SECTOR GROWTH

- Assuming annual 6 percent inflation, annual 6 percent real income growth, and no discretionary tax code changes from 1976 on:

  - *The inflation-induced real increase (that is the increase which would be more than proportionate to inflation) in Federal personal income tax revenue would be about $6 billion in 1977 (3.7% of income taxes) and about $50 billion in 1980 (14.4% of income taxes).* These are the amounts of the automatic increase in income taxes that would be eliminated by tax indexation.

  - *The inflation-induced real increase in personal income tax revenue for a hypothetical "average state" (under the above assumptions and assuming a state personal income tax elasticity equalling 1.65) would be about $15 million or 3 percent of income tax after one year and about $140 million or 14 percent of income tax after five years.* Again, these are the amounts of the automatic increase in income tax that would be eliminated by tax indexation. Any given state's situation will vary from this projection depending on its income tax elasticity, the nominal amount of income tax revenue, and the state's reliance on the income tax in its total revenue picture.

- *Since few local governments utilize progressive personal income taxes, the inflation impact is not significant at the local level.* Important exceptions to this generality are: local jurisdictions in Maryland where the local individual income tax is a percent of the state in-

come tax; New York City which has a progressive individual income tax and allows personal exemptions specified in fixed dollars; and the District of Columbia which has a progressive individual income tax.

- *In the past, at the Federal level, discretionary tax cuts have more than offset the automatic, inflation-induced real increase of personal income taxes.* Indeed, the four major Federal income tax cuts since 1960—justified largely for economic stabilization purposes—resulted in lower income taxes in 1975 than would have existed had indexation been adopted in 1960 with no subsequent tax changes. However, these Federal tax cuts have not fully eliminated the effects of inflation on aggregate income taxes since 1965.

- *Most states have not cut their income tax rates so as to reduce the inflation impact on their revenues.* From 1966 to 1973, state discretionary action in the aggregate served to increase income taxes beyond the impact of income growth and inflation. Since 1973, most states have not raised their rates but have relied on inflation's impact on their revenue to maintain their public service levels.

- *Using the economic projection of the Congressional Budget Office—average annual total income growth of 10 percent including about a 6 percent average annual inflation rate—the average annual increases in aggregate state income tax revenue will be about 13 percent from 1977 to 1980 with indexation; and about 16.5 percent without indexation.* In contrast, actual aggregate state individual income tax revenue increased at an average annual rate of about 15.5 percent from 1971 to 1975.

INTERGOVERNMENTAL FISCAL EFFECTS

Without Indexation

In the absence of indexation, the interaction of substantial inflation with progressive income taxes is likely to produce the following intergovernmental fiscal effects:

- *Of the revenue systems of the three levels of government, the Federal sector has the greatest capacity to automatically realize the revenues which accrue as inflation generates nominal increases on various tax bases.* The Federal government makes relatively intensive use of the progressive personal income tax, Federal collections account for about 85 percent of all individual income taxes.

- *State governments have the second greatest ability to realize inflation-generated tax revenues.* States rely more heavily on progressive personal income taxation than do local jurisdictions.

- *On the expenditure side, local governments tend to be more "inflation prone" than the other sectors (Federal, state, private) of the economy.* Local government services are relatively most labor intensive (e.g., teaching, health).

- *The capability of the Federal government to continue its past (1960–75) record of returning the "inflation tax" revenues in the form of enacted tax reductions will continue for the foreseeable future unless Congress decides to underwrite a major new initiative such as a national health plan.* Although this capability is a function of national economic stability and the political alignment, both of which can be difficult to predict, CBO projections nevertheless indicate that during the next five years the Federal government will have the fiscal capacity to enact tax reductions and still reduce the size of its budget deficit in the absence of major new expenditure commitments.

- *The 16 states which permit their residents to deduct their Federal income tax liability in computing the state income tax will experience, during an inflation, a lower growth of revenues than would otherwise occur.* As inflation induces Federal personal income tax increases that are proportionately greater than inflation, these higher liabilities will erode these states' income tax base.

- *States which "piggyback" their state income tax on the Federal income tax (state tax liability is computed as a set percentage of Federal liability) are likely to find a roller-coaster effect on their income tax revenues.* Their tax collec-

tions will automatically rise with inflation due to the inflation responsiveness of the Federal income tax. If Congress follows past practice, however, (as is plausible) and enacts tax cuts to offset the inflation-generated, real income tax increases, the piggyback states will experience declines in their tax revenues (for a given tax rate). At the very least, the "piggyback" states will experience uncertainty of revenues with inflation.

- *Most state and local governments will be in too weak a fiscal position to enact tax reductions during the next few years.* State and local governments do not, in general, have highly inflation-responsive tax structures. Some state governments and many local governments have been forced to restrict or even reduce the quality and scope of their services in the last few years. Unlike the Federal government, they cannot engage in extended deficit financing to bridge their current expenditure-revenue gap. Accordingly, in the next two-three years, new state and local expenditures may be needed just to maintain past (e.g., 1972) program service levels.

- *The inflation-personal income tax interaction will slightly reduce the net resident burden of state and local taxes.* This interesting and beneficial twist for state-local jurisdictions results from the fact that the major state and local taxes are deductible when a taxpayer itemizes deductions on his or her Federal income tax. The reduced "cost" of state-local taxes thus occurs as inflation pushes taxpayers into higher Federal tax rate brackets and, as a result, increases the dollar value of the state-local tax deduction.

With Federal Indexation

With the indexation of the Federal individual income tax, the following intergovernmental effects are likely to occur:

- *The Federal government would experience reduced flexibility in the enactment of income tax cuts.* The "reduced flexibility" is likely to affect both the frequency and the amount of tax cuts during the next few years.

- *Depending on the requirements of stabilization policy, the Federal government might be forced periodically to enact discretionary tax increases in the absence of the built-in, "inflation tax" increases which now occur.* This does not necessarily mean that, on net, Federal taxes will be higher over time—only that periodic tax increases which would be necessary would result from discretionary Congressional action.

- *State and local governments would find that their residents experience a rise in the net burden of state-local taxes relative to what otherwise would occur because of the reduction in the dollar value of the state-local tax deduction on the Federal income tax return.* Federal tax indexation would permit taxpayers with constant real incomes to avoid being moved into higher tax rate brackets where the dollar value of the state-local tax deduction on the Federal tax return is slightly increased.

- *States which permit the deductibility of Federal tax liability against their state income taxes would experience a slight increase in the revenue productivity of their taxes as Federal tax liabilities have the automatic "inflation tax" component eliminated.*

- *Piggyback income tax states would, just as the Federal government, lose the revenues once generated by the "inflation tax."* Federal indexation might reduce to some extent, the fiscal uncertainty these states now experience as a consequence of the possible periodic Congressional reductions in the Federal personal income tax.

State Indexation (In Addition to the Federal)

If the states as well as the Federal government index the individual income tax, the following fiscal effects are likely to occur:

- *In general, state income tax indexation could be expected to increase state-local fiscal tensions.* Because state governments have limited ability to incur deficits to finance current expenditure-revenue gaps and because their long-run budget situation *is at best one of balance or slight surplus,* indexation at the state level would mean either reduction in the rate of expenditure growth and/or the likelihood of

more tax increases than would be the case in the absence of indexation.

- *The degree of fiscal stress due to indexation would vary among states depending on the extent to which they rely on progressive personal income taxation. In general, jurisdictions which have a high reliance on the personal income tax would experience the most fiscal strain due to indexation.* But some states which have rapidly growing economic bases (e.g., the "energy rich" states) may well be able to afford indexation and still be able to increase the scope and quality of their public services or cut taxes.

- *To the extent that indexation would reduce the fiscal flexibility of certain states, local governments in these states would also experience financial strain if the states become more reluctant to increase state to local aid (e.g., for property tax relief) and/or take over certain local fiscal responsibilities (e.g., school financing).* Over the last 20 years, state aid as a percent of local general revenue has risen from 42 to 60 percent.

OTHER INDEXATION ISSUES

- *Indexation is not likely to alter the built-in, economic stabilizing influence of the Federal individual income tax.* The response of income taxes to changes in real national income would remain under indexation. Any indexation impact on the built-in stabilizer would depend somewhat on how the index is determined.

- *If unions or individuals bargain for wage levels high enough to maintain real after-tax purchasing power, then indexation would reduce pressure for wage increases.* Indeed, the severe inflation (about 15% per year) in Australia has prompted the labor unions in that country to "bargain" for real wage increases by urging income tax indexation as a means to protect automatically at least part of wage gains negotiated at the bargaining table.

FOREIGN EXPERIENCE

- *Several other countries have already adopted some form of indexing their individual income tax.* These countries include Canada, the Netherlands, France, Luxembourg, Denmark, Israel, Brazil, and Chile.

- *Canada uses a partial tax indexation scheme similar to the type discussed in this report.* Under the Canadian approach, which took effect in 1974, the personal exemptions and the tax rate brackets are adjusted upward annually by the rate of change in the Consumer Price Index for the year ending in the previous September. As a result, the Canadians have adjusted these two features by 6.6 percent for 1974, 10.1 percent for 1975, and by 11.3 percent for 1976.

FEDERAL RECOMMENDATIONS

In the light of the foregoing findings, the Commission adopted recommendations for dealing with the impact of inflation on individual income tax structures at both the Federal and state government levels.

FULL DISCLOSURE AND ANNUAL INDEXATION OF THE FEDERAL INDIVIDUAL INCOME TAX

The Commission recognizes that inflation induces increases in real income tax revenue and introduces distortions in interpersonal tax equity. The Commission is persuaded that taxpayers may not readily perceive the automatic, real tax increase that occurs from the inflation-personal income tax interplay. **Therefore, the Commission recommends, in the interest of complete public information, that the amount of the inflation-induced, Federal real personal income tax increase be calculated and publicized for each tax year.**

While a full disclosure policy is a desirable first step, the Commission also believes that effective, personal income tax rates should only be increased by overt Congressional action and should not be an automatic consequence of inflation. **Therefore, the Commission further recommends that the Congress give early and favorable consideration to indexation—the annual adjustment of the personal exemptions, the low-income allowance, the maximum limit of the standard deduction, any per capita credits, and the tax rate brackets of the Federal individual income tax by the rate of increase in the general price level.***

Five major considerations prompted the Advi-

*Mr. Cannon abstained from the vote on this recommendation.

sory Commission to recommend that the Congress index the Federal individual income tax.*

Fiscal Accountability: Indexation is needed to insure that higher, effective income tax rates are the product of overt legislative action rather than the automatic consequence of inflation.

Tax Equity: The maintenance of tax equity requires that increases in tax liability be based on *real* rather than *nominal* income.

Public Sector Growth: Without indexation, there is a bias in favor of an expanded public sector because inflation automatically pushes taxpayers into higher tax brackets with the consequent unlegislated increase in governmental revenues.

Fiscal Imbalance: In the absence of indexation, inflation aggravates intergovernmental fiscal imbalance because the Federal government is the primary collector of the "inflation tax."

Current Inflation Rates: The significance of the above considerations takes on increased importance in these times when inflation is well above historic rates.

STATE RECOMMENDATIONS

The policy implications of state income tax indexation differ from the Federal in two important respects. First, state governments face budgetary constraints and economic pressures which are fundamentally different from the national government (e.g., limits on deficit financing, special vulnerability of expenditures to inflation).

Second, statements about the effects of indexation on state income taxes are less subject to generalization due to the fact that there are 30 different broad-based, state income taxes with varying degrees of progressivity and relative quantitative importance.

FULL DISCLOSURE AND ANNUAL INDEXATION OF STATE INDIVIDUAL INCOME TAX

The Commission recognizes that inflation induces increases in real income tax revenue and introduces distortions in interpersonal tax equity. The Commission is persuaded that taxpayers may not readily perceive the automatic, real tax increase that occurs from the inflation-personal income tax interplay. **Therefore, the Commission recommends, in the interest of complete public information, that governors have an estimate made of the amount of the inflation-induced state personal income tax increase and publicize the estimate for each tax year.**

While a full disclosure policy is a desirable first step, the Commission also believes that effective personal income tax rates should be increased only by overt state legislative action and should not be an automatic consequence of inflation. **The Commission recommends, therefore, that all states give early and favorable consideration to annual indexation of exemptions, deductions, per capita tax credits, and tax rate brackets. The Commission believes that the need for this remedial action is especially apparent for those states that combine a highly progressive, income tax rate structure with heavy reliance on the tax.**

The same major considerations—fiscal accountability, tax equity, public sector growth—that prompted the Advisory Commission to recommend the indexation of the Federal income tax also support indexation of the state personal income tax,

Over the last 15 or 20 years, many states have moved strongly to make balanced use of various revenue sources including particularly the personal income tax. Thirty-nine states now use progressive individual income taxes that provide, on average, a substantial portion of own-source state revenue. As a result, state revenue systems now generally enjoy higher elasticity—that is stronger growth responsiveness—than ever before. There is little doubt that the inflation-induced real increases in income tax revenue encouraged the states to make greater use of income taxes. Now that these progressive, state personal income taxes are established, however, further automatic real increases *due to inflation* should not be tolerated.

With indexation, the distortions in interpersonal tax equity that are introduced by inflation interacting with progressive state income taxes would be largely eliminated. Furthermore, states would still enjoy substantial, income tax elasticity from the income tax response to real economic growth. Indeed, the evidence suggests that, with indexation, aggregate state personal income tax collections can increase over the next four years at about 13 percent annually. This is only 2.5 percentage points less than the actual annual revenue growth between 1971 and 1975—a period of significant legislative action to raise taxes.

*The pro and con argumentation for the Commission's policy recommendations on indexation is presented in detail in Appendix B.

Although state individual income tax collections approximate only 20 percent of Federal collections from this source, this average obscures the heavy reliance certain states make of this tax instrument. While Ohio and Louisiana income tax yields are only about 7 percent of the Federal, Minnesota and Wisconsin income tax yields are 41 and 38 percent, respectively, of Federal collections. In states where a highly progressive rate structure is combined with heavy reliance on the income tax, the impact of inflation on the state's income tax collections can be substantial.

Footnotes

[1]Progressive here refers to the share of income paid as tax. An individual income tax may be progressive even if the rate structure is proportional; exemptions, deductions, and credits can cause the effective tax rate to increase with income.

[2]Even if a taxpayer is not forced into a higher bracket, a larger proportion of his income is subject to taxation at the highest marginal rate applicable.

[3]Internal Revenue Service, *Statistics of Income*—1971, Individual Income Tax Returns, Washington, D.C., 1973.

[4]The choice of the proper index to reflect changes in the general price level for income tax adjustment purposes is not a trivial question. While many nations have opted to use their equivalent of the Consumer Price Index (CPI), this is not universal and may not be best. One desires to adjust for changes in the *general* price level and not for changes in the relative prices of different goods only. Some have argued that a better index for tax indexation is a national income deflator because national income comes close to the income tax base. For more on this issue, see Edward F. Denison, "Price Series for Indexation of the Income Tax System," paper presented at the Conference of Inflation and the Income Tax System, The Brookings Institution, October 1975.

[5]J. R. Allen, D. A. Dodge, S. N. Poddar, "Indexing the Personal Income Tax: A Federal Perspective," *Canadian Tax Journal*, July-August 1974, p. 363.

Chapter II

Effects of Inflation on Individual Income Tax Burdens

INTRODUCTION

Under stable price conditions and economic growth, the yield of the progressive personal income tax increases more than proportionately as income increases (exhibits "elasticity") and the burden is distributed among taxpayers in accordance with legislated criteria of tax equity. During periods of increase in the general price level of the magnitude we have recently been experiencing in the United States, the personal income tax may change its legislated character. With inflation, non-legislated tax increases occur which produce an arbitrary redistribution of the tax burden. Concomitantly, tax revenues grow more rapidly than personal incomes, thus potentially generating a larger public sector.

In short, inflation creates a situation which subverts intended legislative tax policy and, as a result, poses a set of policy choices which differs from that in a world of relative price stability.

The purpose of this chapter is to examine these inflation-induced distortions with particular reference to the tax equity (relative tax burden) effects.

To illustrate how inflation leads to non-legislated tax increases, consider a married taxpayer with a 1975 adjusted gross income (wages only) of $10,000 and four exemptions. This taxpayer files a joint return, uses both the $750 personal exemption and the $30 per capita credit for personal exemptions, and the standard deduction (the higher of a flat $1,900

deduction or 16 percent of AGI up to a limit of $2,600).[1] Under these conditions the taxpayer's (1975) tax bill will be $709, giving an effective individual income tax rate (tax due on current income) of 7.1 percent.

Now assume that the economy experiences an annual 7 percent rate of inflation for the next five years and that the taxpayer is able to maintain a constant real income during that time. Table II-1 illustrates the resulting tax burden effects. In the first three years (to 1978) of inflation, the taxpayer's nominal (money) income rises from $10,000 to $12,250—a 22.5 percent increase—just enough to maintain constant real income. But the tax bill rises by nearly 58.7 percent over 1975 levels and, as a result, the effective tax rate jumps by 2.1 points to 9.2 percent.

Why, with no change in real income, is the relative increase in the tax bill twice that of nominal income? Because the tax code provisions do not allow for the full price level adjustments. For example, in this case, the real value of the specific dollar personal exemptions, the per capita credit, and the standard deduction declined—even though the taxpayer did not change tax brackets.[2] Consequently, a higher fraction of adjusted gross income became taxable at the highest applicable marginal rate. The combined result is that in 1975 dollars the taxpayer's after tax-income is reduced from $9,291 to $9,081.[3]

After five years, the taxpayer's nominal income has risen to $14,030, a 40.3 percent increase. But now, relative to that higher money income, the tax bill has increased even further. The real value of the specific dollar personal exemptions and tax credits have further eroded, and the taxpayer has moved up to the next taxable income bracket due to the progressive tax rate structure. The taxpayer's effective tax rate has risen to 10.2 percent. After-tax real income is now $8,980—less than for any other time during these inflationary years.

Thus, in an economy with constant real incomes and with considerable, but not necessarily unexpected, inflation, *ceteris paribus*, the taxpayer's ef-

Table II-1
INFLATION INDUCED TAX CHANGES

(Change in Personal Tax Burden for a Hypothetical Family of Four Assuming a 7 Percent Annual Average Rate of Inflation and Constant Real Income)

	1975	1978	1980
Adjusted Gross Income	$10,000	$12,250	$14,030
Less: Standard Deduction	1,900	1,960	2,245
Less: Personal Exemptions	3,000	3,000	3,000
Taxable Income	5,100	7,290	8,785
Tax Liability Before Credits	829	1,245	1,553
Less: Per Capita Credit	120	120	120
Tax Due	$ 709	$ 1,125	$ 1,433
Effective Tax Rate[a]	7.1%	9.2%	10.2%
Marginal Federal Tax Rate	19.0%	19.0%	22.0%
Percent Increase in Nominal Income (1975 Base)	—	22.5%	40.3%
Percent Increase in Nominal Tax Due (1975 Base)	—	58.7%	102.0%
After-Tax Real Income (1975 Dollars)	$9,291	$9,081	$8,981
Non-Legislated Tax Increase (Current Dollars)[b]	—	$257	$437

Note: Details may not add due to rounding.

[a] Current year tax due divided by current year income.
[b] Difference between actual current year tax due and that year's tax bill if computed at the 1975 effective rate.

fective personal tax rate automatically, and arbitrarily, increases.[4] As Table II-1 further indicates, this result can also be expressed by a simple computation of the dollar amount of the inflation-generated real tax increase. For our hypothetical taxpayer at a constant real income, the tax bill rose by $437 in just five years.

Such tax changes are not necessarily permanent or irreversible. As we note in Chapter III, legislated tax reductions are possible and have occurred. But it is also true that a discretionary tax increase of the amount in the above illustration could not have been achieved without considerable public debate and political rancor. Under inflationary conditions, such tax changes occur with almost no public notice or government disclosure of the fact.[5]

MAJOR NON-INDEXED FEATURES OF THE TAX CODE

THE CONCEPTUAL FRAMEWORK

Inflation-induced changes in personal income tax rates do not affect all taxpayers equally. Rather, the change in the distribution of the tax burden will vary widely and arbitrarily among taxpayers according to their particular circumstances with respect to the major non-indexed features of the income tax code.

The most significant non-indexed features of the individual income tax which determine the inflationary impact on tax burdens are: (1) personal exemptions, (2) the per capita credit for personal exemptions, (3) the standard deduction, and (4) the tax bracket boundaries.[6] These are examined below.

Personal Exemptions

Since the nominal value of the specific dollar personal exemption is not adjusted upward for inflation from year to year, the real value of that exemption declines as the general price level rises. For example, with a rate of inflation of 7 percent and a $750 exemption per qualified dependent, the value of that exemption falls from $750 in the base year to $701 after one year. After five years (as in the case of the taxpayer described in Table II-1) of 7 percent annual inflation, the real value of the personal exemption declines to $535—only 71 percent of its initial nominal dollar value.[7]

The result of this inflation erosion is that each year an increasing portion of nominal adjusted gross income becomes taxable, although no change in real income has occurred.

Table II-2
IMPACT OF INFLATION ON REAL TAXABLE INCOME

(Increase in Taxable Income Associated with a 7 Percent Annual Average Rate of Inflation for Five Years, by Real Income Class and Number of Personal Exemptions, 1975 Laws)

Constant Real Income (AGI)		Percent Increase in Taxable Income Due to Inflation by Number of Exemptions[a]		
1975	1980	2	4	6
$ 5,520[b]	$ 7,745	64%	319%	[c]
8,000	11,224	30	64	162%
10,000	14,030	16	34	62
20,000	28,060	4	9	15
30,000	42,090	3	6	9

[a]Assumes that an indexed standard deduction is used with no maximum deduction limit. The low-income allowance is used for adjusted gross incomes less than $11,875.
[b]Minimum AGI with tax due under 1975 laws, married persons filing jointly, two dependents.
[c]Taxable income less than zero in the base year. Technically, then, there is an infinite increase, as taxable income increases from zero dollars in 1975 to $1,345 in 1980.

Source: ACIR staff computations.

Inflation's erosion of personal exemptions is of greatest significance to these who have low incomes and large families. A specific dollar personal exemption accounts for a larger share of AGI for low-income taxpayers than it does for those in other income groups. Hence, the taxable income of low-income taxpayers rises relative to that of higher-income taxpayers. Those taxpayers initially in the zero tax bracket who are able to maintain constant real incomes may be moved by inflation to the first or second tax bracket, an effect that intensifies as the number of exemptions (size of family) increases.

These effects of inflation on personal income tax liabilities are illustrated in Table II-2, which presents estimates of the percentage change in taxable income by income class and family size under conditions of a 7 percent annual rate of inflation for five years. The table is based on three assumptions: (1) 1975 tax laws apply in 1980, (2) the 1975 standard deduction is fully indexed, and (3) the level of exemptions remain unchanged. The table shows

that the growth in taxable income in real terms decreases as incomes rise and increases as the number of exemptions increase. Other things remaining unchanged, the result is a decline in the overall progressivity of the individual income tax.

Per Capita Credit for Personal Exemptions

Beginning with the taxable year 1975, a new tax credit of $30 was allowed a taxpayer for each exemption claimed other than for old age and blindness.[9] Since this credit is stated as a fixed dollar amount, its real value declines during inflation in the same manner as does the ordinary personal exemption discussed above. Assuming an annual 7 percent inflation rate, the real value of the per capita credit falls from $30 in the base year to $28 after the first year and to about $21 after five years. Again, inflation's impact on the income tax is hardest on the low-income, large family—presumably the group which the per capita credit was intended to help most.

Deductions

Itemized deductions tend to be "self-indexing" because, with some exceptions, they are not subject to fixed dollar limits. Thus, taxpayers who itemize are not penalized by an inflation erosion of the real dollar value of their deductions. Indeed, in recent years, the total value of itemized deductions has risen at a faster rate than the general price level.

For taxpayers who use the percentage standard deduction, especially those who use the maximum amount (ceiling) or the low-income allowance (floor) variants, inflation erodes the value of their deduction.

Percentage standard deduction. Up to an income level of $14,375 for single taxpayers and $16,250 for married persons filing jointly, the percentage deduction provides an automatic adjustment for inflation, since the deduction is measured as a percentage of current income (AGI). Once these income levels are reached, so is the maximum deduction ceiling of the percentage deduction method—$2,300 for single persons and $2,600 for married persons. Because the ceiling does not automatically adjust upward for price level changes, the taxpayer experiences declining real value of deductions from AGI and, thus, an increase in the amount of taxable income even if there is no change in the taxpayer's real income. The group most affected by inflation's impact on the maximum deduction provision are persons unable to itemize deductions—primarily the person or family who does not yet own a home and who therefore is unable to itemize mortgage interest, other interest expense and property taxes, the big outlays which enable most taxpayers to qualify for itemization.

Low-income allowance. The (1975) low-income allowance provides a flat $1,600 standard deduction against AGI for single taxpayers and $1,900 for married persons filing jointly. Thus, in 1975, a single person with an income less than $10,000 or a married couple with an income less than $11,875 will take the low-income allowance (since it is the higher of the two standard deduction variants available to them). They get, in effect, an over-indexed deduction. But this low-income allowance floor will also steadily lose its real value if inflation continues. For example, if current law is maintained and we experience an annual 7 percent inflation, by 1980, the low-income allowance will have a real value (in 1975 dollars) for singles and marrieds of $1,141 and $1,355, respectively, although their real income has not changed. Clearly, if there are no legislated adjustments to the floor, as time passes, fewer persons will benefit from the provisions.

Tax Bracket Boundaries

Just as inflation increases the proportion of one's income which becomes taxable by eroding the real value of exemptions and deductions, a progressive tax rate structure automatically generates a tax increase, because tax rate brackets are fixed in nominal dollar values. This inflation tax effect stems from two sources: (1) assuming constant real income, inflation increases one's nominal income so that, at least, more of that income is taxable at the highest marginal rate applicable prior to the inflation; and (2), possibly, part of the taxpayer's income is subject to even higher marginal rates as a bracket boundary is crossed.

For example, assume a taxpayer with an income of $16,500 in 1975 is in the 28 percent marginal tax bracket with $500 subject to that incremental rate. After five years of inflation at an annual rate of 7 percent, this taxpayer has a nominal income of $23,150. The taxpayer's real income has not increased, yet the person's tax burden has risen due in part to having a higher percentage of income subject to the 28 percent rate (17.3 percent rather than 3.0 percent of income) and in part to having another

13.6 percent of income subject to the higher marginal rate of 32 percent.

What are the likely distributional implications of this tax bracket effect? In general, those with higher income will experience the greatest automatic tax increase. Table II-3 demonstrates why this occurs. The table lists the nominal bracket amount and the corresponding marginal Federal personal income tax rate. If we assume that a given rate of price change inflates all incomes by the same percentage amount, and that taxpayers begin at the bottom of a bracket, column 1 shows that it is those with the higher incomes (e.g., $24,000 and up) who are more likely to have increased tax burdens. Tax burdens increase more at higher income levels because, in general, each successive tax bracket becomes smaller when related to its own base. Thus, for example, a 15 percent rate of inflation which affects all incomes equally will force persons with preinflation incomes in the $32,000–$44,000 range into higher marginal brackets—their income will rise by more than $4,000, the width of the brackets. But those with incomes of $24,000 or less will remain in the same marginal brackets—their income will rise by less than $4,000. Both high- and low-income groups will face the inflationary effect of a higher fraction of taxable income becoming subject to the highest pre-inflation marginal tax rate, but the high-income group is more likely to face the second bracket inflationary effect, namely, the taxation of part of taxable income at an even higher marginal rate.

Table II-3
PERCENTAGE CHANGES IN FEDERAL PERSONAL INCOME TAX BRACKETS[a]

	BASE YEAR		
Taxable Income	**Marginal Tax Rate**	**Change in Bracket**	**Change in Bracket: Percent**[b]
$1,000	14%		
1,000	15	$1,000	[c]
2,000	16	1,000	100.0%
3,000	17	1,000	50.0
4,000	19	1,000	33.0
8,000	22	4,000	100.0
12,000	25	4,000	50.0
16,000	28	4,000	33.0
20,000	32	4,000	25.0
24,000	36	4,000	20.0
28,000	39	4,000	16.7
32,000	42	4,000	14.3
36,000	45	4,000	12.5
40,000	48	4,000	11.1
44,000	50	4,000	10.1
52,000	53	8,000	18.2
64,000	55	12,000	23.1
76,000	58	12,000	18.8
88,000	60	12,000	15.8
100,000	62	12,000	13.6
120,000	64	20,000	20.0
140,000	66	20,000	16.7
160,000	68	20,000	14.3
180,000	69	20,000	12.5
200,000	70	20,000	11.1

[a] Married persons filing jointly, 1975 tax rates and brackets.
[b] Change in taxable income as percentage of base.
[c] An infinite change from zero income.

CONCLUDING OBSERVATIONS

Inflation arbitrarily increases personal income tax burdens under a progressive individual income tax system. General price level increases, which result in corresponding increases in taxpayer income, subject larger portions of the income to highest applicable marginal (and, therefore, effective) tax rate. In addition, the effect on various taxpayers is not uniform; taxpayers move from one marginal rate bracket to another unevenly because the brackets vary in width. The bracket effect is greatest for persons whose taxable income rises through ranges where tax brackets are narrow and increases in marginal tax rates are relatively the largest. In general, the bracket effect is larger for the high-income group than for the low-income group. Of course, at the highest tax bracket level (AGI over $200,000) this effect disappears.

Distortions in income tax liabilities stemming from inflation are not limited to those created by the gradual movement into higher brackets. If incomes increase due to inflation while the personal exemption allowance, the per capita credit, and the standard deduction remain unchanged, the proportion of total income (AGI) subject to tax increases. The concomitant increase in tax liabilities will be greatest for these families with low income and many dependents.

The likely combined effects of these inflation-induced tax changes are illustrated in Tables II-4 through II-6, which present changes in the personal

Table II-4
IMPACT OF INFLATION ON REAL DISPOSABLE INCOME

(Change in After-Tax Real Income Assuming an Annual Rate of Inflation of 7 Percent for Five years, by Constant Real Income Groups.)

Constant Real Income (AGI)	After Tax Real Income (Base Year Dollars)	Decrease in After-Tax Real Income	Year Five Real Income as Percent Base Year	Percent Decrease in Real Income
$6,000 8,418	$6,108[a] 5,659	449	92.6%	7.4%
8,000 11,224	7,574 7,320	254	96.6	3.4
10,000 14,030	9,222 8,995	227	97.5	2.5
15,000 21,045	13,414 12,994	420	96.9	3.1
20,000 28,060	17,455 16,845	610	96.5	3.5
30,000 42,090	25,051 23,816	1,235	95.1	4.9

Note: Based on 1975 laws for a hypothetical average family with husband and wife filing jointly. The first and third real income groups have 3.6 exemptions-joint return; the second group has 3.5 exemptions-joint return, and the last three groups have 3.7 exemptions-joint return. The average exemptions overstate the magnitude of the per capita credit for personal income tax exemptions somewhat, since this includes the old age and blindness exemptions. Under the provisions of the per capita credit these two exemptions are not included in the tax computation.

[a]$30 per capita credit and earned income credits result in an increase in taxpayer's real income.

Source: Internal Revenue Service Preliminary Report, *Statistics of Income—1973 Individual Income Tax Returns,* Washington, D.C., 1975; and ACIR staff computations.

income tax burden of an "average" family (see note to Table II-4) subject to the Federal individual income tax. The calculations assume that taxpayer real income is constant—nominal income increases due entirely to an average rate of inflation of 7 percent for five years.

Table II-4 identifies the taxpayer groups likely to experience the greatest tax increase generated by inflation. The low- and the high-income families are most vulnerable to inflation because these taxpayers (families) experience the greatest decrease in real income after the inflation.

Families at the lowest income level shown ($6,000; $8,418) experience smaller after-tax income because much of their income goes from the zero to the 17 percent marginal bracket—technically, in percentage terms, an infinite increase. For these families, as prices rise, the real values of the personal exemption and per capita credit were eroded. As noted earlier, the erosion in the real value of personal exemptions, the per capita credit, and the standard deduction is greatest for those who have low incomes in times of inflation.

At the other end of the income scale, the bracket effect of inflation becomes increasingly important.

The middle-income groups, meanwhile, avoid the worst of both the exemption-credit-deduction and the bracket effects. The loss in the dollar value of the fixed limit exemptions and credits is relatively less than for the lowest-income family and the impact of the tax bracket effect is less than for the highest-income family.

Table II-5 shows the relative importance of the exemption-credit-deduction effect and the tax

Table II-5
BASE VERSUS RATE EFFECTS

(Relative Importance of the "Exemption-Credit-Standard Deduction" and "Tax Bracket" Effects under Inflation Conditions on Federal Personal Income Tax Liabilities, by Income Group, Assuming a 7 Percent Annual Rate of Inflation for Five years)

Constant Real Income Class	Real Tax Increase Due to Inflation*	Percent of Tax Increase Due to Inflation Erosion of	
		Exemption, Credit, Standard Deduction	Tax Brackets
$6,000 8,418	$ 352	99%	1%
8,000 11,224	361	88	12
10,000 14,030	321	84	16
15,000 21,045	602	54	46
20,000 28,060	862	44	56
30,000 42,090	1,743	28	72

*Tax increase more than proportional to inflation—the difference between the non-indexed tax due in year five and that year's tax bill if computed at year one effective rates.

Source: ACIR staff computation.

bracket effect for the selected income groups. The data clearly indicate that of these two "components" of the inflation-generated tax increase, the exemption-credit-deduction erosion explains nearly all the inflation tax for the low-income groups and becomes relatively less important as incomes rise. This table reaffirms the basis for the earlier finding (Table II-4) that middle-income groups are less harmed by the inflation tax than are those families at either end of the income spectrum; the table shows that the exemption-credit-deduction effect decreases faster than the bracket effect increases.

Similar data on the relative importance of the inflation-generated tax increase are provided in Table II-6. Effective tax rates are shown for each constant real income group assuming a 7 percent annual inflation for five years under conditions of no indexation, and partial and full indexation. The data indicate that whether indexation is confined to exemptions, the per capita credit, and standard deduction (partial indexation) or whether it includes not only these items but also tax bracket boundaries (full indexation), the two lowest income groups bear the greatest inflation tax burdens.

In short, all three of the above tables indicate that, other things remaining unchanged, personal income tax indexation will tend to have a progressive tax distribution effect.

INFLATION AND TAX BURDENS: RECENT EMPIRICAL EVIDENCE

Economists have sought to provide answers to two public policy questions about the effects of inflation on the major non-indexed tax code provisions. They have sought to isolate the effects of inflation and Congressional tax reductions on aggregate income tax liabilities. They have also examined the pattern of distribution of income tax burdens as a result of inflation and Congressional tax reductions.

SUNLEY AND PECHMAN[10]

In a paper prepared for the Brookings Conference on Inflation and Income Taxes, Sunley and Pechman examined effective income tax rates for the period 1960–75. Over these years, Congress acted four times to reduce income taxes in a major way.[11] The Sunley-Pechman computations indicate that the legislated tax reductions since 1960 have more than eliminated the inflation impact on overall effective rates and on income tax collections. In particular, they show that individual income tax liabilities after the *Tax Reduction Act of 1975*, including all income tax code adjustments since 1960, are about $9 billion less than the liability with an indexed tax system based on the 1960 laws. Similarly, while the average effective income tax rate was over 10.7 percent in 1960, the actual rate in 1975 was 11.4 percent, compared with 12.3 percent with the hypothetical indexed 1960 system. Thus, the four major tax reductions were more than sufficient to offset the inflation effects on income tax revenues and overall effective rates.

While legislated actions have offset inflation in the aggregate, it is equally useful to know what effects these *ad hoc* adjustments and inflation have had on the distribution of income tax burdens. With an indexed system, both the aggregate and individual tax burdens are maintained. Periodic action by the Congress may, however, alter individual income tax burdens while leaving the aggregate burden unchanged.

On this issue, Sunley and Pechman show that all income classes except those between $25,000 and $200,000 have lower effective tax rates after 1975

Table II-6
ALTERNATIVE INDEXATION APPROACHES

(Federal Personal Income Tax Liability under Conditions of No, Partial, and Full Indexation, Assuming an Annual Rate of Inflation of 7 Percent for Five Years, by Constant Real Income Group)

Constant Real Income Class	Tax Due and (Effective Rate)[a]			Increase in Effective Rate: Year Five Non-Indexed Tax as Percent of	
	No Indexation	Partial Indexation[b]	Full Indexation[c]	Fully Indexed Tax	Partially Indexed Tax
$6,000[d]	$108			[d]	[d]
8,418	481 (5.7[d])	$148	$152		
8,000	426 (5.3)				
11,224	958 (8.5)	839 (5.7[d])	597 (5.3[d])	60.4%	49.1%
10.000	778 (7.8)				
14,030	1,415 (10.1)	1,145 (8.2)	1,088 (7.8)	29.5	23.2
15,000	1,586 (10.5)				
21,045	2,801 (13.3)	2,477 (11.8)	2,199 (10.5)	26.7	12.7
20,000	2,545 (12.7)				
28,060	4,434 (15.8)	4,055 (14.5)	3,572 (12.7)	24.4	9.0
30,000	4,977 (16.5)				
42,090	8,687 (20.6)	8,196 (19.5)	6,994 (16.5)	24.1	5.6

[a] See note to Table II-4.
[b] Indexation of personal exemptions, the per capita credit, standard deduction and earned income credit where applicable.
[c] Partial indexation plus indexation of tax rate bracket boundaries.
[d] The dollar tax rebates for the $6,000; $8,418 constant real income class is due to the provision of the earned income credit. With no indexation, however, the effective rate on the year five income ($8,418) technically represents an infinite increase in relation to the partially and fully indexed tax. If the earned income credit were not available, the data in the table would be as follows:

Constant Real Income Class	Tax Due and (Effective Rate)[a]			Increase in Effective Rate: Year Five Non-Indexed Tax as Percent of	
	No Indexation	Partial Indexation[b]	Full Indexation[c]	Fully Indexed Tax	Partially Indexed Tax
$6,000	$ 92 (1.5%)				
8,418	481 (5.7)	133 (1.6%)	129 (1.5%)	280.0%	256.3%

Source: ACIR staff computations.

than they would have had if the 1960 law had been indexed and no discretionary changes had been made in the interim.

Thus, if indexation had been adopted in 1960 and no other income tax changes had been made subsequently, most individuals would be paying higher taxes this year than they actually must pay thanks to the four major tax changes enacted by Congress. They also found that all income classes have lower effective tax rates under an indexed 1972 system than under the 1975 law. Thus, the *Tax Reduction Act of 1975* has not compensated individuals for the effects of inflation since the changes in 1972.

VON FURSTENBERG[12]

George von Furstenberg examined the effects of inflation on income tax liabilities for different income classes. He considered data from all tax returns in real income classes of $5,000, $10,000, $20,000, and $40,000, measured in 1969 dollars. Since real income is held constant over the years studied, changes in tax liabilities are due only to inflation and Congressional tax code changes. In all of these classes, average income tax rates increased from 1965 to 1969 and fell through 1972. However, only in the $5,000 income class are effective rates lower in 1972 than 1965. In the other three classes, effective income tax rates are significantly higher in 1972. Thus, when all taxpayer groups are considered, Congressional action in the 1965–1972 period offset inflation in the aggregate only for the lowest-income group.

Von Furstenberg also considered the inflation effects on tax rates for a family of four at two different income levels—real incomes (1969 dollars) of $5,000 and $10,000—who file a joint return and take the standard deduction. Between 1965 and 1969—after the 1964 tax cut and before the *Tax Reform Act of 1969*—average effective tax rates on both families increased. For the families with $5,000 income, the tax rate rose from 4.39 to 5.80 percent. For the family with $10,000, the rate rose from 10.18 to 12.25 percent. From 1969 to 1972, the higher level of exemptions and deductions enacted in 1969 became effective. Compared to 1965 rates, average tax rates then fell for both families; to 3.58 percent for the $5,000 family and to 9.93 percent for the $10,000 family. Note also that the effective rates for these families are lower in 1972 than the rates in 1965. Taking into account the rapid rate of inflation after 1972, von Furstenberg estimated that even if the low-income allowance were increased to $1,500 for married couples and the standard deduction raised to 17 percent in 1975, the effective income tax rates for families in both income groups would be about on a par with or higher than in 1965.

In sum, he found that action by Congress in 1969 offset the effects of inflation through 1972 for these particular families. But he also found that greater Congressional tax reductions than were then anticipated would be required by 1975 to continue to offset the inflation effects.

GOETZ AND WEBER[14]

In a 1971 study, Goetz and Weber examined income tax liability structured by income class and number of exemptions during the period 1954–1970. Incomes in each year are real incomes adjusted from a 1954 base. Tax liability is determined for two parent families taking the standard deduction and filing a joint return. They find that from 1954 to 1963, when there was no statutory change in the tax law, all family groups but one experienced a decrease in real disposable income (the exception is a family with $3,000 income and six exemptions; there was no tax on this group throughout the period). Since real incomes are considered and no major tax changes occurred in the period, this decrease in real disposable income represents the effect of inflation. The tax changes in 1965 lowered tax liabilities compared with 1954 for all groups except two: $3,000 income with four exemptions and $4,000 income with six exemptions. Thus, the tax cut in 1964–65 offset inflation in the aggregate, but this offset varied for individuals both by income and size of family. By 1970, many families had higher taxes and thus lower real disposable income than in 1954. Again, that effect was particularly evident for those with low income and many dependents. Of even greater importance is the different changes in disposable income that have occurred. Income tax liabilities were higher in 1970 than in 1954 for some families and lower for other families. In addition, both within the group that benefited and that which was "hurt," changes are not uniform. That is, average effective rates by income class and number of exemptions between these years do not differ proportionately.

Goetz and Weber also examined the effect of inflation and Congressional tax changes on marginal tax rates. Consideration of marginal income tax rates is important because economic theory suggests that this factor accounts for the effect of the income tax on labor supply and investment decisions. From 1954 to 1970, marginal tax rates increased for a num-

ber of families, especially those at family income levels above $14,000, although this also occurred for an income level of $3,000 with five exemptions. Changes in the tax law, therefore, did not prevent differential changes in marginal tax rates attributable entirely to inflation.

The evidence reported by Goetz and Weber suggests that Congressional action does not offset the inflation effect on income tax liability for many individuals. More importantly, Congressional action is not neutral with respect to the tax burden distribution. In this study, families with income between $10,000 and $20,000 as well as families which have incomes below $7,000 and more than three personal exemptions have not been totally spared the "inflation tax" by Congressional action.

COMMENT AND SUMMARY

Evaluation of the effectiveness of Congressional income tax changes in eliminating the inflation effects on individual income taxes is not always as clear as the data suggest. Two particular limitations of this type analysis need to be noted. One must recognize first that Congressional changes in the tax law are not solely, if at all, intended to eliminate the "inflation tax." It can be argued that the intent of these changes has been to change the distribution of the tax burden. Comparison of tax rates that result from both inflation and law changes suggest a difference from what rates would be with indexation. Indexation would serve as a benchmark of individual income tax burdens. Indexation would in no way preclude additional Congressional action to raise or lower rates or to change the distribution of the burden between individuals. For example, to raise more income tax revenue, Congress can adjust tax burdens in any manner; either by raising proportionately the tax burden on everyone or by raising selectively the burden on some groups.

If tax changes are made every five years so that effective tax rates on constant real incomes in every fifth year are equalized with the initial year, many studies might report that Congressional tax change had "offset" the inflation tax. However, the sum of individual tax payments over this five-year period must be greater than with indexation. To offset completely the inflation tax, that is, to equalize the sum of tax payments, effective rates would have to be lower in each fifth year than in the initial year.

The evidence comparing Congressional income tax changes and income tax indexation can be summarized as follows:

1. Income tax revenues will increase as long as there is real growth. Moreover, income tax revenue and effective income tax rates increase proportionately more than real incomes because of the progressive structure.

2. Over the last 20 years Congress has enacted four major income tax reductions. These have generally more than offset the inflation effects on income taxes in the aggregate. The distribution of income tax liabilities, however, has become significantly different over this period. Congressional tax changes have not been as neutral with respect to the distribution of individual income tax burdens as full indexation would have been. Even when inflation has been offset in the aggregate, the "inflation tax" on some families and individuals has remained large.

3. Congressional changes in the individual income tax laws since 1954 have increased the marginal income tax rates for a number of taxpayers.

4. The higher the rate of inflation, the greater the amount of the "inflation tax." To eliminate this source of tax increase, Congress would have to act more often or make more dramatic changes in periods of high inflation.

STATE INCOME TAXES

The basic principles of both the inflation-income tax interaction and indexation which have been developed for the Federal income tax can also be applied to state income taxes. Most state income taxes provide for fixed nominal dollar personal exemptions, standard deductions, and progressive tax rate bracket boundaries. Indeed, many states seek a high degree of conformity between their tax base and the Federal income tax base. See Tables II-7 through II-9.

Indexation of a state's income tax, however, could pose more complex issues than Federal income tax indexation because states make use of tax credits that relate to other provisions of state law. For example, state tax credits are provided for the equivalent of sales taxes paid on food and drugs and for homeowner and renter relief from extraordinary property tax burdens. See Table II-10 and

Table II-11. These credits sometimes tie a fixed dollar maximum on the size of the credit itself to some nominal income eligibility figure, in which case both kinds of limits have to be adjusted upward for inflation if states adopt personal income tax indexation.

Because of the wide diversity in the structure of the 39 state income taxes, broad generalizations about the effects of either inflation or indexation on tax equity are difficult to make. Two observations are, nonetheless, appropriate. First, because most states rely to a modest or low degree on the income tax, the inflation-tax equity issue is not as severe as it is at the Federal level. Secondly, low reliance on the income tax suggests that the discretionary tax adjustments required by the states to offset any inflation-induced equity distortions should also be relatively simple—perhaps involving no more than minor adjustments to one of the tax credits which a state may already employ. The issue of state income tax indexation is developed further in Chapter IV.

Table II-7

STATE INDIVIDUAL INCOME TAXES: PERSONAL EXEMPTIONS, JULY 1, 1975

State	Personal Exemption		Additional Exemption on Account of		
	Single	Married (Joint Return)	Dependents	Age[1]	Blindness[1]
Alabama	$1,500	$3,000	$300	...	...
Alaska	[2]	[2]	[2]	[2]	[2]
Arizona[4]	1,000	2,000	600	$1,000	$500
Arkansas[3,4]	17.50(1,750)	35(3,200)	6(267)	17.50	17.50
California[3,4]	25(2,250)	50(4,500)	8(400)	...	8(400)
Colorado[4]	750	1,500	750	750	750
Delaware	600	1,200	600	600	600
Georgia[5]	1,500	3,000	700[6]	700	700
Hawaii[4]	750	1,500	750	750[7]	5,000
Idaho[4,8]	750	1,500	750	750	750
Illinois	1,000	2,000	1,000	1,000	1,000
Indiana[4]	1,000	2,000[9]	500	500	500
Iowa[3]	15(1,500)	30(2,250)	10(370)	15	15
Kansas	600	1,200	600	600	600
Kentucky[3]	20(1,000)	40(2,000)	20(1,111)	20(1,000)	20(1,000)
Louisiana[10]	2,500(50)	5,000(100)	400(8)	...	1,000(20)
Maine	1,000	2,000	1,000	1,000	1,000
Maryland	800	1,600	800[11]	800[11]	800
Massachusetts[4,12]	2,000	2,600-4,600	600	600	2,000
Michigan[4,13]	1,500	3,000	1,500	1,500	1,500
Minnesota[3,4]	21(1,057)	42(1,657)	21(553)	[14]	[14]
Mississippi	4,500	6,500	750	750	750
Missouri[4]	1,200	2,400	400	...	...
Montana	650	1,300	650	650	650
Nebraska[4]	[2]	[2]	[2]	[2]	[2]
New Mexico[4]	750	1,500	750	750	750
New York	650	1,300	650	650	650
North Carolina	1,000	2,000[15]	600[16]	1,000	1,000
North Dakota	750	1,800	750	750	750
Ohio[17]	650	1,300	650	[17]	...

Table II-7

STATE INDIVIDUAL INCOME TAXES: PERSONAL EXEMPTIONS, JULY 1, 1975 (Cont.)

State	Personal Exemption		Additional Exemption on Account of		
	Single	Married (Joint Return)	Dependents	Age[1]	Blindness[1]
Oklahoma	750	1,500	750	750	750
Oregon[4]	675	1,350	675	675	675
Rhode Island	[2]	[2]	[2]	[2]	[2]
South Carolina	800	1,600	800[18]	800	800
Utah	[2]	[2]	[2]	[2]	[2]
Vermont[4]	[2]	[2]	[2]	[2]	[2]
Virginia	600	1,200	600	1,000	600
West Virginia	600	1,200	600	600	600
Wisconsin[3,4]	20(645)	40(1,265)	20(645)	5	...

[1]In most states, an identical exemption is allowed for a spouse if she meets the age and blindness condition. In Massachusetts, the deduction for blindness is allowed against business income only. In Hawaii, the $5,000 blindness deduction is allowed in lieu of the personal exemption.

[2]Since the state tax is based on either Federal taxable income or Federal tax liability, in effect, Federal personal exemptions are adopted.

[3]Personal exemptions and credits for dependents are allowed in the form of tax credits which are deductible from an amount of tax. With respect to personal exemptions, the sum in parentheses is the exemption equivalent of the tax credit assuming that the exemption is deducted from the lowest brackets. With respect to the dependency exemptions; the sum in parentheses is the amount by which the first dependent raises the level at which a married person or head of family becomes taxable.

[4]In addition to the personal exemption deductions, a sales and/or property tax credit or cash rebate is provided.

[5]In addition to the personal exemption deductions, low-income tax credits are provided. The credits range from $1 to $15 for single persons with Federal adjusted gross income under $3,015, and $1 to $30 for married persons filing joint returns with Federal AGI under $6,030.

[6]The exemption is allowed for students regardless of age or income. For students beyond the high school level, $1,400 per dependent and $700 if the taxpayer is a student. A taxpayer who has used a student dependent to qualify as the head of a household is allowed only a $700 exemption for that student dependent.

[7]Individuals establishing residency in Hawaii after the age of 65 are subject to tax on income from Hawaii sources only (the tax is imposed on the entire taxable income of resident individuals, estates, and trusts).

[8]In addition to the personal exemption deductions, a $15 tax credit is allowed for each personal exemption ($20 per exemption for taxpayers 65 or over).

[9]Each spouse is entitled to the lesser of $1,000 or adjusted gross income (minimum of $500 each).

[10]The exemptions and credits for dependents are deductible from the lowest-income bracket and equivalent to the tax credits shown in parentheses.

[11]An additional exemption of $800 is allowed for each dependent 65 years of age or over.

[12]The exemptions shown are those allowed against business income, including salaries and wages: a specific exemption of $2,000 for each taxpayer. In addition, a dependency exemption of $600 is allowed for a dependent spouse who has income from all sources of less than $2,000. In the case of a joint return, the exemption is the smaller of (1) $4,000 or (2) $2,600, plus the income of the spouse having the smaller income.

[13]Personal exemptions are increased to $1,500 effective January 1, 1974.

[14]An additional tax credit of $20 is allowed for each taxpayer or spouse who has reached the age of 65. Additional tax credits for the blind: unmarried, $25; married, $25 for each spouse.

[15]An additional exemption of $1,000 is allowed a married woman with separate income; joint returns are not permitted.

[16]Plus an additional $600 for each dependent who is a full-time student at an accredited university or college.

[17]Taxpayers 65 and over allowed a $25 tax credit, not to exceed tax otherwise due.

[18]The exemption is extended to dependents over the age of 21 if they are students in an accredited school or college.

Source: ACIR staff compilations based on Commerce Clearing House, *State Tax Reporter.*

Table II-8

STATE INDIVIDUAL INCOME TAXES: USE OF STANDARD DEDUCTION AND OPTIONAL TAX TABLE, JULY 1, 1975

State	Size of Standard Deduction				Optional Tax Table
		Maximum			
			Married		
	Percent[1]	Single	Separate Return	Joint Return	
Alabama	10	$1,000	$1,000	$1,000	x
Alaska[2]	[3]	[3]	[3]	[3]	x
Arizona	10	500	500	1,000	x
Arkansas	10	1,000	500	1,000	....
California	....	1,000	1,000	2,000	x
Colorado[2]	10	1,000	500	1,000	x
Delaware[4]	10	1,000	500	1,000	....
Georgia	[3]	[3]	[3]	[3]	....
Hawaii	10	1,000	500	1,000	x
Idaho[2]	[3]	[3]	[3]	[3]	x
Illinois	....	....	....	....	....
Indiana	....	....	....	....	....
Iowa	10[5]	250	250	250	....
Kansas[2]	[3]	[3]	[3]	[3]	x
Kentucky[6]	....	500	500	500	x
Louisiana	10	1,000	500	1,000	x
Maine	10	1,000	500	1,000	x
Maryland	10	500	500	1,000	x
Massachusetts	....	....	....	....	x
Michigan	....	....	....	....	....
Minnesota	10	1,000	1,000	1,000	x
Mississippi	15	750	750	1,500	....
Missouri[2]	[3]	[3]	[3]	[3]	....
Montana	10	500	500	1,000	....
Nebraska[2]	[3]	[3]	[3]	[3]	x
New Mexico[2]	[3]	[3]	[3]	[3]	....
New York[2]	15	2,000	[7]	2,000	x
North Carolina	10	500	500	[8]	....
North Dakota[2]	[3]	[3]	[5]	[3]	....
Ohio	....	....	....	....	x
Oklahoma	15	2,000	1,000	2,000	x
Oregon[2]	13	1,500	750	1,500	x
Rhode Island	[3]	[3]	[3]	[3]	....
South Carolina	10	500	500	1,000	x
Utah[2]	[3]	[3]	[3]	[3]	x
Vermont[2]	[3]	[3]	[3]	[3]	....
Virginia[2]	15	2,000	1,000	2,000	....
West Virginia	10	1,000	[7]	1,000	x
Wisconsin[2]	15	2,000	[9]	2,000	....

Table II-8

STATE INDIVIDUAL INCOME TAXES: USE OF STANDARD DEDUCTION AND OPTIONAL TAX TABLE, JULY 1, 1975 (Cont.)

Note: Excludes New Hampshire and Tennessee where the tax applies to interest and dividends only, Connecticut where tax applies to capital gains, the New Jersey commuter's tax, and Pennsylvania (no personal exemptions or standard deduction).

[1]Amount of standard deduction is generally based on gross income after business expenses. The detailed provisions vary.
[2]A low-income allowance is provided.
[3]Since the state uses either the Federal tax base or Federal tax liability in computing the state tax, in effect, the Federal standard deduction is adopted. (The standard deduction in effect before *Tax Reduction Act of 1975,* except North Dakota.)
[4]In lieu of all other deductions except Federal income taxes up to $300 for individuals and $600 for married couples filing joint return.
[5]Deduction of 10 percent of net income after deduction of Federal income tax, not to exceed $500.
[6]In lieu of other deductions except Federal income taxes, a standard deduction of $500 may be taken if adjusted gross income is at least $8,000. If adjusted gross income is less than $8,000, taxpayers may use optional tax table.
[7]The standard deduction allowed a married couple may be taken by either or divided between them in such proportion as they may elect.
[8]An additional $500 is allowed a married woman with separate income; joint returns are not permitted.
[9]The combined total deduction for married persons who both have income may not exceed $2,000 nor may either spouse claim more than 15 percent of their own total incomes.

Source: ACIR staff compilation based on Commerce Clearing House, *State Tax Reporter*.

Table II-9

STATE INDIVIDUAL INCOME TAXES: RATES, JULY 1, 1975

State	Net Income After Personal Exemption	Rate (Percent)	Federal Tax Deductible	Special Rates or Features
Alabama	First $1,000	1.5	x	
	$1,001-$3,000	3		
	$3,001-$5,000	4.5		
	Over $5,000	5		
Alaska	First $4,000	3		Rates shown are for married persons filing jointly and surviving spouses. For single persons and fiduciaries these rates apply to income classes half as large.
	$4,001-$8,000	3.5		
	$8,001-$12,000	4		
	$12,001-$16,000	5		
	$16,001-$20,000	5.5		
	$20,001-$24,000	6		
	$24,001-$28,000	7		
	$28,001-$32,000	7.5		
	$32,001-$36,000	8		
	$36,001-$40,000	8.5		
	$40,001-$44,000	9		
	$44,001-$52,000	9.5		
	$52,001-$64,000	10		
	$64,001-$76,000	10.5		
	$76,001-$88,000	11		
	$88,001-$100,000	11.5		
	$100,001-$120,000	12		
	$120,001-$140,000	12.5		
	$140,001-$160,000	13		
	$160,001-$180,000	13.5		
	$180,001-$300,000	14		
	Over $300,000	14.5		
Arizona[1,2]	First $1,000	2	x	An income tax credit or rebate is provided for property taxes or rent payments of low-income taxpayers age 65 and over. See Table 11.
	$1,001-$2,000	3		
	$2,001-$3,000	4		
	$3,001-$4,000	5		
	$4,001-$5,000	6		
	$5,001-$6,000	7		
	Over $6,000	8		
Arkansas	First $2,999	1	....	A property tax refund or credit is provided for senior citizens. See Table 11. Reduced rates provided for low-income taxpayers.
	$3,000-$5,999	2.5		
	$6,000-$8,999	3.5		
	$9,000-$14,999	4.5		
	$15,000-$24,999	6		
	$25,000 or over	7		
California[1]	First $2,000	1	....	The following rates apply to heads of households:
	$2,001-$3,500	2		First $4,000 ..... 1%
	$3,501-$5,000	3		$4,001-$6,000 2
	$5,001-$6,500	4		$6,001-$7,500 3
	$6,501-$8,000	5		$7,501-$9,000 4
	$8,001-$9,500	6		$9,001-$10,500 5
	$9,501-$11,000	7		$10,501-$12,000 6
	$11,001-$12,500	8		

See footnotes at the end of table.

Table II-9
STATE INDIVIDUAL INCOME TAXES: RATES, JULY 1, 1975 (Cont.)

State	Net Income After Personal Exemption	Rate (Percent)	Federal Tax Deductible	Special Rates of Features
California (Cont.)	$12,501-$14,000	9		$12,001-$13,500 7
	$14,001-$15,500	10		$13,501-$15,000 8
	Over $15,500	11		$15,001-$16,500 9
				$16,501-$18,000 10
				Over $18,000 11
				A resident renter credit is provided.
Colorado	First $1,000	3	x	*Surtax on income from intan-*
	$1,001-$2,000	3.5		*gibles in excess of $5,000,*
	$2,001-$3,000	4		2 percent. Taxpayers are
	$3,001-$4,000	4.5		allowed a credit equal to 0.5
	$4,001-$5,000	5		percent of net taxable income
	$5,001-$6,000	5.5		on the first $9,000 of taxable
	$6,001-$7,000	6		income.[3] A $7 tax credit is
	$7,001-$8,000	6.5		allowed each taxpayer and each
	$8,001-$9,000	7		dependent for sales tax paid on
	$9,001-$10,000	7.5		food. If there is no income tax
	Over $10,000	8		liability the taxpayer can apply
				for a refund. An income tax credit
				or refund is also provided for low-
				income senior citizens and dis-
				abled persons for property taxes
				or rent payments. See Tables 10
				and 11.
Delaware	First $1,000	1.6	x[4]	Excludes $2,000 received by
	$1,001-$2,000	2.2		totally and permanently disabled
	$2,001-$3,000	3.3		persons, or by persons over 60
	$3,001-$4,000	4.4		whose earned income for the tax
	$4,001-$5,000	5.5		year is less than $2,500 and
	$5,001-$6,000	6.6		whose adjusted gross income
	$6,001-$8,000	7.7		(without reduction by this exclu-
	$8,001-$20,000	8.8		sion) is not over $10,000 for the
	$20,001-$25,000	9.3		tax year (the above dollar
	$25,001-$30,000	9.9		amounts are doubled for quali-
	$30,001-$40,000	12.1		fied taxpayers filing jointly).
	$40,001-$50,000	13.2		
	$50,001-$75,000	15.4		
	$75,001-$100,000	16.5		
	Over $100,000	19.8		
Georgia	First $1,000	1	....	Rates shown in table apply to
	$1,001-$3,000	2		married persons filing jointly and
	$3,001-$5,000	3		heads of households. The follow-
	$5,001-$7,000	4		ing rates apply to single persons:
	$7,001-$10,000	5		First $750 ..... 1%
	Over $10,000	6		$751-$2,250 2
				$2,251-$3,750 3
				$3,751-$5,250 4
				$5,251-$7,000 5
				Over $7,000 6

See footnotes at the end of table.

Table II-9
STATE INDIVIDUAL INCOME TAXES: RATES, JULY 1, 1975 (Cont.)

State	Net Income After Personal Exemption	Rate (Percent)	Federal Tax-Deductible	Special Rates or Features
Georgia (Cont.)				For married persons filing separately, rates for married filing jointly apply to income classes half as large. A tax credit is provided for low-income taxpayers. Single–$15 on income of $3,000 or less. Married–$30 on income of $6,000 or less. Credit reduced $1 for $1 if income exceeds above amounts. Credit not to exceed tax.
Hawaii[2]	First $500	2.25	....	Alternative tax on capital gains: deduct 50 percent of capital gains and pay an additional 4 percent on such gains. The income classes reported are for individuals. For joint returns the rates shown apply to income classes twice as large. Special tax rates are provided for heads of households ranging from 2.25 percent on taxable income not over $500 to 11 percent on taxable income in excess of $60,000. Effective for taxable years beginning on or after January 1, 1974, a general excise tax credit replaced the consumer, educational, drug, and medical, and rental tax credits. The credit per qualified exemption ranges from $30 on income under $5,000 to $6 on income between $14,000 and $15,000. If a taxpayer's credits exceed his tax, a refund will be made. See Table 10.
	$501-$1,000	3.25		
	$1,001-$1,500	4.50		
	$1,501-$2,000	5.00		
	$2,001-$3,000	6.50		
	$3,001-$5,000	7.50		
	$5,001-$10,000	8.50		
	$10,001-$14,000	9.50		
	$14,001-$20,000	10.00		
	$20,001-$30,000	10.50		
	Over $30,000	11.00		
Idaho[1]	First $1,000	2.0	....	For a surviving spouse and a head of a household the rates shown apply to income classes twice as large. A $10 filing fee is imposed on each return. A $15 tax credit is allowed for each personal exemption for sales tax paid. The credit is $20 for taxpayers 65 or over. A refund will be made if credits exceed tax. See Table 10.
	$1,001-$2,000	4.0		
	$2,001-$3,000	4.5		
	$3,001-$4,000	5.5		
	$4,001-$5,000	6.5		
	Over $5,000	7.5		
Illinois	Total net income	2.5	....	.....

See footnotes at the end of table.

Table II-9
STATE INDIVIDUAL INCOME TAXES: RATES, JULY 1, 1975 (Cont.)

State	Net Income After Personal Exemption	Rate (Percent)	Federal Tax Deductible	Special Rates or Features
Indiana	Adjusted gross income	2	....	An income tax credit or rebate is provided for property taxes or rent payments of taxpayers age 65 and over or disabled, with income below $5,000. See Table 11. Individuals who rent their principal place of residence may subtract from adjusted gross income the amount of rent paid or $1,000, whichever is less.
Iowa	First $1,000	0.75	x	Residents or non-residents with net income of $4,000 or less are non-taxable. If payment of the tax reduces net income to less than $4,000 the tax is reduced to that amount that would result in allowing the taxpayer to retain a net income of $4,000.
	$1,001-$2,000	1.5		
	$2,001-$3,000	3		
	$3,001-$4,000	4		
	$4,001-$7,000	5		
	$7,001-$9,000	6		
	Over $9,000	7		
Kansas	First $2,000	2	x	The income classes reported are for individuals and heads of households. For joint returns the rates shown apply to income classes twice as large.
	$2,001-$3,000	3.5		
	$3,001-$5,000	4		
	$5,001-$7,000	5		
	Over $7,000	6.5		
Kentucky	First $3,000	2	x	.....
	$3,001-$4,000	3		
	$4,001-$5,000	4		
	$5,001-$8,000	5		
	Over $8,000	6		
Louisiana[1]	First $10,000	2	x	Tax tables are provided based on Federal tax liability.
	$10,000-$50,000	4		
	Over $50,000	6		
Maine	First $2,000	1	....	The income classes reported are for individuals and heads of households. For joint returns the rates shown apply to income classes twice as large.
	$2,001-$5,000	2		
	$5,001-$10,000	3		
	$10,001-$25,000	4		
	$25,001-$50,000	5		
	Over $50,000	6		
Maryland	First $1,000	2	....	A credit is allowed for state personal property taxes payable.
	$1,001-$2,000	3		
	$2,001-$3,000	4		
	Over $3,000	5		
Massachusetts	Earned income	5	....	No tax is imposed on, and the tax may not reduce, total income below $5,000 for a husband
	Interest and dividends, capital gains on intangibles	9		

See footnotes at the end of table.

Table II-9
STATE INDIVIDUAL INCOME TAXES: RATES, JULY 1, 1975 (Cont.)

State	Net Income After Personal Exemption	Rate (Percent)	Federal Tax Deductible	Special Rates or Features
Massachusetts (Cont.)				and wife or $3,000 for a single individual. A consumer tax credit is allowed: $4 each for the taxpayer and his spouse and $8 for each qualified dependent. If there is no income tax liability the taxpayer can apply for a refund. See Table 10.
Michigan	All taxable income	4.6 (4.4 eff. 7/1/77)	....	The following credits are allowed:
		City income tax		Credit
		Not over $100		20% of city tax
		$101-$150		$20 + 10% of excess over $100
		$151-$200		$25 + 5% of excess over $150
		Over $200		$27.50 + 5% of excess over $200 Maximum credit $10,000
		The sum of this credit and the credit allowed for charitable contributions may not exceed tax liability.		
		A credit is allowed for property taxes based on type and/or age of claimant and household income. If the allowable claim exceeds the income tax due, or if no income tax is due, the unused claim shall be paid to the claimant. See Table 11.		
Minnesota	First $500	1.6	x	A credit is allowed for low-income taxpayers based on income and number of dependents. A credit for property taxes is allowed for senior citizen homestead relief and for renters. Cash refund granted if tax credit exceeds income tax due. See Table 11.
	$501-$1,000	2.2		
	$1,001-$2,000	3.5		
	$2,001-$3,000	5.8		
	$3,001-$4,000	7.3		
	$4,001-$5,000	8.8		
	$5,001-$7,000	10.2		
	$7,001-$9,000	11.5		
	$9,001-$12,500	12.8		
	$12,501-$20,000	14.0		
	Over $20,000	15.0		
Mississippi	First $5,000	3	....	.....
	Over $5,000	4		
Missouri	First $1,000	1.5	x	.....
	$1,001-$2,000	2		
	$2,001-$3,000	2.5		
	$3,001-$4,000	3		
	$4,001-$5,000	3.5		
	$5,001-$6,000	4		

See footnotes at the end of table.

Table II-9
STATE INDIVIDUAL INCOME TAXES: RATES, JULY 1, 1975 (Cont.)

State	Net Income After Personal Exemption	Rate (Percent)	Federal Tax Deductible	Special Rates or Features
Missouri (Cont.)	$6,001-$7,000	4.5		
	$7,001-$8,000	5		
	$8,001-$9,000	5.5		
	Over $9,000	6		
Montana	First $1,000	2	x[5]	After computing the tax liability pursuant to these rates, there shall be added as a surcharge, 10 percent of the tax liability. The minimum tax is $1 on all individuals having taxable income.
	$1,001-$2,000	3		
	$2,001-$4,000	4		
	$4,001-$6,000	5		
	$6,001-$8,000	6		
	$8,001-$10,000	7		
	$10,001-$14,000	8		
	$14,001-$20,000	9		
	$20,001-$35,000	10		
	Over $35,000	11		
Nebraska[2]	The tax is imposed on the taxpayer's Federal income tax liability before credits, with limited adjustments. The rate is set as a flat percentage by the State Board of Equalization and Assessment on or before November 15 annually for the taxable year beginning during the subsequent calendar year. The rate for 1975 is 12 percent.			A $13 tax credit is allowed each taxpayer and each dependent for sales tax paid on food. If there is no income tax liability the taxpayer can apply for a refund. See Table 10.
New Mexico[1,2]	First $500	0.9	....	The income classes reported are for single individuals. Married joint returns and heads of households rates range from 0.9 percent on first $1,000 to $15,436 plus 9 percent of excess of income over $200,000. Special rates are provided for married persons filing separately. A credit is allowed for state-local taxes paid during the tax year by taxpayers with modified gross income of $8,000 or less. The credit ranges from $6 to $286 based on income and number of exemptions. If the credit exceeds tax liability, the excess will be refunded. See Table 10.
	$501-$1,000	1.1		
	$1,001-$1,500	1.3		
	$1,501-$2,000	1.5		
	$2,001-$3,000	1.6		
	$3,001-$4,000	1.9		
	$4,001-$5,000	2.3		
	$5,001-$6,000	2.4		
	$6,001-$7,000	3.0		
	$7,001-$8,000	3.3		
	$8,001-$10,000	3.6		
	$10,001-$12,000	4.3		
	$12,001-$20,000	6.1		
	$20,001-$50,000	8.0		
	$50,001-$100,000	8.5		
	Over $100,000	9.0		
New York	First $1,000	2	....	No tax is due from individuals with a N.Y. AGI of $2,500 or less; married, head of a household or a surviving spouse of $5,000 or less. Capital gains treatment is similar to that provided under Federal law. Income from unincorporated business is taxed at 5.5 percent. The following credit is allowed:
	$1,001-$3,000	3		
	$3,001-$5,000	4		
	$5,001-$7,000	5		
	$7,001-$9,000	6		
	$9,001-$11,000	7		
	$11,001-$13,000	8		
	$13,001-$15,000	9		
	$15,001-$17,000	10		
	$17,001-$19,000	11		

See footnotes at the end of table.

Table II-9
STATE INDIVIDUAL INCOME TAXES: RATES, JULY 1, 1975 (Cont.)

State	Net Income After Personal Exemption	Rate (Percent)	Federal Tax Deductible	Special Rates or Features
New York (Cont.)	$19,001-$21,000	12		If tax is— credit is—
	$21,001-$23,000	13		
	$23,001-$25,000	14		$110 or less . . . full amount of tax.
	Over $25,000	15		$110-$550 . . . difference between $137.50 and 25% of the amount of tax.
				$550 or more . . no credit.
				In addition to the personal income tax, a 6 percent tax is imposed on the N.Y. minimum taxable income (tax preference items) of individuals, estates, or trusts. A surcharge of 2.5 percent of the regular income tax and the minimum income tax, before the deduction of any allowable credits, is imposed.
North Carolina	First $2,000	3	....	
	$2,001-$4,000	4		
	$4,001-$6,000	5		
	$6,001-$10,000	6		
	Over $10,000	7		
North Dakota	First $1,000	1	x	An additional 1 percent tax on net income in excess of $2,000 is imposed on net incomes derived from a business, trade, or profession, other than as an employee. Individuals required to file a North Dakota personal income tax return are allowed a (inflation) tax credit equal to 25 percent of their tax liability, excluding any additional taxes due for the 1975 and 1976 tax years. Maximum credit per taxpayer is $100 per year.
	$1,001-$3,000	2		
	$3,001-$5,000	3		
	$5,001-$6,000	5		
	$6,001-$8,000	7.5		
	Over $8,000	10		
Ohio	First $5,000	0.5	....	Taxpayers 65 or older are allowed a credit of $25 per return or, if they so elect and if they have received a lump sum distribution from a pension, retirement or profit sharing plan during the tax year, a credit equal to $25 times the taxpayer's expected remaining life.
	$5,001-$10,000	1		
	$10,001-$15,000	2		
	$15,001-$20,000	2.5		
	$20,001-$40,000	3		
	Over $40,000	3.5		

See footnotes at the end of table.

Table II-9
STATE INDIVIDUAL INCOME TAXES: RATES, JULY 1, 1975 (Cont.)

State	Net Income After Personal Exemption	Rate (Percent)	Federal Tax Deductible	Special Rates or Features
Oklahoma[2]	First $1,000	0.5	x[6]	The income classes reported are for individuals and married persons filing separately. For joint returns the rates shown apply to income classes twice as large. The rates for heads of households range from 0.5 percent on the first $1,500 to 6 percent on taxable income over $11,250. A credit is provided for property tax relief. If the credit exceeds tax liability, the excess will be refunded. See Table 11.
	$1,001-$2,500	1		
	$2,501-$3,750	2		
	$3,751-$5,000	3		
	$5,001-$6,250	4		
	$6,251-$7,500	5		
	Over $7,500	6		
Oregon	First $500	4	x[7]	The income classes reported are for individuals. For joint returns and heads of households the rates shown apply to income classes twice as large. A credit is provided in an amount equal to 25 percent of the Federal retirement income tax credit to the extent that such credit is based on Oregon taxable income. A credit is provided for property tax relief if the credit exceeds tax liability the excess will be refunded. See Table 11.
	$501-$1,000	5		
	$1,001-$2,000	6		
	$2,001-$3,000	7		
	$3,001-$4,000	8		
	$4,001-$5,000	9		
	Over $5,000	10		
Rhode Island	The tax is imposed on the taxpayer's modified Federal income tax liability. The rate for 1975 is 17 percent.			
South Carolina	First $2,000	2	x[8]	The tax does not apply to persons aged 65 or older who, during the taxable year, receive gross income from all sources of not more than $2,800 if there are no dependents, or $4,000 if there is a dependent spouse or other dependent.
	$2,001-$4,000	3		
	$4,001-$6,000	4		
	$6,001-$8,000	5		
	$8,001-$10,000	6		
	Over $10,000	7		
Utah	First $1,500	3	x	Rates shown in table apply to married persons filing jointly. The following rates apply to single persons: First $750 ..... 2.5% $751-$1,500 ..... 3.5 $1,501-$2,250 ..... 4.5 $2,251-$3,000 ..... 5.5
	$1,501-$3,000	4		
	$3,001-$4,500	5		
	$4,501-$6,000	6		
	$6,001-$7,500	7		
	Over $7,500	8		

See footnotes at the end of table.

Table II-9
STATE INDIVIDUAL INCOME TAXES: RATES, JULY 1, 1975 (Cont.)

State	Net Income After Personal Exemption	Rate (Percent)	Federal Tax Deductible	Special Rates or Features
Utah (Cont.)				$3,001-$3,750 ..... 6.5 $3,751-$4,500 ..... 7.5 Over $4,500 8
Vermont[2]	The tax imposed at a rate of 25 percent of the Federal income tax liability of the taxpayer for the taxable year (after the allowance of retirement income credit, investment credit, foreign tax credit and tax-free covenant bonds credit, but before the allowance of any other credit against that liability or the addition of any surtax upon that liability granted or imposed under Federal law), reduced by a percentage equal to the percentage of the taxpayer's adjusted gross income for the taxable year which is not Vermont income. A 9 percent surcharge is imposed. Tax credits are provided for taxpayers aged 65 or over with Vermont income under $6,000.			If a taxpayer's liability exceeds, by any amount, what that liability would have been had it been determined in accordance with the Federal *Internal Revenue Code* in effect on January 1, 1967, instead of the Federal statute in effect for the year for which the return is filed a credit is allowed equal to 106 percent of the amount of the excess, applicable to the taxpayer's tax liability for the succeeding year. Resident taxpayers who are full-time students for at least five months in the year are allowed a $10 credit. Effective June 1, 1969, a sales tax credit based on modified adjusted gross income brackets and number of exemptions is provided, ranging from $0 to $91. If a taxpayer's credits exceed his tax, a refund will be made. See Table 10. Resident taxpayers are provided a credit for property taxes or rent constituting property taxes. For taxpayers 65 or older if income tax liability is less than the credit the difference between the liability and the credit will be refunded.[9] See Table 11.
Virginia	First $3,000	2	....	.....
	$3,001-$5,000	3		
	$5,001-$12,000	5		
	Over $12,000	5.75		
West Virginia	First $2,000	2.1	....	The income classes reported are for individuals and heads of households. For joint returns the rates shown apply to income classes twice as large.
	$2,001-$4,000	2.3		
	$4,001-$6,000	2.8		
	$6,001-$8,000	3.2		
	$8,001-$10,000	3.5		
	$10,001-$12,000	4.0		
	$12,001-$14,000	4.6		
	$14,001-$16,000	4.9		
	$16,001-$18,000	5.3		
	$18,001-$20,000	5.4		

See footnotes at the end of table.

Table II-9
STATE INDIVIDUAL INCOME TAXES: RATES, JULY 1, 1975 (Cont.)

State	Net Income After Personal Exemption	Rate (Percent)	Federal Tax Deductible	Special Rates or Features
West Virginia (Cont.)	$20,001-$22,000	6.0		
	$22,001-$26,000	6.1		
	$26,001-$32,000	6.5		
	$32,001-$38,000	6.8		
	$38,001-$44,000	7.2		
	$44,001-$50,000	7.5		
	$50,001-$60,000	7.9		
	$60,001-$70,000	8.2		
	$70,001-$80,000	8.6		
	$80,001-$90,000	8.8		
	$90,001-$100,000	9.1		
	$100,001-$150,000	9.3		
	$150,001-$200,000	9.5		
	Over $200,000	9.6		
Wisconsin[2]	First $1,000	3.1	....	A property tax credit is allowed for homestead relief. Cash refund granted if property tax credit exceeds income tax due. See Table 11.
	$1,001-$2,000	3.4		
	$2,001-$3,000	3.6		
	$3,001-$4,000	4.8		
	$4,001-$5,000	5.4		
	$5,001-$6,000	5.9		
	$6,001-$7,000	6.5		
	$7,001-$8,000	7.6		
	$8,001-$9,000	8.2		
	$9,001-$10,000	8.8		
	$10,001-$11,000	9.3		
	$11,001-$12,000	9.9		
	$12,001-$13,000	10.5		
	$13,001-$14,000	11.1		
	Over $14,000	11.4		

[1]Community property state in which, in general, one-half the community income is taxable to each spouse.
[2]Allows deduction of state individual income tax itself in computing state tax liability.
[3]Effective for taxable years beginning on or after July 1, 1969, taxpayers whose only activities in the state consist of making sales, who do not own or rent real estate in the state and whose annual gross sales in or into Colorado amount to not more than $100,000, may elect to pay a tax of 0.5 percent of annual gross receipts derived from sales in or into Colorado in lieu of paying an income tax.
[4]Limited to $300 for single persons and $600 for married persons filing joint returns.
[5]Limited to itemized returns.
[6]Limited to the first $500 paid during the tax year plus 5 percent of such taxes paid in excess of $500, but no taxpayer may deduct more than $1,700 in Federal taxes.
[7]For tax years beginning on and after January 1, 1974, and before January 1, 1975, the deduction is limited to $3,000. $5,000 effective January 1, 1975.
[8]Limited to $500 per taxpayer.
[9]Claimants under age 65 shall file for a credit on forms provided by the commissioner. Such claims shall be processed separately from the Vermont income tax returns and no amount of claim shall be allowed as a credit against income tax liability.

Source: ACIR staff compilation based on Commerce Clearing House, *State Tax Reporter.*

Table II-10

STATE USE OF A PERSONAL INCOME TAX CREDIT-REBATE TO MINIMIZE OR OFFSET THE REGRESSIVITY OF SALES TAXES, JULY 1, 1975[1]

State	Type of Credit	Year Adopted	Amount of Credit	Law	Administrative Procedure
Colorado	For sales tax paid on food	1965	$7 per personal exemption (exclusive of age and blindness)	Chap. 138, Art. 1 (Secs. 138-1-18 & 138-1-19 added by H.B. 1119, Laws 1965, effective 6/1/65	Credit to be claimed on income tax returns. For resident individuals without taxable income a refund will be granted on such forms or returns for refund as prescribed by the director of revenue.
Hawaii	General excise tax credit	1974	Varies with income. From $30 per qualified exemption if AGI is under $5,000 to $6 if A.G.I. is between $14,000 and $15,000	Act 221, Laws 1974; Sec 235-56	Credit to be claimed on income tax returns. If credit exceeds income tax due or if there is no tax liability, the excess of credits over tax liability will be paid to the individual.
Idaho	For sales taxes paid	1965, 1969 and 1975	$15 credit per personal exemption (taxpayers 65 and over $20)	Chap. 195, Laws 1965. Chap. 456, Laws 1969; Sec. 63-3024(d); H.B. 286, Laws 1975	Credit (or rebate if credit exceeds tax liability) to be claimed on income tax returns. For resident individuals without taxable income a refund will be granted on such forms or returns for refund as prescribed by the state tax commission.
Massachusetts	For consumer-type taxes	1966	$4 for taxpayer, $4 for spouse, if any, and $8 for each qualified dependent[2]	Chap. 62 (Sec. 6b added by ch. 14, Acts 1966)	Credit to be claimed on income tax returns. If credit exceeds income tax due a refund will be granted.
Nebraska	For sales tax paid food	1967	$16 per personal exemption (exclusive of age and blindness)	H.B. 377, Laws 1967 Rev. 1972; 1974; 1975	Credit to be claimed on income tax returns. Refund will be allowed to the extent that credit exceeds income tax payable but no refund will be made for less than $2.
New Mexico	For all state-local taxes	1972	Credit varies from $0 to $286 based on modified gross income up to $8,000 and total number of personal exemptions taken for Federal income tax pur-	Chap. 20, Laws 1972; Chap. 336, Laws 1973 Chap. 213, Laws 1975	Credit to be claimed on income tax returns. If the tax credit exceeds the taxpayer's income tax liability, the excess shall be refunded to the taxpayer.

See footnotes at the end of table.

Table II-10

STATE USE OF A PERSONAL INCOME TAX CREDIT-REBATE TO MINIMIZE OR OFFSET THE REGRESSIVITY OF SALES TAXES, JULY 1, 1975[1] (Cont.)

State	Type of Credit	Year Adopted	Amount of Credit	Law	Administrative Procedure
New Mexico (Cont.)			poses plus an additional exemption for each person 65 and over		
Vermont	For sales tax paid	1969; 1974	Varies, based on income and number of personal exemptions (other than age and blindness)[3]	H.B. 125, Laws 1969; Chap. 152, Sec. 5829	Credit to be claimed on income tax returns. Credits properly claimed by resident individuals who have no income or no income subject to Vermont tax will be allowed the full amount of the credit as a refund.

[1]Effective for taxable years beginning on or after January 1, 1974, a general excise tax credit replaced the consumer, educational, drug and medical, and rental tax credits.
[2]Credits are only allowed if total taxable income of taxpayer and spouse, if any, does not exceed $5,000 for the taxable year.
[3]Ranges from $22 to $91 for taxpayers having less than $1,000 total household income to $0 to $46 for those having between $6,000 and $6,999 income, based on number of personal exemptions.

Source: ACIR staff compilation based on Commerce Clearing House, *State Tax Reporter*.

Table II-11

KEY FEATURES OF STATE INCOME TAX CIRCUIT-BREAKER PROPERTY TAX RELIEF PROGRAMS, 1976

State	Date of Adoption	Description of Beneficiaries (Number of Beneficiaries)	Income Ceiling	Description of Program	Form of Relief
Arizona[1]	1973	Homeonwers and renters 65 and over (not available)	$3,500 single, $5,000 married (assessed value of all property not to exceed $5,000)	A percentage of tax is returned as a credit, credit declines as income rises. Only taxes on first $2,000 of assessed value are considered (25 percent of rent equals tax equivalent, up to $225).	State income tax credit or rebate
Arkansas[2]	1973 revised 1975	Homeowners 65 and over (2,798)	$8,000	Relief cannot exceed $150 and is equal to homestead realty tax paid (up to $500) less 5 percent of household income up to $8,000.	State income tax credit or rebate
Colorado	1971, 1973 revised 1974 revised 1975	Homeowners and renters 65 and over or disabled (27,251)	$6,900 single, $7,900 married (net worth less than $30,000—home, furniture, clothing, and car excluded)	Relief cannot exceed $400 and is equal to $400 reduced by 10 percent of income over $3,000 for individuals and 10 percent of income over $4,000 for married couples (20 percent of rent equals tax equivalent).	State income tax credit or rebate
Indiana	1973	Homeowners and renters 65 and over or disabled (44,000)	$5,000	Relief ranges from 75 percent of property tax for incomes below $500 to 10 percent for incomes above $4,000. Relief limit is $500 (20 percent of rent equals tax equivalent [15 percent if furnished or utilities provided]).	Income tax credit or rebate
Michigan[3]	1973 revised 1975	All homeowners and renters (1,011,709)	None	Credit equals 60 percent of property taxes in excess of 3.5 percent of income (100 percent of a lower percentage of income for elderly). Maximum relief is $1,200 (17 percent of rent equals tax equivalent).	State income tax credit or rebate
Minnesota[4]	1967, 1973 revised 1975	All homeowners and renters (not available)	None	Tax exceeding various percentages of income is remitted; percentages range from 1 percent of income below $2,500 (max. cdt. $475) to 4 percent of income $100,000 or more	State rebate (optional income tax credit for elderly, disabled, and renters)

Table II-11

KEY FEATURES OF STATE INCOME TAX CIRCUIT-BREAKER PROPERTY TAX RELIEF PROGRAMS, 1976 (Cont.)

State	Date of Adoption	Description of Beneficiaries (Number of Beneficiaries)	Income Ceiling	Description of Program	Form of Relief
Minnesota (Cont.)				(max. cdt. $325). Rent tax equivalent is 20 percent.[5]	
Missouri	1973 revised 1975	Homeowner and renters 65 and over (58,031)	$7,500	Tax exceeding various percentages of income is remitted; percentages range from 1 percent of income below $2,000 to 4 percent for incomes above $5,000. Not more than $500 tax considered for relief (20 percent of rent equals tax equivalent).	State income tax credit or rebate
Oklahoma[6]	1974	Homeowners age 65 and over or disabled (not available)	$6,000	Relief equal to property taxes due in excess of 1 percent of household income, not to exceed $200.	Refundable income tax credit
Oregon	1971, 1973 revised	All homeowners and renters (509,000)	$15,000	Refund of all property taxes up to various maximums that depend on income ($490 for incomes below $500) (17 percent of rent equals tax equivalent).	Refundable income tax credit
Vermont	1969 1973 revised	All homeowners and renters (26,400)	None	Refund of taxes exceeding variable percent of income ranging from 4 percent for incomes less than $4,000 to 6 percent for incomes over $16,000. Maximum relief is $500 (20 percent of rent equals tax equivalent).	State rebate (or income tax credit for elderly)
Wisconsin	1964, 1973 revised	All homeowners and renters (189,521)	$7,000	Excess taxes are taxes above 14.3 percent of income exceeding $3,500. Tax credit equals 80 percent of excess taxes. Not more than $500 tax considered for relief (25 percent of rent equals tax equivalent).	State income tax credit or rebate

[1]Program took effect calendar year 1974. First claims were to be filed January 1975.
[2]Relief currently takes the form of cash refunds as those having an income tax liability fail to qualify for property tax rebate.
[3]In 1974, Michigan extended circuit-breaker coverage to farmers as well as owners of residential property. Farmers must agree to restrict land use to obtain relief, however.

Table II-11
KEY FEATURES OF STATE INCOME TAX CIRCUIT-BREAKER PROPERTY TAX RELIEF PROGRAMS, 1976 (Cont.)

[4]Homeowners 65 and over also participate in a property tax freeze program wherein the state will refund property tax increases.
[5]The maximum credits are increased by $200 for the elderly and disabled. All credits shall be reduced by any state paid homestead credits provided under section 273.13(6) and (7).
[6]The Oklahoma program took effect January 1, 1975, and grants relief for taxes paid in 1974.

Note: Number of beneficiaries are for 1974.

Source: ACIR staff compilation from questionnaire responses and Commerce Clearing House data.

Footnotes

[1]As with all such hypothetical illustrations, this one is "rigged" to emphasize certain major characteristics of the (tax) system. Such a procedure allows one to simplify a complex system (the tax code) without a serious sacrifice of reality. For example, we have four important simplifying assumptions regarding our hypothetical taxpayer: (1) income is in excess of $8,000, thus eliminating the need to consider the earned income credit, (2) deductions are not itemized, (3) no preference income (e.g., net long-term capital gains), and (4) no deductions from gross income (GI), therefore, GI = AGI.

[2]In the first year, the taxpayer used the low-income allowance. In the third year, the alternative percentage formula was adopted.

[3]This does not imply, however, that the taxpayer is "worse off." Since the likely result is a level of public service spending higher than what otherwise would have occurred, the taxpayer may prefer this after-tax position of an increased availability of public goods.

[4]If inflation is fully anticipated, the public would presumably enter into private contracts (wage, financial obligations, etc.) designed to preserve before-tax real incomes. Thus, the distinction between actual and expected rates of inflation becomes an important issue in discussions of comprehensive indexing of economic assets, since the private sector may, *de facto*, index itself. Even if inflation is fully anticipated, however, the tax burden distortions such as those illustrated above will still occur because tax indexing can only be done by statute.

[5]Automatic personal income tax increases also result from real economic growth. The view taken in this report, however, is that revenue elasticity with respect to real growth as well as the proportionate response of revenues to inflation have been historically recognized and intended. In contrast, the real revenue increases generated by inflation can be viewed as unintended or, at least, unanticipated, since the current rates of inflation are well above the historical rates.

[6]Other fixed dollar limitations in the tax code include those on capital gains and losses, health insurance premiums, child care expenses, moving expenses, farmers' land-clearing expenses, political contributions, the floor on personal casualty loss, sick pay, initial first-year depreciation allowance, the minimum for income averaging, and the minimum income tax exemption. Also note here that "equity" is being quite narrowly defined with respect only to the four provisions listed. A complete equity approach would require an examination of the proper definition of what constitutes "income."

[7]The base year is 1975. The real value of an exemption falls by $[1 \div (1 + i)]$, where i equals the rate of inflation. This formula also applies to the fall in the real value from year to year of any fixed dollar in the tax code (e.g., tax bracket boundaries, the maximum allowable for the standard deduction once the maximum is reached and the per capita credit for personal exemptions).

[8]This is true even though the nominal dollar value of the tax reduction becomes larger as one moves into the higher marginal tax bracket. Also note, however, that if a family has very low income it may remain in the zero tax bracket.

[9]The *Tax Reform Act of 1976* increased the tax credit to $35 per exemption or 2 percent of the first $9,000 of taxable income, whichever is greater.

[10]Sunley and Pechman, "Inflation Adjustment."

[11]The *Revenue Act of 1964*, the *Tax Reform Act of 1969*, the *Revenue Act of 1971*, and the *Tax Reduction Act of 1975*.

[12]George M. von Furstenberg, "Individual Income Taxation and Inflation," *National Tax Journal*, March 1975, pp. 117–126.

[13]Charles T. Goetz and Warren E. Weber, "Intertemporal Changes in Real Federal Income tax Rates, 1954–70," *National Tax Journal*, March 1971, pp. 55–63.

Chapter III

Effects on Public Sector Size

HOW LARGE ARE THE POTENTIAL INDIVIDUAL INCOME TAX INCREASES DUE TO INFLATION?

Inflation will interact with a progressive individual income tax to generate—in the absence of countervailing legislative action—increases in income taxes more than proportionate to the increase in wages and prices. In order to evaluate the importance of inflation-induced real income tax increases, estimates of these potential gains in the next several years to both the Federal government and to certain state and local governments must be made.

FEDERAL GOVERNMENT

Estimates of the potential inflation-induced real individual income tax gains at the Federal level for 1977 and 1981 were presented at the recent Brookings Conference on Inflation and Income Taxes.[1] These estimates were made using the Brookings income tax file and are based on the following assumptions.

1. 1976 individual income taxes are assumed to be about $136 billion.
2. The 1975 income tax law is extended through 1981.
3. Real income growth in each year will be 6 percent.
4. The increase in number of returns filed in each year will be 1 percent.

5. The percentage increase in capital gains in each year will be nearly the same as all other income.

These projections are reported in Table III-1. With 12 percent growth of income from 1976 to 1977—6 percent real growth and 6 percent inflation—individual income taxes are projected to be $165.5 billion in 1977, for an effective rate of 14.3 percent of adjusted gross income (AGI). This is contrasted with income tax liability of $151.3 billion and an effective rate of 13.8 percent with 6 percent real growth but no inflation. Thus there is a 0.5 percentage point increase in the aggregate effective tax rate because of the inflation. If this real increase in income tax due to inflation is removed—so that the effective rate remains 13.8 percent with 12 percent growth of income—income tax liability would be $159.3 billion.

Thus the Federal government would collect automatic, inflation-induced real income tax increases from $2 to $10 billion in 1977, depending on the rate of inflation. Similarly, if no discretionary changes in the income tax law were made, the inflation-induced real individual income tax gains in 1981 could range from $13 to $100 billion.

Two fine distinctions about the data presented in Table III-1 need to be noted. First, the difference between the income tax liability with 6 percent inflation and with zero inflation is the total increase in income taxes due to inflation; only a portion of that amount causes the effective tax rate to rise—and is thus considered a problem—because income also increases concurrently with the inflation. Thus with

Table III-1

EFFECT OF INFLATION ON THE YIELD OF THE FEDERAL INDIVIDUAL INCOME TAX, 1977 AND 1981 (IN BILLIONS)

Annual Percentage Increase in Income Per Return			Adjusted Gross Income[1]	Individual Income Tax Liability	Effective Rate of Tax	Tax Liability at Constant Effective Rate[2]	Additional Real Tax Due to Inflation	
Total	Real	Inflation					Amount	Percent
				1977				
6%	6%	0	$1,092.6	$151.3	13.8%	$151.3	0	0
8	6	2%	1,113.3	156.0	14.0	153.6	$ 2.4	1.5%
10	6	4	1,133.9	160.8	14.2	156.5	4.3	2.7
12	6	6	1,154.6	165.5	14.3	159.3	6.2	3.7
14	6	8	1,175.2	170.4	14.5	162.2	8.2	4.8
16	6	10	1,195.8	175.2	14.6	165.0	10.2	5.8
				1981				
6%	6%	0	$1,435.9	$229.3	16.0%	$229.3	0	0
8	6	2%	1,576.8	265.9	16.9	252.3	$ 13.6	5.1%
10	6	4	1,728.6	307.2	17.8	278.2	29.0	9.4
12	6	6	1,891.8	353.6	18.7	302.7	50.9	14.4
14	6	8	2,067.1	405.6	19.6	330.7	74.9	18.5
16	6	10	2,255.2	463.7	20.6	360.8	102.9	22.2

Note: Brookings 1972 tax file projected to 1977 and 1981. For assumptions used in the calculations, see Joseph A. Pechman, "Responsiveness of the Federal Individual Income Tax to Changes in Income," *Brookings Papers on Economic Activity*, 2, 1973, pp. 395–396 and 413. Figures are rounded.

[1]Assumes an increase of 1 percent a year from 1976 in the number of returns filed.
[2]Tax liability to maintain effective rate of 13.8 percent in 1977 and 16.0 percent in 1981. This would be the tax liability if the income tax were fully "indexed."

Source: Reprinted with permission from Emil Sunley and Joseph Pechman, "Inflation Adjustment for the Individual Income Tax," presented at the Brookings Conference on Inflation and Income Taxes, October 1975.

6 percent inflation the revenue lost in 1977, if indexation were adopted, is $6.2 billion (a 3.7% reduction), so that the effective rate is 13.8 percent, i.e., the effective rate with 6 percent real growth and no inflation. Second, comparing effective tax rates between 1977 and 1981 with zero inflation, one observes that real growth also generates an increase in the share of AGI taken by income tax. This inherent property of a progressive income tax must be distinguished from the similar effect due to inflation; in the former case purchasing power increases, while in the latter it may not increase or may even fall.

STATE GOVERNMENT

Estimates of the potential real income tax increases due to inflation at the state level are more difficult to determine. Currently there are 39 states with broad based individual income taxes that have overall progressive incidence, including credits and exemptions.[2] These states differ substantially in the structure of their individual income taxes, in the effective rate of tax, in the state's income distribution, and in the degree of utilization of individual income taxes. Consequently, in order to estimate the effect of inflation on state individual income taxes in general, a hypothetical "average state" was constructed from those 39 with broad based individual income taxes that can be affected by inflation. This average state is characterized as follows:[3]

Personal income: $21 billion
Individual income taxes: $401.1 million
Effective tax rate: 1.91 percent
Population: 4 million
Per capital income: $5,250

Income and income tax projections for the average state, similar to those made by Sunley and Pechman in the Federal case, were computed and are shown in Table III-2. Estimates were made for

Table III-2
THE EFFECT OF INFLATION ON THE YIELD OF AN INDIVIDUAL INCOME TAX FOR AN AVERAGE STATE (IN MILLIONS)

Year	Annual Percentage Change in Income: Total	Real	Inflation	Personal Income	Individual Income Tax Liability	Effective Rate of Tax	Tax Liability at Constant Effective Rate[1]	Additional Real Tax Due to Inflation: Amount	Percent
Elasticity = 1.50									
0	—	—	—	$21,000	$401.1	1.91%	—	—	—
1	6%	6%	0	22,260	437.2	1.96	$437.2	0	0
1	12	6	6%	23,520	473.3	2.01	461.0	$12.3	2.6%
5	6	6	0	28,103	617.1	2.20	617.1	0	0
5	12	6	6	37,009	917.6	2.48	814.2	103.4	11.3
Elasticity = 1.65									
1	6	6	0	22,260	440.8	1.98	440.8	0	0
1	12	6	6	23,520	480.5	2.04	465.7	14.8	3.1
5	6	6	0	28,103	643.0	2.29	643.0	0	0
5	12	6	6	37,009	989.7	2.67	847.5	142.2	14.4
Elasticity = 1.80									
1	6	6	0	22,260	444.4	2.00	444.4	0	0
1	12	6	6	23,520	487.7	2.07	470.4	17.3	3.5
5	6	6	0	28,103	669.8	2.38	669.8	0	0
5	12	6	6	37,009	1066.3	2.88	880.8	185.5	17.4

[1]Tax liability to maintain effective rate with zero inflation, in each case.

Source: ACIR staff compilation.

three assumed elasticities of the individual income tax with respect to personal income; the elasticities selected conform to the "low," "medium," and "high" average values reported by ACIR in 1968.[4] As with the Federal projections, these state estimates are based on several assumptions that should be carefully noted, namely:

1. Real income growth in each year over the period will be 6 percent.
2. There are no population or income distribution changes in the state over the period.
3. The assumed individual income tax elasticity with respect to personal income remains constant over the period. (Normally, if the tax law is not changed, income tax elasticity should fall over time.)

Table III-2 shows that, for the average state, the real individual income tax increase due to a 6 percent inflation ranges from $12 to $17 million after one year, depending on the assumed elasticity. The additional real tax due to inflation is the amount of the annual automatic individual income tax increase that would be eliminated by indexing the state individual income tax. As a result of indexation, then, this average state would, after one year of 6 percent inflation, collect 2.5 percent to 3.5 percent less income tax.

If there was no change in the state individual income tax law for five years, the inflation-induced real income tax gains would range from $103 to $185 million in the fifth year.

As a companion to this analysis of the average state, we examined the impact of inflation and indexation on the Virginia personal income tax.[5] Those simulations show that indexation of personal exemptions, all features of the standard deduction, and the tax rate brackets would have reduced individual income taxes in Virginia by about $17.6 million or 4 percent in 1973 and by about $50.8 million or about 9.9 percent in 1974, compared with the taxes without indexation. By way of comparison with the average state analysis, in Virginia in 1973, inflation was 6.2 percent, while total AGI rose by 13.8 percent. In 1974, in Virginia, AGI rose by 11.7 percent and inflation was 11.0 percent. On the basis of this comparison with Virginia's experience, the average state analysis appears to be a reasonable guide to the impact of inflation on state personal income taxes.

LOCAL GOVERNMENT

Although individual income taxes have become common at the local level—ACIR estimates local individual income taxes exist in some 4,000 jurisdictions spanning ten states[6]—they generally do not have a progressive structure. Nearly all are levied at a constant rate on wages and salaries primarily, while only a minority allow personal exemptions or credits. Therefore, the issue of inflation-induced increases in effective individual income tax rates at the local level is currently a trivial one.[7]

THE CONCEPTUAL ARGUMENTS: BIAS TOWARD A LARGER PUBLIC SECTOR

In this section, we discuss how the automatic nature of the inflation-induced increase in the share of national income taken by individual income taxes might bias the political process in favor of a larger public sector. The effects of inflation on a progressive individual income tax that lead to this concern can be separated into two areas.

1. *Increasing National Income.* National income measured in current dollars (nominal income) can increase both from increases in national output (real increases in income) and from increases in the general price level (inflation-induced increases in income). When increases in nominal income are accompanied by inflation, the effective rate of a progressive individual income tax will rise more than is warranted by the increase in purchasing power (real growth).[8]

2. *Constant or Falling National Income.* National income measured in current dollars may remain constant or fall during an inflation period. In this case, the aggregate effective rate of the individual income tax remains the same. Since national purchasing power or real national income has fallen, however, some would argue that the share of national income absorbed by the individual income tax should also fall.

When confronted with automatic real individual income tax revenue increases, legislative bodies have several options. Discretionary legislative action can reduce tax rates or increase deductions so that all or part of the potential revenue increase is

foregone. Discretionary legislative action to raise tax rates can also enlarge automatic increases in real tax revenue from the effects of inflation. The crucial considerations for purposes of the discussion of public sector growth are, however, the economic and political implications of automatic as opposed to legislated tax revenue changes.

A major concern about automatic, inflation-induced real income tax increases is that much of the fiscal accountability for the rising share of national income absorbed by the public sector is removed. This may happen either because individuals do not perceive automatic tax increases as easily as discretionary ones or because it is more difficult to pinpoint the exact source of the increase.

FISCAL ILLUSION

One school of thought suggests that individuals are cognizant of tax revenue increases that occur after lengthy and detailed public debate in conjunction with legislative enactment. Through press and media coverage and through contacts with legislators, individuals are made aware of the impact of proposed tax changes and can react in favor or against the proposal through the same channels. In contrast, the argument goes, when the tax increases occur automatically from the interaction of the progressive income tax rate structure and inflation, individuals may be less cognizant of the tax changes that have occurred. Clearly, this effect requires a "fiscal illusion," a term used here to suggest that individuals react to changes in the tax code and not to changes in their tax bill. Though this argument is subject to criticism, it may be strongest in the case of inflation-induced, automatic real tax increases. It may be especially difficult for individuals to translate dollar values of income and taxes into purchasing power in a period of rapidly rising prices.

ACCOUNTABILITY

The second part of this viewpoint is that even if individuals do recognize the impact of inflation in raising real tax revenues, they are unable to focus their concern on any specific agent of the public sector. That is, inflation-induced increases in real individual income tax revenue can be obtained without political cost to any legislator or administration. Moreover, those revenues can be used to finance expenditures which provide large political benefits to those same legislators and administration. Again, in contrast, legislated tax increases force policymakers to stand in favor or opposed to the tax-expenditure package and thereby make themselves liable for political reprisal.

SUMMARY

The clear implication in this line of argument is to favor discretionary tax increases rather than automatic increases that result from inflation. Proponents of this view claim that the public sector cannot automatically benefit, relative to the private sector, from an inflation. If the individual members of society desire real tax revenue gains during an inflationary period, these can be enacted by the legislature. A larger public sector would thus occur only after public debate rather than automatically as an effect of inflation.

A CRITICAL ARGUMENT: PERIODIC TAX REDUCTIONS

The potential for an enlarged public sector as a result of real individual income tax increases caused by inflation may prove nothing more than threatening if individuals are aware of such tax hikes and can, through the political process, induce periodic income tax reductions. In addition, the executive and legislative branches may act to reduce individual income taxes for a number of reasons, including, for example, at the Federal level, economic stabilization objectives. The net effect of tax cuts, regardless of their rationale, is to reduce or eliminate the real income tax increases due to inflation.

Individual income tax cuts have been made periodically. Whether they will continue to be made and with what frequency and scope will determine whether inflation's effects on income taxes are offset. Past experience may hold some useful guide to future Federal policy.

Sunley and Pechman calculated actual effective individual income tax rates for the period 1960–1975 and compared them with the effective rate that would have prevailed had various income tax laws been indexed to remove all inflation effects.[9] Their analysis shows that the aggregate effective individual income tax rate in 1975 was lower than it would have been under the 1960 tax law indexed for inflation. See Table III-3. In particular, Federal individual income tax liabilities after the *Tax Reduction Act of 1975* (including all income tax code adjustments since) were about $9 billion less than the liability would have been with an indexed tax system based on the 1960 laws. Effective tax rates

Table III-3

FEDERAL INDIVIDUAL INCOME TAX LIABILITIES IN 1975 UNDER VARIOUS TAX LAWS

Law	Effective Tax Rate	Percent Difference in Taxes (Actual 1975–Indexed Law) Actual 1975
1975 Actual	12.9%	0
1960 Indexed[1]	13.7	− 6.4%
1965 Indexed[1]	11.4	+12.7
1972 Indexed[1]	11.9	+ 8.2

[1]Under the indexed laws, the limits of the rate brackets, personal exemptions, and the standard deduction are adjusted for change in the consumer price index to 1975.

Source: Sunley and Pechman, 1975, pp. 11–12. Brookings Tax file projected to 1975. Figures are rounded.

would have been lower in 1975, however, under either the indexed 1965 or 1972 individual income tax law. As of 1975, the four major Congressional income tax cuts since 1960 *had* in the aggregate more than corrected income tax liabilities fully for inflation compared to the 1960 law. The tax cuts, however, *had not* eliminated the effects of inflation on aggregate income taxes since 1965.

At the state level, the situation in recent years has been entirely different. During the period 1966–1974, state political action served only in 1974 to reduce state income tax collections below what they otherwise would have been. See Table III-4. For any given year, some individual states may of course have reduced individual income taxes by more than enough to offset the effects of inflation. Still, in the recent past, the adoption of a new individual income tax—seven enacted from 1964 to 1973—or the increase of existing income tax rates has more generally characterized state experience. State political action, therefore, has probably not offset the effects of inflation on individual income taxes. Rather, state-legislated tax increases most likely were made somewhat smaller by inflation-induced growth in income tax receipts.

INDEXING'S POTENTIAL EFFECTS ON GOVERNMENT PROGRAMS AND OUTLAYS

Automatic increases in real income taxes due to inflation potentially allow legislated tax cuts. Inflation-induced income tax increases also provide potential for expenditure increases and adjustments in other fiscal variables. In this section, comparisons are made between various proposed budgets reflecting individual income tax revenues under an indexed system at both the Federal and state levels.

FEDERAL GOVERNMENT

To examine the potential effects of indexing the Federal individual income tax on expenditures, other taxes, and the size of budget deficits, two questions are posed. Given that Federal individual income tax indexation is adopted,

1. What size tax increases or expenditure cuts (if any) would be required to continue current Federal programs?
2. Would tax increases be necessary to fund President Ford's proposed 1977 budget?

To answer the first question, the Sunley-Pechman projections of Federal individual income tax collections for 1977 for an indexed tax system are compared with the income tax revenue projected by the Congressional Budget Office for "Path B" economic assumptions.[10] The CBO current program budget represents the costs of continuing Federal programs and activities at 1976 levels, allowing for such factors as inflation and increases

Table III-4

SOURCES OF GROWTH: STATE INDIVIDUAL INCOME TAXES, 1966–1974

Fiscal Year	Percent of Growth Over Previous Fiscal Year Due to: Economic Growth	Political Growth
1966	79.4%	20.6%
1967	91.5	8.5
1968	42.2	57.8
1969	55.6	44.4
1970	43.6	56.4
1971	90.8	9.2
1972	57.5	42.5
1973	64.0	36.0
1974	131.3	−31.3

Source: ACIR survey of annual state revenue growth in cooperation with state revenue departments.

Table III-5

AGGREGATE EFFECT OF INDEXATION ON STATE INDIVIDUAL INCOME TAX REVENUE[1]

Calendar Year	Percent Change in Personal Income		Inflation Rate (CPI)[2]	Personal Income (millions)	Without Indexation		With Indexation		Tax Change Due to Indexation	
	Total	Real			Income Tax Revenue (millions)	Effective Tax Rate	Income Tax Revenue (millions)	Effective Tax Rate	Amount (millions)	Percent
1976	—	—	—	$1,099,980	$22,000	2.0%	—	—	—	—
1977	10.1%	3.2%	6.9%	1,211,075	25,666	2.11	$24,706	2.04%	$ 960	3.7%
1978	11.1	5.2	5.9	1,345,500	30,367	2.25	28,256	2.10	2,111	6.95
1979	9.4	3.8	5.6	1,471,980	35,077	2.38	31,648	2.15	3,429	9.8
1980	9.5	4.7	4.8	1,611,820	40,575	2.53	35,621	2.21	4,954	12.2

[1]For 39 states with broad based individual income taxes. Assumed elasticity of aggregate state personal income tax revenue with respect to personal income of 1.65.
[2]Economic Assumptions, Congressional Budget Office, Path B.

Source: ACIR staff compilation.

rent program budget represents the costs of continuing Federal programs and activities at 1976 levels, allowing for such factors as inflation and increases in the number of persons entitled to benefits.[11] This budget involves about $200 billion in non-income tax revenue and a $64.9 billion deficit to finance $424.9 billion outlays. Assuming about 10 percent income growth in calendar 1977 with about 6 percent inflation, individual income tax revenues are projected to be $159.8 billion in fiscal 1977 (based on the tax law in effect January 1, 1976). For 10 percent growth in 1977, Sunley and Pechman project income taxes of $160.8 billion without indexation and $156.5 billion under an indexed 1975 tax law. To meet the CBO projections for funding of current programs if the income tax were indexed, $3 to $4 billion of tax increases or deficit financing apparently would be required.

A similar analysis of President Ford's budget with and without an indexed system of income taxes reveals a somewhat different picture. Under the President's proposal, total outlays would be $394.2 billion financed by $198.5 billion in non-individual income tax revenue and a $43.0 billion deficit. On the basis of expected fiscal year 1976 individual income tax collections of $130.8 billion and assuming about 12 percent growth in calendar 1977 with about 6.2 percent inflation, individual income taxes in the President's budget for fiscal 1977 are projected to be $153.6 billion ($175.8 billion without the President's proposed tax cuts). On the basis of expected 1976 individual income taxes of $135 billion and assuming 12 percent growth in 1977, Sunley and Pechman project individual income taxes of $165.5 billion for an indexed 1975 tax structure.[12] Thus, it appears that the tax and expenditure package proposed by the President for fiscal 1977 could easily be financed if the Federal income tax were indexed. Moreover, smaller legislated cuts in individual income taxes would be required, since indexation would be a substitute for some of these cuts.

STATE GOVERNMENT

Attempts to quantify the impact of indexing state individual income taxes are more difficult. Although it is recognized that aggregate estimates are prone to error because simplifying assumptions necessarily are applied across states with varying tax structures, the impact of indexing state individual income taxes beginning in 1977 has nevertheless been calculated and is shown in Table III-5. Several important assumptions must be noted:

1. The aggregate values are for only the 39 states with broad based individual income taxes that exhibit some progression.
2. The elasticity of aggregate state individual income tax revenue with respect to personal income is assumed to be 1.65, remaining constant over these five years.
3. The personal income and tax revenue figures for the calendar year 1976 are estimates extrapolated from actual 1975 data.

4. Personal income growth and inflation assumptions are those made by the Congressional Budget Office for Path B projections.

Indexation would reduce state individual income tax revenue by over $900 million in 1977, a reduction of about 3.5 percent on the basis of the foregoing assumptions. See Table III-5. Unless states planned to cut income taxes by a like amount under any circumstances, indexation would require states to increase taxes or cut expenditures or accomplish some combination of the two in order to make up for the reduction in their income tax collections. Under indexation, state income tax revenue by 1980 could be about 12 percent below that which the state would receive without any tax change through the period 1976 to 1980. Even so, if indexation were adopted starting in 1977 and no tax changes were subsequently enacted, state individual income tax revenue would rise by over $13 billion by 1980, producing average annual increases of nearly 13 percent. In contrast, without indexation, aggregate state income tax revenue would increase annually by an average of about 16.5 percent. State individual income tax revenue increased at an average annual rate of about 15.5 percent from 1971 to 1975. During those years several states enacted new income taxes and others raised income tax rates. See Table III-4.

Inferences based on these estimates must be drawn cautiously for several reasons. First, the reductions in tax revenue due to indexation are obtained by comparing the current tax laws projected five years hence and an indexed tax system. It is nearly certain that some legislated tax cuts will be made by some states whether they adopt indexation or not. Consequently, it is very unlikely that indexing would really "cost" state governments the amounts noted in Table III-5; rather, indexation serves in some measure as a substitute for periodic tax cuts.

Second, the assumption of constant income elasticity for state personal income taxes has special ramifications worthy of further comment. Elasticity refers to the percentage change in revenue for each 1 percent change in income, given any tax structure. The elasticity of any individual income tax depends upon the rate and exemption structure of the tax and the income distribution of all taxpayers. Available evidence suggests that many state income taxes have high elasticity relative to the Federal individual income tax, because state individual income taxes tend to have the same or smaller exemptions and narrower tax rate brackets. In most state tax rate structures, marginal tax rates increase faster toward the top rate than does the Federal rate structure, and even though the state tax rates are lower the progression of rates provides greater elasticity. Eventually, however, this feature of some state income taxes will tend to reduce the state's income tax elasticity. As a larger share of a state's taxpayers becomes subject to the maximum rate, income tax elasticity declines. It is conceivable, therefore, that income tax indexation could increase income tax elasticity for some states, and it is likely to reduce the overall tendency for state income tax elasticity to decline. Under an indexed system it is possible that elasticity will be higher than under a non-indexed system, even though the absolute amount of income tax revenue is less as a result of indexation. Inferences drawn for any state on the basis of the analysis in Table III-5 should be appropriately modified to consider alternative assumptions about income tax elasticity.

For all its limitations, the evidence in Table III-5 still suggests that, with indexation, aggregate state individual income tax revenue will increase at an average annual rate of between 11 and 15 percent from 1977 to 1980. Will that growth be sufficient to maintain state expenditures? In order to continue to finance current state programs, expenditures will have to rise somewhat faster than the inflation rate, if past experience is a guide. From 1977 to 1980, inflation is projected to decline, though continuing to average nearly 6 percent annually. Total state expenditures to continue current programs will have to average annual increases of 6 to 10 percent. The central issue is whether the projected growth of state income tax revenue with indexation is large enough to finance this amount of expenditure growth. No general answer seems possible; the situation will vary from state to state. It does seem, however, that indexation of state individual income taxes would not automatically mean cuts, although it would assuredly mean slower growth in state expenditures.

Footnotes

[1]See Emil M. Sunley, Jr., and Joseph A. Pechman, "Inflation Adjustment for the Individual Income Tax," presented at the Brookings Institution Conference on Inflation and Income Taxes, October 1975.

[2]Those states now included are Connecticut, Florida, Nevada, New Hampshire, New Jersey, Pennsylvania, South Dakota, Tennessee, Texas, Washington, and Wyoming.

[3]These values, in each case, are the approximate arithmetic averages for these 39 states as of fiscal year 1974.

[4]ACIR, *Sources of Increased State Tax Collections: Economic Growth vs. Political Choice*, Information Report 17-41, October 1968, p. 3.

[5]This analysis utilized the income tax file of the Virginia Department of Taxation. More complete results and a full description of the analysis are provided in Appendix A.

[6]ACIR, 1974–75 ed.; *Significant Features of Fiscal Federalism, 1976 ed., 1. Trends*, M-106, June 1976.

[7]Important exceptions to this generality are: local jurisdictions in Maryland where the local individual income tax is a percent of the state income tax; New York City and the District of Columbia, each of which have a progressive rate individual income tax and allow personal exemptions; and Michigan cities, including Detroit, which grant a personal exemption specified in fixed dollars.

[8]This includes the case of a falling real income; i.e., inflation greater than the increase in nominal income.

[9]Sunley and Pechman, 1975. Over these years the major congressional actions to reduce individual income taxes were the *Revenue Act of 1964*, the *Tax Reform Act of 1969*, the *Revenue Act of 1971*, and the *Tax Reduction Act of 1975*.

[10]Congressional Budget Office, "Five-Year Budget Projections Fiscal Years 1977–1981," Washington, D.C., January 26, 1976. Path B assumes average annual real growth in GNP of 5 percent. For other assumptions see page 4 of the above report.

[11]*Ibid.*, p. *iv*.

[12]The Sunley-Pechman projections exclude tax code changes involving about $10 billion that the President's budget proposes to extend, which accounts for the difference in the overall projections.

Chapter IV

Intergovernmental Fiscal Effects

INTRODUCTION

The interaction of inflation and the progressive personal income tax and the effect indexation might have on personal income tax yields raise several questions for the intergovernmental fiscal system. Does greater Federal reliance on progressive income taxation relative to state-local reliance on this tax source suggest that inflation will magnify fiscal imbalance among the levels? What result will tax indexation (at the Federal level or at the Federal and state levels) have on these intergovernmental relationships? To what extent will the "inflation tax" and indexation affect direct Federal-state-local fiscal links such as the deductibility of most state and local taxes against the Federal income tax and the Federal deductibility allowances against the income tax in 16 states? What would be the fiscal impact of indexation on states which set their tax liability as a percentage of Federal tax liability? And what effect, if any, will indexation have on the growth of grant-in-aid flows between levels of government?

This chapter addresses these questions under three headings. Part I deals with the intergovernmental fiscal relations in an inflationary, non-indexed economy. Part II examines the intergovernmental implications of Federal individual income tax indexation. Part III indicates what the likely fiscal effects would be if the states were also to adopt a policy of income tax indexation. Within each of these parts the focus will be on two intergovernmental aspects: the likely effects on revenues and expenditures at each level of government and the

related issues of Federal-state income tax coordination. Throughout this discussion it will be necessary to adopt many of the assumptions and the resulting evidence regarding (1) the public revenue aspects (Chapter III) of inflation and progressive income taxation and (2) the degree to which one can expect all three levels of government to continue to respond to economic circumstances as they have been doing in recent years.

Part I

INFLATION AND PROGRESSIVE PERSONAL INCOME TAXATION: INTERGOVERNMENTAL FISCAL EFFECTS

BUDGET EFFECTS

Revenues

Of the three levels of government, the Federal has the greatest capacity to realize automatically the revenues which accrue as inflation generates nominal increases in various taxes, because the Federal government makes relatively the most intensive use of the progressive personal income tax.

Currently, the Federal government receives approximately 45 percent of its total receipts from the individual income taxes.[1] If one follows U.S. Bureau of the Census practice and excludes insurance trust fund revenues from total Federal taxes, the individual income tax accounts for about 64 percent of total Federal tax collections.[2] In contrast, the individual income tax accounts for only 20.3 percent of total state-local tax revenues exclusive of social insurance contributions.[3]

In addition to its greater quantitative reliance on individual income taxation, the Federal government uses a more progressive tax rate structure over a wider range of taxable income than the average of the states.[4] The effects of this quantitative and tax structure (degree of progressivity) combination is to give the Federal government greater ability than the state and local governments to automatically "capture" inflation in its tax collections. This capturability feature results from the fact that inflation erodes the real value of tax exemptions, credits, standard deductions, and the tax bracket boundaries of Federal and state-local personal income taxes.

The inflation capturability characteristic of taxes is not without significance for state and local governments. Both the state personal income tax and the local property tax have the potential to generate new revenues which are proportionately greater than the change in the price level. Table IV-1 summarizes the findings of one recent survey on the relative inflation capturability of the principal tax categories of state and local revenue systems.[5] The inflation indexes indicate the extent to which each of these tax sources have increased between 1967 and 1972 (1967 = 100), assuming that there are no other changes in the rev-

Table IV-1
INFLATION INDEXES FOR POTENTIAL REVENUES OF STATE AND LOCAL GOVERNMENTS, 1967–1972 (1967=100)

	Property Tax	General Sales Tax	Selective Sales and Gross Receipts Tax	Individual Income Tax	Corporation Income Tax	Motor Vehicle License Tax	Total Taxes	Total Revenue*
State and local	134.1	125.2	105.5	133.8	120.3	100.0	123.7	121.2
State	121.2	125.2	104.9	134.8	120.3	100.0	115.9	115.2
All Local	134.5	125.2	112.8	126.2	—	100.0	132.2	127.1

Notes: 1) The CPI index equals 125.3.
2) Indices are based on potential, not actual, yields. See text discussion.

*Excludes intergovernmental aid programs.

Source: David Greytak and Bernard Jump, *The Effects of Inflation on State and Local Government Finances: 1967–1974*. Occasional Paper No. 25 of the Metropolitan Studies Program of the Maxwell School of Citizenship and Public Affairs, Syracuse University, 1975, Table 6.

enue system and that there is no change in the effective tax rates applicable in 1967. As the data indicate, both local and state general sales taxes increased by 25.2 percent—a change nearly identical to the 23.5 percent change in the Consumer Price Index (CPI) during the same period. The corporation income tax potential automatically grew less than proportionately to the CPI, while selective sales and gross receipts taxes and motor vehicle license taxes were relatively unresponsive to inflation.

For the states, the personal income tax is the most inflation-responsive tax source; but, as noted above, it accounts for less than a quarter of total collections. Local income taxes grew slightly more than proportional to inflation, though there is little practical significance to the inflation responsiveness of this revenue source because of its low rate of utilization.

The local property tax, among state-local sources, exhibits inflation response potential second only to the state income tax and accounts for more than four-fifths of total local government receipts.

It should be emphasized that the focus here is on revenue *potential*. The inflation capturability measures indicated in Table IV-1, accordingly, provide no guarantee that actual revenues collected will keep pace with potential levels.

Except for the property tax, potential and actual collections indicated above are likely to be similar. Income and sales taxes are levied on a percentage of nominal market or transactions value basis. Thus, assuming no extraordinary problems with tax evasion, tax avoidance, or unexpected administrative lags in collection, actual and potential revenues can be expected to be the same.[6]

Because of its unique administrative and institutional characteristics, property tax collections are not as likely to exhibit an equality between actual and potential inflation-induced revenues. That is, although property tax values may theoretically rise sufficiently to keep up with or even outpace inflation, practical considerations minimize corresponding tax collection increases. Such considerations include time lags between the market change in the value of the property and its assessment for tax purposes and the fact that property taxes are, relative to other state-local levies, more susceptible to political manipulation. Moreover, recent political reaction to the growth in property values has been to put a lid on local spending and provide "relief" from the potential burden of the property tax. These actions have ranged from voter rejection of bond issues to state legislative action freezing assessments, enacting tax rate and levy limits, and requiring that certain types of property (e.g., agricultural land) be valued at their "actual" rather than at their "highest and best" or market use.[7]

As a consequence, the progressive personal income tax emerges as the most reliable tax source for automatically generating actual inflation-induced revenues. Moreover, because the Federal government relies so intensively on the tax, it follows that of the three major levels of government, the U.S. Treasury is the most likely to benefit from inflation. States are second in this inflation capturability. Local governments are least likely to have revenue benefits resulting from general price increases.

Expenditures

Before specifically examining the intergovernmental impact of inflation on the expenditure side of budgets, it is important to discuss the theory and evidence which indicate that, even in the absence of inflation, state-local and national expenditures will tend to react differently to economic growth. These unequal responses of the cost of providing public services stem not only from the inherent nature of the types of public goods and services produced, but also from the varying abilities of Federal, state, and local governments to engage in extended borrowing in order to deficit finance some expenditures.

Once these fundamental expenditure cost relationships among the different levels of government have been developed, the added role of inflation can be examined.

Perhaps one of the safest observations to make regarding federalism today is that the fiscal situation of most local governments—particularly the central cities in the large metropolitan areas—is one of continual strain. The problem is to find the additional resources necessary to meet rising expenditure requirements. Although this fiscal strain is not a new phenomenon, the 1974–75 "inflationary recession" has given it a new visibility and urgency.

The underlying reasons for these local government problems range from the changing composition and income characteristics of the central city population, to the urban deterioration resulting in tax base erosion, and to a basic long-run social susceptibility to rising public service costs. It is this last point that is of particular interest here.

The special cost problem arises for local govern-

ments whose major output takes the form of services which are characterized by a relatively high degree of individual attention (e.g., welfare, teaching, health and hospital care, and police and fire protection).[7] Such services are inherently highly labor intensive. As a result, local governments are less able to bring about productivity increases through innovative or technical advances and thereby dampen the impact of rising labor and other costs than are the more capital intensive sectors of the economy (e.g., private sector manufacturers and, to a lesser extent, state and Federal governments). As noted, the key factor here is the labor intensive character of providing public services. While productivity gains in other sectors of the economy serve as an offset to rising wages, this offset will be smaller in the service sector (e.g., local government). The consequence is that costs in the service sector rise faster than in the rest of the economy.

Although the evidence of the existence of this special cost vulnerability is largely confined to the local level, state governments are not isolated from its effects.[8] States have taken on an increasing share of state-local expenditure responsibilities.[9] They have not only increased their aid to local governments in relation to own-source local revenue,[10] but also have taken over some local government program areas. Similarly, the Federal government has increased its share of domestic government responsibilities by providing both conditional and unconditional grants-in-aid to state and local governments and adding to its role in welfare ("income security") financing.[11]

The outcomes, however, between these initially similar state-local and Federal-state-local cost sharing arrangements differ fundamentally. The Federal government has a major fiscal advantage over the states due to its ability to increase aid or add to spending through deficit financing. In contrast, statutory and Constitutional requirements as well as practical economic considerations place much stricter limits on the borrowing powers of state and local jurisdictions.[12]

In fact, there is some evidence which suggests that, at least until the last few years, the *combined* state and local cost pressures have been greater than those on the Federal government. Table IV-2 gives an indication of these relative cost pressures. In all but 1975, the change in the total GNP implicit price deflator was clearly less than the changes in the government price deflators.

For most of the years examined, the percent change in the state-local deflator exceeded that of the Federal—a record that extends back through the 1950s and mid-1940s. In the first half of the decade of the 1970s, however, the Federal deflator rose more rapidly than the state-local deflator. One factor that may help explain this recent experience seems to be the (1970–73) wage gains of Federal employees—including, in particular, military personnel. Table IV-3 indicates the relative size of these wage gains for various classifications of public employees. The changes in earnings in government enterprises and the military stand out quite clearly.

The rate of change in the Federal deflator probably will not continue to outrun the rate of change in the state-local deflator. The payroll of the new volunteer armed services increased 175 percent more than total civilian pay between 1971 and 1973, the

Table IV-2

PERCENTAGE CHANGES IN THE TOTAL GNP IMPLICIT PRICE DEFLATOR, AND THE COMPONENTS OF TOTAL PERSONAL CONSUMPTION, TOTAL FIXED INVESTMENT, FEDERAL AND STATE-LOCAL GOVERNMENT, 1965–1975**

Price Level Changes (Percent)

	Total	Private Sector		Public Sector	
Year	GNP	Consumption	Investment	Federal	State-Local
1960–1965	8.2%	7.5%	2.6%	13.4%	14.6%*
1965–1970	22.9	20.7	23.4	29.0	35.6*
1970–1975	38.3	36.9	45.5	51.2*	44.2
1968	4.5	4.1	4.3	5.2	6.1*
1969	5.0	4.6	5.9	4.7	6.5*
1970	5.4	4.5	4.8	8.0*	7.8
1971	5.1	4.3	5.3	7.2*	7.0
1972	4.1	3.5	4.3	8.0*	7.8
1973	5.9	5.5	6.0	6.1	7.5*
1974	9.7	10.5	10.8	10.8*	10.6
1975	8.7	7.7	12.8*	12.8*	7.1

*Denotes largest percentage change for the relevant time period.
**1975 data are preliminary.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Table IV-3

GOVERNMENT ANNUAL AVERAGE EARNINGS RELATED TO PRIVATE INDUSTRY, VARIOUS YEARS*

(Private Industry Percent Change Equals 100)

Government Sector	1970–1973	1965–1970	1960–1965
General Civilian Government	106.7	121.8	121.6
Federal	121.7	121.8	143.2
State and Local	106.7	123.6	118.9
Public Education	95.0	123.6	113.5
Non-School	120.0	123.6	124.3
Government Enterprises and Military	185.0	130.9	81.1

*Annual average earnings equals wages and salaries divided by full-time equivalent employees.

Source: ACIR staff compilations based on U.S. Department of Commerce, Survey of Current Business, various years (*National Income Account*).

prime factor that brought total military compensation to a level even with that of civilian compensation.[13] If, as is plausible to assume, public sector salaries tend to be linked with private sector salaries, then there is reason to believe that the Federal deflator may not undergo as rapid a change as it has in the recent past. It is also possible, however, that Federal assumption of welfare financing or the enactment of a national health insurance program could cause the Federal deflator to continue its rise relative to those of private and state-local sectors.

Given current economic circumstances, it can be concluded that local governments, and, in particular, central cities which are most heavily service oriented, will be under the greatest cost pressures. One indicator of the greater susceptibility is shown by taking expenditures for personal services (the amount paid for gross compensation of officers and employees of government) as a percentage of current operations (direct expenditures for compensation plus outlays for materials, supplies, and contractual services except the amount for capital outlay). This measure for the three levels of government for 1972–73 was: Federal, 53.3 percent; state, 53.9 percent; and local, 65.8 percent.[14]

The states are more likely to feel the "second round" pressures of rising local costs in their budgets, as they increase their local cost-sharing role. The states most likely to be affected are the 16 that pay 40 percent or more of state-local personal service costs (the U.S. average for 1973–74 is 28.0 percent). These states are Hawaii (74.8%), Alaska (54.8%), New Hampshire (49.7%), Vermont (47.3%), Kentucky (45.1%), Rhode Island (44.2%), Delaware (43.9%), Utah (43.0%), New Mexico (42.6%), North Dakota (42.5%), Maine (41.9%), South Carolina (41.7%), Virginia (41.3%), Alabama (40.9%), Arkansas (40.8%), and South Dakota (40.8%).[15]

Inflation and Budget Implications

Once the revenue and expenditure sides of the budget are brought together, an important intergovernmental "fiscal imbalance" relationship emerges. The Federal government not only has the most growth-responsive revenue structure, but it is also best able to avoid the short-run fiscal strains created by the rising cost of public services. The states are in a second best position. The productivity of their revenue systems is superior to that of local governments, but it falls short of that of the Federal. In addition, the states are more vulnerable than the national government to the short-run problems of expenditure growth. Relatively, local jurisdictions face the worst of both situations. They have the least growth-responsive revenue structures and are the most vulnerable to rises in public service costs. This intergovernmental fiscal imbalance does not require an inflationary world in which to operate, but it is exacerbated by a general inflation.

Recent empirical work has isolated the effects of inflation on state and local budgets.[16] Assuming the full potential inflation capturability of revenues, it was found that during the comparative mild inflation between 1967 and 1972, the inflation-induced revenue potential of most local governments (counties, municipalities, and townships, and school districts) grew at a faster rate than the inflation-induced expenditure potential.[17] On the other hand, the states experienced potential expenditure increases greater than that of revenues.

The relationship between inflation and revenues and expenditures was found to have changed markedly for the 1972–74 period, when inflation hit the double-digit level. During that period, the implicit revenue growth due to inflation fell well short of the inflation-induced expenditure potentials at both the state and local levels. Indeed, the net result was that between 1972 and 1974 the net purchasing power index of states fell to 90.6 and of localities to an

average of 92.2 (100 = the ratio if potential revenues and expenditures increase equally and, thereby, the real purchasing power of revenues remains unchanged).[18]

Intergovernmental Outlook

Federal government. The different intergovernmental impacts of inflation on revenue capturability and expenditure growth have contributed to a post-1960 record of fiscal ease at the Federal level relative to that observed for the state and local sectors. Although all three levels of government have been expanding the scope and quality of their public services, state and local governments have generally been forced to increase tax rates on existing levies and/or expand old or enact new taxes. In contrast, the Federal government, aided by its special ability (and willingness) to deficit finance, has been able to make significant *ad hoc* personal income tax reductions.[19]

Whether Congress continues its past practice of providing periodic personal income tax reductions during the next few years depends on such factors as the level of unemployment and inflation, the money market effects of the borrowing, and the political alignment of the nation. Nonetheless, there is good reason to believe that the Federal revenues will be sufficient, through at least 1981, to permit discretionary tax reductions—perhaps even with indexation. For example, as Table III-1 (Chapter III) indicates, the additional real tax due to inflation will be $29 billion in 1981 alone assuming, conservatively, an annual GNP growth of 10 percent (6% real, 4% inflationary growth). If GNP growth is 12 percent (6% inflationary growth), the additional inflation tax will be $50.9 billion.

Moreover, other things being equal, the faster the economy grows—and the more rapid the inflation—the faster the Federal budget will tend to shift from deficit to surplus. This outlook is based on the assumption that the current (1976) levels of public services will be continued through 1981. Such an assumption may indeed be realistic, since it would place total Federal outlays at about 21 percent of GNP—only about 0.5 percent below the average ratio of Federal outlays to GNP since 1970.[20] In short, it is plausible to assume that without indexation, the Federal sector will be in a fiscal position to provide periodic personal income tax reductions.

State and local government. At least two recent studies[21] suggest that there is reason for some optimism not only that state and local governments—particularly the states—may experience a relatively greater fiscal ease during the remainder of this decade as compared to the first half, but also that state-local budgets will be at balance or even in surplus in the foreseeable future. Robert D. Reischauer projects that if the rate of inflation measured by the CPI steadily declines from 7.0 to 3.5 percent between now and 1980 and if state-local services are maintained at 1973 levels, then there will be an approximately $30 billion state-local surplus by 1980. David Ott, *et al.*, using very optimistic assumptions about the condition of the national economy (0 and 4% inflation, and unemployment of only 4-4.7%), projects similar large surpluses for the state-local sector in the national income accounts.

Such projections, of course, are subject to criticism on their assumptions, and a full reading of each report is required to evaluate them fairly. These authors provide several practical reasons to believe that during the next five to 19 years, however, state and local governments will experience less fiscal strain or, alternatively, will be able to add to the scope and quality of their existing services without increasing taxes. These authors emphasize the favorable effect on state-local budgets of such factors as the decline in school enrollments, the reduction in welfare load that can be expected as national economic recovery proceeds, a moderation in public employee wage demands now that public sector wage levels match or exceed private sector wage levels, and the increased bargaining strength which is presumably being gained by state and local governments as a result of their experience build-up in the collective bargaining process.

On the revenue side, it can be argued that the state-local tax system has become more responsive to economic growth since the 1960s due to the growth and improvements in income, sales, and property taxes (e.g., the use of income tax credit rather than sales and propety tax base erosion provisions).

An alternative view to this rather optimistic outlook can be derived from the recent analysis (Greytak and Jump) discussed above, which focuses primarily on the inflation effects on the budgets of state and local governments. The evidence presented indicates that if inflation continues in the range of 6 to 7 percent in the next few years, one can expect the resulting inflation-induced revenue potential to fall short of the inflation-induced spending

potential. This outlook becomes even more pessimistic if one considers that political leaders will not withstand the tendency to give in to extraordinarily high public employee wage demands and provide property tax relief. Realistically, revenues may behave more sluggishly and expenditure pressures may be greater than the optimistic forecasters assume.

In summary, the outlook for state and local government budgets during the next five to six years seems to hinge on four key factors.

- *The bargaining strength of public employees.* This will be a key determinant of state-local expenditures.
- *The intensity of inflation.* If inflation slows to the range of 4.5 to 3.5 percent by 1978 as assumed by Reischauer and by Ott, *et al.*, severe budgetary pressures can probably be avoided. If the recent rates of 6 to 7 percent inflation continue, however, the outlook becomes much more grim. Under these latter circumstances, state and local governments will be forced either to reduce the scope and quality of existing programs or to find new revenues either through their own action or through increased Federal aid.
- *The condition of the national economy.* If the latter part of the 1970s is characterized by recession, or slow economic recovery, spending pressures on the traditional state-local programs for welfare, health, hospitals, police, and post-secondary education may increase—or, at least, will not decline. Under such conditions, a fiscal ease condition seems quite remote.
- *The ability of local governments in particular to increase productivity.* Local governments which are heavily public service-oriented (particularly the large central cities) are most likely to continue to experience severe fiscal strain.

The applicability of the foregoing factors will vary with the unique circumstances of each state-local system. The crucial first variable is the nature of the state-local tax structure. Prospects for avoiding fiscal strain are better for state-local revenue systems that rely more heavily on the progressive personal income tax than on sales and property taxes. The income tax has both built-in real growth and inflation responsiveness features.

Second, states which are able to isolate themselves from revenue base erosion and expenditure increases under conditions of slow national economic growth have better prospects for avoiding budgetary strain. For example, the major energy-producing states[22] were able to maintain a combined surplus throughout the inflation and recession of fiscal 1975. Similarly, states which are significant agricultural producers[23] were also able to maintain a combined surplus. In contrast, the states experiencing high unemployment have had to face the reality of cutting back on services, raising taxes, or both. Poor economic conditions are estimated to have caused the aggregate budgets of state and local governments to decline from a $10 billion surplus position in 1972 to a $12 billion deficit position by 1975.[24]

INTERGOVERNMENTAL TAX COORDINATION

Three intergovernmental tax coordination issues of income taxation require attention in the inflation-personal income tax context: (1) the deductibility of state and local taxes in computing the Federal income tax, (2) the deductibility of Federal taxes paid against some state income taxes, and (3) state taxes which are computed as a given percentage of a resident taxpayer's Federal tax liability ("piggybacking").

Deductibility of state-local taxes. Taxpayers who itemize their Federal individual income taxes are permitted to deduct most of their state and local taxes paid. These taxes are, in general, deductible only by the taxpayer with the legal payment liability. Such personal levies include state or city income taxes, and real and personal property taxes. However, by specific statutory authority, state-local retail sales and gasoline taxes which are assumed to be passed by business on to consumers as a separate item are deductible by the buyer. Nondeductible taxes include certain specific excises (e.g., admission taxes) and automobile license fees. Special rules apply to state death taxes.[25]

From the Federal "itemizer's" view, the "burden" of his state and local taxes becomes the net (after the deduction) addition that must be paid to government—Federal plus state-local. Since certain state-local taxes paid are allowable as itemized deductions against the Federal tax, the dollar value of the deduction (the net decrease in one's state-local tax burden) is equal to the taxpayer's Federal marginal tax rate multiplied by the amount of the state-local taxes paid. Thus, as indicated in Table IV-4, the dollar value of the deductibility provision increases with income—a result which follows from

Table IV-4

THE ESTIMATED EFFECT DEDUCTIBILITY OF STATE-LOCAL TAXES HAS ON THE FEDERAL PERSONAL INCOME TAX, CALENDAR YEAR 1971

Adjusted Gross Income	Benefit to Typical Taxpayers Who Itemize			
	Property Tax	Other State-Local Taxes	All Taxes	Average Rate of Write-Off
$0–3,000	—	$7	$7	14.2%
3,001–5,000	$20	27	47	15.5
5,001–7,000	31	32	63	17.2
7,001–10,000	41	56	97	18.7
10,001–15,000	66	79	145	20.8
15,001–20,000	98	150	248	24.5
20,001–50,000	214	464	678	32.8
50,001–100,000	612	2,311	2,923	50.9
100,001 or more	1,386	9,385	10,772	56.3
All	$87	$181	$268	23.1%

Source: ACIR staff compilation based on various Treasury publications.

the progressive tax rate structure of the Federal personal income levy.

The practical effect of this deductibility provision from the state-local view is that it provides a genuine, albeit indirect, revenue sharing. From Table IV-4 it can be seen that on the average a state-local government is, in effect, able to "export" nearly a quarter of its nominal tax burden to the Federal government. This, in turn, reduces the cost of state-local own-source revenue raising. In short, state and local governments can raise a dollar's worth of revenue but only increase their average itemizer's tax bill by 77 cents. This will tend to reduce the fiscal strain on subnational budgets below that which would occur in the absence of the deduction.[26]

This intergovernmental tax relationship gives the inflation–personal income tax interaction an interesting twist. In particular, as inflation pushes taxpayers into higher Federal marginal tax rate brackets, the dollar value of the state-local tax deductibility provision increases. The net result is that although a taxpayer with a constant real income still experiences a decline in real income after federal plus state-local taxes, this decline will be partially offset as a result of the deductibility provision. Accordingly, for a given yield, the net own cost of state-local revenues is also reduced. The significance of this effect will, of course, depend on the Federal marginal tax rate of the average taxpayer and, therefore, the rate of "write off" or "export" of state and local taxes to the U.S. Treasury.

According to Table IV-4, this average rate of "write-off" is about 23 percent for all income classes. If we assume, as we did in Chapter II, that there is an annual rate of inflation of 7 percent for three years, the average taxpayer would be able to export from 4 to 5 percent of his or her higher state and local tax burden to the U.S. Treasury.

Whether this relative tax reduction effect can be translated into a greater political feasibility to raise taxes at the state or local level is conjectural. It may, indeed, be very difficult to convince taxpayer voters that although inflation has eroded their after-tax real incomes, the main culprit is the Federal tax system and, therefore, higher state or local taxes are now somehow less "painful." Nevertheless, the fact remains that the interplay between inflation and the Federal income tax may have some small indirect appeal to state and local governments.

Deductibility of Federal Taxes

As of 1975, 16 of the 39 income tax states allow, as a deduction in computing state income taxes due, the amount of the Federal income tax payment.[27] The amount deducted for Federal income tax paid increases with inflation and, as a result, the states' income tax productivity is less than it would be without the deduction. The practical effect of this deductibility feature is that these states actually pay some of their residents' Federal taxes—with the amount of state payment of the Federal tax varying from state to state, depending on the state income tax rate structure. Further, since all the Federal tax deductibility states have effective tax rate progression, this indirect state payment of the Federal tax will increase as resident incomes grow. What we have here is a "reverse" form of revenue sharing—this time the money is flowing upward from the states to the Federal government.

Federal Tax Liability States

Three states (Nebraska, Rhode Island, and

Vermont) now "piggyback" their income tax by having taxpayers compute their state tax at a set percentage of their Federal individual income tax due.[28] As a result, their state income taxes are, by definition, as progressive as the Federal tax. Thus, during an inflation, these states will be able to "capture" the real inflation tax increases along with the Federal government. However, this inflation-induced revenue gain will not have the same relative impact on total government revenues as it does for the Federal sector since each of these piggyback states makes less intensive use of income taxation relative to its total tax revenues.

Moreover, although this piggyback feature does permit Nebraska, Rhode Island, and Vermont to capture automatically inflation-induced real income tax increases, it also means automatic tax reduction when Congress reduces the Federal income tax. If the Federal government makes tax reductions to offset inflation-generated real tax increases or for other purposes, these states will experience a commensurate reduction in the state income tax yield. Because piggybacking is a two-edged sword and because periodic Federal income tax reductions are likely to be made in the next few years, the three piggyback states may face the need to go along with Federal tax cut decisions and thereby reduce the level of public services (or debt retirement) below what would otherwise occur, or raise the percentage of Federal tax used to compute the state tax in order to offset the Federal tax cuts.

Part II

FEDERAL INDEXATION ISSUES

BUDGETARY IMPLICATIONS

Indexation of the Federal personal income tax (only) would, by definition, eliminate its automatic inflation-generated real tax increase. This does not necessarily mean, however, that Federal income tax collections will, over time, be less than expected in the absence of indexation. Since 1960, periodic tax reductions have more than offset the "inflation tax" increases. And, as indicated in the preceding section of this chapter, there are reasons to expect Federal tax reductions to take place in the future.

The major difference between legislated tax reductions and a policy of tax indexation would be the timing of tax reductions. Without indexation, inflation-induced real income tax increases are returned only after public debate and subsequent congressional approval. Indexation, by contrast, bars the government from even collecting inflation-induced real tax increases. Either way Federal receipts are reduced from what would otherwise occur.

The timing difference in tax reduction has at least one budgetary implication. In the case of legislated tax cuts, the government receives a type of interest-free loan from the taxpayers—i.e., the Treasury may hold onto the "inflation tax" money for a period of several years and yet pay no interest rate on that holding. Under such circumstances, even a nominal dollar-for-dollar tax reduction puts the government ahead of its taxpayers in terms of purchasing power over real goods and services. Other than this factor, however, *ad hoc* tax reduction can result in the same net effect on Federal tax collections as can indexation.

Also, given a continued willingness of Federal policymakers to engage in deficit finance, indexation will probably have little effect on the size of Federal expenditures. Indeed, even if indexation caused Federal tax receipts to decline in the short run below what they otherwise would be in the absence of tax cut action, the national government's ability to deficit finance provides a basis to maintain expenditures. As a practical matter, the growth in Federal expenditures is more likely to be controlled as the result of direct action on spending proposals such as envisioned in the new Congressional budget process.

Indexing the Federal income tax could pose a threat to the continuation of "no strings" Federal aid (e.g., general revenue sharing) to the states. The reasons for this, however, are political, not economic.

If the Federal government returns the "inflation tax" by a legislated tax reduction or foregoes its collection as a result of indexation, there is no substantive economic reason for questioning the appropriateness (or inappropriateness) of Federal aid to state and local governments. The economic pro and con arguments over such Federal outlays will remain focused on issues such as the nature of public service interjurisdictional spillovers, and vertical and horizontal fiscal imbalance tendencies.

Politically, however, indexation of the Federal personal income tax may put certain proponents of general revenue sharing on the defensive. They have argued, though not too successfully, that the Federal government should share a part of the proceeds from its growth-responsive individual income

tax with states and localities. Because indexation would eliminate the inflation-induced real income tax revenues, opponents of revenue sharing could argue that the Federal revenue superiority has been somewhat reduced.

TAX COORDINATION

Deductibility of State-Local Taxes

If the Federal personal income tax is indexed, Federal income tax payers who itemize will realize a small increase in the net burden of state and local taxes. Federal tax indexation prevents taxpayers with constant real incomes from being pushed into higher marginal income tax brackets due only to an inflation-generated increase in their nominal income.

To illustrate this situation, consider a family of four which, in year one, has an AGI of $20,000, itemizes deductions in computing Federal taxable income, and pays $1,300 in state-local taxes—the average amount of major state and local taxes paid for this income class.[29] State and local taxes ($1,300) are, of course, part of the itemized deductions taken by the family in their Federal income tax computations. Now assume that there is an annual average rate of inflation of 7 percent and that the family's nominal income also increases at that rate so that their real income remains constant.

Table IV-5 illustrates the family's tax situation. The family's net (after Federal deduction) cost of state-local taxes increases with indexation. That is, there is a $54 nominal ($44 real) decrease in their ability to export part of their state and local taxes to the U.S. Treasury as a result of the indexation scheme. In percentage terms, the family has a 4.5 percent increase in the effective rate of state and local taxes.

From the taxpayer's view, these numbers are quite small when one considers that the increase in the net effective rate of state-local taxes is overwhelmed by the decrease in the effective Federal tax rate as a result of indexation. Note, however, that after-tax real income is reduced slightly (from $16,535 to $16,519) between years one and three due to the loss in the value of the state-local tax deductibility. Nevertheless, such a change is not likely to affect taxpayer attitudes toward the "burden" of state-local taxes, nor is it likely to undercut the argument for the enactment of progressive state personal income taxes in order to take advantage of the ability to shift taxes to the U.S. Treasury.[30]

Table IV-5
INFLATION-INDUCED TAX CHANGES

Change in Personal Tax Burden
for a Hypothetical Family of Four Assuming a
7 Percent Annual Average Rate of Inflation
and Constant Real Income[a]

		Year Three	
	Year One	Without Indexation	Indexation
Nominal Income	$20,000	$24,500	$24,500
Federal Tax	2,490	3,445	3,062
State-Local Tax[b]	975	1,145	1,201
Effective Rate (all taxes)	17.3%	18.7%	17.4%
After-Tax Real Income	$16,535	$16,250	$16,519

[a]Federal individual income taxes plus major state and local taxes (personal income, general sales, and property).
[b]After deduction against Federal tax.

Source: ACIR staff computation.

Deductibility of Federal Taxes and Federal Tax Liability States

States which permit the deduction of their residents' Federal tax liability in computing the state income tax will, as a result of indexation, experience some increase in their tax productivity. This follows from the fact that the elimination of the automatic, inflation-generated real income tax increase will reduce tax liabilities below what they would be in the absence of indexation. Further, as compared to the periodic, legislated tax reduction alternative, the automatic timing of indexation would tend to increase the revenue certainty of Federal deductibility states.

Federal indexing would also add a degree of revenue certainty to the income tax systems of piggyback income tax states. Of course, these jurisdictions, along with the Federal government, would "lose" the inflation tax revenues, but they would also be less likely to have to face the uncertainties and (revenue loss) consequences of periodic Congressional tax code changes. As a result of the automatic nature of indexation, the states could make their own income tax projections with increased assurance. Piggyback states, nevertheless, would

have to consider periodic tax increases in the same way as they now do when Congress cuts Federal taxes.

Part III

INDEXING STATE TAXES

Policy issues surrounding the fiscal effects of the indexation of state progressive individual income taxes are similar, but not identical, to those at the Federal level. The similarities stem from the fact that both levels of government employ many of the same major non-indexed tax code provisions—*viz*, the personal exemption, flat limit standard deductions, tax rate bracket boundaries, and tax credits. Accordingly, the principles regarding the inflation erosion on the real values of these major tax code features—and the resulting automatic real tax increase—can be applied to the state income taxes.

The policy implications of state income tax indexation differ, however, from Federal income tax indexation in two respects. First, state governments face budgetary constraints and economic pressures which are fundamentally different from those faced by the national government. Second, statements about the "likely effect" of indexation of state income taxes are less subject to generalization due to the fact that there are 39 different broad-based income taxes with varying degrees of progressivity with which to deal and the relative quantitative importance of these taxes varies widely among states.[31]

VIEW FROM THE "REPRESENTATIVE STATE"

Between 1966 and 1974, state governments have enacted tax increases with greater frequency than they have engaged in tax reduction (Chapter III, Table III-4). Assuming (as we did for the Federal government) that the economic and fiscal forces acting on state and local governments will be about the same as they have been in the recent past, indexation of state income taxes would serve to aggravate an already difficult budgetary situation. Forces contributing to this continued tight state-local fiscal situation relative to that of the Federal sector are:

- the vulnerability of local governments to inflation-induced expenditure increases;
- the relative lack of automatic real and inflationary growth responsiveness of state and local revenue systems;
- the probability that during the last half of the seventies the "budget dividend" arising from the projected workload reductions in education and welfare and the moderation of public employee pay demands will either be partially or wholly offset by the states' desire to increase expenditures in order to offset the decline in scope and quality in current programs during the recessions of 1971 and 1973–75;[32] and
- the institutional constraint on states and localities which prohibits deficit spending over an extended period of time to finance current services. States have the ongoing responsibility for maintaining both their fiscal integrity and that of their local governments, and, as previously noted, local governments generally have the greatest expenditure and revenue vulnerability under the type of inflationary conditions which have characterized the national economy in recent years.

The revenue side of the state-local fiscal picture is, however, not so bleak. For example, it is estimated that if states were to index their income taxes, aggregate state income tax collections would nevertheless rise by more than an annual average of 13 percent between 1977 and 1981 if there were no other tax code changes. This represents a decline of only 2.5 percentage points in the annual average rate of increase in state income tax collections between 1971 and 1975.

These revenue figures give force to the viewpoint that during the next few years the strain on state budgets will begin to ease. Indeed, some states may well find indexation "affordable" in the sense that officials will not have to face the choice—as they have in the past two years—of cutting the scope and quality of existing services or of discretionary tax hikes of the magnitude enacted during the 1966–73 period.

Indexation, it appears, would force state officials to consider revenue raising decisions more frequently, an outcome not necessarily undesirable. If it could be clearly shown that tight state budgets themselves result in poor policy decisions (e.g., a continued reliance on expediency in taxation and a disregard for principles of "good" taxation), then

one might be able to argue against indexation. But a major and persuasive argument for state indexation can be made on grounds that it would increase the likelihood of periodic expenditure reviews. Thus, indexation will force more budget decisions into the arena of public debate and thereby increase accountability to the taxpayers.

DIFFERENCES AMONG THE STATES

The claim of general applicability of statements regarding indexation of the "representative" state has to be modified according to the structure of each state's economic base and the degree to which it relies on the progressive personal income tax as a major source for total tax revenue.

States which are reaping the benefits of a growing real tax base will find that the return of the inflation-induced real tax revenue would create relatively minor, if any, fiscal strains. The best example of these jurisdictions are the 13 major energy producing states. In contrast, the recession-prone, industrial-urban states with declining rates of growth in their tax base can ill afford to forego inflation-induced real income tax collections.

The budgets of states having both a highly progressive income tax structure and a reasonably strong reliance on this tax as part of the total state (and local) revenue system tend to "benefit" from the ability to capture automatically the income tax growth due to inflation. For other states, the importance of inflation effects on income tax revenues are minimized due to the larger quantitative role played by sales and local property taxes.

Table IV-6 ranks the 39, broad based, income tax states according to the relative intensity with which they rely on progressive income taxation. "Intensity" for this purpose refers to the quantitative importance of income tax revenues in each of the states' total revenue systems as well as to the degree of tax progressivity. States which have a "high" rank on both the quantitative and progressivity measures (e.g., Colorado) are those most likely to experience fiscal strain under indexation. States which exhibit a "high-medium" mix (e.g., Alaska, California) would be the next most likely group to experience fiscal strain. Similarly, those states characterized by a "low-medium" mix (e.g., Illinois) would experience the least revenue impact from indexation—i.e., in a revenue maximization sense (only) these states would find indexation relatively "affordable."

Table IV-6

THE PROGRESSIVE INCOME TAX STATES RANKED ACCORDING TO DEGREE OF PROGRESSIVITY AND RELIANCE ON THE PERSONAL INCOME TAX, 1974

State Personal Income Tax as a Percent of State Tax Revenue[2]	Income Tax Progressivity[1]: High	Medium	Low
High	Colorado	Alaska	Iowa
	Delaware	Maryland	Montana
	Hawaii	Massachusetts	
	Minnesota	Wisconsin	
	New York		
	Oregon		
	Virginia		
Medium	California	Alabama	Illinois
	Georgia	Arizona	Indiana
	Idaho	Arkansas	Kentucky
	Michigan	Kansas	West
	Missouri	North Carolina	Virginia
	Nebraska	Rhode Island	
	North Dakota	Vermont	
	Oklahoma		
	South Carolina		
	Utah		
Low	Louisiana		
	Maine		
	Mississippi		
	New Mexico		
	Ohio		

[1]Progressivity is measured by the ratio of the effective tax rate for a family of four at $25,000 to the effective rate of $7,500. A tax has high progressivity if the ratio is at least three, medium if from two to three, and low if below two. As a comparison, the same ratio for the Federal personal income tax in 1974 was 2.5 before the tax rebate and 3.2 after the tax reduction.

[2]Low, 0–15 percent; medium, 15–30 percent; high, above 30 percent.

Source: ACIR, *Federal-State-Local Finances: Significant Features of Fiscal Federalism* (advance release of the general sales and income tax sections), 1974–75 ed., November, 1975, pp. 8, 30.

Footnotes

[1]Average percentage, 1970–1975. This is the highest percentage share of total revenues from this tax during its existence. Richard Goode, *The Individual Income Tax*, rev. ed., Washington, D.C., The Brookings Institution, 1976. Table A-1; and U.S. Office of Management and Budget, "Federal Government Finances," Budget Review Division, Fiscal Analysis Branch, January 1976 (unpublished).

[2]ACIR, *Federal-State-Local Finances: Significant Features of Fiscal Federalism*, 1974–75 ed., November 1975, Table 1.

[3]*Ibid.*, Tables 1 and 4, and ACIR staff computations. Data are for 1974–75.

[4]ACIR, *Federal-State-Local Finances: Significant Features of Fiscal Federalism*, 1973–74 ed., February 1974, Table 140.

[5]David Greytak and Bernard Jump, *The Effects of Inflation on State and Local Government Finances; 1967–1974,* Occasional Paper No. 25 of the Metropolitan Studies Program of the Maxwell School of Citizenship and Public Affairs, Syracuse University, 1975, Table 6. The remainder of this discussion of the relative inflation capturability draws heavily on the Maxwell School analysis.

[6]The sales tax exceptions are those cases for which the price change of a specific product subject to a selected excise rises, more or less, than the overall rate of inflation rate.

[7]The current status of state government controls on the taxing powers of local government is summarized in a forthcoming ACIR report on state-imposed local tax and expenditure controls.

[7a]This argument was first fully developed by William Baumol in "Macroeconomics of Unbalanced Growth: The 1967 Anatomy of Urban Crisis," *American Economic Review*, June 1967, pp. 415–426. Bradford, Malt, and Oates examined this hypothesis for municipal public services and concluded that in many instances, even though improvements in technology led to superior services, they were not of a cost-reducing form. Bradford, *et al.*, also argue that these rising costs pressures are greater on governments of large central cities than on the smaller suburban municipalities. D. F. Bradford, R. A. Malt, and W. E. Oates, "The Rising Costs of Local Public Service: Some Evidence and Reflections," *National Tax Journal,* June 1969, pp. 185–202.

[8]Some empirical evidence of the occurrence of this effect at the state level is presented in Kent Sims, "Crisis in the State House," *Monthly Review*, The Federal Reserve Bank of San Francisco, October 1969, pp. 211–217.

[9]The state share of state and local expenditures from own funds increased from 46.7 percent of the total in 1964 to 52.8 percent in 1974. ACIR, *Trends in Fiscal Federalism*, Report M-86, February 1975, Table V.

[10]Total state aid as a percent of local revenue from own sources has increased from 42.9 percent in 1964 to 57.5 percent in 1974. *Ibid.*, Table X.

[11]Unconditional or non-matching grants like general revenue sharing are generally used by state-local jurisdictions to reduce taxes, retire debt, or replace own-source funds in the provision of public services which would have occurred in the absence of the grant. Conditional or matching grants tend to be "stimulative," that is to induce the recipient jurisdiction not only to use the entire amount of the Federal funding for a given project (or projects), but also to spend additional own-source funds on these public goods and services. This induced spending takes the form of goods and services which are complementary to the purpose of the aid. As a consequence, own-source state-local expenditure is greater than it would be in the absence of the grant.

[12]A summary of the state constitutional and statutory limitations on local government borrowing power, referendum requirements, and limitations on state borrowing are detailed in ACIR, *Federal-State-Local Finances: Significant Features of Fiscal Federalism*, 1973–74 ed., Report M-79, Washington, D.C., 1974, Tables 93, 94, and 95. The major practical economic limit on state-local borrowing is the constraint dictated by U.S. money market conditions. The 1975–76 record of the bond market in reaction to recent city financial emergencies attests to the importance of this factor. For a detailed look at the state-local debt market see ACIR, *Understanding the Market for State and Local Debt*, Report M-104, Washington, D.C., May 1976, 56 pages.

[13]ACIR, *State Taxation of Military Income and Store Sales,* A-50, Washington, D.C., August 1976. See especially Appendix B.

[14]U.S. Bureau of the Census, *Governmental Finances in 1972–73*, Series GF 73, No. 5, U.S. Government Printing Office, Washington, D.C., 1974, Table 5.

[15]The 40 percent cut-off was arbitrarily chosen. As the text notes, a third of the states are in this category. U.S. Bureau of the Census, *Governmental Finances in 1973–74,* Series GF 74, No. 5, U.S. Government Printing Office, Washington, D.C., 1975, Table 25. The automatic tendency toward fiscal imbalance in state-local government budgets is discussed conceptually and empirically in Gerald J. Boyle, "The Anatomy of Fiscal Imbalance," *National Tax Journal*, December 1968, pp. 412–424.

[16]Greytak and Jump, *Effects of Inflation*.

[17]Note that this does not necessarily mean there will be budget surpluses due to inflation. Whereas actual expenditures are likely to meet their potential inflation-induced levels, the same is not likely to be true of revenues, because economic, institutional, and political forces will tend to restrain the growth of local property tax collections.

[18]Greytak and Jump, *Effects of Inflation,* pp. 32–37. The apparent contradiction of a higher purchasing power index for localities than for states can be explained by the gap between potential and actual tax revenues used in calculating the index. For reasons discussed above, actual local property tax revenues will fall below their potentials.

[19]Had Congress made no discretionary changes in the personal income tax between 1960 and 1975, the total 1975 tax liability would have been nearly $52 billion higher than its actual level. For further discussion see Chapters II and III. It should be stressed that we are only indicating that inflation tends to reinforce this tendency of a relatively greater budget stress for state and local units. Other factors that ease the relative stress at the Federal level include the ability to deficit finance (noted above) the degree of growth elasticity of taxes other than the individual income tax, and the relative Federal versus state-local increases in the workload and scope and quality determinants of expenditure growth.

[20]During the 1975 recession, outlays were 23.8 percent of GNP, with the increases above the 1970–76 average of 21.4 percent due in part to recession-induced, temporary expenditures on "benefit payments to individuals" such as unemployment assistance, welfare payments, food stamps outlays, and the like.

[21]Robert D. Reischauer, "The General Fiscal Condition of the State and Local Sector," unpublished working paper, 1976. Also see David J. Ott, Attiat F. Ott, James A. Maxwell, and J. Richard Aronson, *State-Local Finances in the Last Half of the 1970s*, Washington, D.C., American Enterprise Institute for Public Policy Research, 1975, 105 pages.

[22]Oklahoma, Texas, Louisiana, West Virginia, Ohio, Utah, Indiana, New Mexico, Alabama, Arkansas, Montana, Wyoming, and Tennessee all have a per capita energy input above the national average. See "Fuel and Energy Data, United States by States and Regions, 1972," U.S. Department of the Interior, Washington, D.C.

[23]Iowa, Minnesota, North Dakota, South Dakota, Wisconsin, Kansas, Nebraska. For further discussion see "The Current Fiscal Position of State and Local Governments," Subcommittee on Urban Affairs, Joint Economic Committee of the Congress, May 1975, mimeographed.

[24]U.S. Congressional Budget Office, *Temporary Measures to Stimulate Employment: An Evaluation of Some Alternatives*, U.S. Congress, Washington, D.C., September 1975, Ch. IV, p. 41. The U.S. Joint Economic Committee estimates that for 1975 at least 22 states were forced to reduce current levels of public services in order to keep their budgets in balance. The total value of these expenditure reductions was estimated at $1.9 billion. Together these account for 4 percent of aggregate state budgets. Local governments were estimated to have made expenditure cuts of $1.4 billion and new tax increases of $1.5 billion. This combined $2.9 billion in budget adjustments is approximately 3.5 percent of the combined budget for all local governments that year. It should be stressed that the bulk

of the budget adjustment measured here will occur in the high-unemployment states. The JEC report estimates (p. 32) that these governments will be forced to make adjustments equal to 7 or 8 percent of their total operation budgets. (See Joint Economic Committee of the United States, "The Current Fiscal Position.")

[25]These examples are limited to personal income tax deductions. Taxes on corporations are also qualified for Federal (corporate) tax deductibility. For a summary of these deductibility provisions see Commerce Clearing House, Inc., *1976 U.S. Master Tax Guide*, Chicago, CCH, 1975, para. 1078–1090.

[26]The above discussion implicitly assumes that the resulting U.S. Treasury revenue loss due to the offset (of the non-forward shifted portion) of subnational taxes is not, over time, made up in higher rates. This complete offset view is adopted by Charles E. McLure in "The Interstate Exporting of State and Local Taxes: Estimates for 1962," *National Tax Journal*, March 1967, pp. 49–77. Similarly, both the "Michigan" and "Wisconsin" approaches to tax incidence studies adopted the complete offset. Richard A. Musgrave and Darwin W. Daicoff, "Who Pays Michigan Taxes?" in Michigan Tax Study Staff Papers, Lansing, Legislative Tax Committee, House of Representatives, 1958, p. 131ff.; and University of Wisconsin Tax Study Committee, *Wisconsin's State and Local Tax Burden*, Madison, University of Wisconsin Press, 1959, especially Appendix II-a, pp. 4–9 (Appendix prepared by John A. Grounouski).

[27]Delaware, Oklahoma, Oregon, and South Carolina limit the extent of this deductibility by fixed dollar maximums. Montana limits the deduction to itemized returns only. To the extent such limits are imposed, the effects described below are correspondingly minimized. For a summary of these administrative features of state individual income taxes see Table II-9.

[28]Table II-9.

[29]ACIR, *Significant Features*, 1973–74 ed., Table 38.

[30]For an empirical discussion of this issue see Edward Moscovitch, "State Graduated Income Taxes—A State-Initiated Form of Federal Revenue Sharing," *National Tax Journal*, March 1972, pp. 53–64.

[31]State by state measures of the relative use of income taxes are presented in ACIR, *Significant Features*, 1974–75, Table 5.

[32]See footnote 24.

Chapter V
Some Other Issues

INTRODUCTION

In addition to the analyses of the effects of inflation on the individual income tax and the implication of indexing for the income tax structure, implementation of indexation raises other policy issues; namely the proper form of the indexing mechanism as well as some broader conceptual considerations.

THE INCOME TAX AS AN AUTOMATIC STABILIZER

Conventional theory holds that the individual income tax has an automatic countercyclical stabilizing impact because revenue rises or falls when income is increasing or decreasing, respectively. Specifically for the Federal case, when personal income increases, either because of inflation or because of real growth in national output, income tax liability increases proportionately more than the rise in income. This occurs because the higher general level of income is subject to higher marginal income tax rates in the progressive Federal income tax. Thus, the average effective income tax rate rises and a larger proportion of the real national income is paid as tax. Similarly, if personal income falls, more income is subject to lower marginal tax rates; consequently, income tax liability falls proportionately more than the income level. The effect of the Federal income tax, then, is to restrict aggregate demand in an expansionary or inflationary period and to stimulate aggregate demand in a re-

cessionary or deflationary period. Accordingly, one must determine if the introduction of income tax indexation would dampen the impact of this macroeconomic stabilizing device.

The stabilizing effect of the individual income tax in a period when income is rising rests on two foundations. First, constraints on aggregate demand will slow the inflation or expansion. Second, that price increases are an immediate response to expansionary pressure. Therefore, when there is an inflation-induced increase in income, rising income tax liabilities slow the growth of disposable income and thus alter the inflationary environment. There are several reasons why this process is less clear and the effect of indexation more uncertain.

As a first approach to considering the effect income tax indexation might have on the automatic stabilizing property of the tax, one must determine to what extent income tax collections without indexation can be an effective stabilizer. To the extent that inflation is induced by excess aggregate demand, automatically rising income tax collections may have a stabilizing influence. However, inflation can also be caused by factors other than increases in aggregate demand (for example, individual expectations or supply restriction), and those types of inflation may not be most efficiently attacked by reducing demand. The recent prolonged period of concurrent inflation and recession leaves one less sanguine about reducing inflation with tax increases, automatic or otherwise.

A second challenge to the conventional theory concerns the timing of price increases. As a result of a change in the economy that generates expansionary pressures, both real national output and prices can rise. Both cause income to increase and income taxes to increase faster. However, only the response of income tax collections to inflationary income increases will be removed by indexing the income tax. Income taxes will still be a stabilizing force in reaction to real increases in output. Since it appears to be both theoretically and empirically true that the price response to the expansionary pressure occurs only after a long delay—while the output response is nearly immediate—indexing should not affect the most significant stabilizing impact of the income tax.

This consideration was important in the debate on indexation in Canada and thus the subject of some investigation. In a recent *Canadian Tax Journal* article, professors John Bossons and Thomas Wilson report the results of a sophisticated statistical examination of this issue for the Canadian economy.[1] They concluded that virtually all of the short-run, built-in stability of the present income tax structure is attributable to its sensitivity to real output changes rather than price changes. Since this pattern of price and output response is applicable to the U.S., most of the built-in, automatic stabilizing impact of the income tax would remain if the income tax were indexed.

Finally, one should recognize that part of the effect of income tax indexation on its built-in, stabilizing property will depend on how indexation is implemented. Indexation would not affect the short-run, stabilizing impact of the Federal income tax system if the index is constructed with a lag. That is, if the index for current income tax due is based upon the previous year's inflation rate, as it would be under many indexing plans, then whatever built-in, stabilizing effect there is would not be dampened. Income taxes would still automatically increase because of current inflation. Individual income tax liability would be adjusted in the following year to remove the extra tax due to inflation.

No absolute and final conclusion can be reached regarding the automatic stabilizing properties of an indexed individual income tax; further research seems warranted. However, as one guide, we can consider the Canadian opinion on the issue—on which both the Federal government and the provinces seem to agree. The Ontario controller of revenue writes, "The evidence that is available does not indicate that the tax indexing plan is likely to impair the stabilizing properties of the tax system."[2]

THE EFFECT OF PERSONAL TAXES ON WAGE DEMANDS

If indexation is a successful mechanism in reducing the inflation-induced increase in an individual's income tax liability, then it may also serve to hold down inflation through its impact on wage demands. If workers and unions in their wage bargaining desire to maintain a constant real after-tax income, then wages must increase more than prices. If purchasing power is not to fall, this is required because, in a progressive system, income taxes increase proportionately more than does income. If inflation is pushing incomes up and income taxes up even more, taxpayers must get increases in wages and

salaries more than sufficient to offset inflation in order to maintain real disposable incomes.

Why individuals might adopt maintenance of after-tax purchasing power as a wage bargaining goal rather than total purchasing power is not totally clear. In the latter case, individuals would have a larger share of consumption coming from government expenditure. Thus, if they feel this extra government expenditure is not as valuable to them as the increased cost in taxes, they might prefer to maintain real private consumption. In any case, there is strong evidence that increased personal taxes do, to some degree, lead to increased wage demands.[3]

Because indexation would reduce the automatic increase in income taxes that results from inflation, workers would require lower wage increases to maintain after-tax purchasing power. In turn, lower wage demands would reduce the pressure for "cost-push" inflation.

LIMITED INDEXATION OF INFLATION

While we have generally assumed that any indexation mechanism adopted would completely adjust the income tax for inflation effects, this may not be feasible or desirable. First of all, some types of income are difficult to adjust in order to remove the inflation-generated component because they require changes in the definition of income. These include the tax treatment of capital gains, interest income, and debt. While these issues are not considered in this report, one must recognize that indexation of only brackets, exemptions, and deductions is an incomplete adjustment for the inflation effects on individual income taxes. Second, beyond the problem of incomplete indexation due to omission of necessary income adjustments, incomplete indexation may also result as an intended feature of the design of the indexing mechanism.

Drawing in large measure from recent research by Vito Tanzi,[4] some experience of other nations with partial indexation by design can be noted. The rationale for incomplete indexation seems to rest on two foundations. There is an implicit recognition that indexation involves some administrative and compliance costs so that it may be desirable to forego indexation if the inflation is relatively small. In addition, partial adjustment for inflation can be a direct way of recognizing that indexation will sometimes impose a severe revenue constraint on governments, severe enough perhaps to require a discretionary tax increase. Partial indexation can allow for some easing of this constraint. Consider now several examples of incomplete indexation designed with this rationale in mind.

Two different techniques are used to limit indexation to severe inflation only. In France, adjustment of the individual income tax structure for inflation is made only when the general price increase in any year is greater than 5 percent. While this procedure introduces indexation for any year with particularly high inflation, it does not allow for consideration of the cumulative impact of inflation. In Luxembourg, indexation is triggered when the cumulative inflation since the last adjustment in the individual income tax structure is 5 percent.

In response to the possibility of a tight revenue constraint due to tax indexation, the Netherlands grants the minister of finance discretion to adjust the nominal income tax features by a factor that is 80 to 100 percent of the change in the price level. In effect, this mechanism gives the minister of finance discretion to increase the tax through partial application of the inflation adjustment. Thus, the tax revenue is made larger than with full indexation by imposing heavier tax burdens on those taxpayer groups most affected by the interplay of inflation and the income tax.

The desirability of limited indexing schemes depends upon the goal one wishes to attain by indexation. If the goal is to leave individual taxpayers with the same real income in the same relative tax position despite ongoing inflation, then these mechanisms must be rejected. But if the goal is to allow officials greater fiscal policy discretion during inflation without sacrificing completely fiscal accountability and revenue constraint, then limited indexation may be desirable. Most of the automatic, inflation-induced revenue increases are removed under limited indexation, and surely the executive or legislative action required to limit the adjustment is just as much an "open" action as a discretionary tax increase. The two approaches to partial indexation can differ significantly with respect to the income classes of taxpayers who will bear the burden of the inflation-induced higher taxes. Moreover, even though both a limited indexation scheme and a total indexation mechanism can result in the same aggregate level of income taxes, different taxpayer groups may bear the burden of the tax increase due to the discretionary power left to the minister.

Footnotes

[1]John Bossons and Thomas Wilson, "Adjusting Tax Rates for Inflation," *Canadian Tax Journal*, May–June 1973, pp. 185–199.

[2]R. J. Weiers, "Indexing the Personal Income Tax in Canada," *Revenue Administration 1975*, Federation of Tax Administrators.

[3]Otto Eckstein and Roger Brinner, *The Inflation Process in the United States*, Joint Economic Committee, U.S. Congress, February 1972.

[4]Vito Tanzi, "Adjustments of Personal Income Taxes for Inflation: The Foreign Experience," International Monetary Fund, prepared for the Brookings Conference on Inflation and Income Taxes, 1975.

Chapter VI

The Canadian Experience

INTRODUCTION

Although a number of other nations have adopted some variety of income tax indexation—including the Netherlands, Denmark, Chile, and Brazil[1]—Canada is the nation with an economy and an indexation experience that seems most relevant to the U.S. Assuming, then, that the Canadian individual income tax indexing plan and its subsequent effects offer some after-the-fact evidence of what income tax indexation might mean in the U.S., this section reviews the history and impact of tax indexation in Canada.

Indexation of the Canadian invidiual income tax was formally proposed in the federal budget offered in February 1973. Despite a recommendation against indexation by the Royal Commission on Taxation (the Carter Commission) in 1966, Minister of Finance John N. Turner proposed this plan to eliminate the unfair and unintended changes in income taxes generated by inflation. Turner's Budget Speech to the House of Commons offers evidence of what the federal government viewed as the major rationale for income tax indexation. Stressing the impact of inflation in raising taxpayer burdens, he goes on to note:

> The indexing of rates and exemptions will produce a tax liability which will no longer erode a person's purchasing power as a result of inflation interacting with the progressive tax system. A person will no longer pay tax at a higher marginal rate simply because inflation swept him up into a higher tax bracket. For a person on a fixed income, the result of indexing would be to reduce his taxes each year if prices rise.[2]

Also recognizing the impact of these inflation effects in providing inflation-induced increases in government revenue, Turner concluded:

> I suggest that this new system will be recognized everywhere as a bold and sensitive response to a rather fundamental tax problem. With [indexation], Canada will join a very select group of countries which have eliminated the hidden revenues accruing to governments through the effect of inflation on a progressive tax system.[3]

An indexation plan for the Canadian individual income tax was approved in 1973 to become effective for tax year 1974.

On the expenditure side, prior to indexation of the income tax, payments for old age pensions and the guaranteed annual supplement had been indexed—to be adjusted upward by the inflation rate—in 1972. Canadian pension plan payments were added as indexed expenditures in 1973 and family allowance payments indexed in 1974. As a result, income tax indexation in Canada—which served to reduce revenues below what they would otherwise have been—was accompanied by indexation of the major federal income security payments—which of course automatically forced expenditures higher than they otherwise would have been.

Upon its introduction in Canada, income tax indexation was not without opposition, opposition voiced most strongly by some provincial governments. The objections of the provinces generally were in three areas.

1. Indexation would reduce the elasticity of provincial revenue systems.
2. Indexation would generate greater increases in real disposable income for high-income taxpayers.
3. The reduction of income tax revenue may induce increases in other revenue sources.

Subsequently, indexation has been shown to be progressive in the sense of providing larger gains in real disposable income to lower-income taxpayers. The elasticity question seems relatively less important compared with the idea that income tax revenue may be lower with an indexed tax system and thus may lead to tax increases elsewhere in the system. This continuing concern of the provinces is noted by the Ontario controller of revenue as follows:

> If additional needs for revenue result in future tax increases, the dollar benefit of indexing to individual taxpayers would be short-lived. As well, if taxes other than the personal income tax are used to provide additional revenues, the result could be a substantially less progressive tax system than that existing in Canada and Ontario at the present time.[4]

HOW TAX INDEXATION IS ACCOMPLISHED

The Canadian individual income tax is indexed by adjusting the major exemptions—including the basic personal exemption, the marital exemption, dependent exemptions, and the exemptions allowed the aged, blind, and disabled—and the rate bracket limits for changes in the Consumer Price Index. Note that these adjustments do not fully index the individual income tax against inflation effects; neither capital gains and losses nor the dollar limits on other deductions are indexed; the tax treatment of interest income and debt is not changed.[5]

The index for any year is the ratio of the CPI for the 12-month period ending September 30 of the previous year to the CPI for the 12-month period ending September 30, 1972. Thus, if the CPI averaged 100 in the first period and 105 in the second, all the indexed features of the income tax would be multiplied by 1.05. This is equivalent to a 5 percent inflation. The year ending in September before each taxable year was selected to construct the index in order to allow sufficient time for calculation and distribution of adjusted withholding tables.

THE IMPACT OF INDEXATION ON TAXPAYERS

Once the indexing plan was in effect, the indexed features of the individual income tax were increased by 6.6 percent for the 1974 tax year, by an additional 10.1 percent for 1975, and further by 11.3 percent for 1976. (Thus, in comparison with the base year, the exemptions and rate brackets that would exist without indexation were multiplied by 1.066 for 1974, by 1.174 for 1975, and by 1.307 for 1976.) The effects of these adjustments are shown in Table VI-1. In these three years the basic personal exemption for a single person rose from $1,600 to $2,091 and for a married couple from $3,000 to $3,921. Similarly, the income on which the lowest

Table VI-1

FEDERAL PERSONAL EXEMPTIONS AND TAXABLE INCOME BRACKETS SUBJECT TO INDEXING

	Personal Exemptions			
	1973	1974 Inflation Factor 6.6%	1975 Inflation Factor 10.1%	1976 Inflation Factor 11.3%
Single Status	$1,600.00	$1,706.00	$1,878.00	$2,091.00
Married Status	3,000.00	3,198.00	3,522.00	3,921.00
Aged, Additional	1,000.00	1,066.00	1,174.00	1,307.00
Incapacitated, Additional	1,000.00	1,066.00	1,174.00	1,307.00
Dependent Child Under Age 16	300.00	320.00	352.00	392.00
Dependent Child Age 16 or Older	550.00	586.00	646.00	719.00
Other Dependent Under Age 16	300.00	320.00	352.00	392.00
Other Dependent Age 16 or Over	550.00	586.00	646.00	719.00
Dependents' Earnings Not Affecting Taxpayer's Claim:				
Wife	300.00	314.00	334.00	392.00
Dependent Child Under Age 16	1,100.00	1,166.00	1,274.00	1,438.00
Dependent Child Age 16 or Over	1,150.00	1,220.00	1,332.00	1,503.00
Other Dependent Under Age 16	1,100.00	1,166.00	1,274.00	1,438.00
Other Dependent Age 16 or Over	1,150.00	1,220.00	1,332.00	1,503.00

Federal Rates and Taxable Income Brackets

1973		1974 Inflation Factor 6.6%		1975 Inflation Factor 10.1%		1976 Inflation Factor 11.3%	
15% on first	$500	12% on first	$533	9% on first	$587	6% on first	$654
18% on next	500	18% on next	533	18% on next	587	18% on next	653
19% on next	1,000	19% on next	1,066	19% on next	1,174	19% on next	1,307
20% on next	1,000	20% on next	1,066	20% on next	1,174	20% on next	1,307
21% on next	2,000	21% on next	2,132	21% on next	2,348	21% on next	2,614
23% on next	2,000	23% on next	2,132	23% on next	2,348	23% on next	2,614
25% on next	2,000	25% on next	2,132	25% on next	2,348	25% on next	2,614
27% on next	2,000	27% on next	2,132	27% on next	2,348	27% on next	2,614
31% on next	3,000	31% on next	3,198	21% on next	3,522	31% on next	3,921
35% on next	10,000	35% on next	10,660	35% on next	11,719	35% on next	13,070
39% on next	15,000	39% on next	15,990	39% on next	17,619	39% on next	19,605
43% on next	21,000	43% on next	22,386	43% on next	24,651	43% on next	27,447
47% on remainder		47% on remainder		47% on remainder		47% on remainder	

Source: R. J. Weiers, "Indexing the Personal Income Tax in Canada," and Information Services, *Finance Release,* October 28, 1975, Ottawa, Canada.

marginal tax rate applies rose from $500 to $654, while the boundary of the highest bracket increased from $60,001 to $78,421.

The impact of these adjustments on the income tax liability of various representative taxpayers is shown in Table VI-2. Of course, all taxpayers have lower liabilities due to indexation compared with the same tax structure without any inflation correction. Note also that the dollar tax savings due to indexation rise with income, leading to the charge that "indexation is regressive."

Clearly this is a false proposition, as demonstrated by the percentage reduction in taxes due to indexation. Although not shown in this table, it should also be mentioned that indexation provided a 100 percent tax saving for many individuals, in effect, dropping them from the tax rolls or preventing their ascension to taxable status. For

example, in 1974, a married couple with two dependents and $4,000 income paid no income tax due to indexation; in 1975, a single taxpayer with $2,000 income or a single taxpayer over 65 with $3,000 income has a 100 percent tax saving due to indexation. The minister of finance estimated that the 1974 indexation removed 175,000 taxpayers from the rolls and that indexation in 1975 removed an additional 225,000 taxpayers.

THE IMPACT OF INDEXATION ON REVENUES

For the federal government, the Department of Finance estimates that the incremental reductions in federal individual income tax revenues were $400 million in 1974 and $750 million in 1975 and will be about $1,025 million in 1976. The "tax reduction" here simply is the loss in revenue due entirely to indexation, after allowing for other statutory tax law changes.

For the years that indexation has been in effect, the federal government has also reduced taxes by legislative action, so that expansionary federal budgets were the norm. In fact, before indexation was adopted in 1973, an across the board 5 percent cut in personal income taxes was approved to become effective January 1, 1974, and reductions in corporate income taxes were also made. In 1974, both the budget proposed in May and that adopted in November included expansionary tax changes. Thus, eventually, the general personal income tax cut was raised to 8 percent, sales taxes on clothing, shoes, and building materials were reduced, and several business and investment incentives were enacted. With the federal budget of June 1975, however, the focus of Canadian economic policy shifted from expansionary policies to policies designed for the dual purpose of reducing inflation without aborting recovery from the recession. Although there were some tax increases—particularly an income tax increase for taxpayers with income above

Table VI-2
INCOME TAX SAVINGS DUE ENTIRELY TO INDEXATION

	1974[1]		1975[2]		1976[3]	
Income	Dollar Amount	Percent of Tax Liability Without Indexation	Dollar Amount	Percent of Tax Liability Without Indexation	Dollar Amount	Percent of Tax Liability Without Indexation
	Single—No Dependents					
$5,000	$36	5.6%	$54	9.2%	$66	18.5%
10,000	63	3.0	97	4.7	103	5.9
50,000	407	1.9	667	3.2	638	3.2
	Single—Over 65—No Dependents					
$5,000	$50	11.8%	$78	22.2%	$92	60.9%
10,000	76	4.1	113	6.4	141	9.3
50,000	443	2.1	727	3.6	666	3.4
	Married—Two Dependents Under 16					
$10,000	$88	5.9%	$137	9.9%	$152	12.6%
20,000	228	4.4	333	6.7	364	7.8
50,000	481	2.4	774	3.9	679	3.6

[1]Tax saving is Federal and Provincial tax under the 1974 law without indexation less actual 1974 tax (with indexation). Source: Information Services, *Finance Release,* October 16, 1973, Ottawa, Canada.
[2]Tax saving is the Federal and Provincial tax under the 1975 law (including statutory rate change) with the 1974 index factor less the tax under the 1975 law with the 1975 index factor. Source: Information Services, *Finance Release,* October 25, 1974, Ottawa, Canada.
[3]Tax saving is the Federal and Provincial tax under the 1976 law (including statutory rate change) with the 1975 index factor less the tax under the 1976 law with the 1976 index factor. Source: Information Services, *Finance Release,* October 28, 1975, Ottawa, Canada.

For more information about these calculations, see each separate *Release.*

$27,000—the budget policy thrust was to control the growth of federal government expenditures. After some expenditure reduction and restrictions on the growth of federal employment, however, a total budget deficit of nearly $5.3 billion (about 18% of expenditures) is forecast for the fiscal year 1975–76.

The Institute for Policy Analysis at the University of Toronto calculates that, all in all, tax reductions of over $2.7 billion resulted in 1974 from the mix of legislated tax cuts and indexation; similarly, total tax reductions of over $3 billion were estimated in 1975. Thus, indexation during these years was an important component of a general expansionary budget environment. Indeed, Professors G. Jump and T. Wilson of the University of Toronto noted:

> The additional fiscal drag which inflation would have generated with a tax-transfer system without indexation would have been sufficient to plunge the economy into recession in early 1975, unless offset by discretionary fiscal changes.[6]

For the provinces, income tax indexation has also meant a reduction in individual income tax revenue. All of the provinces except Quebec have income tax collection agreements with the federal government; thus, provincial income taxes are expressed as a percentage of the federal tax and, without tax rate increases by the provinces, the revenue effects of indexation are automatically passed on. The Ontario Ministry of Revenue estimated that due to indexation in 1974, personal income tax revenues for all provinces were reduced in the range from 5.5 percent to 3.8 percent and Ontario income taxes were reduced by 4 percent or about $60 million. Similar estimates were suggested by the federal Department of Finance.[7]

In addition, a larger percentage decline in income tax revenue due to indexation occurs in the provinces with lower per capita income. This result follows directly from the observation that indexation provides greater percentage reduction in tax liability of lower-income taxpayers. This disparity in the impact of indexation on provincial income tax revenue is mitigated in large measure by federal equalization payments (provinces receive payments to raise their per capita tax yield to the national average provincial per capita tax yield). One should also recognize that the relationship between percentage tax reduction and provincial per capita income results because all provinces (except Quebec) have identical personal income tax structures, although the percentage of the federal tax used by each province may vary. No such similar relationship between the revenue impact of indexation and state personal income could be expected for the U.S. situation.

When the Canadian tax system was reformed in 1972, the federal government, in its tax collection agreements with the provinces, committed itself through 1976 to make up any provincial revenue losses compared to the revenue that would have been collected by the pre-reform systems. While this commitment remains and would be applied to losses due to tax code changes, the federal government does not compensate the provinces for revenue losses due to indexation.

Like the federal government, the provinces have generally enjoyed the luxury of not having to enact tax increases despite the revenue impact of indexation since 1973. Moreover, the provincial budgets presented during the spring of 1975 involved expansionary fiscal policies, including substantial tax cuts. Alberta, Manitoba, Saskatachewan, and New Brunswick all reduced personal income taxes. Ontario reduced sales taxes and provided income tax cuts for low-income persons. Quebec cut personal income taxes mostly to benefit low- and middle-income taxpayers. While there were other fiscal actions—including some small tax increases—the overall impact was expansionary.[8] The personal income tax cuts in Quebec were largely "designed to offset the effects of inflation on the tax system but in a more selective way" than indexation.[9]

Despite the reduction of inflation-induced federal and provincial income tax receipts by the introduction of tax indexation in Canada, its economic condition apparently has been such that both the federal government and the provinces felt it necessary to pursue expansionary budget policies through tax cuts and expenditure increases. Significantly, because of the effects of inflation on all revenues, tax increases apparently have not been required.

Footnotes

[1]For a comprehensive review of the international use of indexation, see Organization for Economic Co-operation and Development, "The Adjustment of Personal Income Taxes for Inflation," 1975, and Walter Krause, "Indexing: Lessons from Latin American Experience," paper presented at the meeting of the Allied Social Science Associations, Dallas, 1975.

[2]Honorable John N. Turner, Minister of Finance and Member of Parliament, Budget Speech in the House of Commons, February 19, 1973.

[3]*Ibid.*

[4]Weiers, 1975, p. 30.

[5]In addition, the tax is indexed only for price increases. Should the general price level fall, income tax variables will not be adjusted downward.

[6]G. V. Jump and T. A. Wilson, "Macro-Economic Effects of Federal Fiscal Policies: 1974–1975," *Canadian Tax Journal*, January 1975, p. 65. See also G. V. Jump and T. A. Wilson, "Canadian Fiscal Policy: 1973–1974," *Canadian Tax Journal*, January 1974.

[7]See Weiers, *op. cit.*; Allan, *et al.*, *op. cit.*

[8]For a detailed account of provincial fiscal action, see David Perry, *et al.*, "A Round-up of 1975 Provincial Budgets," *Canadian Tax Journal*, May 1975.

[9]*Ibid.*, pp. 241–242. See also T. A. Wilson and G. V. Jump, "Economic Effects of Provincial Fiscal Policies, 1975–76," *Canadian Tax Journal*, May 1975.

Appendix A

Indexation of the Virginia Personal Income Tax: A Case Study

Although projections regarding the impact of the personal income tax indexation were made in Chapter IV for aggregate state income taxes as well as an "average" state, any given state's situation is quite likely to differ from these general estimates. Ideally—if the data are available—each state contemplating indexation would have to carry out its own indexation impact analysis.

Such an individual state analysis was made for Virginia using a computer income tax file provided by the Virginia Department of Taxation.[1] The Department's income tax file is a statistically representative sample of individual income tax returns collected each year since 1971. Our technique is to simulate alternative income tax indexation schemes and to compare the resulting tax burdens with those without indexation.

The most recent major change in the Virginia individual income tax structure took effect in 1972. Thus, we assumed 1972 as a base year and projected tax revenues under four different indexation mechanisms for 1973 and 1974. The actual Virginia personal income tax structure and each of the four indexed structures are outlined below.

Virginia Tax Structure

Exemptions: $600, Personal, Dependent, Blind
$1,000, 65 and Over

Deductions:

Standard Deduction	15% of AGI
Maximum, Married, Joint, Single	$2,000
Maximum, Married, Separate	1,000
Minimum, Joint, Single	1,300
Minimum, Separate	650

Rates:	*Net Taxable Income* (NTI)	*Rate*
	$0– 3,000	2.00%
	3,001– 5,000	3.00
	5,001– 12,000	5.00
	12,001– 999,999	5.75

INDEXED SIMULATION I: PARTIAL INDEXATION, NO LAG

Simulation I involves indexing only the exemptions and standard deduction limits ("partial indexation") by the national Consumer Price Index for the year in which taxes are due. (Thus, the indexed structure for 1973 is determined by the percent change in the CPI during 1973.) The exemptions and maximums and minimums of the standard deduction were increased by 6.2 percent for 1973 and again by 11.0 percent for 1974. The tax rate brackets were not indexed. Under this partial indexation system the 1973 and 1974 values of the exemptions and standard deduction maximums are as follows:

Exemptions	*1973*	*1974*
Personal, Dependent, Blind	$ 637	$ 707
65 and Over	1,062	1,179
Standard Deduction	*1973*	*1974*
Percentage	15% of AGI	15% of AGI
Maximum, Joint, Single	$2,124	$2,358
Maximum, Separate	1,062	1,179
Minimum, Joint Single	1,381	1,533
Minimum, Separate	690	766

INDEXED SIMULATION II: FULL INDEXATION, NO LAG

The second indexation mechanism is the same as the first, except that the tax rate brackets were also indexed by changes in the CPI during the tax year ("full indexation"). Therefore, the exemptions and standard deductions are as above. The tax rates are the following:

Rate	*NTI (1973)*	*NTI (1974)*
2.00%	$0– 3,186	$0– 3,536
3.00	3,187– 5,310	3,567– 5,894
5.00	5,311– 12,744	5,895– 14,146
5.75	12,745–	14,147–

INDEXED SIMULATION III: PARTIAL INDEXATION, ONE-YEAR LAG

The third simulation involves partial indexation. In this third case, however, these features are adjusted by the percentage change in the CPI for the year preceding each tax year. Thus, the exemptions and standard deduction for 1973 taxes are determined by the inflation rate during 1972. For this simulation, then, these features were increased from the 1972 level by 3.3 percent for 1973 and again by 6.2 percent for 1974.

Exemptions	*1973*	*1974*
Personal, Dependent, Blind	$ 620	$ 658
65 and Over	1,033	1,097
Standard Deduction	*1973*	*1974*
Percentage	15% of AGI	*15%* of AGI
Maximum, Joint, Single	$2,066	$2,194
Maximum, Separate	1,033	1,097
Minimum, Joint, Single	1,343	1,426
Minimum, Separate	672	713

INDEXED SIMULATION IV: FULL INDEXATION, ONE-YEAR LAG

The fourth mechanism is identical to simulation III except that the tax rate brackets are also indexed by the CPI with a one-year lag. The exemptions and standard deduction are the same as in III and the tax rate brackets are as follows:

Rate	*NTI (1973)*	*NTI (1974)*
2.00%	$0– 3,099	$0– 3,291
3.00	3,100– 5,165	3,292– 5,485
5.00	5,166– 12,396	5,486– 13,165
5.75	12,397–	13,166–

Virginia income tax yields under each of the four simulations for both 1973 and 1974 are compared with actual collections in Table 1.

AGGREGATE RESULTS

An analysis of the simulation results for four (4) different types of tax indexation in each of two

Table 1

IMPACT OF INDEXATION ON AGGREGATE VIRGINIA PERSONAL INCOME TAXES (IN MILLIONS, WITH EFFECTIVE TAX RATE IN PARENTHESES)

		Simulations			
Year	Actual Tax Structure	I Exemptions & Standard Deduction Only—No Lag	II Exemptions, Standard Deduction and Rate Brackets—No Lag	III Exemptions and Standard Deduction Only—with a One-Year Lag	IV Exemptions, Standard Deduction & Rate Brackets—with a One-Year Lag
1972	$366.010 (2.300%)	—	—	—	—
1973	438.684 (2.450%)	$430.844 (2.401%)	$421.034 (2.351%)	$434.450 (2.426%)	$428.011 (2.390%)
1974	513.057 (2.565%)	489.369 (2.447%)	462.202 (2.311%)	500.090 (2.500%)	483.727 (2.419%)

years (1973 and 1974) leads to the following general findings.

1. Indexation of personal exemptions, all features of the standard deduction, and the tax rate brackets (when the indexation factor is calculated without any lag) would have reduced individual income taxes in Virginia by about $17.6 million or 4 percent in 1973 and by about $50.8 million or 9.9 percent in 1974 compared to the taxes without indexation. In 1973, Virginia AGI increased by 13.8 percent while the rate of inflation was 6.2 percent. In 1974, AGI rose by 11.7 percent and the inflation rate was 11.0 percent.

2. When indexation is accomplished by adjusting only exemptions and the standard deduction (leaving rate brackets unindexed), the tax reduction is a little less than half the amount of the reduction if exemptions, the standard deduction, *and* rate brackets are indexed. Specifically, in 1973, the tax reduction from partial indexation is 44 to 49 percent of the reduction with full indexation (depending on whether a lag exists or not); in 1974, partial indexation provides about 44 to 46 percent of the tax reduction with full indexation. Thus, for Virginia, the impact of inflation on exemptions and deductions is, in the aggregate, about the same size as the impact of inflation on tax rate brackets.

This result is different from that for the Federal individual income tax for which the exemption-deduction effect accounts for the bulk of the inflation-induced tax increase. The difference occurs because the relative width of tax brackets are less for lower incomes in the Virginia tax structure than in the Federal. That is, despite the fact that the top Virginia rate is reached at $12,001, the Virginia taxpayer with AGI between $3,000 and $12,000 moves across the state tax rate brackets more rapidly than across the Federal rate brackets. Therefore, the rate effect is more significant in the Virginia case.

3. The analysis also shows the implications of designing the index mechanism with a one-year lag between the inflation and adjustment of the income tax features. The simulations show that with indexation of exemptions, standard deduction, and rate brackets without a lag, income taxes would have been reduced by about $17.6 million in 1975, while the tax reduction would have been $10.7 million if the index were lagged one year. In percentage terms for 1974, the tax reduction under a lagged index arrangement is about 58 percent of the tax reduction when no lag is used.

Table 2

IMPACT OF INDEXATION ON VIRGINIA PERSONAL INCOME TAXES (IN MILLIONS) BY INCOME CLASS, 1974[1] (ASSUMING INDEXATION UTILIZED IN 1973 AND 1974)

		Simulations			
AGI Class	Actual	I Exemptions and Standard Deductions Only—No Lag	II Exemptions, Standard Deduction, and Rate Brackets—No Lag	III Exemptions and Standard Deduction Only—with a One-Year Lag	IV Exemptions, Standard Deduction, and Rate Brackets—with a One-Year Lag
$0- 4,999	$8.848	$6.993	$7.022	$7.788	$7.817
5- 9,999	49.886	44.238	41.018	46.903	44.635
10-14,999	87.113	82.119	75.484	84.262	80.258
15-19,999	91.157	85.926	79.584	89.298	84.453
20-24,999	71.605	68.907	64.439	70.161	67.571
25-49,999	137.506	134.634	128.981	135.964	132.753
50-74,999	27.433	27.164	26.620	27.288	26.985
75-99,999	12.010	11.931	11.774	11.967	11.878
100,000 and over	27.498	27.427	27.279	27.460	27.377

[1]1972 is the base year. Indexation applied both in 1973 and 1974.

The inflation rate (CPI) for 1972 was 3.3 percent, for 1973, 6.2 percent, and for 1974, 11.0 percent. Because inflation increased over these three years, the lagged indexing mechanism always fell short of fully compensating for the effects of the current year's inflation. However, for 1975, the inflation rate was below 11.0 percent. Therefore, had there been indexation, the inflation correction for that year (based on the 11.0 percent inflation in 1974) would more than compensate individuals for the inflation-induced tax increases in 1975. In short, when inflation is rising from year to year, a lagged indexing mechanism provides smaller tax reductions than a mechanism with no lag; when the inflation rates decline from year to year, the lagged mechanism provides larger tax reductions than a current year index.

In total, four different mechanisms for indexing the Virginia individual income tax were examined. Since the inflation rate was increasing over these years, the largest tax reduction occurred when all three factors—exemptions, deductions, and rate brackets—were indexed by the current year CPI. The second largest tax cut occurred when all three factors were indexed with a one-year lag, the third largest cut occurred by indexing exemptions and the standard deductions only without a lag, and finally, the smallest tax reduction occurred under a lagged, partial indexation scheme.

DISTRIBUTIONAL RESULTS

The distributional implications of state income tax indexation can be analyzed from simulations applied to the Virginia tax and shown in Tables 2 through 6. The major inferences that can be drawn from these simulations are:

1. Indexation of the Virginia personal income tax is progressive for all the indexation mechanisms studied in the sense that the percentage tax reduction from indexation falls as AGI rises. As expected, the degree of progressivity varies, depending on the type of indexation mechanism selected. As an example of the distributional impact of income tax indexation, consider from Tables 2 and 3 the tax reduction due to indexation of exemptions, the standard deduction, and the rate brackets with no lag, i.e., simulation II. The tax reduction in 1974 when indexation is applied both in 1973 and 1974 ranges from 20.6 percent (Table 3) of the 1974 taxes with no indexation for those in the $0 to $4,999 AGI class to a 0.8 percent tax reduction (compared to taxes with no indexation) for those with AGI above $100,000.

2. Indexation of tax rate brackets in addition to

Table 3
PERCENT TAX REDUCTION DUE TO INDEXATION, BY INCOME CLASS, 1974 (COMPARED TO TAXES WITH NO INDEXATION IN EITHER 1973 OR 1974)

	Simulations			
AGI Class	I	II	III	IV
$0–4,999	20.9%	20.6%	12.0%	11.6%
5–9,999	11.3	17.8	6.0	10.5
10–14,999	5.7	13.3	3.3	7.9
15–19,999	5.7	12.7	2.0	7.4
20–24,999	3.8	10.0	2.0	5.6
25–49,999	2.1	6.2	1.1	3.5
50–74,999	1.0	3.0	0.5	1.6
75–99,999	0.7	2.0	0.4	1.1
100,000 and over	0.3	0.8	0.1	0.6

Table 4
EFFECTIVE INCOME TAX RATES, ACTUAL VERSUS INDEXED, 1974

		Simulations			
AGI Class	Actual	I	II	III	IV
$0–4,999	0.62%	0.49%	0.49%	0.55%	0.55%
5–9,999	1.52	1.35	1.25	1.43	1.36
10–14,999	2.12	2.00	1.84	2.06	1.96
15–19,999	2.57	2.42	2.24	2.52	2.38
20–24,999	3.00	2.89	2.70	2.94	2.83
50–74,999	4.29	4.25	4.16	4.27	4.22
75–99,999	4.56	4.53	4.47	4.55	4.51
100,000 and over	4.83	4.82	4.80	4.83	4.81

personal exemptions and the standard deduction does not significantly affect the tax liabilities of those taxpayers with AGI below $5,000 and above $50,000 (Table 5). There are two reasons for the small size of the tax bracket effect on these groups.

The tax liabilities of those taxpayers with AGI below $5,000 do not differ significantly whether indexation is partial (exemptions and standard deduction only) or total (including the rate brackets). See Table 2. Thus, for taxpayers in the lowest income range, almost all of the inflation impact of their Virginia income tax results from the erosion of the value of exemptions and the fixed dollar features of the standard deduction.

Similarly, tax liabilities of those taxpayers with AGI above $50,000 do not significantly change depending on whether indexation is partial or total. In these cases, however, the explanation is different. Here, the total impact of indexation is very small. See Table 3. For example, even total indexation with no lag, the indexation mechanism with the greatest effect, reduces taxes in the $50,000 to $100,000 class by only 2-3 percent. Thus, for higher income groups, the small difference between partial and total indexation arises simply because indexation itself is not very significant for these groups.

Further, the data in Table 5, which express taxes due under full indexation as a percent of taxes under a partial indexation approach, indicate that it is taxpayers with AGI between $5,000 and $25,000 who especially benefit by total indexation, compared with indexation of personal exemptions and the standard deduction only. This follows due to the fact that relative to AGI, the exemption-deduction effect is largest for low incomes, this minimizes the relative role of the bracket effect. However, because there are no new brackets beyond $12,001, the importance of the bracket effect declines along with the exemption-deduction effect as AGI grows. It is the middle-income taxpayer, then, who is most impacted by the erosion of the real values of all three items—exemptions, standard deductions, and bracket limits—and who, accordingly, "gains" most from indexation of the bracket limits.

3. If the price index for an income tax indexation scheme is constructed with a lag, there are differential effects on the tax bills of taxpayers in different income classes. Specifically, as shown in Table 6, there is practically no difference in tax liabilities for those taxpayers with AGI above $50,000 whether the index is lagged or not. Again, this occurs simply because state income tax indexation does not have a significant impact on tax bills for taxpayers in the high-income class.

The lagged indexation mechanism does not fully correct for the inflation tax in the current year when inflation is increasing from year to year. Thus, the tax bills with a lagged index are higher than tax bills without any lag in the index. If inflation is decreasing from year to year, the lagged index mechanism over-corrects for inflation in the current year. The data indicate that the differential effect of the lagged

Table 5

A COMPARISON: PARTIAL[1] VERSUS TOTAL[2] INDEXATION (TAXES UNDER FULL INDEXATION AS A FRACTION OF TAXES UNDER PARTIAL INDEXATION)[3]

AGI Class	No Lag	One-Year Lag
$0–4,999	1.00	1.00
5–9,999	0.93	0.95
10–14,999	0.92	0.95
15–19,999	0.93	0.95
20–24,999	0.94	0.96
25–49,999	0.96	0.98
50–74,999	0.98	0.99
75–99,999	0.99	0.99
100,000 and over	0.99	1.00

[1]Indexation of personal exemptions and standard deduction features.
[2]Indexation of personal exemptions, standard deduction features, and the tax rate brackets.
[3]The "no lag" column is the ratio of taxes in simulation II to the taxes in simulation I. The "one-year lag" column is the ratio of taxes in simulation IV to taxes in simulation III. For example, a ratio of .95 means that the taxes in this class when exemptions, the standard deduction, *and* rate brackets are indexed is 95 percent of the taxes when exemptions and the standard deduction only are indexed.

index on tax liabilities falls as AGI rises. This is reasonable and expected, since the overall relative impact of tax indexation also is greatest for those individuals with lower incomes. Thus, for taxpayers with AGI below $5,000, the tax liability without a lag is only 90 percent of the amount when a one-year lag is present. Of course, if the inflation rate had fallen over these years, then the tax liability for this income class without a lag would have been greater than when a lag was present. In sum, while the presence of a lag in the index does have distributional implications over a short period, one would expect them to disappear if a longer period were examined during which the inflation rate both rose and fell.

Table 6

THE DISTRIBUTIONAL IMPACT OF A LAGGED INDEX (TAXES WITHOUT A LAG AS A FRACTION OF TAXES WITH A ONE-YEAR LAG)[1]

AGI Class	Partial Indexation[2]	Total Indexation[3]
$0–4,999	0.90	0.90
5–9,999	0.94	0.92
10–14,999	0.97	0.94
15–19,999	0.96	0.94
20–24,999	0.98	0.95
50–74,999	0.99	0.99
75–99,999	1.00	0.99
100,000 and over	1.00	1.00

[1]Column 2 is the ratio of taxes under simulation I to taxes under simulation III. Column 3 is the ratio of taxes with simulation II to taxes with simulation IV. A ratio of 0.95, for example, means that the taxes for this class when the index is constructed with no lag are 95 percent of the taxes when the index has a one-year lag.
[2]Indexation of personal exemptions and standard deduction features.
[3]Indexation of personal exemptions, standard deduction features, and the tax rate brackets.

Finally, one should note that the use of a lagged index has a slightly larger impact when all features are indexed compared to when only personal exemptions and the standard deduction features are indexed. This follows directly from the fact that the overall tax reduction is greater with the total indexation mechanism.

Footnote

[1]This study was possible only because of the gracious and valuable assistance of William Forst, state tax commissioner, Barry Lipman, research director, and Robert Benton, senior economist.

Appendix B

Policy Prescriptions: Pros and Cons

In recognition of the fact that the issue of personal income tax indexation is one over which there is legitimate disagreement, this appendix presents a listing of the "pro" and "con" *(status quo)* arguments considered by the Advisory Commission in evaluating the following policies:

—full disclosure only,
—indexation of the Federal personal income tax, and
—indexation of broad-based, state, progressive, personal income taxes

FULL DISCLOSURE

A policy of "full disclosure" would require Federal and state governments to calculate and then publicize the increase in effective tax rates (and the windfall revenue gain to the government treasury) which automatically results from the interaction of inflation and the broad-based, progressive, individual income tax. Elimination of these effective tax rate increases (and government revenue) could occur only if, subsequent to the disclosure, legislative bodies enacted income tax reductions.

PRO ARGUMENTATION

The argumentation in favor of public disclosure is simply that Federal and state policymakers should routinely and openly detail the fiscal alternatives to taxpayers. Since real individual income taxes increase both because of real economic growth and

because of inflation, public disclosure may be particularly valuable because of the complexity of determining the change in real income tax liability when prices are rising rapidly. This policy eliminates the charge that the Federal and state governments can benefit from inflation in a "surreptitious" manner. Moreover, a public disclosure policy should quicken the pace of legislated tax reductions during inflationary times.

The idea behind public disclosure of the inflation impact on income taxes is that if this fact is explicitly presented and explained to taxpayers, they will be more able to make a judgment about proposals for tax increases or decreases. Moreover, if individuals are aware of tax changes that occur automatically because of inflation, they can make their feelings about these increases known to legislators. Because state legislators tend to be more accessible to taxpayers than members of Congress, and because annual legislative increases and decreases in taxes are more common in the states than for the Federal government, there seems good reason to believe that public disclosure of the inflation-induced, real income tax increases might have greater tax policy impact at the state than at the Federal level. The contention that public disclosure would have no tax policy impact seems somewhat weaker for the state situation.

CON ARGUMENTATION

As is usually the case with a "compromise" position, the full disclosure policy can be attacked from either flank. Proponents of indexation can claim that it does not go far enough because there is serious question as to whether public disclosure of the inflation-induced, income tax increases will have any tax policy impact. If "public disclosure" means a few pages in the annual Federal or state budget document, then relatively few taxpayers will be made aware of the information. It can also be attacked as unnecessary because a substantial number of taxpayers are aware of the inflation-induced hikes in their income taxes and it is this knowledge that prompts Congress to make periodic, *ad hoc*, reductions in their tax bills.

INDEXATION

A policy of tax indexation would require an annual adjustment in the fixed dollar values of personal exemptions, deductions, credits, and tax rate brackets equal to the change in the general price level.

INDEXING THE FEDERAL TAX

PRO ARGUMENTATION

The recent projections regarding the conditions of the national economy all indicate that while inflation should decline from its recent levels, it is projected to remain in the 5–6 percent range between now and 1981. Thus, the inflation rate in the next five years will continue to be substantially higher than the historical average over the last 20 years. Moreover, there is no guarantee that new changes in economic conditions will not occur pushing the U.S. again into a period of double-digit inflation. Thus, given the high inflation rates expected for the next several years, and at least as a contingency against a new period of even higher inflation, tax indexation is a needed current addition to the Federal personal income tax structure.

The economic effects of the impact of inflation on the structure of the progressive Federal individual income tax have been well documented. One of the most significant is the arbitrary increase in the real income tax burdens of individual taxpayers due solely to inflation. As inflation pushes money incomes higher, it induces tax increases that impact most heavily on low-income taxpayers, on taxpayers who are already into the region of rapidly rising marginal tax rates, and on large families in nearly all income classes. Those taxpayers whose money income stays constant during an inflation experience no decline in their income tax burden despite a very real decline in purchasing power. Indexation will eliminate automatically these inflation-induced changes in real personal income tax burdens.

Since inflation induces real increases in personal income taxes for individual taxpayers, inflation also generates real increases in income tax revenue to the Federal government. These increases mean that because of inflation, the share of national income accruing to the Federal government as income taxes automatically rises. Since this inflation-induced tax increase does not operate through the legislative process, taxpayers do not have an opportunity to object. The estimates for the next five years suggest that these hidden, inflation-induced, Federal tax increases could be substantial: $6 billion in 1977 and, without any tax cuts; $50 billion in 1981. Since the Congress can collect this much additional revenue in the absence of any significant public debate, it may be attractive for the Congress to use these inflation-induced, tax increases for additional Federal spending. Indexation of the income tax would eliminate

these automatic, inflation-induced, real tax increases and require the Congress to face squarely the entire expenditure-taxation relationship.

Opponents of Federal personal income tax indexation correctly point out that these inflation-induced tax increases can be offset by periodic Congressional tax cuts. While this is theoretically so, the evidence of the last 15 years demonstrates that this might not happen. It is true that the tax cuts since 1960 have more than offset the tax impact of inflation at the Federal level. (Although some classes of taxpayers—particularly those in the $25,000 to $200,000 income classes—have higher Federal income tax burdens in 1975 than they would have had if indexation were adopted in 1960 and no additional tax changes made.) Since the tax cut in 1964, however, the subsequent Congressional tax cuts have *not* offset the inflation-induced real increases. This seems particularly significant because it is only in recent years that we have experienced the historically high rates of inflation, a situation that may more closely approximate the likely course of events in the next several years. Moreover, an important factor motivating Federal policymaking in making tax cuts since 1960 has been to achieve national economic stabilization and growth policies. If stabilization policy had not required tax cuts, then it is problematical whether the inflation effects would have been offset by tax cuts.

Federal personal income tax indexation is not intended to be a correction for all the inequities of the current income tax law nor need it be the final determining factor about the size of income tax collections. Adoption of tax indexation does not preclude any other income tax changes the President wishes to propose or the Congress wishes to enact. Income tax indexation simply guarantees that inflation will not alter any distribution of tax burdens or amount of real tax collections. With indexation, the Congress could, at any time, still change the degree of income tax progression or the amount of income tax collections.

Those opponents of indexation who argue that this mechanism would destory the growth responsiveness of the Federal tax structure are overstating the case. Indexation does not affect the more-than-proportionate response of Federal income tax revenues to increases in real national income. In addition, income tax indexation does allow tax revenue to increase in response to inflation at a rate just proportionate to the inflation. The only automatic increase that would be eliminated by indexation is the tax increase induced by inflation that is *more than proportionate* to the inflation.

Federal aid has been one of the fastest growing items in the national budget since 1960, growing from 16 percent of total state-local revenues to 34 percent in 1975. During this same period, the major post war tax cut enactments reduced income tax collections below that which would have occurred with indexation. Consequently, there is no convincing, *a priori* reason to believe that Federal indexation will lead to reductions in the growth rate of Federal aid.

Though some may argue that Federal indexation would exert pressure on the states to follow with state income tax indexation, this seems to overstate the degree to which states are inclined to follow every Federal tax action. Of course, those states that do wish to index their personal income taxes would find it easier if the Federal government had led the way.

The annual indexation of personal exemptions, the low-income allowance, the standard deduction, any per capita credits, and the tax rate brackets in the Federal individual income tax is a simple and relatively low-cost administrative procedure that should not create significant new problems either for IRS or the individual taxpayer. The entire procedure would require (1) the determination of the index number; (2) calculation of the new exemptions, deductions, and rates; (3) calculation and distribution of new withholding tables, and (4) printing of new tax forms that reflect the indexed tax features. These are procedures that IRS regularly undertakes now and thus should present no new and significant problems. More important, indexation of the tax structure does not increase compliance costs for taxpayers.

One of the strongest philosophical or conceptual arguments in favor of income tax indexation is derived from the idea that tax burdens should be distributed according to one's ability to pay. If we are to distinguish fairly between taxpayers, regardless of how broad or narrow the definition of what constitutes income, then taxes must be based on real income—real purchasing power—and not on nominal income. An individual's real purchasing power is the basis for his spending decisions and should also be the basis of his payment for government services. Since inflation induces changes in real income very different from changes in nominal income, it is necessary to introduce tax indexation and make real income the tax base.

Admittedly, the partial, tax indexation mechanism proposed in this report does not com-

pletely adjust the Federal personal income tax for inflation effects arising from the definition of real property income. However, complete indexation may not be currently feasible for a variety of political and administrative reasons. Nevertheless, this in no way diminishes the desirability of taking this major step in the direction of full tax indexation. The merits of adjusting exemptions, deductions, and rate brackets remain. In addition, this first step may be an inducement to redefine taxable property income, especially capital gains and interest income.

In the final analysis, the issue of whether to index these major structural features of the Federal individual income tax is political, not economic. That is, the economic case in favor of indexation is well founded. The impact of inflation on individual tax burdens is real. The fact that tax cut enactments may offset the inflation-induced, real tax increases suggests that indexation may not substantially change the overall tax burden, at least in times of low inflation, although there may be major changes in the distribution of tax burdens. Indexation simply makes these tax cuts automatic and thus more efficient. The strongest concern about indexation then is political. What will happen in the Congress if the potential for periodic, legislated, income tax cuts is reduced once the likelihood of legislated tax increases become greater? Political life may become more difficult for Federal officials and some interest groups may find the path for their favorite expenditure steeper. This conflict of economic and political goals has been noted by Milton Friedman:

> These reforms [tax indexation, among others] deserve wide support. They would reduce the harm done by inflation and would ease the withdrawal pains from reducing inflation. They would also lower the revenue that the government gets from inflation and hence the government's incentive to engage in inflation. This is at one and the same time a major argument in their behalf and the chief obstacle to their enactment.[1]

CON ARGUMENTATION

Legislated tax cuts are preferred to automatic cuts by indexation because they allow tax reduction to be targeted at specific taxpayer groups. In that way, the distribution of income tax burdens can be adjusted in line with the political perception of required changes. In fact, there is evidence that the tax cuts enacted at the Federal level since 1960 have resulted in a somewhat more progressive income tax than indexation would have produced.

Legislated Federal personal income tax cuts are also preferred to indexation because they allow the Federal government the greatest latitude for responding to public needs under varying circumstances. While indexation automatically reduces income tax growth in all inflation situations, discretionary tax cuts can be applied only when the revenue loss will not affect the provision of necessary public services and when the tax cut is in accordance with national economic stabilization and growth goals. Moreover, the Commission has recognized the need for a strong, growth responsive, revenue source at the Federal level so that the national government can undertake functions best performed at the national level. Such special undertakings include equalizing regional fiscal capacities, stimulating subnational expenditure in areas of national priority, and providing programs for individual income redistribution, including the Commission recommendation for Federal takeover of welfare.

While it is suggested that the inflation-induced, real income tax gain to the Federal government is "hidden" from the taxpayers, this claim overstates the matter. Some taxpayers are keenly aware that inflation is increasing their effective income tax rate faster than their real income.

If one is concerned that the inflation impact on Federal personal income taxes introduces a bias toward a larger Federal government, there are mechanisms other than indexation for controlling the growth of government. For example, the new budget procedure adopted by Congress (1974) has proved most effective during its first two years of operation.

Since Federal tax indexation will reduce the automatic growth of revenues, it may also lead to reductions in Federal expenditures or a slowdown in the growth of Federal aid. If this should happen, Federal tax indexation could cause an increase in fiscal stress at the state and local level.

Indexation of the Federal individual income tax might create heavy pressure for widespread state income tax indexation. Although Federal indexation might not cause severe fiscal problems for the national government, indexation at the state level could be a severe financial blow.

Beyond the contention that indexation is not necessary, specific partial indexation can also be challenged because it fails to come to grips with another important inflation-income tax issue: the

proper definition of property income (especially the treatment of capital gains) in an inflationary situation. Further, fairness demands that Congress not proceed on the personal income tax front until it can also make the indexation adjustments on the corporate income tax front.

From the viewpoint of tax reform strategy, this partial indexation of the Federal individual income tax may reduce the political desire for other Federal tax reforms unrelated to inflation which some individuals believe are much more important or fundamental. Piecemeal changes in the tax code are not substitutes for an overall consideration of tax reform. Indexation may have the effect, then, of being only a partial solution to the inflation-personal income tax problem and a barrier to other tax changes. As Henry Aaron has written:

> The view that removing the distortions of inflation deserves attention whether doing so aggravates or ameliorates existing imperfections seems to place form before substance.[2]

Federal income tax indexation and related reductions in income tax collections could increase Federal resort to deficit financing. The Federal government has a powerful fiscal option not generally available to other levels of government: large-scale, deficit financing. Thus, if indexation reduces Federal tax collections, Congress may be inclined to avoid the politically painful tax increase route and make heavier use of deficit financing to meet rising expenditure requirements.

INDEXING STATE INCOME TAXES

PRO ARGUMENTATION

The same basic considerations—fiscal accountability, tax equity, and public sector growth—that support the case for indexation of the Federal income tax also argue in favor of indexation of state personal income taxes.

Over the last 15 or 20 years, many states have moved strongly to make balanced use of various revenue sources including particularly the personal income tax. Thirty-nine states now use broad-based, progressive, individual income taxes that provide, on average, a substantial portion of own-source state revenue. As a result, state revenue systems now generally enjoy higher elasticity—that is stronger growth responsiveness—than ever before. There is little doubt that the inflation-induced real increases in income tax revenue encouraged the states to make greater use of income taxes. Now that these progressive, state personal income taxes are established, however, further automatic real increases *due to inflation* should not be tolerated.

With indexation, the distortions in interpersonal tax equity that are introduced by inflation interacting with progressive state income taxes would be largely eliminated. Furthermore, states would still enjoy substantial, income tax elasticity from the income tax response to real economic growth. Indeed, the evidence suggests that, with indexation, aggregate state personal income tax collections can increase over the next four years at about 13 percent annually. This is only 2.5 percentage points less than the actual annual revenue growth between 1971 and 1975—a period characterized by significant legislative action to raise taxes.

Although state individual income tax collections approximate only 20 percent of Federal collections from this source, this average obscures the heavy reliance certain states make of this tax instrument. While Ohio and Louisiana income tax yields are only about 7 percent of the Federal, Minnesota and Wisconsin income tax yields are 41 and 38 percent, respecitvely, of Federal collections. In states where a highly progressive rate structure is combined with heavy reliance on the income tax, the impact of inflation on the states income tax collections can be substantial.

During the last decade the greatest rate of growth in government has occurred at the state-local level. These governments have been increasing expenditures on traditional functions and taking on new expenditure programs and functions. Indexation of state income taxes may provide a means of slowing this growth of state-local government. Indeed, inasmuch as many states have constitutional requirements for balanced budgets, the reduction in the automatic, income tax increases due to inflation at the state level is likely to be a stronger force in reducing the rate of government growth than at the Federal level—where the option of deficit financing provides an "out."

CON ARGUMENTATION

It is a longstanding, ACIR position that states should endeavor to strengthen their revenue systems through the balanced use of various revenue sources, particularly state general sales taxes, corporate income taxes, and personal income taxes. Over the last two decades, many states have adopted

progressive individual income taxes while others have increased personal income tax rates. As a result, state revenue systems have been strengthened. Because personal income taxes provide most of the automatic state revenue growth, the trend toward greater state reliance on personal income taxes has been assisted by the impact of inflation on these prime revenue instruments. To index these taxes now might simply serve to reduce the elasticity of state income taxes and make other revenue sources a bit more attractive. Thus, state indexation will serve to slow down the trend for income tax states to generate larger portions of revenue from income taxes.

The argument that indexation is particularly well suited to states which combine a highly progressive rate structure with heavy reliance on the individual tax overlooks an important corollary. The states that are characterized by "high" intensity use of the income tax are likely to experience the greatest reduction in revenues from indexation. At the other end of the intensity scale, some states make such insignificant use of the income tax that the inflation increment in their tax revenues has little relevance for tax and spending policy purposes.

While state revenue systems have become more growth responsive as a result of increasing reliance on the personal income tax, they generally remain significantly less elastic than the Federal revenue system. In addition, state governments face automatic cost increases because of inflation at least as severe as the Federal government faces. Thus, indexation at the state level, with the resulting restriction on state revenue growth, is not desirable even if it is preferable for the Federal government.

The arguments presented above are even stronger when state individual income tax indexation is considered in the context of a state-local sector. It is often argued that local governments, as creatures of the states, are primarily dependent upon them for external fiscal assistance. When this view of the total state-local sector is taken, the need for strong, growth-responsive, state revenue systems to meet growth and inflation-induced cost increases is heightened. Local governments, in most cases, capture even less inflation-induced revenue increases than state governments. On the expenditure side, local governments have greater inflation-generated cost increases than the states because of the relative labor intensity of their public service functions. Further, the inflation-induced real increases in state personal income tax revenue provide leeway for additional state aid—either through grants or direct expenditure—in support of such programs as local property tax relief.

If the Federal government were to index the structure of the Federal individual income tax, then states would also experience a revenue impact on state personal income taxes. In addition to those states that would be affected directly because they piggyback on the Federal income tax, all states would be affected because state and local taxes are allowed as a deduction against the Federal tax for taxpayers who itemize. Because Federal income tax indexation would reduce the automatic rise in the marginal Federal tax rate of many taxpayers, the value of the state-local tax deduction to such taxpayers would also be reduced. This indirect result of Federal income tax indexation on the states might be a political factor in holding down future state-legislated income tax increases.

Footnotes

[1]Milton Friedman, *Living With Inflation, Three Essays*, American Enterprise Institute, Washington, D.C., 1974, p. 7.

[2]Henry Aaron, "Inflation and the Income Tax," *The American Economic Review*, May 1976, pp. 193–199.

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The Advisory Commission on Intergovernmental Relations (ACIR) was created by the Congress in 1959 to monitor the operation of the American federal system and to recommend improvements. ACIR is a permanent national bipartisan body representing the executive and legislative branches of Federal, state, and local government and the public.

The Commission is composed of 26 members—nine representing the Federal government, 14 representing state and local government, and three representing the public. The President appoints 20—three private citizens and three Federal executive officials directly and four governors, three state legislators, four mayors, and three elected county officials from slates nominated by the National Governors' Conference, the Council of State Governments, the National League of Cities/U.S. Conference of Mayors, and the National Association of Counties. The three Senators are chosen by the President of the Senate and the three Congressmen by the Speaker of the House.

Each Commission member serves a two year term and may be reappointed.

As a continuing body, the Commission approaches its work by addressing itself to specific issues and problems, the resolution of which would produce improved cooperation among the levels of government and more effective functioning of the federal system. In addition to dealing with the all important functional and structural relationships among the various governments, the Commission has also extensively studied critical stresses currently being placed on traditional governmental taxing practices. One of the long range efforts of the Commission has been seek ways to improve Federal, state, and local governmental taxing practices and policies to achieve equitable allocation of resources, increased efficiency in collection and administration, and reduced compliance burdens upon the taxpayers.

Studies undertaken by the Commission have dealt with subjects as diverse as transportation and as specific as state taxation of out-of-state depositories; as wide ranging as substate regionalism to the more specialized isse of local revenue diversification. In selecting items for the work program, the Commission considers the relative importance and urgency of the problem, its manageability from the point of view of finances and staff available to ACIR and the extent to which the Commission can make a fruitful contribution toward the solution of the problem.

After selecting specific intergovernmental issues for investigation, ACIR follows a multistep procedure that assures review and comment by representatives of all points of view, all affected levels of government, technical experts, and interested groups. The Commission then debates each issue and formulates its policy position. Commission findings and recommendations are published and draft bills and executive orders developed to assist in implementing ACIR policies.