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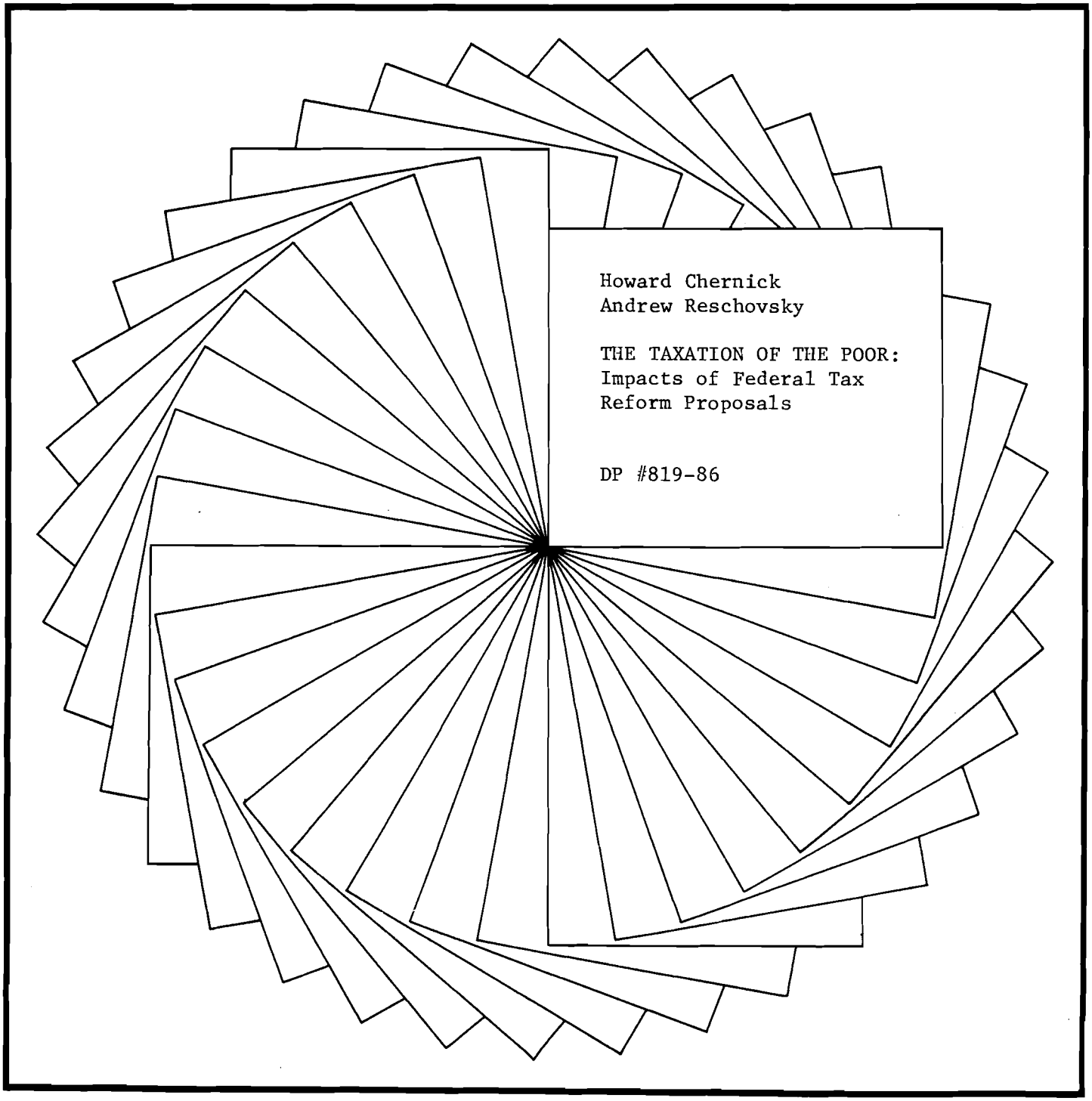

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The Taxation of the Poor: Impacts of Federal Tax Reform Proposals

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Abstract

"The tax system should not be an additional burden to those who are struggling to escape from poverty; insofar as possible, those below the poverty line should be freed from taxation altogether." This quote from the President's tax reform proposals (1985) is given special urgency by the fact that in recent years an increasing number of poor families have been faced with significant federal income and payroll tax liabilities.

This paper uses a set of linked microsimulation models of all the major federal, state, and local personal taxes in two states to analyze the impact of the tax system on families with incomes below the poverty line. The primary purpose of the paper is to identify the tax burdens faced by the poor, and various subgroups among the poor, and to evaluate the effect of the various federal tax reform proposals in reducing the tax burdens faced by this group. Particular attention is paid to the state and local government tax burdens faced by the poor, and on the likely impact of federal tax reform on these state and local tax burdens.

Our initial findings show an average rate of taxation of about 10 percent for poor families in Massachusetts, and close to 15 percent in New York. The single most important source of the high tax burdens on the poor is the local property tax. All of the major tax reform proposals currently being discussed (the President's proposal, and those of the House and the Senate) would substantially reduce the number of poor families facing positive federal income tax liabilities. However, even if federal tax reform completely eliminated both the federal income tax and the FICA tax burdens on all families below the poverty line, a large number of poor would still face tax burdens in excess of 10 percent of

their money income, primarily from sales, excise, and property taxation. This would be the case despite recent reforms in both Massachusetts and New York which reduce the burden of state income taxation on the poor.

The Taxation of the Poor: Impacts of Federal Tax Reform Proposals

> The tax system should not be an additional burden to those who are struggling to escape from poverty; insofar as possible, those below the poverty line should be freed from taxation altogether.

This statement is from the President's tax reform proposals submitted to Congress in May 1985 (President's Tax Proposals, 1985, p. 5). Reducing the taxation of poor families and individuals is one of the very few provisions of the president's plan about which there is little debate. Policymakers representing a wide range of perspectives agree that the poor should not be burdened with taxation. The primary purpose of this paper is to identify the tax burdens faced by the poor and to evaluate the effectiveness of various tax reform proposals in reducing those burdens. Particular attention is paid to the state and local government taxation of the poor, and to the probable impact of federal tax reform on these state and local tax burdens.

In recent years considerable research has documented the fact that an increasing number of poor families and individuals face federal income and payroll (FICA) tax liabilities.[1] Charles McLure, Jr. (1984) testified to the House Committee on Ways and Means that nearly 20 percent of families with non-elderly earners and with incomes below the poverty level had positive income tax liabilities in 1982. When payroll taxes are included, 70 percent of the families in this group, over two and a half million families, have positive tax liabilities. Joseph Minarik (1984) has presented evidence that many poor single individuals face federal tax burdens that are higher than the tax burdens on poor families.

The indexing of rates, personal exemptions, and the standard deduction, which took effect in 1985, will help slow the increase of tax pressure on the poor. However, the fact that under current law the Earned Income Tax Credit, intended to give a cash supplement to working parents with low earnings, is not indexed for inflation and applies only to taxpayers with children implies that many families and individuals with incomes below the poverty line will continue to face positive federal tax liabilities.

Relatively little attention has been paid to the impact of state and local taxes on the poor. To our knowledge, no research has looked directly at the total tax burden faced by persons below the poverty level. A few studies have, however, calculated tax burdens for low-income individuals. Donald Phares (1981) in a study of state and local tax burdens in all 50 states, finds a highly regressive state and local tax structure under a wide range of tax incidence assumptions. He finds that, on average, taxpayers with incomes (in 1976) below $5,000 face state and local tax burdens of at least 15 percent of income. Joseph Pechman (1985) finds that, even under his most progressive incidence assumptions, the average family in the lowest decile of the income distribution faces a state and local tax burden of 8 percent. The Census Bureau, in its annual study of after-tax money incomes, reports that the average household with money income under $5,000 (1983 dollars) faces a state income tax burden of 1.3 percent, and, among those who own their own homes, a property tax burden of 16.1 percent (U.S. Bureau of the Census, 1984).

In this paper we use microsimulation models of the federal income tax and payroll taxes and state-specific models of state and local income

taxes, state and local sales taxes, and local property taxes to determine the total tax burdens of a large random sample of taxpayers in two states, Massachusetts and New York. Although some degree of generality is lost in focusing on two states, we gain considerable accuracy by concentrating on building models that reflect in great detail most of the provisions of the tax systems in each of these two states.

In the next section of the paper we briefly describe the models we have developed to estimate federal, state, and local tax burdens. The following section assesses the burden of taxation on the poor. In addition to providing estimates of the overall tax burden faced by the poor, this section evaluates the contribution of each individual tax to the overall tax burden, and explores the impact of family type, age, and sources of income to the tax liabilities and burdens faced by those persons both below and near the poverty level. We then turn to an evaluation of federal tax reform, first examining the impact of federal income tax reform on the poor, then comparing current proposals for reform with the distibution of federal tax burdens prior to the Reagan presidency. A final section draws some conclusions.

MODELING FEDERAL, STATE, AND LOCAL TAXES

The strategy followed in this analysis is to focus on the five taxes that are likely to have the largest direct effect on the poor. In fiscal year 1986 the federal individual income tax and the payroll tax together accounted for 85 percent of federal government tax revenue. In fiscal year 1986 the residential property tax, the personal income tax, and the sales tax provided 68 percent of state and local tax revenue in

Massachusetts. In 1983, 80 percent of tax revenue in New York State came from these sources (Advisory Committee on Intergovernmental Relations, 1985).

Assumptions

The real burden of the tax system is significantly affected by the assumptions made about the incidence of each tax. In this analysis our choice of incidence assumptions has been guided primarily by the principle that the burden of a tax falls most heavily on the inelastic source or use of income. If it is possible to alter economic behavior in such a way as to avoid taxation, the burden of taxation can be shifted to another group within the economy (e.g., in treatment of property tax).

1. With respect to the individual income tax at both the federal and state levels, we follow the conventional wisdom and assume that the tax is borne by the income recipients. The basis for this assumption is the empirical evidence that workers do not in general change their hours worked, and investors the amount saved, in response to a change in income tax rates.[2]

2. As with the income tax, we assume that the burden of the payroll tax falls on workers. The reason for this assumption is that for the large majority of workers, changes in the payroll tax rate have little or no impact on labor supply. It is customary also to assume that the burden of the employer portion of the payroll tax is borne by employees; in this paper, however, we only consider the portion of the payroll tax levied on employees, thereby underestimating the total tax burden on those with earnings.

3. The burden of the sales tax is generally considered to be borne by consumers in proportion to their expenditures on taxed items. Since a general sales tax is levied on a wide range of commodities, alterations in consumption patterns are assumed to be relatively minor, as are any changes in relative prices.

4. A great deal of the controversy surrounding tax incidence centers on the property tax. Our approach is to assume that taxpayers who live in owner-occupied housing bear the entire burden of the tax on such housing. Following conventional assumptions, the portion of the homeowner's property tax levied on land cannot be shifted, because the supply of land is fixed. For the portion of the tax that falls on improvements, the differentials between New York and Massachusetts communities and the rest of the nation, which are essential components of our modeling approach, are treated as variable excise taxes, and are assumed to rest on homeowners in the form of higher prices for housing services. The "new view" of property tax incidence treats the national average component of the property tax as being borne in proportion to the ownership of capital. For low-income home owners, almost all capital is in the form of equity in their homes. Hence, for this group, our approach is consistent with the new view (Ihlanfeldt, 1982).

5. We assume that the property tax on residential rental property is split between landlords and tenants, with 75 percent of the burden falling on tenants. Landlords bear the burden of the land portion of the property tax, but can pass the nonland portion of the property tax on to tenants, primarily because demand for housing is relatively price inelastic. This is particularly true in the case of the poor, who, though they may move frequently, are restricted in their access to jurisdictions

and neighborhoods by fiscal zoning and discrimination (Yinger, 1979, 1985). Thus the property tax acts as an excise tax on rental housing. Under reasonable assumptions concerning the price elasticity of supply and demand for rental housing, we calculate that over 90 percent of the nonland portion of the property tax is passed on to tenants.[3] Our assumption that 75 percent of the property tax is shifted to tenants is based on this calculation, and on the evidence from Netzer (1966) that land accounts for somewhat less than 25 percent of the value of rental property. The argument for forward shifting is strengthened in cities like New York, where there is considerable rent control, and property tax increases are a cost factor in determining allowable rent increases. However, because there is a lack of consensus within the economics profession regarding the incidence of the property tax, we also test the sensitivity of our results to alternative assumptions regarding the degree of shifting of the tax on rental housing.

Taxes Not Considered in the Analysis

In evaluating the tax burdens on the poor we do not include any burdens from the federal and state corporate income taxes, various federal and state excise taxes, estate and gift taxes, and miscellaneous business taxes. In future work we shall expand the analysis to include excise taxes on gasoline, alcohol, and tobacco.

The major tax that is not included in the analysis is the corporate income tax at both the federal and state level. There is no consensus within the economics profession concerning where the burden of the corporate income tax falls. One view, based on the work of Harberger (1962), is that the burden of the national tax falls on all capital.

Other views suggest that the burden of the tax remains with owners of capital in the corporate sector, and, alternatively, that the tax is shifted forward to consumers, or backward to labor.[4] A similar debate centers on the incidence of the state corporate income tax. McLure (1981) argues that the tax burden is shifted to labor, consumers, and landowners in the taxing state, while Mieszkowski and Zodrow (1985) contend that capital owners throughout the nation bear the burden of the state corporate income tax.

We do not include the corporate income tax in our analysis in part because of the difficulty in modeling the tax and in part because, to the extent that the burden of the tax falls on capital income, it will have little impact on the poor. As one would expect, a very small portion of the total income of the poor comes from capital income. For example, in Massachusetts only 2.8 percent of the money income of families and unrelated individuals below the poverty line comes from interest, dividends, rents, or capital gains.

Method, Data, and Definitions

Our approach is to develop detailed models of each major tax, and to use the models to analyze the tax burdens faced by a random sample of residents in each state. The models are constructed as a series of new subroutines to the Transfer Income Model (TRIM), a model developed during the early 1970s by the Urban Institute and the (then) U.S. Department of Health, Education, and Welfare (Sulvetta, 1976). Since its development, the TRIM model has been used to evaluate proposals for a large number of federal government programs.

Our models are used to analyze data from the Survey of Income and Education (SIE), a large household survey conducted by the Census Bureau in 1976. The SIE has been demographically and economically aged to 1982, and then economically aged from 1982 to 1986.[5] Poverty thresholds are inflated to 1986 levels by adjusting the 1984 thresholds by the estimated increase in the Consumer Price Index from 1984 to 1986. Although it would be preferable to use more recent data, such as those from the annual Current Population Survey (CPS) conducted by the Census Bureau, the SIE has several very important advantages over any alternative data set. The state SIE samples are considerably larger than the state samples from the CPS--more than twice as large in the case of Massachusetts. In addition, the SIE oversampled low-income households, a fact that allows us to conduct a much more detailed analysis of poverty-level households.[6] The SIE is also the only household data set that combines detailed income and demographic data with information on within-state locations, housing values, and rents. Those data are essential for modeling the property tax.

The basic unit of analysis is the federal income tax filing unit. A filing unit is a single individual or married couple who is not the dependent of another taxpayer. The model follows Internal Revenue Service rules to determine who is a dependent. Data on family relationships and incomes are used to define each household member's dependency status. After the total tax liability of each filing unit is calculated, incomes and tax liabilities of each filing unit within a family (as defined by the Census Bureau: a group of two or more persons related by blood, marriage, or adoption and residing together) are added together. Thus the results reported in this paper are for both families

and unrelated individuals (defined by the Census Bureau as noninstitutionalized persons who are not living with any relatives).

The following paragraphs briefly describe the general structure of the tax models.

An FICA model assigns the appropriate payroll tax to all those with wage and salary or self-employment income. The federal income tax model starts by aggregating income by source in order to define adjusted gross income (AGI). The SIE provides data on income from all sources except capital gains. Capital gains are imputed for each individual using data on capital gains and losses available from the IRS.[7]

Taxable income is defined for each filing unit by subtracting from AGI the appropriate exemptions and the larger of total itemized deductions or the standard deduction. In a first pass, filing units are assigned a value for deductions for real estate taxes, mortgage interest, medical and dental expenditures, charitable contributions, state and local income taxes, and miscellaneous deductions. Data on the amount of each type of itemized deductions come from unpublished IRS sources on the average deductions in 1977 for each 1,700 demographic/income classes. These amounts have been adjusted to reflect state-specific deduction levels in New York and Massachusetts. In a second pass of the federal income tax model, after the appropriate models have calculated values for property taxes, state and local income and sales taxes, total itemized deductions are recalculated by substituting these "actual" values for the tax deductions for the average values assigned during the first pass of the federal income tax model. Before calculating final tax liabilities, the federal income tax model also calculates the two-earner deduction,

the child care credit, and the elderly credit, and applies them where appropriate.[8]

The state income tax models reflect in great detail nearly all the specific provisions of the income tax code in each state. For example, in New York, the model allows married couples to file separate returns when, as specified by law, such a strategy would reduce their joint tax liability. In Massachusetts the model divides income into earned and unearned income, applies a series of deductions and exemptions such as a deduction for payroll (FICA) tax payments and rental payments, and finally applies the state's dual rate tax structure.

The property tax model exploits data on household location from the SIE, and data on tax rates and assessment ratios from state sources, in order to assign each filing unit an effective property tax rate.[9] Homeowners' property tax burdens are equal to this rate multiplied by the value of their house. Tenants are assumed to bear three-quarters of the tax liability on their rental unit (determined by capitalizing rents), while the remaining one-quarter is allocated to those filing units with rental income. The model also calculates property tax credits and abatements for eligible households. As no data are available on intrafamily income pooling, secondary families or individuals within a household are assigned a zero property tax liability.

The foundation of the state sales tax models is the Consumer Expenditure Surveys (CES) of the Bureau of Labor Statistics. Data from the 1980-81 CES diary survey was combined with micro data from the 1972-73 CES interview survey in order to generate a data set combining demographic data and highly detailed expenditure information.[10] With

these data plus the definition of the sales tax base in each state, a three-step procedure was used to estimate taxable consumption in each state. In the first step, total consumption was estimated as a function of a series of demographic and economic variables available from the CES. In the second step the proportion of total consumption subject to taxation in each state was estimated as a function of total consumption and a set of demographic variables.[11] In the final step these proportions are multiplied by total consumption in order to calculate total taxable consumption. The coefficients of the two regressions are then used in a sales tax model within TRIM to calculate total taxable consumption for each filing unit. By multiplying these amounts by each state's general sales tax rate and, where appropriate, local sales tax rates, sales tax liabilities are calculated. Based on total income and family size, the model also calculates the appropriate amount from the optional sales tax tables; in the federal tax model, these amounts are used to determine the federal itemized deduction for state and local sales taxes.

Advantages of the Models

Although our models have a great deal in common with a number of others, in particular those of the Census Bureau and the Urban Institute, they have a number of unique features that make them especially powerful as tools for analyzing the tax burdens on the poor.[12] With the exception of the Brookings and the Phares models, no others calculate tax liabilities for all major federal, state, and local taxes. Although our models are currently restricted to only two states, we have been able to model the major taxes within these states with a much higher degree of accuracy

than is found in other models. For example, to determine both local property and sales tax incidence, the Brookings model (Pechman and Okner, 1974; Pechman, 1985) uses federal itemized deduction amounts from the MERGE file. A comparison between the sales tax generated using the IRS look-up tables, the method used by most itemizers to determine their sales tax deduction, and the sales tax generated by our model reveals a substantial underestimate of taxes paid using the look-up tables. For nonitemizers, which include almost all of the poor, the Brookings model is forced to allocate the remaining revenue from each tax proportionally to an estimate of the money consumption of each taxed item. This implicitly assumes that all nonitemizers face identical tax rates. Our earlier work (Chernick and Reschovsky, 1982) demonstrates that ignoring variations in effective tax rates and bases both within and across states can have a very dramatic impact on the tax burdens faced by the poor. None of the models mentioned above, including ours, is designed to provide long-run equilibrium responses to specific tax policy changes. Thus the models can not be described as fully behavioral. Our models and the Brookings model in particular are, however, designed to allow a wide range of tax incidence assumptions. This flexibility is specially important in modeling state and local taxes.

Our models differ from others in several other dimensions. Of particular importance is the fact that state and local tax liabilities calculated in the state income, property, and sales tax models are used in calculating each filing unit's itemized deductions. This results in much more accurate estimates of state and local tax deductions than, for

example, the Urban Institute model or the Phares work, and consequently produces more accurate assessments of the impact of eliminating these deductions.

Special Problems

Using cross-sectional data to analyze tax burdens at the lower end of the income distribution poses a number of problems. For example, in our data we found a number of families and individuals with levels of annual housing consumption that were higher than their reported income. A number of analysts (Pechman, 1985; Okner and Bawden, 1983) exclude the lowest income groups, on the grounds that income for many of these units includes a large negative transitory component, and is only temporarily low.

For families with incomes that were very close to reported rent levels, we assume that underreporting of income or noncash and gift components were important, and adopt an imputation procedure. For families or unrelated individuals with reported income less than 75 percent of the poverty level, and with annual rent more than 85 percent of reported income (or for homeowners, housing values more than 10 times income), imputed income is set at the income that lowers the rent burden to 0.85, or at a level of income equal to three-quarters of the poverty line, whichever is less. Likewise, for owners, imputed income is set so that it lowers the value/income ratio to 10, or at a level equal to three-quarters of the poverty line.[13]

Tax Burdens on the Poor

There are about 184,500 families or unrelated individuals below the poverty level in Massachusetts and about 685,800 in New York State. (For convenience we shall refer to unrelated individuals as families of one). These numbers equal 8.3 percent of all families in Massachusetts and 10 percent of all families in New York. There are also an additional 8.3 and 14.3 percent of families with incomes between the poverty line and one and half times the poverty line in Massachusetts and New York, respectively. Detailed information on the tax burdens of those near the poverty line are presented in Tables A.1, A.2, in the Appendix.

Table 1 shows that the average poor family in Massachusetts faces an average annual tax liability of $543 and a tax burden (tax liability divided by total money income) of 10.1 percent. In New York State, which has both a higher state income tax and higher local sales and income taxes, the average annual tax liability in $940, and the average tax burden is 14.7 percent. These averages mask large variations in tax burdens for those below the poverty line. In Massachusetts, although all families pay some sales tax and three-quarters of all poor families face a property tax burden, only 30 percent of poor families pay payroll taxes, and only a small proportion pay either federal or state income taxes. The situation in New York is similar. The proportion of New York's poor population that pays payroll taxes and state income taxes is slightly higher than in Massachusetts, while the proportion facing positive property tax burdens is somewhat lower.

Families face a zero property tax burden for several reasons. In the case of multiple families living in the same household, as discussed above, secondary and subfamilies are assigned a zero tax liability in our

Table 1

Tax Liabilities and Tax Burdens of Families and Unrelated Individuals below the Poverty Line, 1986

	Number of Poor Families[a] Paying Taxes	% of All Poor Families[a]	Average Tax Liability	Tax Burden[b]
	MASSACHUSETTS			
All taxes	184,500	100.0%	$ 543	10.1%
1. Federal income tax				
a. With positive tax liability	14,100	7.6	170	2.8
b. With negative tax liability	22,700	12.3	-245	-3.6
2. F.I.C.A.	54,400	29.5	179	3.1
3. State income tax	1,500	0.8	151	1.5
4. State sales tax	184,500	100.0	85	1.5
5. Local property tax	141,500	76.7	550	10.3
	NEW YORK			
All taxes	685,800	100.0	940	14.7
1. Federal income tax				
a. With positive tax liability	66,700	9.7	305	3.2
b. With negative tax liability	92,200	13.4	-280	-3.4
2. F.I.C.A.	261,200	38.0	253	3.8
3. State income tax[c]	52,600	7.6	108	0.8
4. State sales tax[c]	685,800	100.0	325	5.0
5. Local property tax	486,300	70.9	731	11.7

Source: Massachusetts and New York tax simulation models. See text for description of data.

[a]Unrelated individuals are considered to be one-person families.

[b]Defined as tax liability as a percentage of money income.

[c]Includes local income and sales taxes.

model. In addition, families that pay no cash rent or live in public housing are assumed to pay no property tax.

A frequency distribution analysis of the tax liabilities simulated by our models shows that 25 percent of all Massachusetts families with incomes below the poverty level face total tax burdens from the five taxes of less than 4 percent; 34 percent of the poor face tax burdens between 4 and 10 percent, 20 percent face burdens between 10 and 15 percent, while the remaining 21 percent of the poor bear tax burdens of 15 to 50 percent of money income. In New York, higher average tax burdens on the poor are also reflected in the distribution of burdens. Only 9 percent face burdens below 4 percent, 30 percent of the poor face burdens between 4 and 10 percent, 12 percent face burdens of 10 to 15 percent, while almost 40 percent pay more than 15 percent of their income in taxes.

The data in Table 1 show that in both states the largest source of the tax burden on the poor comes from the property tax. Among those facing a property tax burden, the average tax liability is $550 in Massachusetts and $731 in New York, and the average burden is 10.3 and 11.7 percent in Massachusetts and New York, respectively. We also consider the sensitivity of these results to the assumption that tenants bear 75 percent of the burden of the property tax, by testing a full forward shifting (100 percent) model, and a 25 percent forward shifting model. The results of this sensitivity analysis, which are reported in the tables show that if tenants bear only 25 percent of the property tax burden on their housing units, average tax burdens on all tenants are dramatically reduced. The reduction is particularly strong for the lowest-income tenants. For example, in Massachusetts, the average tax

burden faced by the lowest-income tenants is reduced by 66 percent. Since about 70 percent of poor families are renters, this means that the overall property tax burden on the poor would be reduced by slightly less than 50 percent. If tenants are assumed to bear the full burden of the residential property tax, the average property tax burden on the poor increases by about 10 percent. Thus, under a wide range of shifting assumptions, property tax burdens on the poor compose a significant portion of the overall tax burden on the poor.

The federal income tax plays a relatively small part in the total tax burden of the poor. In both states less than 10 percent of all poor families (Table 1, row 1b), face a positive federal income tax liability. When we restrict the sample to families with earnings, our models show that about 24 percent of poor families face positive federal income tax liabilities. For over 12 percent of poor families the Earned Income Tax Credit is large enough to result in a negative income tax liability which averages $262 (row 1b). In Massachusetts almost all poor people are exempt from the state income tax--less than 1 percent of all poor families are required to pay it (row 3). In New York under 8 percent of poor families face a positive state income tax liability, but the average tax burden of those who do pay it is only 0.8 percent.

The data in Table 2 indicate that about 80 percent of the Massachusetts families below the poverty line and about 65 percent of the New York families below the poverty line consist of single individuals. Table 2 also shows that among the nonaged poor in both states, married couples face tax liabilities that are considerably higher than liabilities of single individuals. This pattern occurs for three major reasons.

Table 2

Tax Liabilities and Tax Burdens of the Poor
by Family Type and Age, 1986

	Number of Poor	% of All Poor	Average Tax Liability	Tax Burden[a]
		MASSACHUSETTS		
Nonelderly				
Single	99,700	54%	$ 532	10.2%
Head of household	14,400	8	440	5.7
Married couples	18,900	10	815	10.8
Elderly				
Single	49,000	26	495	10.9
Married couples	2,500	1		
Total	184,500	100	543	10.1
		NEW YORK		
Nonelderly				
Single	355,200	52	789	13.3
Head of household	35,300	5	933	11.4
Married couples	146,800	21	1,631	18.6
Elderly				
Single	85,300	12	524	12.0
Married couples	63,300	9	740	13.9
Total	685,800	100	940	14.7

Source: Massachusetts and New York tax simulation models. See text for description of data.

[a]Tax burdens are defined as total taxes as a percentage of money income.

First, couples are almost twice as likely as singles to have some earnings (50 as compared to 30 percent in Massachusetts, and 64 to 33 percent in New York). Higher earnings result in larger federal income and payroll tax liabilities. Second, poor couples have total money incomes that average about $2,500 more than the incomes of poor nonelderly individuals. Higher incomes imply higher levels of consumption and correspondingly higher sales tax liabilities. Finally, higher incomes and, by definition, larger family sizes result in more housing consumption and thus higher property tax liabilities. The average property tax liability of non-elderly married couples is $681 in Massachusetts and $965 in New York. These liabilities are 30 to 50 percent higher than those of nonelderly single individuals. In addition, a larger proportion of single individuals as compared to couples (29 percent compared to 15 percent) pay no property tax, because singles are more likely to live in multiple-family households.

In evaluating the economic status of the poor, it is reasonable to focus on their after-tax incomes. Table 3 provides data on the before- and after-tax income of the poor. The last column in Table 3 shows that in both states the average family below the poverty line has a before-tax income of about 73 percent of the poverty level, and an after-tax income that is about 65 percent of the poverty level. The average poor family's after-tax income is over $2,900 below the poverty line. For married couples, after-tax income is nearly $4,200 below the poverty line.

If after-tax income rather than before-tax income were used to define pvoerty status, the number of poor families would grow by 20 percent in Massachusetts and by 34 percent in New York. The largest increase in

Table 3

Income Characteristics of Families and Individuals below the Poverty Line, 1986

	Single	Head of Household	Married Couples	Total
		MASSACHUSETTS		
Total money income	$ 5,176	$ 7,697	$ 7,507	$ 5,643
Total taxes	518	440	793	543
After-tax income	4,658	7,257	6,714	5,100
Families with after-tax income below poverty line	174,400	19,100	27,300	220,900
Money income as a % of poverty line	76	77	71	75
After-tax income as a % of poverty line	68	72	63	68
After-tax amount below poverty line	2,336	3,151	4,169	2,612
		NEW YORK		
Total money income	5,635	8,198	7,738	6,411
Total taxes	738	933	1,363	940
After-tax income	4,897	7,265	6,375	5,472
Families with after-tax income below poverty line	572,400	49,200	296,400	918,000
Money income as a % of poverty line	72	76	70	72
After-tax income as a % of poverty line	62	71	61	62
After-tax amount below poverty line	2,799	2,929	4,389	3,292

Source: Massachusetts and New York tax simulation models. See text for description of data.

poverty would be among single-parent households and among married couples. In Massachusetts the increase among these two groups would be 32.5 percent and 28 percent, respectively. In New York the incidence of poverty in these groups would increase by about 40 percent. However, it should be recognized that the post-tax, post-transfer concept of income described above should also include in-kind income. Depending on the method of valuation, the inclusion of in-kind income has been estimated by the Census Bureau to reduce poverty rates by as much as 33 percent. Thus, the inclusion of in-kind income would substantially offset the increase in poverty on the post-tax basis computed above.

Tax Burdens in the Long Run

A number of authors (Pechman, 1985; Davies, St.-Hilaire, and Whalley, 1984) have argued that tax-incidence computations would lead to less regressive patterns if income were measured over a longer accounting period than one year. This is particularly true for taxes whose incidence is determined primarily by the uses of income, as we assume to be the case for the sales tax and the residential property tax. Analysts typically ascribe the high annual tax burdens for the lowest income classes to the large transitory component of measured income for these groups, and frequently exclude this group from the analysis. Since consumption is more nearly proportional to permanent income than to annual income, the average tax burden for consumption taxes borne by low-income families will be lower as the accounting period is lengthened.

To compute longer-run average tax burdens for families who are poor in any one year, one must know the variance of transitory income around permanent income at different levels of permanent income. Using panel

data from the National Longitudinal Survey for intact families with earnings, Gottschalk (1982) finds that of those families that are earnings-poor in a given year, 53 percent were earnings poor in more than half the survey years from 1967 to 1975. Eliminating transitory fluctuations, over 78 percent of the sample are poor in more than half the survey years, while almost half have nontransitory earnings below the poverty line in all of the survey years. He also finds that the transitory variation in earnings is greatest in the lowest and highest deciles, but smallest in the second decile of the earnings distribution. Levy (1977) found even less mobility than Gottschalk, using a sample that included female-headed families. These studies suggest that families with incomes below the poverty line in any given year are highly likely to have relatively low incomes over a more extended period.

Given the cross-sectional nature of our data, we cannot address adequately the lifetime versus current income question. However, the evidence presented above on the duration of low incomes suggests that a rough approximation of longer-run tax burdens could be obtained by examining average tax burdens for a larger slice of the low end of the income distribution, on the grounds that even for those who are temporarily below the poverty line, most will not rise very high up in the income distribution over a longer time period. We chose, arbitrarily, the bottom three deciles, and computed an average tax burden for this group.

In Massachusetts, the average tax burden for families and unrelated individuals in the lowest three income deciles is 11.4 percent, as compared to a tax burden of 10.1 percent for all families and individuals

below the poverty line. In New York, the average tax burden for the bottom three deciles is 14.7 percent, exactly equal to our estimated tax burden for those below the poverty line. It should be recalled that our estimates of tax burdens on the poor are reduced because we arbitrarily impute additional income to families with very low reported incomes (see above). Therefore, the approximate equality of tax burdens on the poor and on the lowest three deciles is somewhat misleading. If we restrict our analysis to the third decile, to avoid this problem, we find an average tax burden of 15.4 percent in New York and 13.5 percent in Massachusetts.

These results suggest that longer-run tax burdens for many poor families are not appreciably lower than the annual estimates presented in our analysis. Since taxes are paid out of current income, high annual burdens are a relevant public policy concern. Our analysis suggests that such a concern would only be reinforced by using a longer time period.

THE IMPACT OF FEDERAL TAX REFORM ON THE TAX BURDENS OF THE POOR

A major objective of both the Reagan administration's tax reform proposals and the House- and Senate-passed Tax Reform Acts of 1985 and 1986 is to eliminate any federal income tax burden on families with incomes below the poverty line. Although the majority of families below the poverty line do not pay any federal income taxes under current law, a significant minority do face federal income tax burdens. The reason why some poor people must pay federal income taxes is easy to understand. Federal adjusted gross income averages only 21 percent of the money income of families below the poverty line. However, for those families

whose major sources of income are subject to taxation (primarily earnings), the income level at which they begin to face a tax liability (the tax threshold) is frequently below the poverty line. Calculations by the Joint Committee on Taxation (1984) indicate that the income tax threshold has been below the poverty line since 1981. The committee staff estimated that the tax threshold was 17.2 percent below the poverty line in 1984, and will fall to 21.5 percent below the poverty line in 1986. In 1986 a family of four with earnings at the poverty line will face a federal income tax liability of $380.

The income tax threshold has fallen below the poverty level because, although the poverty line is indexed to the rate of inflation, the personal exemption amount and the zero bracket amount (the standard deduction) were not changed between 1978 and 1985. Beginning with the 1985 tax year both the personal exemption and the zero bracket amount (ZBA) are indexed to the inflation rate. Although the Tax Reform Act of 1984 increased the credit percentage, maximum credit, and income limit for the earned income tax credit, these amounts have not been indexed. This failure to index the Earned Income Tax Credit implies that up through 1986 the income tax threshold will continue to fall further and further below the poverty line. For 1987 and beyond, the 1986 tax reform bill alleviates this problem by indexing the Earned Income Tax Credit.

Both the Reagan and the House and Senate tax reform plans and the final bill signed by the president will raise the income tax threshold by increasing the amounts of the personal exemption, the ZBA (or standard deduction), and the Earned Income Tax Credit. The data in Table 4 allow us to compare the average poverty line with the income tax threshold

under current law, the Reagan plan, and the House bill for a variety of different family types. The calculations in Table 4 are based on the assumption that all income is subject to taxation and that, for families eligible for the Earned Income Tax Credit, all income is in the form of earnings.

The data in Table 4 indicate that with the exception of married couples where both spouses are over the age of 65, the federal income tax threshold is lower than the poverty line. Both the Reagan and the House tax reform proposals increase the income tax threshold for every type of family. In all cases, the tax thresholds are higher under the House tax reform bill than under the Reagan tax plan. Under the Reagan plan, the tax threshold is raised above the poverty line for all types of families except for single individuals. The House plan raises the tax threshold above the poverty line for all taxpayers except for nonelderly single individuals. Under the Senate plan, tax thresholds are slightly higher than under the House plan, with the maximum difference equal to $200 for couples and heads of households.

In relation to the poverty line, the tax threshold under the House bill would be highest for elderly couples, a full 47 percent above their poverty level. Elderly couples are the only group whose tax threshold is currently above the poverty level, and though the double exemption for the elderly would be eliminated under both the Senate and House bills, their favored position would be continued by the addition of $600 to the ZBA for each elderly or disabled person.

Single parents also receive relatively large increases in their tax thresholds under both tax reform proposals. The House Ways and Means Committee (U.S. House of Representatives, 1985) provides two explanations

Table 4

Poverty Levels and Federal Income Tax Thresholds

Type of Family	Weighted Average Poverty Levels	Current Law	Reagan Proposal	House Bill
Single, nonelderly				
ZBA[a]		$2,580	$ 2,900	$ 2,950
Exemption		1,080	2,000	2,000
	$ 5,785	3,560	4,900	4,950
Single, elderly				
ZBA		2,580	2,900	3,550
Exemptions		2,160	2,000	2,000
	5,387	4,740	4,900	5,550
Couple, nonelderly, No children				
ZBA		3,670	4,000	4,800
Exemptions		2,160	4,000	4,000
	7,522	5,830	8,000	8,800
Couple, elderly,[b] No children				
ZBA		3,670	4,000	6,000
Exemptions		4,320	4,000	4,000
	6,822	7,990	8,000	10,000
Single parent, Two children				
ZBA		2,480	3,600	4,200
Exemptions		3,240	6,000	6,000
Without EITC[c]	8,775	5,720	9,600	10,200
With EITC		8,499	11,344	11,704
Couple, Two children				
ZBA		3,670	4,000	4,800
Exemptions		4,320	8,000	8,000
Without EITC	11,347	7,990	12,000	12,800
With EITC		9,575	12,784	13,264

[a]Zero bracket amount.

[b]Both spouses elderly.

[c]Earned Income Tax Credit.

for not raising the tax threshold of single individuals above the poverty line. First, the committee argues that additional increases in the standard deduction for single individuals will result in a significant marriage penalty for two single individuals who marry. Second, the committee argues that because over two thirds of all single individuals with incomes under $10,000 are under the age of 25, many of them probably receive significant economic support from other family members. In addition, many single individuals over the age of 25 live with other individuals, and presumably share household costs. The committee thus argues that comparing the income of single individuals to the poverty line for single individuals does not provide an accurate picture of their economic well-being. It can also be argued that increasing the personal exemption or the ZBA for the poor is not a very efficient mechanism for reducing their tax burdens, as most of the benefit of such increases goes to individuals with moderate and high incomes.

The data from Massachusetts and New York merely confirm the conclusions that were drawn from Table 4. In both states, under the Reagan plan, the number of families or individuals facing positive federal income tax liabilities in 1986 would fall by about 40 percent. The average positive tax liability would decline by $92 in Massachusetts and $42 in New York. As expected, most of those facing positive tax liabilities under the Reagan plan are nonelderly single individuals. The results for the House bill are very similar to those under the Reagan plan.

Table 5 illustrates the impact the proposed changes in the Earned Income Tax Credit will have on poor and nearly poor families in Massachusetts and New York. As expected, both the number of families

Table 5

Impact of Federal Tax Reform on Families Receiving a Refund under the Earned Income Tax Credit (REITC)

	Current Law	Reagan Plan	House Bill
	MASSACHUSETTS		
Income below poverty level			
Families receiving REITC	22,700	23,300	23,900
Average REITC	$245	$336	$342
REITC as a % of income	3.6%	4.8%	4.9%
Income between 100% and 150% of poverty level			
Families receiving REITC	17,700	21,200	22,300
Average REITC	$253	$389	$387
REITC as a % of income	3.0%	4.1%	3.7%
	NEW YORK		
Income below poverty level			
Families receiving REITC	92,200	102,000	100,900
Average REITC	$280	$367	$369
REITC as a % of income	3.3%	4.3%	4.3%
Income between 100% and 150% of poverty level			
Families receiving REITC	56,800	78,400	77,600
Average REITC	$295	$323	$325
REITC as a % of income	2.2%	2.5%	2.5%

Source: Massachusetts and New York tax simulation models. See text for description of data.

eligible for a refundable Earned Income Tax Credit and the amount of the average refundable credit are increased under both tax reform plans. Under current law, the Earned Income Tax Credit is equal to 11 percent of the first $5,000 of earned income, minus 12 2/9 percent of the excess of earned income over $6,500. If this credit exceeds the taxpayer's positive tax liability, the excess is refunded to the taxpayer. To be eligible for the credit, the taxpayer must file jointly or as a head of household, and must have a child living in the household. For those below the poverty line, the refund credit under both reform plans would increase to nearly 5 percent of money income. For about 11 percent of poor taxpayers who receive refundable credits, their refund is larger than the sum of FICA taxes and all state and local taxes, thereby eliminating their overall tax burden. Under the Reagan and the House tax reform plans, the proportion of poor recipients of the refundable credit whose overall tax liabilities are reduced to zero increases to 13 and 15 percent respectively.

Recent evidence suggests that at least 80 percent of those eligible for the earned income tax credit take advantage of the credit.[14] Therefore our simulation results, which are based on the assumption that all eligible taxpayers actually take the credit, are representative of the full impact of the changes in the credit.

THE DISTRIBUTIONAL IMPACT OF RECENT FEDERAL INCOME TAX CHANGES

The elimination of most poor families from the federal tax rolls under the proposed tax reforms has met with near universal praise. However, some historical perspective on the relative benefits going to

families at the low end of the income distribution may be gained by comparing the distribution of the proposed tax cut to previous reductions in the personal income tax. There were five major individual tax cuts between 1964 and 1985. As pointed out by Okner and Bawden (1983), the cuts enacted until 1975 were progressive, most of their benefits going to low- and middle-income taxpayers. The 1978 cut reversed this pattern by providing roughly equal percentage cuts for all taxpayers. Under a progressive tax system, such a cut provides larger increases in after-tax income to those at the upper end of the income distribution. The 1981 Economic Recovery Tax Act (ERTA) continued in this direction by providing equal percentage reductions in taxes at all income levels, except for those with taxable incomes exceeding $60,000. This group benefited from an additional reduction in the top marginal rate on income from capital from 70 to 50 percent. ERTA also provided for the full indexing of the personal income tax structure starting in 1985.

While there are a number of ways to compare the progressivity of alternative tax structures, some of which give contradictory results, a frequently used approach is to compute the change in effective tax rates across income classes. This is equivalent to comparing the change in after-tax income, as a percentage of income, across income classes. If the cut in effective rates is greater at the bottom end of the income distribution, the tax cut is progressive. We compare the tax structure in 1980, the last pre-Reagan tax year, to 1986 current law and to the Senate-passed tax reform proposal. To hold constant the underlying income distribution, we simulate each tax regime using our 1986 aged data base for New York and Massachusetts.

The first column of Table 6 shows the change in effective tax rates by income decile between 1980 and 1986, while the second shows the change in rates from current law to rates which would result if the Senate tax reform plan is adopted. The third column combines these two changes, to show the overall impact effective tax rates of actual and proposed changes in the structure of the personal income tax during the Reagan Administration. The first column shows the regressive effect of the 1981 tax act, with the change in effective tax rates nearly six times as great for the top two deciles as the bottom two. The second column repeats this pattern, though more moderately, with effective tax rates under the Senate plan declining more for higher income groups than for the poor. The third column shows that, under the Senate proposal, the cumulative impact on the progressivity of the federal tax structure from 1980 to 1986 would be quite substantial. The decline in effective rates, if the Senate bill were to become law, would be nearly eight times as in high in the top quintile as the bottom quintile of the income distribution.

Because our simulation model does not include the impact of reductions in tax shelters and the expansion of the alternative minimum tax under the Senate proposal, the second and third columns of Table 6 overstate somewhat the decline in effective tax rates for high-income taxpayers under the Senate plan. Nonetheless, the Senate and the House Bills, which have been characterized as distributionally neutral, do nothing to offset the decline in progressivity of the tax system that occurred during the first half of the 1980s. Thus the most recent efforts to reform the tax system, by raising the tax threshold for poor families and providing "distributionally neutral" tax cuts for all other income classes, still leave low-income families worse off relative to

Table 6

Change in Effective Federal Income Tax Rates under the 1980 and 1986 Tax Laws and the Senate 1986 Tax Reform Proposal, by Income Decile (1986 income level)

Income Decile	Change in Effective Tax Rate		
	1980-1986	1986: Senate	1980: Senate
	MASSACHUSETTS		
Lowest	-0.23	-0.30	-0.53
Second	-0.89	-0.55	-1.44
Third	-1.85	-0.61	-2.46
Fourth	-3.05	-1.18	-4.23
Fifth	-3.81	-1.09	-4.90
Sixth	-3.84	-1.26	-5.10
Seventh	-4.54	-1.66	-6.20
Eighth	-5.03	-2.15	-7.18
Ninth	-5.75	-2.16	-7.91
Highest	-6.20	-3.39	-9.59
All deciles	-3.52	-1.43	-4.95
	NEW YORK		
Lowest	-0.16	-0.19	-0.35
Second	-0.50	-0.30	-0.80
Third	-1.60	-0.90	-2.50
Fourth	-2.60	-1.20	-3.80
Fifth	-3.40	-1.20	-4.60
Sixth	-3.80	-1.30	-5.10
Seventh	-4.40	-1.70	-6.10
Eighth	-4.70	-1.90	-6.60
Ninth	-5.20	-1.80	-7.00
Highest	-3.20	-1.30	-4.50
All deciles	-3.20	-1.30	-4.50

Source: Massachusetts and New York tax simulation models. See text for description of data.

high-income taxpayers than in the 1970s. This point is strengthened by the fact that our base of comparison, 1980 tax law, itself reflects tax cuts in 1978 which provided larger tax reductions for higher-income taxpayers.

CONCLUSIONS

Despite a broad consensus among policymakers that people with incomes below the poverty line should pay little or nothing in taxes, most poor people do in fact face significant tax liabilities. From our analysis of five major taxes--the federal income and payroll taxes, state and local income and general sales taxes, and the local property tax--in two states, we conclude that most poor families and unrelated individuals pay substantial amounts in taxes. We have calculated that the average tax burden faced by the poor is over 10 percent in Massachusetts and close to 15 percent in New York State. In Massachusetts 4 out of 10 poor families face total tax burdens in excess of 10 percent of their money incomes, and 12 percent face burdens of more than 20 percent of income. In New York 60 percent of poor families face burdens of over 10 percent, and nearly 25 percent face tax burdens over 20 percent of income.

The single most important source of the high tax burden on the poor is the local property tax. Although some poor people escape paying property taxes because they live in a household with a nonpoor household head or live in public housing, over 70 percent of poor families face an average property tax burden of over 10 percent. This conclusion is based on what we believe to be the reasonable assumption that poor owner occupants bear the full burden of the tax, and that landlords are able to shift three-quarters of their property tax liability to tenants.

One of the objectives of federal tax reform is to eliminate the federal income tax burden on the poor. Both the president's tax reform proposals and the House and Senate tax reform bills of 1985 and 1986 would substantially reduce the number of poor families facing positive income tax liabilities, and would increase the number of poor who actually receive an Earned Income Tax Credit larger than their income tax liability. Under these proposals, most of the poor people who would continue to face positive income tax liabilities will be nonelderly taxpayers filing single returns. Despite the favorable treatment of many poor families, a broader distributional perspective shows that all of the plans would leave low-income families worse off relative to high-income families than in 1980.

Taxation, particularly at the state and local level, places a heavy burden on most people below the poverty line. Even if federal tax reform completely eliminated both the federal income tax and the FICA tax burdens on all families below the poverty line, a large number of the poor would still face tax burdens in excess of 10 percent of their money incomes, primarily from sales, excise, and property taxation.

Although many state governments, including those of Massachusetts and New York, have taken steps to reduce both property and income tax burdens on their poor residents, high tax burdens remain. For example, since 1980 Massachusetts has allowed renters a state income tax deduction of one-half of all rental payments (up to $2,500). Although this deduction is intended to reduce the property tax burden on tenants, it has no impact on the poor because under current law they are exempted from income taxation because of their low-income levels. Similarly, New York

has recently implemented a major income tax reform which includes a substantial increase in the low-income credit. New York also has a limited income tax credit for renter households. However, neither of these credits is refundable, and thus they provide little tax relief for many low income renters.

The major reason for high property tax burdens among the poor is the high proportion of total income that many poor people must pay in order to find housing. For example, a survey in November 1985 indicated that nearly three-quarters of Massachusetts AFDC recipients not living in public housing had to pay rents that were in excess of 50 percent of their income, and nearly one-quarter of AFDC recipients faced rent burdens of over 80 percent of income. These data suggest that probably the only effective way of reducing property tax burdens is to initiate policies aimed at reducing the extraordinarily high rent burdens faced by many poor families.

One effective federal policy to reduce the overall tax burden on the poor may be a refundable income tax credit that is available to all poor families, including those who have no earnings. Approximately two-thirds of all poor families and unrelated individuals are not eligible for the current Earned Income Tax Credit. Unless federal policy begins to target those poor people without earnings, the tax burdens faced by most of the poor will remain high.

Notes

[1]See a report prepared by the staff of the Joint Committee on Taxation (U.S. Congress, Joint Committee on Taxation, 1984), and a report prepared by the staff of the House Ways and Means Committee (U.S. House, of Representatives, Committee on Ways and Means, 1984).

[2]A brief review of the evidence on labor supply and saving behavior is provided by Pechman (1985).

[3]With linear demand and supply curves, the ratio of the change in rent to a change in the property tax is given by $\phi_s/(\phi_s + \phi_d)$, where ϕ_s and ϕ_d are the price elasticities of supply and demand. With a supply elasticity for low-income housing of 2.2 (Grieson, 1973) and a demand elasticity of -0.22 (Friedman and Weinberg, 1981), over 90 percent of the tax would be shifted forward to tenants.

[4]The literature on the incidence of the corporate income tax is extensive. For two examples of analyses that suggest that the tax is shifted either forward or backward, see Krzyzaniak and Musgrave (1963) and Feldstein (1974).

[5]The data were aged to 1982 using the following demographic and economic aging procedures. Demographic aging was accomplished by changing the population weights to correspond with the changes in population size in each of 10 age classes. Income was aged by applying different percentage changes for income from each of six sources--wages and salaries, self-employment income, dividends, interest and rents, social security, supplemental security income (SSI), and Aid for Families with Dependent Children. The percentages were determined such that the product of the population percentage increase multiplied by the income percentage

increase was equal to the overall percentage increase in income from that source. Economic aging between 1982 and 1986 was accomplished by separately inflating each source of income. The inflation factors are based on state-specific data on per capita personal income by source. The data for 1986 are from the December 1985 control forecast of Data Resources Incorporated.

[6]The Massachusetts sample of the SIE consists of 3,867 families and 10,529 persons, and the New York sample consists of 4,213 families and 12,438 persons.

[7]Data on the proportion receiving long-term capital gains or losses, and the average amount of gains or losses, by income class and age group, were taken from the 1981 IRS Statistics of Income. Individual filing units were assigned gains or losses on a random basis so as to replicate these proportions. Among those assigned capital gains or losses, a distribution within a given age and income class was imputed to the sample by multiplying the standard deviation of gains within each cell by a random variable with standardized normal distribution, and adding the resulting product to the mean gain or loss in each cell. The standard deviation by cell came from Table J, 1981 IRS Statistics of Income.

[8]The two-earner credit and the elderly credit are calculated in a straightforward fashion from data available in the SIE. The calculation of the credit for work-related child care expenditures is based on a three-stage estimating procedure that first determines whether a filing unit is eligible for the credit, then estimates, using a logit regression, the probability of that filing unit (characterized by its income and demographic composition) having eligible child care expenditures, and finally, estimates the amount of the allowable deduction.

The econometric estimates of work-related child care expenditures are based on data from the Michigan Panel Study of Income Dynamics.

[9]For a detailed description of the property tax model, see Chernick and Reschovsky (1982) and Reschovsky (1986).

[10]We are currently in the process of reestimating the sales tax using microdata from the 1980-81 Consumer Expenditure Survey.

[11]By using this multi-step approach and estimating expenditure share equations, we guarantee that the adding-up restriction is satisfied. See Deaton and Muellbauer (1980) for further information.

[12]For a description of the Census Bureau model see U.S. Bureau of the Census (1984); for a description of the Urban Institute model, see Sulvetta (1976).

[13]The source of information on rent burdens of low-income families was a recent survey (November 1985) of Massachusetts AFDC recipients. This survey indicated that nearly three-quarters of recipients not living in public housing paid rents that were in excess of 50 percent of their income, and nearly one-quarter of AFDC recipients faced rent burdens of over 80 percent of income.

[14]This estimate was obtained in conversation with Richard Kasten of the Congressional Budget Office, who compared the IRS reported number of Earned Income Tax Credit recipients to the simulated number of recipients using a microsimulation model and a household survey.

References

Advisory Commission on Intergovernmental Relations, (ACIR), 1985. Significant Features of Fiscal Federalism. 1984 Edition. Washington, D.C.: ACIR.

Chernick, Howard, and Andrew Reschovsky. 1982. "The Distributional Impact of Proposition 13: A Microsimulation Approach," National Tax Journal, 35, no. 2 (June), 149-170.

Davies, James, France St-Hilaire, and John Whalley. 1984. "Some Calculations of Lifetime Tax Incidence," American Economic Review, 74, no. 4, 633-649.

Deaton, Angus, and John Muellbauer. 1980. Economics and Consumer Behavior. Cambridge: Cambridge University Press.

Feldstein, Martin. 1974. "Tax Incidence in a Growing Economy with Variable Factor Supply," Quarterly Journal of Economics, 88, no. 4, 551-573.

Friedman, Joseph, and Daniel H. Weinberg. 1981. "The Demand for Rental Housing: Evidence from the Housing Allowance Demand Experiment," Journal of Urban Economics, 9, no. 3 (May), 311-331.

Gottschalk, Peter. 1982. "Earnings Mobility: Permanent Change or Transitory Fluctuations?" Review of Economics and Statistics, 64, 450-456.

Grieson, Ronald E. 1973. "The Supply of Rental Housing: Comment," American Economic Review, 63, no. 3, 433-436.

Harberger, Arnold C. 1962. "The Incidence of the Corporate Income Tax," Journal of Political Economy, 70, no. 3, 215-240.

Ihlandfeldt, Keith R. 1982. "Property Tax Incidence in Owner-Occupied Housing: Evidence from the Annual Housing Survey," National Tax Journal, 35, no. 1, 89-97.

Krzyzaniak, Martin, and Richard A. Musgrave. 1963. The Shifting of the Corporate Income Tax. Baltimore: Johns Hopkins Press.

Levy, Frank. 1977. "How Big is the American Underclass?", Urban Institute Working Paper 0090-1, Washington, D.C., Urban Institute.

McLure, Charles E., Jr. 1981. "The Elusive Incidence of the Corporate Income Tax: The State Case," Public Finance Quarterly, 6, 395-413.

McLure, Charles E., Jr. 1984. Statement presented at a hearing of the House Committee on Ways and Means on Federal Tax Treatment of Low Income Persons, April 12, 1984. Washington, D.C.: U.S. Government Printing Office.

Mieszkowski, Peter, and George R. Zodrow. 1985. "The Incidence of a Partial State Corporate Income Tax," National Tax Journal, 38, no. 4, 479-487.

Minarik, Joseph J. 1984. Statement presented at a hearing of the House Committee on Ways and Means on Federal Tax Treatment of Low Income Persons, April 12, 1984. Washington, D.C.: U.S. Government Printing Office.

Netzer, Dick. 1966. The Economics of the Property Tax. Washington, D.C.: The Brookings Institution.

Okner, Benjamin A., and D. Lee Bawden. 1983. "Recent Changes in Federal Income Redistribution Policy," National Tax Journal, 36, no. 3, 347-360.

Pechman, Joseph A. and Benjamin A. Okner. 1974. Who Bears the Tax Burden? Washington, D.C.: The Brookings Institution.

Pechman, Joseph A. 1985. Who Paid the Taxes, 1966-85? Washington, D.C.: The Brookings Institution.

Phares, Donald. 1981. Who Pays State and Local Taxes? Cambridge, Mass.: Oelgeschlager, Gunn, and Hain.

Reschovsky, Andrew. 1986. "Who Pays Massachusetts' Taxes? The Residential Property Tax." Report to the Special Commission on Tax Reform, Commonwealth of Massachusetts, September.

The President's Tax Proposals to the Congress for Fairness, Growth, and Simplicity. 1985. Washington, D.C.: Government Printing Office, May.

Sulvetta, Margaret B. 1976. "An Analyst's Guide to TRIM - The Transfer Income Model." Urban Institute Working Paper 996-03, Washington, D.C.

U.S. Bureau of the Census. 1984. Current Population Reports, Series P-23, No. 143: After-Tax Money Income Estimates of Households: 1983. Washington, D.C.: U.S. Government Printing Office.

U.S. Congress, Joint Committee on Taxation. 1984. Federal Tax Treatment of Families Below the Poverty Line. Prepared by the Staff of the Joint Committee on Taxation. Scheduled for a hearing before the House Committee on Ways and Means, April 12, 1984. Washington, D.C.: U.S. Government Printing Office.

U.S. House of Representatives, Committee on Ways and Means. 1984. Families in Poverty: Changes in the "Safety Net." Report prepared for use of the Committee by its staff. Washington, D.C.: U.S. Government Printing Office. September 20.

House of Representatives, Committee on Ways and Means. 1985. Tax Reform Act of 1985. Report of the House Committee on Ways and Means on H.R. 3838 together with dissenting and additional dissenting views. Washington, D.C.: U.S. Government Printing Office.

Yinger, John. 1979. "Prejudice and Discrimination in the Urban Housing Market." In Current Issues in Urban Economics, ed. Peter Mieszkowski and Mahlon Straszheim. Baltimore: Johns Hopkins University Press.

Yinger, John. 1985. "Caught in the Act: Measuring Racial Discrimination with Fair Housing Audits." John F. Kennedy School of Government, Harvard University. Mimeo.

Table A.1

Tax Liabilities and Tax Burdens of Families and Unrelated Individuals with Income Between 100% and 150% of the Poverty Level, 1986

	Number of Poor Families[a] Paying Taxes	% of All Poor Families[a]	Average Tax Liability	Tax Burden[b]
	MASSACHUSETTS			
All taxes	184,400	100.0%	$ 941	9.7%
1. Federal income tax				
a. With positive tax liability	45,800	24.8	547	4.5
b. With negative tax liability	17,700	9.6	-253	-3.0
2. F.I.C.A.	65,000	35.2	448	3.7
3. State income tax	40,200	21.8	219	1.7
4. State sales tax	184,400	100.0	103	1.1
5. Local property tax	146,100	79.3	669	7.7
	NEW YORK			
All taxes	764,500	100.0	1,341	12.2
1. Federal income tax				
a. With positive tax liability	203,500	26.2	686	4.6
b. With negative tax liability	56,800	7.4	-295	-2.2
2. F.I.C.A.	279,700	36.6	546	4.0
3. State income tax[c]	201,000	26.3	184	1.2
4. State sales tax[c]	764,500	100.0	366	3.6
5. Local property tax	584,600	76.5	741	7.5

Source: Massachusetts and New York tax simulation models.

[a]Unrelated individuals are considered to be one-person families.

[b]Defined as tax liability as a percentage of money income.

[c]Includes local income and sales taxes.

Table A.2

Tax Liabilities and Tax Burdens of Individuals With Income Between 100% and 150% of the Poverty Level by Family Type and Age, 1986

	Number of Almost Poor[a]	Average Tax Liability	Tax Burden[b]
	MASSACHUSETTS		
Nonelderly			
Single	40,200	$1,098	13.5%
Head of household	15,600	1,347	10.4
Married couples	23,600	2,061	12.3
Elderly			
Single	79,300	568	7.6
Married couples	25,700		
Total	184,400	941	9.7
	NEW YORK		
Nonelderly			
Single	205,600	1,206	13.0
Head of household	49,100	1,961	14.7
Married couples	167,300	2,697	17.4
Elderly			
Single	262,300	524	7.8
Married couples	80,200	1,153	11.6
Total	764,500	1,341	12.2

Source: Massachusetts and New York tax simulation models.

[a]The almost poor are those with income between 100% and 150% of the poverty level.

[b]Defined as a percentage of money income.