
CHAPTER 1

Introduction

Joel Slemrod

The question of tax progressivity – who should bear the tax burden – is a central one for tax policy. It has concerned tax philosophers for over a century, and has often dominated political debate over tax-reform options. The issue was certainly prominent in the U.S. presidential campaign of 1992, during which the Democrats proposed tax cuts for the middle class accompanied by tax increases for the wealthy and certain corporations. The Republicans countered by stressing the economic costs of higher taxes and proposed instead tax cuts on capital gains, which are largely received by upper-income individuals, and (at the Republican convention) an across-the-board tax cut for individuals.

The prominence of the tax progressivity issue puts economists in an uncomfortable position, because we know in our heart that progressivity is not solely an economic question. It is equally a matter of ethics, or moral philosophy, because it involves choosing between situations where some people are better off and others worse off. Economics cannot settle which people are more deserving. Economic reasoning cannot determine whether it is a good idea to take one dollar from a wealthy family in order to give one dollar – or, even more problematically, fifty cents – to a poor family.

Lionel Robbins, in his influential book *An Essay on the Nature & Significance of Economic Science* (first published in 1932), argued persuasively that for such issues the role of the economist should be to lay out the implications of various courses of action, and to let the policy-maker decide among these choices. He then added:

Nor is it in the least implied that economists should not deliver themselves on ethical questions, any more than an argument that botany is not aesthetics is to say that botanists should not have views of their own on the lay-out of gardens. On the contrary, it is greatly to be desired that economists should have speculated long and widely on these matters,

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since only in this way will they be in a position to appreciate the implications as regards *given* ends of problems which are put to them for solution. (Robbins 1946, p. 149)

This conundrum explains why, in a conference devoted to tax progressivity, none of the commissioned papers is devoted directly to just how progressive the tax system should be. Rather, most of the papers are devoted to the inputs that a policymaker needs in order to make an informed decision.

Traditionally, economists have used two different principles for evaluating how the tax burden ought to be allocated: the benefit principle and the ability-to-pay principle. Under the benefit principle, taxes are seen as a quid pro quo for the services government provides to its citizens. From this perspective, the problem of assigning tax burden boils down to assessing how much each citizen benefits from government activity.

As a principle to guide tax policy, the benefit principle runs into two problems. The first is an operational problem. For many important government activities, such as national defense, it is impossible to evaluate how the benefit varies from individual to individual or from group to group. In the case of defense, it is plausible that the benefit is higher for people of higher income and wealth, because they have more to be defended, but the precise relationship is elusive. For this reason, the benefit principle does not provide practical guidance with regard to the tax progressivity question. Second, many people would reject the benefit principle on the fundamental ground that it allows no role for the government in redistributing income. Those that accept such a role would want to assign tax burdens not only to mirror the benefits of government activity, but also with an eye toward the resulting distribution of after-tax income. The benefit principle offers no guidance concerning how to do this.

The ability-to-pay principle does offer such guidance. It posits that tax burdens should be assigned, not on the basis of who benefits from government policy, but instead on the basis of who has the “ability to pay.” Defining that term precisely becomes the problem. It is plausible, but not provable, that a dollar given up in tax entails less sacrifice, the higher is the taxpayer’s income level. Then, if taxing according to ability to pay is interpreted as equalizing the sacrifice due to taxes, taxes should rise with income. However, how fast taxes should rise with income depends on exactly how much sacrifice a dollar of tax causes for people at different income levels, and therein lies the rub. This is impossible to determine, and so the ability-to-pay principle fails as an operational guide to tax progressivity for the same reasons that the benefit principle fails.

The modern approach to evaluating progressivity focuses on the trade-off between the potential social benefit of a more equal distribution of

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income and the economic costs caused by the disincentive effects of the high marginal tax rates required by a redistributing tax system. As Henry Simons stated so elegantly in *Personal Income Taxation*, “Both progress and justice are costly luxuries – costly, above all, in terms of each other” (1938, p. 24). How that trade-off is resolved depends in part on the value society places on a more equal distribution of income, which is not an economic question. But it also depends on more mundane matters which are the bread and butter of economists, and which are the subject of most of this volume.

One of these matters is how to evaluate exactly who bears the burden of any particular tax, a question which is logically prior to assessing how the actual burden stacks up against what it should be. It is well known that who bears the burden of any given tax need not be the same as the person who writes out the check to the Internal Revenue Service. Taxes can be shifted via their influence on market prices, so assessing the true distribution of the tax burden is a delicate and important matter.

The first two papers of this volume address both how to measure the distribution of the tax burden and how the tax burden, measured appropriately, has changed over the past decade, first for federal taxes and then for state and local taxes.

The volume begins with a paper by Richard Kasten, Frank Sammartino, and Eric Toder, all of the Congressional Budget Office. In it they calculate recent trends in federal effective tax rates (ETRs), and separate the changes in ETRs into those due to changes in the tax law and those due to shifts in the composition of income within income groups. They find that overall ETRs have changed very little in the past decade, going from 23.3% in 1980 to a projected 23.2% in 1993. However, the ETR for the highest income percentile has declined 9% over the same period. There have been important changes in the mix of taxes. The effective income tax rate has fallen from 12.3% to 10.9%, effective social insurance–tax rates have grown from 7.2% to 8.9%, effective corporate income taxes have fallen by 20%, and the effective excise tax has risen by 18%.

In the second paper, Gilbert E. Metcalf of Princeton University computes the lifetime tax incidence of the major state and local taxes used in the United States during the 1980s. Using data from the Consumer Expenditure Survey, he shows that over the life cycle, general sales taxes are equally as progressive as state and local income taxes. He argues that while the progressivity of sales taxes did not change between 1984 and 1989, income taxes became less progressive over that five-year period while property taxes became more progressive. The system of state and local taxes is mildly progressive over the life cycle and became slightly more progressive between 1984 and 1989. Finally, eliminating deductibility for sales

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taxes in 1986 appears to have had little effect on the overall progressivity of the tax system.

As I have just argued, at what degree of progressivity the marginal economic cost balances the gain of additional redistribution is ultimately not an economic question. Economists can, however, provide policymakers with a kind of spreadsheet, where policymakers can input their views about the social value of a dollar to a family with income X versus a family with income Y , and out pops the appropriate progressivity. Built into the spreadsheet program is an estimate of the cost of redistribution, a (necessarily simple) model of the economy, and some programming code that finds the ideal trade-off between the costs and benefits of redistributive tax policies.

Because the cost of redistribution and the appropriate model of the economy are both still controversial, different economists will offer different spreadsheets. To put it bluntly, we don't know what the right degree of progressivity is. The next four papers in this volume offer insight into what that spreadsheet program would look like.

One important component of the spreadsheet program is the extent of inequality in pre-tax income. Other things equal, more inequality makes a greater degree of progressivity more attractive. There is a broad consensus that income inequality has been increasing in the last two decades. There is evidence of increased dispersion since the mid-1970s in both the lower and upper tails of the distribution for families and for individuals, and in the distribution of labor income for workers. At least since 1979, inequality has grown both between less and more educated workers and also among apparently similar workers. The increase in inequality among workers cannot be explained simply by shifts in the gender, education, or experience of the work force, and is evident even when the sample is restricted to full-time workers.

A variety of alternative explanations have been offered for the increased inequality. Most attention has been paid to labor market factors, as labor market income accounts for about 70% of family income. Among the "supply" explanations offered are shifts in the size of worker age cohorts and the educational distribution of these cohorts. Among the "demand" explanations offered are shifts in the composition of final output, in the occupational mix within industries, and in skill requirements. All of these explanations for the increased inequality boil down to an increased dispersion of the ability to earn income which is exogenous to individual decisions.

There is, however, an alternative explanation that has strikingly different policy implications. Lindsey (1990) has argued that the sharply reduced marginal tax rates initiated in 1981 induced high-income taxpayers

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to work more hours, report a higher share of their income to the Internal Revenue Service, realize more capital gains, take more compensation in taxable form, and generally substitute taxable income for either nontaxed income or leisure. This argument implies that much of the apparent increase in the dispersion of income in the 1980s does not represent increased dispersion of potential incomes. Instead, it suggests that the high incomes did exist prior to 1981, but in forms that either would not be readily picked up by the standard data sets on income, not be realized income sources, or consisted of potential income consumed in the form of leisure.

If this alternative explanation is correct, the observed increase in inequality does not call for a response of increased tax progressivity. But its validity has not been decisively established. The next two papers add to what we know about this issue.

The paper by Lynn A. Karoly of RAND uses the Census Bureau's Current Population Surveys to examine trends in income inequality, and investigates the role of tax policy, business cycles, family composition, and wage structure. Overall income inequality as measured by the Gini coefficient has risen steadily since a postwar low in 1967–68, with most of the increase occurring in the 1980s.

The paper concludes that tax policy alone cannot explain this trend. Inequality began increasing in the 1970s, whereas tax reforms did not take effect until the early 1980s. Additionally, increased income dispersion occurring in both tails of the distribution cannot be explained solely by high-income taxpayers' supply response to marginal tax-rate cuts. Business cycle explanations also fail because inequality is generally held to be countercyclical, and the increased inequality of the 1980s coincided with business peaks. More convincing explanations are offered by changes in family composition and wage structure. As much as one-third of the rise in inequality may be due to the increasing number of single-parent households; an increasingly divergent wage structure, with rising returns to skilled labor, may also contribute to rising inequality.

The paper by Joel Slemrod of the University of Michigan investigates two related questions – how responsive high-income taxpayers are to changes in tax rates, and whether the recent increase in measured inequality is due to the increased work effort of the rich and greater exposure of their income to taxation. An analysis of both income-tax and wealth data over the past three decades uncovers no evidence that the behavioral responsiveness is large enough to produce an inverse revenue response, and suggests that the growth in inequality is not an illusion caused by behavioral responses to tax changes. A more definitive conclusion will have to wait until the analysis of data from the late 1980s on the labor supply and form of compensation of high-income taxpayers.

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Remember that in the spreadsheet program it is the economic cost of the disincentive effect of high marginal tax rates that limits progressivity. The belief that these costs were very high – what I call “elasticity pessimism” – probably reached a high-water mark in 1980, about the time that the Kemp–Roth tax cuts were beginning to be taken seriously as a policy option.

The view that taxes exact a high economic cost was popularized by Arthur Laffer, but at the time many prominent academic economists argued that such key economic variables as saving, investment, and labor supply were highly sensitive to the bite taken out of their return by taxes. Because the cost of high marginal taxes was high, so the reasoning went, it was appropriate that progressivity be restrained.

The two major tax reforms of the 1980s, while playing havoc with long-term planning, provide a wonderful opportunity to re-assess the elasticity pessimism that flourished in 1980. Thus it is important that we carefully assess the record of the past decade. My own reading of this evidence is that the 1980 brand of elasticity pessimism was overstated (Slemrod 1992); the 1980s have strengthened the case that taxes can exert a powerful influence on the timing of economic activity and the financial and legal structuring of economic activity, but have lowered our best estimate of the tax responsiveness of real variables such as labor supply and saving. The best example of the former is the enormous increase in 1986 in long-term capital gains realizations, clearly a response to the increased taxation on capital gains due in 1987. A good example of the latter is the continued decline of the personal savings rate in the face of lower tax rates and special incentives to save. The next paper in this volume reconsiders the evidence on the important question of the responsiveness of labor supply to taxation, and explores its policy implications.

In that paper, Robert Triest of the University of California at Davis uses estimates of labor supply determination to quantify the trade-off between equality and efficiency. He computes the efficiency cost of increased progressivity achieved by increasing top tax rates and either expanding the earned income credit, offering a general refundable tax credit program, or increasing the value of the personal exemption. Although earlier studies suggested large efficiency costs, Triest finds relatively small efficiency costs. For example, a \$1 increase in the earned income credit has an efficiency cost of less than \$1.20 for the labor supply parameters Triest finds most plausible. Other ways of increasing progressivity have larger efficiency costs, as do estimates based on other labor supply parameters.

Next, John Karl Scholz of the University of Wisconsin uses data from the 1983 and 1989 Survey of Consumer Finances to test the responses of portfolios to the Tax Reform Act of 1986 (TRA). He finds that although

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overall demand for tax-exempt bonds increased and ownership of these bonds was concentrated in high marginal tax-rate households, there were no sharp changes in ownership patterns after TRA despite the steep reduction in marginal tax rates. Scholz finds evidence to support the “dividend clientele” hypothesis: that high marginal tax-rate households invest in low-dividend equities while low marginal tax-rate households invest in high-dividend equities. He also documents a sixfold increase in home-equity lines of credit, consistent with the fact that TRA removed the tax-deductible status of all but home-equity debt.

The next two papers address perennially vexing issues in progressivity: capital gains and the corporate income tax. Because such a large fraction of the taxable income of affluent taxpayers is capital income, understanding the economic impact of our peculiar way of taxing it is crucial to questions of progressivity.

Michael Haliassos and Andrew B. Lyon, both of the University of Maryland, measure the distribution of capital gains realizations and examine the effects of changes in capital gains tax law using a model that takes a broad view of tax burden, including “lock-in” and risk-sharing effects. Evidence from a five-year panel data set reveals that although those who report capital gains every year constitute only 2.5% of the sample, they account for 42% of the net gains.

Haliassos and Lyon next develop a model to examine the excess burden of capital gains taxation. They note that tax payments understate the burden of taxation if a “lock-in” effect occurs, but that they overstate the burden to the extent that taxation reduces risk. The authors’ simulations suggest that tax payments overstate the burden, and that distributional analyses using tax payments as a measure of burden therefore overstate progressivity, since capital gains tax payments are concentrated in high-income brackets.

Steven M. Sheffrin, of the University of California at Davis, employs original survey research and reviews a variety of studies by economists, tax lawyers, accountants, and psychologists in order to examine how tax policy is influenced by perceptions of tax fairness held by the voting public. He begins by asking how well the public understands the tax system, citing evidence that individuals underestimate both their tax liability and marginal tax rate, have perceptions biased by the relative visibility of various taxes, and have difficulty grasping complex tax-law changes or even such concepts as progressivity.

Survey respondents who are asked to give “fair” tax rates suggest schedules that are progressive, but closely related to the income-tax system in place at the time. Respondents overwhelmingly approve of corporate income-tax hikes, but may have difficulty connecting this tax with its

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incidence on individuals. Finally, the paper discusses the potential link between perceptions of fairness and tax compliance, but notes that this link is difficult to establish empirically.

The volume closes with a paper by Richard Musgrave, who perhaps comes closest of anyone to combining the attributes of an economist and a moral philosopher needed to provide the ultimate answer to how the tax burden should be shared. Musgrave's paper provides a general overview of the theory of tax equity, as well as a look at progressivity as a determinant of tax-structure design. The paper begins by discussing "benefits received" and "ability to pay" as principles of distributive justice, noting that the Anglo-Saxon tradition of tax theory has focused almost entirely on the latter. The history of thought behind the ability-to-pay principle is further examined, discussing how fair patterns of sacrifice, the development of social welfare functions, and excess burden each affect utilitarian calculations. Musgrave also notes the importance of public perception and its relevance to economists' theories of taxation. The paper next turns to the issue of progressivity and tax-structure design. Musgrave argues that the desired degree of progressivity should be determined *before* the tax structure. Complex systems of taxing personal income or personal expenditure can only be justified if progressivity is required.

Thus, while philosophers, theologians and, yes, politicians argue over what is fair, there is much for economists to do. We must understand the nature of the sharp increase in the inequality of pre-tax incomes, and decide how much of it is an exogenous increase in the dispersion of the return to abilities – which increases the value of redistribution – and how much is due to other factors. Second, we must carefully study the evidence from the 1980s in order to sharpen our understanding of the economic cost of redistribution. Finally, we must preserve the integrity of the economics profession by not presuming to know what is fair and what is not. Alas, we must be content with improving the software that generates answers to the burning questions of the day if provided with value-judgment inputs, and admit that we cannot provide the answers themselves.

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CHAPTER 2

Trends in federal tax progressivity, 1980–93

Richard Kasten, Frank Sammartino, & Eric Toder

1 Introduction

Since 1980 there have been major changes in federal tax policy. The U.S. Congress enacted five major tax bills: the Economic Recovery Tax Act of 1981 (ERTA), the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), the Deficit Reduction Act of 1984 (DEFRA), the Tax Reform Act of 1986 (TRA), and the Omnibus Budget Reconciliation Act of 1990 (OBRA). Congress also had previously enacted the Social Security Amendments of 1977, which increased payroll tax rates throughout the decade, and later enacted the Social Security Amendments of 1983, which accelerated the effective date of those increases and made a portion of social security benefits taxable under the individual income tax. These changes in the law have resulted in a much different tax structure today than the law in effect in 1980. The income-tax rate schedule is lower and flatter, and many tax preferences under the individual income tax have been scaled back or eliminated. The top corporate tax rate is lower, but the investment tax credit has been eliminated and other business investment incentives, which were expanded in ERTA, were subsequently scaled back. The base for payroll taxes is wider and rates are higher. Some excise-tax rates are higher today than at the beginning of the decade, offsetting in part the decline in the real value of excise-tax rates with inflation.¹

U.S. Congressional Budget Office, Tax Analysis Division. The views in this paper are those of the authors alone and do not necessarily represent the views of the Congressional Budget Office. An earlier version of this paper was presented at the Conference on Tax Progressivity, University of Michigan, September 11, 1992. The authors are grateful for helpful comments from Bruce Davie, William Gale, Jane Gravelle, Rosemary Marcuss, Robert Reischauer, Joel Slemrod, David Weiner, Kenneth Wertz, and conference participants.

¹ For a description of tax changes between 1980 and 1990, see Steuerle (1992).

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Excerpt

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In this paper, we examine the effect of these changes on the distribution of the tax burden among income groups. We report results from simulations of a large micro-database that the Congressional Budget Office (CBO) has developed by combining data files on household income, demographic characteristics, and consumption data from the Census Bureau and the Bureau of Labor Statistics as well as tax-return data from the Internal Revenue Service. We array families by a measure of realized cash income, adjusted for family size; compute income and taxes paid for different income groups for the years 1980, 1985, and 1989; and project income and taxes paid for 1993. We simulate directly the individual income- and payroll-tax liabilities of families under tax laws of different years, and assign corporate and excise taxes according to assumptions about the incidence of these taxes among families. We compute effective tax rates – the ratio of all taxes paid to a measure of pre-tax income that includes all taxes.

There are several ways of measuring changes in tax progressivity over time. One way is simply to compare ratios of taxes paid to pre-tax income for different income groups over time. Using this measure, we find that the sweeping changes in tax policies resulted in virtually no change in either the overall level or the distribution of tax burdens between 1980 and 1993. The total federal effective tax rate (ETR) for all families was 23.3% in 1980 and is projected to be 23.2% in 1993. The distribution of tax burdens became slightly less progressive. The overall ETR changed little for most of the population, but declined by slightly over 10% for families in the top 1 percent of the income distribution. (In 1993, the cut-off level of income for the top 1 percent of families is projected to be \$161,000 for a single person, \$206,000 for a married couple with no children, and \$324,000 for a family of four.)

Changes in observed ETRs over time, however, reflect both changes in tax laws and changes in the income, consumption, and demographic composition of families in different income groups. To isolate the effects of tax-policy changes alone, we must hold income and other characteristics of families fixed. We do this by simulating the effects of 1980, 1985, 1989, and 1993 tax laws on a sample of families from a single year. We perform two separate sets of such “income-fixed” simulations: one comparing the impact of the four tax laws on 1985 families, and another comparing the impact of the tax laws on 1989 families. The income-fixed simulations show that, compared to a small increase in the actual ETR, 1980–93 tax-law changes had no effect on the ETR for 1989 families in the lowest income quintile, while tax-law changes increased the ETR by slightly more than the actual change in the ETR for 1985 low-income families. Tax-law changes measured at both 1985 and 1989 incomes slightly