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Progressive Taxation, Equity and Tax Design

by

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LEADING IN THOUGHT AND ACTION

PROGRESSIVE TAXATION, EQUITY AND TAX DESIGN

by

Richard A. Musgrave *

Beginning in 1981, repeated and major changes in the federal tax structure have taken place. At the same time, its overall level remained practically unchanged, with a revenue to GNP ratio of 23.3 percent in 1980 and 23.2 percent in 1993. Did this stability extend to the degree of progressivity as measured by the pattern of effective rates? Spanning the entire income scale, the ratio of effective rates payable by the top to that payable by the bottom quintile dropped from 3.39 in 1980 to 3.17 in 1993, thus suggesting a slight flattening of progression. But a closer look at what happened over various ranges in the scale is needed to understand what went on.

For this we may draw on data presented earlier in this volume (Kasten, Samartino and Toder, Table 1). Beginning at the top, the ratio of effective rates for the highest to that for the fourth quintile dropped from 1.93 in 1980 to 1.84 in 1983. With benefits accruing mostly to the highest two percent of income recipients, this flattening reflected the drastic cutback in top income and corporate tax rates under the 1980 legislation. Moving down from the fourth to the middle and from the middle to the second quintile, the ratios changed but little, falling from 1.27 to 1.25 and from 1.16 to 1.14 respectively. This stability over the middle range reflected the offsetting effects of rate reduction and base broadening under the tax reform of 1986. The pattern of overall stability continues as we drop from the second to the bottom quintile with ratios of 1.9 in 1993 and 1.8 in 1980. This overall stability once more reflects offsetting effects. Increases in personal exemptions, standard deduction and earned income credit (i.e. an enlarged zero-rate bracket) raised progressivity while increased payroll tax rates lowered it. The picture changes if social security is viewed as a contributory system. Without also allowing for benefits, it may then be appropriate to exclude payroll taxes. When moving down from the middle to the second quintile, the ratio now rises sharply from 2.7

in 1980 to 7.5 in 1993. Moving from the second to the bottom quintile, a slight increase from 1.4 to 1.6 is added. Middle to lower end progressivity excluding payroll tax thus increased substantially. This, however, only reflected a return of exemptions and standard deductions to their earlier real-value levels, levels which had been eroded by inflation.

How should these developments be interpreted? Do they merely reflect changes in political fortune, in the ups and downs of class and special interests and in efficiency considerations, or do changing views on equity enter? My concern here is with the latter, in offering a brief anatomy of the rationale for and against progression as it developed in the context of tax theory. This is followed by a look at progressivity as *the* overriding determinant of tax structure design.

Approaches to Tax Equity

Like it or not, fairness in taxation is an age-old issue which cannot be avoided, especially in a seminar on progressive taxation. Such is the case even though the ultimate determinants of equity fall outside the bounds of Pareto optimality. But so do other factors, such as the state of technology or consumer tastes, which economists also must accept as inputs into their analysis. Though economics cannot establish *the* "correct" equity norm, it can explore the implications of alternative norms, implications which must be weighed in the balance if an intelligent choice among them is to be made. Moreover, economists, and especially those dealing with the public sector, cannot disregard the social setting in which fiscal policies operate, including the central issue of distributive justice and its bearing on tax equity. How this issue has been dealt with offers a fascinating piece of intellectual history, and one that needs to be understood in interpreting the ongoing debate of the '80s and '90s. Three tracks in the approach to tax equity may be distinguished, including (1) the benefit rule, (2) the ability-to-pay rule and (3) the least-total-sacrifice, or maximum welfare rule. All bear on the case for and against progressive taxation, but in different ways.

Benefit Rule and *Quid Pro Quo*

The principle of benefit taxation, as a fairness rule, derives from an underlying

concept of fairness in exchange or *quid pro quo*. Though early on directed at the benefits from defence, the principle was later extended to encompass the entire expenditure side of the budget, offering a rule of fair budgeting rather than of taxation alone. In this respect it differs from the ability-to-pay approach which is limited to fairness in taxation. Based on fairness in exchange, benefit taxation naturally fits the framework of a market economy and an entitlement view of distributive justice. Individuals, according to that view, are entitled to dispose of their earnings, as stipulated by John Locke's "natural order" (1690, p. 327) and Adam Smith's premise of "providential design" (1759, p. 304).

With factor and product prices set in a competitive market, the virtue of the invisible hand is extended to yield an outcome that is not only efficient but also just. Benefit-tax finance of public goods fits that pattern. Consumers pay for public services in line with their preferences as they do for private goods. If preferences were known, government could simply impose benefit taxes to match consumer evaluations. But they are not. Non-rival consumption of public goods calls for their free availability, so that consumers are not compelled to bid. A political process is needed, therefore, to secure preference revelation and to replace bidding in the market. The resulting tax price, as formulated by Lindahl (1918, p. 170) will approximate what consumers would offer if the benefit was provided in the form of a private good. Benefit taxation, accordingly, shares the twofold virtue of competitive market pricing: it enables government to provide public goods in a manner which is both efficient and just.

In practice, benefit taxes cannot be assigned individually, so that some index has to be used. For street cleaning, a property tax based on road frontage may serve, but for general benefits (e.g. defence) a general index such as aggregate income or expenditures is needed. By the logic of benefit taxation, the appropriate rate schedule will be progressive, proportional or regressive, depending on whether the income elasticity of demand for the public service is above, equal to or below its price elasticity (Buchanan, 1961). Moreover, the logic of benefit taxation calls for different tax prices or shares to be applied to various public services, depending on their demand and supply conditions. The resulting distribution of tax shares for revenue as a whole is of no particular interest in this context since, by definition benefit taxes are distributionally neutral. This is as it should be, based on the premise that individuals are entitled to what they can earn and purchase in a competitive market. Given that

premise, the budget deals with the fair and efficient provision of public goods only, and has no redistributive function. Whether the overall system is to be progressive or not is simply a matter of elasticities and without fairness implications *per se*.

Individuals, though granted entitlement to own-use of their earnings, may nevertheless have distributional concerns and engage in voluntary giving. To the extent that the donor's satisfaction rests on the act of giving, this remains a private activity and without relevance to taxation. But a linkage arises once A derives satisfaction from seeing B's welfare increased in response to C's giving. Giving now creates external benefits and thus assumes public-good characteristics. Subsidies through the budget, e.g. tax deductions for charitable giving, then become appropriate. This complicates matters but still fits the essentially *quid pro quo* nature of equity under the benefit approach.

While benefit taxation as a fairness rule rests on an entitlement-based distributive justice, benefit taxation as an efficiency tool does not require that premise. Wicksell (1896), in what remains the most significant single contribution to fiscal literature, recognized that distributive justice may call for corrections in the distribution of earnings, but nevertheless (p.102) gave benefit taxation a central role in his system. Benefit taxation would serve to solicit preference revelation for public goods and would thus be efficient. But it would be just only if applied to a just state of distribution. The system, therefore, called for a two-track approach. Adjustments in the distribution of income, presumably through a tax-transfer system would be needed to establish a just state distribution, followed by benefit-tax finance of public goods. This construct, as will be apparent, resembles my basic distinction between the allocation and distribution branches of the budget and has set my framework for fiscal analysis (Musgrave, 1959, p. 5).

Ability-to-Pay and Equal Sacrifice

A second and more common approach to tax equity disregards expenditure benefits and calls for the tax burden to be distributed in a "fair" fashion. Fairness is interpreted as calling for taxation in line with ability-to-pay. People with equal ability should pay the same (the concept of horizontal equity) while those with higher abilities should pay

more (the concept of vertical equity). The distribution of the tax burden was thus to be based on a fairness norm rather than to be derived from a premise of entitlement.

Adam Smith (1776, p. 310) rather ingeniously combined both benefit and ability-to-pay considerations in one dictum: "The subjects of every state", as he argued, "ought to contribute toward the support of government, as nearly as possible, in proportion to their respective abilities, that is in proportion to the revenue which they respectively enjoy under the protection of the state ". But this nexus, regrettably, was then lost in English-language (but less so in continental) tax theory. From Mill to Edgeworth, Marshall and Pigou, and up to the recent models of optimal taxation, public service benefits were disregarded and tax equity viewed in isolation. This separation, in many ways, has been unfortunate. For one thing, the concept of equity, on closer consideration, should include not only tax burdens, but also expenditure benefits. For another, the tax-expenditure linkage is needed to explain how the political process does (or, in the Wicksellian sense, should) determine the level and composition of the budget as well as who pays.

Viewed as a matter of taking, equitable taxation thus became a matter of assessing tax shares so as to secure a fair distribution of the resulting loss or sacrifice. The principle that all should be treated equally under the law called for equality of sacrifice (Mill, 1848, p. 804) but views differed on whether this should be interpreted in equal absolute or in equal proportional terms. With the rise of marginal analysis in the 1880s, equal marginal sacrifice was added to the roster (Edgeworth, 1897). But whichever interpretation of "equal" is chosen, the resulting rate schedule would depend on the shape of the marginal utility of income schedule. Based on the premise of declining marginal utility of income, equal absolute sacrifice would call for regressive, proportional or progressive taxation, depending on whether the elasticity of the marginal utility of income schedule falls short of, equals or exceeds unit elasticity. Equal proportional sacrifice would leave a more complex relationship, while equal marginal sacrifice would require maximum progression and absorption of top incomes until the required revenue is obtained.

Least Total Sacrifice and Maximum Welfare

As the doctrine developed, the equal marginal sacrifice rule soon won the day and

with Pigou became *the* correct solution (Pigou, 1928, p. 60). Viewed from the perspective of fairness, this was hardly persuasive. Why should only the marginal sacrifice be considered, rather than the entire loss as called for by equal absolute, equal proportional or still other sacrifice rules? The answer, it appears, is that equal marginal sacrifice was chosen not so much as a matter of fairness but as an efficiency-based prescription for securing least total sacrifice. The move from Mill's equal absolute or proportional, to Pigou's enshrinement of equal marginal sacrifice thus involved a paradigm shift from equity to Pareto efficiency as *the* basic criterion. Equal marginal, and with it least total sacrifice, fitted neatly into the economist's utilitarian goal of welfare maximization. The case for distributing the burden of a given tax revenue so as to minimize aggregate loss was but a by-product of the general case for distributing income so as to maximize welfare. The entitlement base for distributive justice was thereby replaced by that of utilitarian welfare maximization.

But two further problems remained. To begin with, there remained the question of operational applicability. The earlier discussion of ability-to-pay had been based on the convenient assumption of known, comparable and even similar marginal utility of income schedules, an assumption which later was discarded as unwarranted (Robbins, 1932). At first this seemed to shatter the very foundation of the utilitarian approach to fair burden assignment, but not for long. The earlier construct was soon replaced by the concept of a social welfare function, based on individual perceptions of distributive justice (Bergson, 1938). These subjective welfare functions were then seen to coalesce into a social norm (a "social" welfare function) determined as the outcome of a political process. By assuming the shape of that function to be thus set or, more carefully, by deriving required tax distributions for alternative functions, the argument could then proceed much as it had before. Given the premise of a downward-sloping social welfare function, least total sacrifice (or maximum welfare) retained the presumption in favor of maximum progression.

Next, this presumption had to be qualified by allowance for adverse economic effects. Voiced from the outset by Bentham, Edgeworth and Marshall (1890), that concern was then formalized in terms of deadweight loss and incorporated into the burden concept. Beginning with Pigou and Ramsey (1927) and followed later by Diamond and Mirrlees (1971), the earlier measure of socially-weighted income loss was replaced by a more sophisticated concept, with

allowance for the implicit burden of deadweight loss. With deadweight loss rising by the square of the marginal rate of tax, maximum progression no longer followed from the mere premise of a downward sloping marginal utility of income or social welfare function. Rather, the optimal distribution of the tax burden (so as to minimize the total welfare loss) would now depend not only on the shape of the social welfare function but also on market responses to the tax wedge. Calculations based on a range of elasticity assumptions showed the earlier case for progressive taxation to be weakened substantially by allowance for deadweight loss. Conclusions regarding the optimal pattern of progression, however, greatly depended on stipulated elasticities and on the social weighting system that is applied (Slemrod, 1982). But these were refinements only. Notwithstanding its more sophisticated reformulation in the optimal taxation model, Pigou's equal marginal (least total) sacrifice view of tax equity had remained essentially unchanged. At the same time, policy conclusions regarding the "correct" pattern of progressivity, now had become contingent on (1) the postulated shape of the social welfare function and (2) empirical propositions regarding taxpayer responses.

More basically, all this also left open the bottom line question why, as a matter of fairness or distributive justice, equal marginal and hence least total sacrifice should be *the* accepted criterion? The case for least total sacrifice in tax burden distribution, as Edgeworth and Pigou saw it, derives from the broader efficiency goal of securing a distribution of income which maximizes aggregate welfare. This takes us back to Bentham's proposition that self-interested individuals, bent on maximizing their own welfare, will also wish to maximize aggregate welfare (Bentham, 1789, p. 3), an heroic conclusion which hardly follows. Using superior force or bargaining from a stronger position, the self-interested and better-endowed individual would disagree, as Hobbes "warre of everyone against every man" well knew (Hobbes, p. 188). To sustain acceptance, the target of maximum aggregate welfare had to be given an ethical underpinning. Based on the golden rule to value the welfare of others as one's own, individuals should not only discard envy and agree to Pareto-optimal rearrangements, but should go further and welcome changes by which others tend to gain more than they lose. Given this more demanding premise of impartiality, least total sacrifice or welfare maximization becomes the preferred solution.

As formulated more recently, and in line with the economist's taste, impartiality

has been interpreted as calling for choice under uncertainty.¹ Individuals are called upon to choose among alternative patterns of distribution from behind a veil, i.e. without knowing their own capacities and what their own position in any one pattern would be (Vickrey, 1946; Harsanyi, 1955; Rawls, 1971). Assuming a fixed pie available for distribution and stipulating declining marginal utility or postulating risk aversion, people would then agree on an equal division of income; but allowing for deadweight losses in response to taxation, some degree of inequality would be agreed on.² Applying this reasoning to the narrower problem of just taxation, tax shares to be agreed upon from behind a veil would similarly fall short of maximum progression.

Conclusion

Economists, as this brief exploration into the genesis of tax equity suggests, can be helpful in setting forth the analytics which go into determining the "correct" pattern of progression or vertical burden distribution under alternative views of distributive justice, but they cannot pronounce on which is *the* correct one. This not only reflects our limitations in adequately measuring economic responses to taxation but, more important, the fact that the outcome depends on the underlying equity norm, a choice which is not to be captured within the confines of Paretian efficiency. It depends on how the problem of distributive justice is

1: As I see it, the veil construct and interpretation of distributive justice *qua* risk aversion, though congenial to the economist's mode of thinking, is of questionable merit. If individuals have agreed on the principle of impartiality and thereby on the least total sacrifice rule, they should be willing to proceed directly to a corresponding income or tax burden distribution. The veil construct becomes roundabout and redundant. Moreover, reliance on self-interested choice, following disinterested acceptance of the veil seems inconsistent. This also poses the question of how acceptance of the impartiality premise (as distinct from entitlement to earnings) can be reconciled with tax avoidance and the standing of the resulting deadweight loss (Musgrave, 1992).

2: Viewed in this context, Rawls' rule of maximin may be interpreted as involving extreme risk aversion.

viewed, e.g. from a Lockean entitlement perspective, from rules of equality in sacrifice, or from the utilitarian target of maximum welfare (least total sacrifice), with its ethical anchor in the premise of impartiality. All this, to be sure, may be taken as subsumed by the stipulated shape of the social welfare function, and the young economist, eager to get on with maximizing, may be impatient with these underpinnings. But to understand what goes into the underlying reasoning, and hence the case for or against progression, the various inputs need to be sorted out. The utilitarian model, convenient though it is to the economist's tool box, is not the only possible formulation.

Public Perception of Tax Fairness

The public's perception of tax equity can hardly be expected to coincide with any of the preceding models as conceived by philosophers and economists. Attitudes, as noted before, may well reflect a desire to freeload and to let the cost be paid by others. Nevertheless, the very fact that in a democratic society interests have to be reconciled by compromise carries an element of fairness. Moreover, the public and even the Ways and Means or Senate Finance Committees are not entirely callous and views of fairness also enter. The cynic's view is not the most realistic one.

To begin with, there is rather general agreement on the guiding principle of horizontal equity, i.e. that people in equal positions should be treated equally. The definition of equal position, to be sure, is a matter of debate and not easily defined in a complex economy. Not surprisingly, the tax law is full of instances where special interests succeeded in securing preferential treatment. After a brave effort at loophole closing in 1986, there is now reason for concern that they will be reopened. Nevertheless, the principle of horizontal equity, that there should be no discrimination in the treatment of equals, is a basic part of our tax mores.

No such general consensus holds regarding the public's view on vertical equity, i.e. the treatment of unequals. Will that perception resemble, if only vaguely, the economist's utilitarian paradigm of aggregate welfare maximization, calling in turn for overall burden minimization? I suspect not. More likely, the public perception begins with an entitlement-based view of distributive justice, to be qualified in some respects. This includes a modest

(much short of Rawlsian) correction for poverty at the lower end of the scale. Over the middle range, it calls for proportional taxation based on an equal absolute sacrifice rule, together with an implicit premise of a generally applicable and unit-elastic marginal utility schedule. To this may be added a dislike of excessively high incomes and the power which they generate, leaving a case for upper-income progression. In all, the public's perception, if only gropingly so, is more likely to move in these terms, rather than in those postulated by recent utilitarian models.

These normative issues, however, are only part of the story. The other part pertains to the choice of tax instruments and their incidence. The public's perception (note here Sheffrin's contribution to this volume) can hardly be expected to understand the technical complexities of tax design. In the context of the income tax, is reference to exemptions and bracket rates or to the final pattern of effective rates that result? Is it understood that exemptions constitute a zero bracket, so that a so-called flat rate (linear) tax remains progressive in effective rates? Is it the progressivity of the tax structure over the entire income range which matters to the public, or do attitudes distinguish between lower, middle and upper range progression? How do views on progression vary with the overall level of taxation? Does popular support for taxing business units suggest failure to understand that tax burdens eventually come to rest on individuals? How is the problem of shifting allowed for and how is the perception of fairness modified by concerns over detrimental (even deadweight loss) effects of high marginal rates? Finally, to what extent are fairness views affected by the expenditure side of the budget, especially for the payroll tax and other earmarked programs?

These questions and others that could be added explain the difficulty of ascertaining the public's perception of tax fairness and its application to particular tax statutes. For someone who has followed the fortunes or misfortunes of progressive taxation for six decades (if I may claim that as a comparative advantage), it is also evident that the public perception is fickle and changes with the circumstances of the times. In the 1930s, "soaking the rich" meant a top marginal rate of 50 percent and only a small part of the population was covered by income tax. War finance in the 1940s turned the income tax into a mass tax with a top marginal rate of 92 percent. By 1962 that rate still stood at 91, but was then followed by a series of cuts, down to 70 percent in 1977, 50 percent in 1982 and 28 percent in 1986. In

part that decline reflected recognition that high nominal rates were (or had become) largely ineffective, and could not be enforced. Concern with deadweight loss and supply-side effects also entered. Politically speaking, it may also be that Congress, while legislating high marginal rates, never meant them to apply in earnest. This is suggested by the reform of 1986, when upper-bracket base broadening was matched by reduction in high bracket rates, rather than permitting it to render them more effective.

Public attitudes also follow a cycle. Beginning with the New Deal of the 1930s, the political climate favored a more egalitarian view of distributive justice, and continued to do so for some decades. That of the '70s and '80s brought a swing of the pendulum back towards what above was referred to as the entitlement premise. A new change in direction, also supported by adverse changes in the underlying distribution of income may now be in the making. With the top rate already returned from 28 to 31 percent, a further increase is now likely and it appears that the trend of the '80s is being reversed, if within moderate limits.

Progressivity and Tax Structure Design

I now leave the elusive question of whether or not the tax structure should be progressive and turn to the more tangible bearing of progressivity on tax structure design. Here tax economists find a comfortable domain.

In Rem vs. Personal Taxation

Whatever the choice between income and consumption as tax base, the desired degree of progression is fundamental to the appropriate choice of tax instruments. If equity calls for equal amounts of tax, a head tax will do. If taxation is to be proportional to the base, the size of the base enters but an indirect, *in rem* approach will still do. Progression, however, requires a global determination of the individual's tax base, and hence direct and personal taxation. Such taxation is inevitably more complex, whether on an income or consumption base. Tax equity, like all good things, is costly and that cost should be minimized by choosing the appropriate tax instrument. But rather than choosing the instrument and then deciding how progressive it should be made, efficient tax design calls for first setting the

desired pattern of effective rates and then choosing the appropriate tax form. What matters, moreover, is not so much the overall degree of progression as measured by say, changes in the Gini coefficient, but the desired patterns over various stretches of the income range.

Suppose first that the community's view of equity calls for a proportional tax without exemptions, i.e. a constant effective rate over the entire range. Under the income base, this may be obtained in direct form by a flat-rate tax on the income recipient, an *in rem* tax on the income payer, or a value-added tax of the income type. Under the consumption base, choice is between a flat-rate expenditure tax, a consumption type value-added tax or a retail sales tax. With the somewhat precarious assumption that a wages tax is in fact equivalent to a consumption tax, there is the further option of a tax on wage income, whether paid by the recipient or withheld as a payroll tax by the employer. The same result may also be approximated via a cash flow tax where, after excluding the normal return to capital via expensing, the remaining base is largely in payroll form. Whether directed at the income or consumption base, proportional taxation can thus be accommodated more simply in *in rem* form, without requiring the more cumbersome mode of personal taxation.

More likely, the public's sense of equity will not accept an across-the-board proportional tax but call for exempting an initial amount of the base. A combination of exemption and flat rate will then cause the effective rate above that amount to rise over the lower to middle income range, tending to approach a flat rate after some mid-point is reached. This outcome may be approximated by combining the *in rem* modes of the preceding pattern with a cash payment, equal to the tax on the exempt part of the base. Allowance for family size would add a personal element but could still be accounted for by a corresponding adjustment in refunds. The need for direct and global-base taxation of the personal type may still be avoided.

Such taxation becomes unavoidable, however, once equity is taken to call for effective rates to rise beyond the mid-range. If the call is for a rising effective rate throughout the income scale, personal taxation with rising bracket rates has to begin above the exemption level. But suppose now that the desired pattern calls for a rising rate ^{beginning above the exemption and extending} over the lower half, followed by a flat rate over the middle and resumption of a rising rate at the upper end. In that case, an *in rem* flat rate approach cum exemption might be used over the lower-middle range,

with a progressive personal tax applicable to taxpayers at the high end of the scale only. Set at, say, \$ 100,000 , this would cover a quarter of taxable income but only some 5 percent of returns now required. The administrative and compliance costs involved would thus be vastly reduced, thereby permitting tighter enforcement of the remainder. While my preference is for a moderately but continuously rising effective rate, today's public perception of equity may well fit such an approach. If so, the prevailing tax structure is unnecessarily complex, implying as it does the headaches of direct taxation for a large number of taxpayers without wanting to impose a significant degree of progression over the middle range of the scale.

An important *caveat* must however be added. Taxation, as noted earlier in the Wicksellian context, is needed not only to provide non-inflationary and equitable finance, but also to secure preference revelation. To meet that function and to exert fiscal discipline, taxation should be visible to voters as the cost of public services, and here personal taxation (even if not of the benefit type) has a great advantage. Seen from this perspective, administrative ease secured by retreat to impersonal taxation may be purchased at too high a cost.

Income versus Consumption Base

In principle, the preceding observations may be applied to either the income or consumption base. The traditional view of income taxation as progressive and consumption taxes as regressive need no longer hold since consumption may be taxed via a progressive and personal expenditure tax. Such is the case at least in theory, although it may not be so in practice. The option of a personalized and progressive expenditure tax has not as yet entered public awareness, with retail sales or consumption based value-added taxes still viewed as the usual alternative to income taxation. As noted before, proposals for a cash flow tax recently entered the fray ; and based on the premise that a wage income and consumption tax are equivalent, it may then be viewed as prepayment of a consumption tax .

Combined with an exemption, these *in rem* taxes on consumption could then form the first bracket component of a progressive expenditure tax. Such could be the case, but most VAT or cash flow tax plans do not make this addition. As a matter of fiscal politics, rather than

of fiscal logic, the debate over income versus consumption base remains linked to that over progressive versus regressive taxation.

There remains the question whether there are technical reasons why the desired degree of progressivity, once set, should affect the choice between the two bases. Assuming a given amount of revenue to be raised by a flat-rate tax, the traditional efficiency argument favors the consumption base. Now the subtle question arises (but not to be resolved here) whether that preference may not be weakened with progressive taxation. Since consumption tends to fall with rising income, the consumption tax has to be more progressive to reach the same burden distribution with respect to income; hence resulting deadweight losses may be more severe. However, it may be responded that under a consumption tax regime, progressivity should be measured against consumption rather than income. It may also be noted that the consumption base is more stable, so that annual taxation is less distorting.

Centralized vs. Decentralized Finance

Next, it should be noted that the feasibility of progressive taxation greatly depends on the way in which the fiscal system is organized. Any one jurisdiction within a federation, acting on its own, cannot afford to impose the higher marginal rates required under a progressive (as opposed to an equal yield flat rate) income tax. Unless other states follow suite, this invites a shift of residence and loss of tax base to lower-rate jurisdictions. With capital more mobile than labor, capital flight is the more likely response; and as the weight of capital income rises when moving up the income scale, this is especially detrimental to progression. The feasibility of progressive taxation at the state, not to mention the municipal level, is thus severely impaired. Similar considerations also apply to central taxation, ^{in the international} as ^{context} income earned abroad cannot be readily reached.

Would these obstacles to effective progression be less severe for the expenditure tax? Perhaps so. Since consumption is linked more closely to residency than is income, tax avoidance by choosing to operate in a lower-rate jurisdiction becomes more difficult. But there is more to the problem. For a progressive expenditure tax to be assessed correctly, inter-

jurisdictional cooperation in the reporting of financial transactions across borders would be needed but is difficult to achieve.

Whichever the base, technical considerations once more carry important implications for the politics of tax policy. Implementation of progressive taxation is more feasible under a system of central finance than with decentralization. The "distribution branch", as I called it, has to be part of the central budget. While the debate over central versus decentralized finance should address a quite different set of issues, it is not surprising that attitudes towards progression hide in the wings.

Tax Burdens vs. Fiscal Benefits

As noted earlier in the context of the payroll tax, it may not be fair to look at the burden distribution of the tax system, without also considering the expenditure side of the budget. This is especially apparent in the case of social security with its earmarked and contractual base, but there is also a more general case to be made. After all, what matters is how the budget operation affects the state of distribution, and it is unimportant in the end whether the impact comes from the expenditure or the tax side of the budget. It may thus well be argued that equity should be viewed in net benefit or burden terms. This may be implemented easily with regard to transfer payments. Certain in kind programs such as low-cost housing, highways or education may also be imputed to their users while benefit allocations from still others, such as national defense, become less manageable. Precise estimates may be unattainable, but an approximation can be made.

If this is done, the picture changes considerably. Notwithstanding many middle class programs, the overall distribution of benefits is much more "pro-poor" than that of the tax burdens is "anti-rich". A net benefit and burden view of distributional impact therefore yields a pattern of distribution much more favorable to the lower half of the income scale than emerges from tax only patterns, such as recorded earlier in this volume by Kasten, Samartino and Toder. The effective net benefit/income ratio, it appears, falls sharply over the lower to middle range of the income scale, reaches zero somewhat above the median level and then

declines at a more moderate rate (Musgrave and Musgrave, 1989, p.246).³

Summary

Issues of tax equity, along with their underlying image of a good society, are not to be resolved by considerations of economic efficiency only. If earners are taken to be entitled to their income, fair taxes are benefit taxes with legitimate redistribution limited to voluntary giving. Absent such overriding entitlement, the issue of just distribution, and with it that of fairness in the distribution of the tax burden, becomes one of fairness rules. These may call for various equal sacrifice prescriptions. Or, based on the utilitarian target of welfare maximization, the call may be for equal marginal and hence least total sacrifice. Whichever rule is chosen, implementation calls for a social welfare function by which to weigh the resulting burdens. Testing these principles against the reality of public perception, the concept of fairness more likely begins with an entitlement norm, modified by dislike of excessive inequality at the lower and to a lesser extent at the upper end of the scale.

Whether progression is favored or not, the desired pattern is of basic importance for tax structure design. A target of proportional taxation permits implementation by indirect and *in rem* taxation, and (combined with an exemption) this still holds where effective rate progression is limited to the lower-middle range. Global base and hence personal taxation becomes essential, however, if such progression is to extend further up. These considerations apply whether the tax base is to be defined in income or consumption terms, so that the desired degree of progression or lack thereof can be implemented in either mode. Such is the case in principle, although in practice the income base remains more progression-friendly. But whatever the goal, rational tax design calls for setting the desired pattern of effective rates first, with the choice of tax instruments to follow, not vice versa.

3: Note that this approach accounts for tax burdens and expenditure benefits only. It differs from an even broader view which would allow for such changes in private earnings as may result from public purchases or employment. The distinction, however, becomes blurred in the case of interest payments, which might be interpreted as either transfers or factor receipts. Under the latter view interest payments are not counted, thus further increasing the more favorable position of the lower part of the income scale. Further difficulties arise in the treatment of deficit or surplus budgets, issues which need not be pursued here.

REFERENCES

- Bentham, J., 1789, The Principles of Morals and Legislation, L. J. Lafleur, ed., New York : Hafner Press.
- Bergson, A., 1938, "A Reformulation of Certain Aspects of Welfare Economics", Quarterly Journal of Economics , vol. 52, no. 2.
- Buchanan, J. M., 1969, "Fiscal Institutions and Collective Outlay", American Economic Review, 51, p. 230.
- Edgeworth, F. Y., 1897, " The Pure Theory of Taxation", Economic Journal, vol. VII, reproduced in R. A. Musgrave and A. Peacock, eds., 1958, Classics in the Theory of Public Finance, New York: Mc Graw-Hill.
- Harsanyi, J. , 1955, "Cardinal Welfare, Individualistic Ethics and Interpersonal Comparison of Utility ", Journal of Political Economy, vol. 63.
- Hobbes, T., 1651, Leviathan, McPherson, ed., Pelican Classics, 1968, p.188.
- Lindahl, E., 1919, Die Gerechtigkeit der Besteuerung, Lund: Gleerupska, reproduced in R. A. Musgrave and A. Peacock, *op. cit.*
- Locke, J., 1690, Two Treatises on Government, P. Lasset, ed., 1960, Cambridge: Mentor Press.
- Marshall, A., 1890, Principles of Economics, London: McMillan
- Mill, J. S., 1849, Principles of Political Economy, W.J. Ashley, ed., London: Longmans.
- Musgrave R. A. and P. B., 1989, Public Finance in Theory and Practice, New York: McGraw Hill
- Musgrave, R. A., 1959, The Theory of Public Finance, New York: Mc Graw Hill.
- _____, 1992, "Social Contract, Taxation and Deadweight Loss", Journal of Public Economics, 49.
- Pigou , A. C., 1928, A Study in Public Finance, London: MacMillan.
- Ramsey, F. P., 1927, "A Contribution to the Theory of Taxation", Economic Journal, vol. 37.
- Rawls, J., 1971, A Theory of Justice, Cambridge: Harvard University Press.
- Robbins, L., 1932, An Essay on the Nature and Significance of Economic Science, London: Macmillan.
- Slemrod, J., 1983, " Do We Know How Progressive the Income Tax System Should Be?", National Tax Journal, vol. 36.
- Smith, A., 1759, The Theory of Moral Sentiments, E. West, ed., New Rochelle: Arlington House.
- _____, 1776, The Wealth of Nations, E. Cannan, ed., 1904, New York: Putnam Sons, Vol. II.
- Vickrey, W., 1945, "Measuring Marginal Utility by Reaction to Risk", Econometrica, Vol. 13.
- Wicksell, K., 1896, Finanztheoretische Untersuchungen, Jena: Fischer, reproduced in R. A. Musgrave and A. Peacock, *op. cit.*

