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# HIGH PROGRESSIVE TAX RATES: INEQUITY AND IMMORALITY? 

Dan Throor Smith*

Any systematic discussion of progressive taxation must take as its point of departure the 1953 monograph by Blum and Kalven, The Uneasy Case for Progressive Taxation, which has become, in its own time, a classic example of thorough and dispassionate analysis of the literature and issues. ${ }^{1}$ Indeed it seems unlikely that one could hope to add any major new concepts or arguments to the theoretical framework already so well defined.

Recent studies and conjecture on various aspects of economic activity modify somewhat the perspective from which the impact of progressive taxation must be appraised. The importance of innovation, a spirit of entrepreneurship, and administrative abilities is increasingly recognized in economies at all stages of development. It is now understood that unless people with particular talents and points of view are active in economic enterprise, the output from the traditional elements of production, labor, capital, and land will fall far short of its potential. A determination of the influence of progression and high marginal tax rates ${ }^{2}$ on these aptitudes and on the development and application of these talents, however, is as elusive as it is important.

Furthermore, the effects of taxation on enterprise must be appraised in the context of the even more subtle consequences of the disenchantment of many of the more able young college graduates with careers in the familiar forms of productive enterprise. A substantially different allocation of talent may evolve in ways that are presently unpredictable, with only minor influences from taxation and indeed from pecuniary incentives for those concerned.

From year to year, we do know a bit more about the propensities to save and consume incomes in terms of their source, their regularity, and their direction of change, but this knowledge has not yet been worked into an analysis of the effects of progressive taxation on the supply of capital from individual savings. New studies and theories about corporate financial and portfolio investment policies cast new light on the present and prospective relative importance of individual and corporate savings, which in turn bear

[^0]on the significance of progressive taxation on the supply of capital. Studies on corporate finance cover such topics as the costs of various sources of funds and returns to the corporations from different forms of investments, dividend distributions, and alternative ways to maximize returns to stockholders. In addition, new theories and policies are being developed from the standpoint of those concerned with the management of portfolios of securities for different categories of investors. ${ }^{3}$ The results of research in the foregoing areas modify and perhaps add precision to familiar propositions; they do not drastically alter the general framework of analysis or add major new concepts.

Recurring appraisals of progressive taxation are appropriate, however, in light of current political and social as well as economic developments. This article is written from that standpoint. The author has added the question mark to the title suggested by the editors in hope of resisting the temptation to write a diatribe against what he regards as the political excesses and demagoguery arising in the application of the concept of progressive taxation.

As a preliminary to a review of the current issues, a brief recapitulation of the fundamental arguments will assure a minimal common background.

As on all issues of tax policy, progressivity must be appraised from the standpoint of equity, economic effects, revenue, and administrative complications. The equity and economic issues were stated in a condensed form by three children in a one-room school in Montana where the author had the challenge of discussing tax policy at the invitation of his daughter, the teacher. In response to the question: What would be a fair tax on a family with an income of 5,000 dollars if a family with 2,000 dollars income paid 200 dollars? The first child said, " 500 dollars," thereby showing a predisposition for proportional burdens and perhaps a desire to make use of a newly-acquired familiarity with percentages. A second child immediately disagreed, with the comment that the payment should be more than 500 dollars because "each dollar isn't so important" to the family with the larger income. A third child agreed but with the reservation that the additional tax over 500 dollars shouldn't be "too much more or they won't work so hard." Elaborate theoretical structures concerning diminishing utility and incentives and disincentives are all really refinements of the quasi-intuitive opinions of those children and may not lead to any greater certainty.

The diminishing marginal utility ${ }^{4}$ of successive units of any single product is a familiar fact and has been an integral part of economic theory for

[^1]about a century. But extension of this concept from a single commodity to income in general, which represents a claim on all commodities present and future and gives a choice between consumption and savings, is questionable in principle and quite unsatisfactory in practice if one hopes to measure the rate of decrease in marginal utility. The concept becomes even less suitable as a basis for public policy when one attempts to extend it to interpersonal comparisons. Though there is probably agreement that there is some decline in marginal utility for an individual's income, as well as for specific items of consumption, and that a decline also exists when one considers a total amount of income distributed among many people, there is no agreement on or even basis for determination of the extent of decrease. Though some progression would generally be regarded as more equitable than a proportionate tax, it is quite possible that under political pressure and confusion about the extent of changes in tax rates as well as the absolute level of rates, progressivity may be carried to such excesses that it is more inequitable than proportionality.

Quite apart from uncertainty about the degree of decline in the marginal utility of income, there is no agreement concerning whether it would be more equitable to strive for minimum aggregate sacrifice or equal proportionate sacrifice among taxpayers. The former sounds plausible and has in fact been advocated by some writers, but a strict application of it would mean that taxes would equalize incomes down to the point where the required revenue was secured. There would be a 100 per cent tax on all incomes (or other tax base above that point, with no tax on lesser amounts. This follows logically from the proposition that any dollar of a larger income represents less wantsatisfying power than any dollar of a small income. Until the largest income is brought down to the level of the next largest income, any taxation of the next largest involves greater sacrifice than additional taxation of the remaining balance of the largest. ${ }^{5}$

The idea of equalization of net incomes through taxation to the point where adequate revenue is secured is for many a valid reductio ad absurdum of the whole idea of progression. If one contemplates a so-called negative income tax at the bottom end of the scale, taxation under this concept would

[^2]become a device for complete equalization of after-tax net incomes. Even the most ardent equalizers, or the most rigorous logicians, usually stop short of 100 per cent marginal tax rates, if only on pragmatic grounds.

The alternative standard of equal proportional sacrifice throws one back to the confusion about the rate of decrease in marginal utility. No basis for psychological measure has yet been found to remove the uncertainty that impelled McCulloch to make his much quoted statement about progression almost a century and a quarter ago that "the moment you abandon . . . the cardinal principle of exacting from all individuals the same proportion of their income or their property, you are at sea without rudder or compass, and there is no amount of injustice or folly you may not commit." ${ }^{6}$

A precise analysis in terms of equity is made even more difficult by the need to relate tax burdens to benefits from government services. Though taxation is the means to pay for government services, which, hopefully, are confined to the activities providing general benefit which can only, or most effectively, be provided collectively, government services in fact give direct benefits in varying degrees to individuals. In many respects the services are intended to help those who can least afford to help themselves and hence any attempt to match taxes against benefits would contravene the very purpose of the government program. But enough of the services are quasi-commercial, or yield benefits that do not have to involve a redistribution of income to be effective, to make a comparison of taxes to benefits not wholly irrelevant. Though theoretically valid, an attempt to carve out and value a segment of individual benefits from the body of general benefits is as frustrating as an attempt to establish the shape of a curve representing the declining utility of income. The existence of this two-fold problem further weakens any confidence one might have in any scientific establishment of equity in a tax system.

Quite apart from equity, one may argue that progressive taxation is justified by the need to reduce inequality and thereby establish a more attractive society (some refer to a more aesthetically satisfying society), the need to reduce social and political tensions, and the need to create greater equality of opportunity. All these are valid and appealing objectives, but some are purely subjective, and the role of taxation in others is quite indeterminate. They cannot, however, be brushed aside as irrelevant. Blum and Kalven conclude that an extensive analysis simply: ${ }^{7}$
> [S]uggests the tantalizing combination of plausible, ingenious and improbable ideas which make up the case for progression in terms of sacrifice and ability to pay. It likewise suggests why these notions have such a stubborn appeal. But it tends to demonstrate that the hold of these notions on the general public must derive from the fallacies that have frequented the theories and not from their truths which are difficult to drive to and once found would not support any firm conviction about the validity of the progressive principle.
6. J. McCulloch, Taxation and the Funding System 142 (1845).
7. W. Blum \& H. Kalven, supra note 1 at 68.

When one turns to the economic significance of progression, the analysis must be made from several standpoints, only two of which are simple and straightforward. The revenue from a progressive income tax invariably fluctuates more with changes in national income than does a proportional tax. It thus exerts a counter-cyclical effect and is referred to as an automatic stabilizer. ${ }^{8}$ On this point, the facts and conclusions seem incontrovertible, though opinions differ on their importance. Many other counter-cyclical forces are available, including timely changes in tax rates and structures by legislation.

A second fairly certain economic result of progression in taxation is that it favors consumption over saving because of a somewhat higher marginal propensity to save from larger and from increasing incomes. In the 1930's with the prevalence of the fallacy of the mature economy and the presumption that savings would always outrun investment opportunities, progressive taxation was regarded as especially suitable to reduce those incomes that were most likely to be saved. With the more recent emphasis on the need for investment to increase productivity and minimize the inflationary effects of large annual increases in wage rates, a tax factor that discriminates against potential savings is more likely to be regarded as undesirable. From this standpoint, the very high degree of progression seems particularly unfortunate when it exists in some of the underdeveloped countries that so desperately need both capital and enterprise even to maintain their present low per capita incomes.

The effects of progression on incentives for work and investment are more important and less clear than the effects on fluctuations in revenue and on the availability of net incomes most likely to be saved. Extreme critics are disposed to say that high progression will so destroy incentives that an economic system will grind to a halt. This is manifestly absurd, but the fact of continued growth in countries with high marginal tax rates is no reason to ignore their possible adverse influence on the amount and direction of human effort and investment. With a better tax structure, the growth might be greater.

Personal activity is stimulated by many incentives, among which pecuniary reward is only one. The old presumption of the "economic man," concerned only with maximizing the material gains from his efforts, has long been superseded. An entire field of study has been developed around human behavior in large and small organizations, with much of the analysis devoted to the nonpecuniary satisfactions and dissatisfactions in job situations. ${ }^{9}$ Per-
8. In economic terms, a "counter-cyclical factor" is one that operates in the opposite direction from the familiar cyclical forces. An increase in welfare payments during a recession is counter-cyclical to the decrease in private income from employment and investment. An automatic stabilizer is one that arises without the need for new legislation or administrative action. Progressivity in income taxation has an automatic stabilizing effect in that revenues fall off more sharply than total personal income in a recession because it is the highest segments of income that are subject to the highest tax rates; government expenditures are thus likely to be covered by deficit financing, which in turn is likely to have an expansionary effect.
9. See E. Mayo \& F. Roethlisberger, Management and the Worker (1939); A. Turner
haps surprisingly, more attention has been given to people employed in routine work than to those in higher levels of management and entrepreneurship. It is the latter who have the greater opportunities for such nonpecuniary rewards as power, prestige, and the satisfaction of one's various desires and talents for creative and socially constructive activity and whose motivations therefore are presumably the more complex. ${ }^{10}$ But it is now so clear that material rewards are by no means so dominant that any analysis of the effects of taxation which is based on the assumption that it operates on a simple "economic man" is woefully inadequate. Since taxation operates primarily to modify the pecuniary rewards of work, the effects of taxation should be appraised with full appreciation of the fact that pecuniary rewards are not necessarily dominant. Subject to this broad and important reservation, the direction of the effects of progressive taxation are quite clear.

By progressively reducing the net return from any given increment of gross income or gain, progressive taxation discourages additional efforts or activities, or a change in the direction of efforts or activities, which might be prompted by greater material rewards. It is always important to note the marginal rate of tax. Too often, defenders of the existing pattern of progression brush aside criticism by noting that the average rate of tax is lower than the marginal rate. This is, of course, true by definition. The average rate gives a quick indication of the fractions of a total income taken by taxation and left for consumption or saving. But it gives virtually no indication about the effects of taxation on incentives.

A moment's reflection will indicate the difference, for example, of the effects on incentives if one compares two people each with taxable income of 20,000 dollars and each subject to an average tax rate of 50 per cent. In one case the tax is a flat 50 per cent; in the other the tax is 20 per cent on the first 10,000 dollars and 80 per cent on the second 10,000 dollars. They each pay a total tax of 10,000 dollars and have a net income of 10,000 dollars, but the first man can keep 50 cents of each extra dollar earned while the second man can keep only 20 cents on each dollar. In virtually all respects regarding incentives, it is the marginal rate of tax on increments of income that is significant.

On a transitory basis, an increase in taxation, through greater progression or a general increase in rates, may stimulate greater effort to maintain an existing standard of living. Two people may react quite differently to a tax structure depending, among other things, on their status under an earlier tax structure. The standards of living of executives and professional people with similar incomes differ on the basis of the scale of expenditure to which they became accustomed under lower taxes. With the persistence of high tax rates since the 1930's, the comparisons are probably not so conspicuous or numerous now as they were shortly after the rates were first raised, but in the late 1940's the standards of living of executives with comparable incomes in the same organization often differed not only with individual tastes but

[^3]10. For a recent inquiry into this field, sec A. Zaleznik, Human Dilemmas of LeadersHIP (I966).
because the older ones reduced savings and even drew on capital to maintain a level to which they had become accustomed while the younger ones continued to save as their incomes rose and simply aspired to less consumption from a given gross income.

The possibility of extra income for extra effort varies greatly with the line of activity. An executive does not have the chance for increments of income from overtime or secondary employment. Even independent professional men may have commitments to established clients or patients that require full-time availability and hence activity. But the author recalls having heard, at the end of World War I, the phrase "income-tax golfer" used to describe those who opted for more recreation in preference to full activity in business or professional work. And it is not uncommon for even academic people to remark in casual conversations that they have declined an invitation to speak or prepare a paper because the honorarium was so reduced by income taxation. It would be interesting and useful to know whether it is the reduced absolute level of the net honorarium or the fact that a major fraction of a given amount had to be paid in taxes that was the principal disincentive. For most people, both aspects probably have some importance.

Though an individual income tax theoretically is not shifted forward, it seems likely that in fact very high salaries and fees are somewhat higher than they would be if marginal tax rates did not exceed 35 or 40 per cent. There is no solid basis for comparing productivity against payment fees for those whose unique talents, or unique good fortune, put them in positions to make decisions with far-reaching pecuniary implications. With salary and bonus figures required to be made public in widely owned companies, public acceptability is certainly one of the criteria determining salaries. The fact that proxy statements, on which compensation is shown for key executives, almost always show presumed income taxes and net incomes in succeeding columns for individually named executives at least suggests that the gross payments may be larger because the net results are so drastically reduced by taxation.

Investments, in contrast to personal activity, do not typically yield nonpecuniary rewards that offset or compensate for lack of material gain. To be sure, ownership of land may provide prestige and emotional satisfaction, as well as an inflation hedge. And certain industries or types of companies may be regarded so distastefully that investments in them, whether directly or by purchase of listed securities, is avoided by many investors regardless of possible rates of return. There is, however, no universal standard of what is unacceptable, and both the degree and direction of fastidiousness depends on the individual concerned. But in spite of these disincentives for certain types of investments, there is no general nonpecuniary pressure for capital to become active. Idle capital does not get bored or develop a sense of frustration because of its wasted talents. In brief, investment is much more susceptible to purely pecuniary calculations and hence to tax influences than personal activity.

The higher the marginal tax rate the greater the inducement to move away from investments that yield regular taxable income toward either tax-
exempt bonds or equity investments that have prospects for capital appreciation. The supply of tax-exempt bonds is so large that it exceeds the demand by high-bracket investors and for many years the yield has had to be high enough to attract medium-bracket investors, with a resulting large tax advantage to the intra-marginal holders. (With top-grade municipals selling to yield about 70 per cent of that on AAA corporate bond yields, the two types give an equivalent yield for an investor subject to a 30 per cent marginal tax, assuming that the securities are equally attractive except for the different tax status. But an investor taxed at a 70 per cent marginal rate would secure a net income 2.33 times higher than that on taxable bonds.) The reduction in the top bracket rate from 91 to 70 per cent between 1964 and 1966 had little effect on the yield differential.

The lower rate of tax on capital gains, with a ceiling of 25 per cent, is criticized by some as unfair in that it breaks the uniform application of the progressive rate structure. Others, including the author, argue with equal emphasis that any tax on long-term gains which are reinvested is more in the nature of a capital levy on the act of shifting from one capital asset to another than an income tax. A discussion of this issue carries one into the definition of taxable income and the distinction between the net accretion concept and the traditional dichotomy of capital and income. (It must be admitted regretfully that the tendency of some investors to treat part of the long-term appreciation in capital values as disposable income weakens the validity of the distinction.) But discussion of the concept of taxable income would go far beyond the proper limits of this article concerned with progression in the rate structures.

The fact of the lower tax on capital gains profoundly influences both the direction and the total amount of investment. The reason for the effect on the direction of investment is self-evident. The higher the spread between the marginal rate on income and the capital gains rate, the greater the influence in favor of the capital gains. The effect on total investment is less obvious, but it arises from the fact that taxation at full rates would require liquidation of more capital to pay the tax when investment is shifted from one asset to another. Also, if the rates are very high, it might force some capital funds into idleness because net yields would be inadequate to compensate for the risk and effort of investment.

The greater attraction of capital gains would appear to increase the supply of funds for equity-type and higher-risk investments which, in turn, permits the financing of innovation and new ventures. From this standpoint, the shift in direction of investment because of high marginal rates on regular income may actually foster economic development, so long as the capital gains rate is not unduly repressive. But against the favorable influence on the direction of investment must be set the unfavorable impact on the supply of savings. Thus, though the direction of investment may be improved, the total amount of investment may be reduced, with the net effect indeterminate. With a somewhat higher marginal propensity to save from higher and growing incomes, progressive taxation hits disproportionately the segments of income most likely to be saved.

Each country has its own set of tax-sheltered investments, depending on the details of its tax laws. Real estate investments receive especially favorable treatment in this country, as do many aspects of agriculture. Tax-exempt mergers are favored over taxable sales of companies to new owners who would continue them as independent entities. Particular forms of capital structures are encouraged and others discouraged, especially in closely controlled corporations. Even a company with no growth can be made attractive if an older generation in a family takes senior securities that are retired with retained earnings, thereby increasing the value of a highly-leveraged common stock held by a younger generation.

Religious institutions, by an unjustified exemption from the tax on unrelated business income applicable to other tax-exempt organizations, are put in a position to pay higher prices than other potential purchasers of business concerns and to do so in a manner that is least likely to build up the enterprise after purchase. Cooperatives are favored over fully-taxable businesses. Extractive industries receive differential tax treatment with consequent lower prices to consumers or higher returns to investors. The list could be extended almost indefinitely. Some of the differential effects are intended and others arise from general provisions of the law. But they are all made more significant by high and progressive tax rates.

Among the economic effects of high and progressive rates, one must include the diversion of intelligence and effort into attempts to minimize taxes. Whenever a tax rate exceeds 50 per cent, it becomes more important to save a dollar of taxes than to earn a dollar of income, and this fact cannot fail to divert attention from truly productive activities. Though the incomes of those concerned with tax minimization enter the gross national product as fully as do those of all other producers of goods and services, their contribution to the general welfare seems at best ambiguous.

Progression typically contributes a very minor fraction of total revenue. When government expenditures amounted to 10 per cent of the gross national product or less, it would have been possible to construct a tax system that would have received most of the revenue from the higher brackets in a generally low-rate tax structure. But when expenditures absorb 25 or 30 per cent of the gross national product, the bulk of the revenue must come from the great mass of taxpayers. The higher income rates contribute only a very minor fraction of the total yield; rates above 50 per cent typically contribute no more than 2 per cent of the total and the entire structure of rates above the base rate, if the latter were applied to the first 2,000 dollars of taxable income, typically contributes less than 20 per cent of the total. One can say categorically that progression, with all its distorting effects, is not required to provide adequate revenue. It must be justified on other grounds.

Nor can progressive rates be said to facilitate tax administration, either for tax collectors or taxpayers. The result is quite clearly the contrary. Not only do differences in rates complicate calculations, they make impossible a really effective system of withholding and, by encouraging shifts to taxsheltered activities and investments, require loophole-closing amendments to the laws, which further complicate it. Or conversely, Congress is moved
to adopt special relief provisions because the full burden of high-bracket rates is recognized as intolerable for certain types of incomes, and the special relief provisions are likely to be as complicated as those that close loopholes; in fact, adoption of a relief provision is likely to be followed by or itself be complicated by the need to prevent abuse of it. Progressive rates clearly and markedly complicate the tax law and its administration.

The existence of personal exemptions in the individual income tax provides a very real form of progression in average effective rates toward the bottom of the income scale since those whose incomes are just above the exemption pay only a very small tax. Progression from this source is quite pronounced until the taxable income is several times the personal exemption. And this sort of progression does simplify tax administration by making unnecessary the filing of many returns. One thus must distinguish between progression that arises automatically from the existence of a basic exemption and progression arising from a progressive rate structure. The former, a sort of built-in progression, is usually simplifying; the latter is almost inevitably complicating.

Probably the most serious burden that high progressive rates place on the tax administration comes from the strain on taxpayer morale. Our whole system relies heavily on self-assessment and tax evasion is generally still regarded as socially reprehensible in our country. But when marginal tax rates are made quasi-confiscatory for long periods, as distinct from short periods of war or other national emergency, tax evasion may come to be condoned by both the private and public conscience. And once a part of a tax is flouted with impunity, the rest of the tax system is in peril - as some critics of the progressive tax on foreign travel expense proposed in the winter of 1968 so properly emphasized.

Rates in excess of 50 per cent should be eliminated if for no other reason than because of the strain they place on the morale of taxpayers subject to them and the consequent jeopardy to our whole system of self-assessed income taxes. Senator Russell Long's proposal for an optional maximum rate of 50 per cent for those taxpayers who include in their tax base various forms of tax-exempt income and waive their claims for various deductions is one of the most constructive proposals for reform of the past generation. ${ }^{11}$ Its adoption would ease the strain of excessive rates, greatly simplify tax calculations and administration, and remove the worst of the distorting effects of high tax rates on incentives and investment. In brief, it would go a long way to create a world in which people would get on with the world's work instead of diverting their ingenuity to tax shenanigans. Indeed, a reduction of rates to 50 per cent might well increase total revenues as savings increase and investment and activity take place with less tax-induced distortion.

Two exceptions should be made, however, in the scope of the Long proposal. True long-term capital gains should be given differential treatment as is now done, at least for those gains that are reinvested. This is necessary to prevent a major tax barrier to equity-type investment. And chari-

[^4]table deductions should be continued to permit the financing of the existing diversity of institutions in educational and welfare activities. Government monopoly in these areas should be more acceptable than private monopoly in business.

As one appraises the present status of progressivity in tax rates, the principal problems seem to arise from what may be referred to as the "each and every" fallacy. Progression has been so vociferously advocated and so indiscriminately accepted that it has become a virtual fetish in political life, with two unfortunate results. There is, first, a presumption that each and every tax should be in and of itself progressive. Sales and property taxes are criticized and at times rejected because they are not progressive. Surely it is the distribution of the local tax burden that must be judged in the light of equity and consistency with social policy. It seems as ridiculous to insist that every tax be progressive as it would be to insist that everything in a meal be salted because salt is a necessary item in a diet. The result of the obsession about progression is a very real political difficulty in developing a balanced tax structure.

Total revenue requirements are so large that no one tax, not even a "least bad" income tax, should be relied on as a sole or even dominant source of funds. With a combination of taxes, rates on each one can be kept from becoming excessive, and the inevitable defects of each may hopefully balance out the defects of the others. The rates of those taxes most suitable for progression can be set to give whatever degree of progression is deemed appropriate in the composite burden.

The author favors a maximum marginal income tax rate of 50 per cent on grounds of equity and social policy. This rate also seems to have merit on economic grounds for reasons already enumerated. A limitation to this figure in no sense suggests approval of all aspects of conspicuous consumption by the very rich, which after all may seem no more foolish or offensive than the forms of conspicuous consumption of those with modest or even small incomes. But taste in consumption is an individual matter, and the income tax is both an inefficient and an inappropriate device for regulation.

When there is a happy coincidence of large potential revenue and a consensus on the need for regulation, selective excises may be used advantageously, as has been done in the liquor and tobacco taxes. But it is doubtful whether the tax system should be regarded as a principal instrument for solving social problems. Fines and penalties directly imposed are preferable to special taxes and tax credits in the control of pollution of the environment, whether it occurs by chemicals in the air and water or by billboards and junk yards on the ground. An attempt to find ways to modify tax systems to make them help at least in a small way in dealing with the population explosion - the greatest social problem of all - without adding to the individual problems of the disadvantaged, should be regarded by tax theorists and technicians as a major challenge. Though the tax law may be of relatively small importance in dealing with this problem, it is so urgent that specialists in any area that might bear on it should devote some thought to the subject.

The second manifestation of the "each and every" fallacy appears when tax rates are changed. Very high marginal rates have developed because of confusion over the form of a tax increase. In 1932, when the range of rates was from 1.5 to 25 per cent, the bottom rate was raised to 4 per cent to secure more revenue. The percentage increase in the rate was applied to the top rate, pushing it to 63 per cent, an increase that from one point of view might be considered merely proportionate. But in terms of the impact on net income it was almost fantastically progressive. At the bottom, net income was reduced from 98.5 cents to 96 cents, or by a little over 2.5 per cent, while at the top it was reduced from 75 cents to 37 cents or by more than half. A continued application of this "proportionate" form of tax increase would have pushed the top rate to 315 per cent when the bottom rate rose to 20 per cent.

In fact, even an increase of an equal number of percentage points is highly progressive when added to an existing progressive rate structure. One percentage point added to a 14 per cent rate reduces net income from 86 to 85 or by $1.16+$ per cent, while the same one percentage point addition to a 70 per cent rate reduces the net income from 30 to 29 or by 3.33 per cent.

The proposal to increase tax liabilities by a uniform percentage has the effect of greatly increasing the progressivity of the tax system. A 10 per cent increase in liabilities would push the bottom rate from 14 to 15.4 per cent and the top rate from 70 to 77 per cent. A 40 per cent increase in liabilities would leave the bottom rate at 19.6 per cent, below the 20 per cent level at which it recently stood, while pushing the top rate to 98 per cent!

Such a result should not be regarded as an improbable fantasy. The recent increase in tax liabilities on British incomes pushed marginal rates to approximately 100 per cent. The ill-fated proposed 5 per cent increase in liabilities in Canada in early 1968 wisely included a dollar ceiling of 600 dollars to prevent excessive increase in the marginal impact on the highest brackets.

On reductions of rates the reverse analysis can be applied. A reduction from 90 to 70 per cent increases marginal net income three-fold while a complete abolition of a bottom rate of 20 per cent could no more than increase income by 25 per cent. To a considerable extent, the very high marginal tax rates have arisen from confusion about the arithmetic and definitions regarding equal, proportionate, and progressive changes in rates when the changes are made in a rate structure that is already highly progressive. Protagonists of each position make the calculations to fit their program, but the fetish of progressivity too often obliterates reasoned analysis and comparisons.

Progressivity in income and inheritance taxation, though universally adopted and almost universally supported in theoretical literature, lacks a solid base for a rational determination of the appropriate degree of progression. A succession of standards has been advanced in attempts to give precision to the concept of ability to pay, which is generally presumed to support progressive taxation. But none of these standards has received general acceptance even by those who intuitively favor progression on grounds of equity and support it as a matter of social policy. The economic effects of
progression are more likely to be harmful than beneficial. Its revenue importance is negligible. It complicates tax administration and, when pushed to excess, strains taxpayer morale.

Some element of progression appeals to an almost intuitive sense of fairness, which is widely held. It is also consistent with a social policy of preventing indefinitely large accumulations of wealth. But progression as it exists is the result of the play of political forces in an area that has lacked clear definitions and analysis. In its excesses it may indeed approach inequity and immorality.


[^0]:    *A.B. 1928, Stanford University; Ph.D. 1934, Harvard University; Sc.D. (honorary) 1962, Iowa Wesleyan College. Professor of Finance, Harvard Graduate School of Business Administration.

    1. W. Blum \& H. Kalven, The Uneasy Case for Progressive Taxation (1953). This article has drawn frequently from the Blum \& Kalven study, though detailed citations are omitted.
    2. The marginal tax rate is the rate applicable to the last increment of income. It is to be distinguished from the average or effective rate, which is simply the quotient of the total tax divided by the tax base and typically will not correspond to any statutory rate in the schedule of progression. For example, the marginal rate for a single person with a taxable income of $\$ 32,000$ is $55 \%$ (applicable to the increment of income between $\$ 32,000$ and $\$ 38,000$ ), but his total tax is $\$ 12,210$ giving an average or effective rate of $38.1 \%$.
[^1]:    3. For a relatively nonmathematical introduction see, e.g., R. Johnson, An Integration of Cost of Capital Theories (The Fourth Summer Symposium of the Engincering Economy Division of the American Society for Engineering Education) reprinted in J. Weston \& D. Woods, Theory of Business Finance 292-304 (1967); Bodenhorn, On the Problem of Capital Budgeting, 14 J. Finance 473-92 (1959).
    4. "Utility," in the economic sense, is the satisfaction derived from an economic good or service. For most items of consumption the utility derived from successive units diminishes. The utility of the least important use, presumably that from the last in a succession of units, is the marginal utility, which in extreme cases may be negative. An orange a month for one who likes oranges would give great satisfaction; the satisfaction from the thirtieth orange in a month's consumption would be much less. And if one had to eat an orange an hour, the incremental satisfaction would quickly become negative.
[^2]:    5. In a simplified example, if an income distribution consisted of one income of $\$ 150,000$, two of $\$ 100,000$ each, ten of $\$ 50,000$ each, and eighty-seven of $\$ 20,000$ each, and only $\$ 50,000$ revenue was required, it should all come from the income of $\$ 150,000$ under the theory of minimum aggregate sacrifice, since even the 50,000 th dollar from it presumably represents less satisfaction than any one of the dollars of the person with an income of $\$ 100,000$. If total revenue requirements do not exceed $\$ 200,000$, all revenue should come from the three incomes above $\$ 50,000$ and reduce them to that level. Only if total revenue required exceeded $\$ 590,000$ would there be any tax on incomes of $\$ 20,000$; equalization down to that level would produce $\$ 590,000$. If $\$ 690,000$ were required, incomes would be equalized down to $\$ 19,000$. Alternatively, one might try to attain equal marginal sacrifice, recognizing that a small payment by someone with the smaller income may represent no more relative sacrifice than some part of the large payment by the person with the larger income. In the example above, a $\$ 10,000$ tax on the incomes of $\$ 100,000$ might involve the same relative sacrifice as a $\$ 30,000$ tax on an income of $\$ 150,000$, to produce $\$ 50,000$ of revenue. But marginal utilities and sacrifices are elusive, if not nebulous.
[^3]:    \& P. Lawrence, Industrial Jobs and the Worker (1965).

[^4]:    11. 21 Congressional Q. Weekly Rep. 2253 (1963) (in a discussion of H.R. Rep. No. 8363).
