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TAX POLICY AND CAPITAL FORMATION

RICHARD A. MUSGRAVE

EFFECTS on capital formation and growth are central to the tax debate, and rightly so. Economic growth is important and tax policy has major bearing on it. Moreover, the weight assigned to growth and how tax policy is adjusted to promote it affect the distribution of the tax burden. This creates an interaction of economic and equity issues which is crucial to an understanding and resolution of the problem. The topic is a big one and to deal with it intensively one would have to explore

1. whether and by how much the present rate of capital formation is inadequate, as this determines the priority that need be given to incentive policies;
2. what have been the limiting factors which kept capital formation from being larger—inadequate saving, inadequate willingness to invest or inadequate technical progress—since this determines the choice of tax remedy; and
3. what are the best tax techniques to meet the various shortfalls, including their effectiveness in raising capital formation as well as their bearing on the equity of the tax system.

Not all this can be done in a brief paper, but some consideration need be given to (1) and (2) so as to set the stage for a more detailed look at (3).

I. Is Capital Formation Deficient?

Domestic plant and equipment investment during 1978 claimed 10.5 percent of GNP. This has been the highest rate since 1946, with the exception only of 1969 when it was 10.6 percent. The average ratio for both the sixties and seventies was 10.3 percent, while that for the fifties was only 9.6 percent. Clearly, there has been no secular decline in the share of GNP devoted to investment. Nevertheless, over the last 5 years there has been a substantial slowdown in the growth of labor productivity, from an average rate of 3 percent between 1948 and 1973 to 1.5 percent since then. One reason is that the growth rate of capital stock has not kept up with the accelerated growth rate of the labor force. While the capital to labor ratio rose at an annual rate of 3 percent during 1948–1973, it has risen at 1.75 percent only since then. This may have accounted for one-third of the decline in productivity growth, with the major part of the slowdown due to other factors. These include changes in the composition of the labor force, in the mix of output and in the composition of capital formation. At least some of these changes are of a temporary sort and some reflect a change in consumer preferences towards the output of industries (such as services and health care) with lower productivity. The remedy, therefore, is not simply increased capital formation. However, I recognize that a somewhat higher ratio of capital formation to GNP may be needed in the future, especially if we should face up to dealing with the energy problem. It is well, therefore, to consider what may be done to expedite it.

Looking back, what have been the limiting factors in keeping the rate of capital formation from being higher? Has the constraint been in the availability of saving and investable funds, or in the willingness to invest them? Beginning with the former, an acute shortage of saving, relative to investment demand, should be signalled by a high and rising real rate of interest. But though interest rates have risen sharply in nominal terms, they have remained surprisingly low in real terms. Such has been the case, notwithstanding the much touted crowding-out effects of rising public debt. While the cost of equity capital has been high due to lagging stock prices, financing by new equity issues has never been a major factor. Major reliance

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has always been on internal sources. In this connection, it is interesting to note that the ratio of internal funds to sales in recent years has been fully as high as it has been over the last three decades, with the exception only of the mid sixties. While the flow of funds has been scarce in some sectors of the economy, it is hard to detect a general shortage for the corporate sector, and this is where most growth creating investment occurs.

This takes me to the willingness to invest. Has investment been retarded by inadequate rates of return? After-tax rates of return on equity during 1974–78 have been around 14 percent, as against 10 to 11 percent in the fifties and sixties. The effective rate of corporation tax itself has been closer to 30 percent, due to various provisions of the law (including the investment credit and accelerated depreciation) than the nominal rate of 48 percent. To be sure, measuring profits has been complicated by inflation. Profits are overstated because the cost of capital replacement has risen, but they are understated because the real value of debt has fallen. Failure to allow for the former has resulted in overtaxation, just as failure to include the latter has resulted in undertaxation. As has been shown in various studies, these two factors tend to wash out for the corporate sector as a whole, although various sub-sectors remain substantial gainers or losers in the process.[1]

Now it has been argued in a recent paper that this takes too limited a view.[2] The individual income tax on corporate source income should be included as well as the corporation tax. Allowance should then be made for the fact that the holders of corporate bonds are taxed on their full interest income, including that part of their return which merely reflects an inflation premium. This element of overtaxation is taken to offset on the average the undertaxation resulting from disregarding the gain due to reduction in the real value of debt at the corporate level. Putting both sides together, it is held proper to correct for excess taxation due to original cost depreciation only, while disregarding the debt side of the corporate balance sheet.

I am not altogether persuaded by this argument and for a number of reasons. Most important, it should be made clear that the reasoning applies to a situation of anticipated inflation, where the inflation rate is fully reflected in the nominal rate of interest. Actually, corporate debt held by individuals is largely longer term, having been contracted prior to the upsurge of interest rates and bond yields in the late sixties. This being the case, lenders are not taxed on inflated interest incomes. Moreover, even in the case of more recently contracted debt, the increase in the nominal rate has fallen far short of the rate of inflation. Moreover, I have some doubt whether it is proper in this context to combine taxation at the corporate and personal level. This is the correct approach when it comes to considerations of tax equity (only individuals have ability to pay, and all taxes should be imputed to them) and I therefore favor integration of the two taxes. However, when concern is with investment incentives, as is the case here, the corporation is not merely a conduit. Far from it, it is the major decision making unit. Investment decisions are made by managers whose primary concern is with the corporation tax, and not the taxes paid by the suppliers of outside funds.

However this may be, taxation is not the only factor in determining the willingness to invest, nor is it the major one. Investment will be high when the economic outlook is buoyant, and it will be depressed when the outlook is dim. While we have come to realize that problems of macro economics are more complex than once thought, the old rule still holds that a prosperous economy with high levels of resource utilization is the sine-qua-non of high investment. Learning how to meet this condition without an intolerable cost of inflation is, therefore, *the* most important issue in growth policy. Coming to terms with the energy problem is the second. Adjustments in tax policy are a distinct third.

While the ratio of investment to GNP and the growth of labor productivity in Japan and some Western European countries have been above ours, there are

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reasons for this and I do not see why it must be a major cause of concern. After all, the purpose of economic activity is not to win a race in abstinence; and an improved potential of our friends to share in the cost of common defense is only to be welcomed. Indeed, foreign investment of U.S. capital has made a hefty contribution to this outcome. To be sure, more rapid growth is nice to have, especially if directed at improving the position of the more underprivileged groups of our population. While the bulk of what was once thought of as the impoverished proletariat has moved into a comfortable middle class, we have permitted a small but highly distressed sector of the population to be left behind; and improving its position should be the major goal of growth. I am not a "growth-is-bad-and-small-is-beautiful" type, but I want to see the importance of growth and its nature in a proper perspective.

Taking a quite different approach it has been argued that the case for increasing growth is not a matter of keeping up with the Joneses or of meeting a particular target, but simply one of economic efficiency. The present rate of saving in the economy is said to be too low because certain distorting fiscal effects (mainly those of capital income taxation and social security) have reduced it below the level which would pertain in their absence. This, in the economist's jargon causes an efficiency or welfare loss which should be avoided. An interesting perspective, but estimates of the resulting saving shortfall have proven inconclusive and controversial. Moreover, the argument presumes a wholly flexible economy which stabilizes itself automatically at a high level of employment and resource utilization. In such an economy, a "natural" or efficient rate of saving can be readily identified, but this is not the world in which we live. Our economy is given to instability, on both the inflation and recession side, and demand management policies are needed, as best as we can, to deal therewith. Such policies may be packaged in different ways, involving various monetary and fiscal mixes. The choice of mix in turn, will affect the division of output between consumption and capital formation. There is no ready way in this setting by which to detect the "efficient mix." The growth rate becomes an element in policy choice and it must be considered in conjunction with other issues (e.g., the level of employment, inflation and the rate of exchange), issues which may well dominate the day to day conduct of stabilization policy.

II. Growth and Equity

Before turning to the specifics of tax policy, let me reiterate the importance of viewing the problem in two-dimensional terms: in considering various tax arrangements, we must allow not only for their effectiveness in raising capital formation, but also for their bearing on tax equity and the distribution of the tax burden.[3] The structure of our economy is such that high income groups play the major role in decisions pertaining to capital formation. This holds for both the flow of savings and the decision to invest. The bulk of savings, available for capital formation, flows from internal sources, and thus reflects the concerns of management and shareholders, and of large shareholders in particular. Personal savings are of relatively minor importance, and to the extent that they become available for equity investment, also originate in large part from the higher income groups. A similar picture applies if we look at investment incentives and the distribution of capital income. While corporate shares are held by a large number of people, a large part of corporate income accrues to high income shareholders. Thus, 60 percent of dividends flow to the top 20 percent of income tax returns, and dividend income as a percent of AGI rises sharply as we move up the income scale.

The question here is not whether these structural features are good or bad, but they explain why tax incentives to saving and investment also tend to be relief measures for high income groups. This being the case, attitudes towards tax policy for growth are influenced, and rightly so, by their equity implications. I consider it of crucial importance, therefore, to de-

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sign measures which will neutralize these distributional effects. Little thought has been given to this aspect and it is high time that it be moved to the fore.

These considerations are not voided by the proposition that more capital formation is to "everybody's advantage" because it raises the future level of wage as well as of capital income. So it does, but not without cost. For one thing, more capital formation means reduced present consumption, and this must be balanced against more consumption in the future. It is not obvious that this generation owes an additional savings effort to the next. Unless the trend of economic history changes sharply, the income of the future generation will already be higher due to technical progress. Moreover, and this is the main point here, it matters how the increased growth is achieved. Suppose that policies (a) and (b) accomplish the same growth effect, but that (a) shifts the tax burden to the lower end of the income scale, whereas (b) does not. The net effects of the two policies will then differ, even though both share the same consequences of increased growth. The "growth is good for everybody" proposition, therefore, does not obviate the need for considering the distributional consequences of how growth is achieved. One more point in this context. If U.S. labor is to share in the fruits of increased capital formation, this capital formation should be such as to raise the capital to labor ratio for the American worker, i.e., it must be in the form of domestic investment. Foreign investment is helpful to U.S. capital and to foreign (but not to U.S.) labor. In 1977 plant and equipment investment by U.S. foreign affiliates amounted to about 25 percent of such investment in the U.S., a not inconsiderable amount.

III. Tax Policy and Saving

With these broader aspects in mind, I now turn to specific tax policies aimed at increasing the rate of growth, first via effects on saving and then on investment. Out of a total Federal tax revenue of $432 billion (1978), about $50 billion may be expected to have fallen on saving. Most of this, say 70 percent, is corporate saving. Corporation tax relief, thereof, offers the main possibility for increasing the savings rate. But much depends on how it is given.

Integration with the individual income tax would reduce the overall rate of taxation on corporate-source income, but it would also remove the deterrent to distribution which now arises from the "double taxation" of dividends. While attractive on equity grounds, it would do little for saving and might even reduce it. Lowering the rate of corporation tax would raise retained earnings, by say half the tax reduction, but it also would increase the tax shelter for high bracket shareholders. Increasing the penalty on distribution by taxing retained earnings at a lower rate (an inverse undistributed profits tax) would do still better, but the tax shelter issue would loom even larger. Putting depreciation on a replacement cost basis would also reduce the tax, and would probably do so with a smaller leakage into dividends. Though questionable on equity grounds while leaving capital gains from debt (incurred at still low interest rates) unattended, it may be the best among the various alternatives.

Turning to personal saving, the potential increase which might be achievable by reshuffling the tax structure (while holding revenue constant) hinges on (a) differences in the propensity to save of various tax payers as well as on (b) responses to the rate of return. Based on (a), the potential is quite modest. A cut in the top bracket rate to 50 percent (combined with a slight offsetting increase in the lower rates) might raise personal saving by, say $2 billion, a small amount, compared to total personal saving in 1978 of $77 billion and total private sector saving of $350 billion. Nor could a substantial increase in saving be achieved by reshuffling the remainder of the tax structure, including a sharp reduction in the progressivity of the individual income tax or its replacement by, say, a sales tax. The reason of course is that the marginal propensity to save does not differ greatly between income levels.

Perhaps more can be achieved by (b), that is increasing the incentive to save

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through reduced taxation of capital income, thereby raising the net rate of return. The answer hinges on the interest elasticity of saving. Replacement of the income tax by a progressive expenditure tax would increase the rate of return by from 16 to 233 percent, depending on the applicable bracket rate. Depending on the structure of savings motivations, this might or might not generate a substantial increase in saving. While I see considerable difficulties with the expenditure tax approach and would want to include gifts and bequests in the base, the expenditure tax maintains the essential principle of personal and progressive taxation and I would certainly prefer it to savings promotion by a massive shift to a retail sales or (which is equivalent) a value added tax.

In the meantime, other if minor things, might be done to increase the rate of return, especially to the small saver. This might include a tax incentive in the form of a limited and vanishing credit against capital income, as well as other measures designed to make attractive short term rates accessible to low income savers. The way such savers are treated under existing capital market arrangements is deplorable, including the pitifully unattractive terms at which savings bonds are offered.

But all these are tidbits only. The sensible fiscal approach to increasing savings in the economy is not by way of tax structure adjustments, but by increasing the budget surplus or, which amounts to the same, by reducing the deficit. This may be done either by way of tax increases or by lesser cuts. The resulting increase in public sector saving may then be made available to private investment by government lending, by some new arrangements which would provide public funds on equity terms or by adjusting the stabilization mix towards easier money. It has been suggested in this context that the social security system be placed on a basis of reserve finance, but this might be achieved as well or better (with less tie-in with the payroll tax) through the general budget.

Instead of reducing taxes, public saving might also be enhanced by lowering expenditures while holding tax rates constant. But by and large, this is not the proper approach. To be sure, if resources are to be transferred from consumption to capital formation, this should include public as well as private uses, but the public sector should not be made to suffer disproportionately. Increased efficiency is all to the good, but increased growth should not be financed by reduced services to the poor nor, I should add, at the cost of needed defense. We should also be aware of the argument that environmental investment is unproductive because, due to faulty figuring, its benefits do not appear in the national income. Like it or not, the public saving route requires a high level of taxation, and might thus be rejected as utopian. Nevertheless, it would provide a much more effective approach than reshuffling the tax structure. Moreover, it would permit the objective to be reached without turning to regressive changes in the burden distribution.

IV. Tax Policy and Investment

To be sure, raising the rate of saving, be it private or public, can be sound public policy only in a setting where higher saving will be matched by higher investment. Otherwise, there will be a loss of output rather than a gain in growth. I thus turn to the investment side of the picture. Here there is no ready solution by letting the government do it, at least not without major institutional changes. The additional investment must be largely in the private sector, hence the importance of taxation effects thereon.

The standard model of investment behavior, which has come to be used widely in recent years, views the investor as maximizing profits by pushing investment to the point where the rental cost of capital equals the rate of return. The profits tax increases the rental cost of capital so that, with a given gross (before tax) rate of return, less is invested. Or, as I prefer to put it, introduction of the tax reduces the net rate of return, so that with a given rental cost investment is reduced. Tax changes to increase investment then call for dampening this depressing effect on

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the net rate of return. This might be done by reducing the tax rate, speeding up depreciation, writing up the depreciable base to adjust for inflation or by granting an investment credit. To be most inducive to growth, the relief should be given in a way which calls forth the largest response in investment, and which does so with least detriment to tax equity.

Among these alternatives it is readily shown that relief aimed at new investment, such as accelerated depreciation or the investment credit should be more effective than a general rate cut which includes the return on both old and new capital. It may also be shown that both the investment credit and accelerated depreciation involve a bias, if in opposite directions, as between short and long capital but that a technique may be devised which does not. Finally, it is evident that an investment credit which aims at incremental investment would be more effective than the general credit in its present form.

Time does not permit a detailed comparison of these alternatives, but a few comments are needed. By and large, I prefer the investment credit, especially if it could be reformulated in marginal terms. The capital gains approach in turn ranks lowest. Providing realized gains with a 60 percent exclusion and omitting unrealized gains altogether is, I think, intolerable on equity grounds. Moreover, it is inefficient as a general incentive since a large part of the benefits accrues to forms of investment which contribute little if anything to productivity growth. In my view, the 1977 legislation took a massive step backward towards dismantling tax reform. The Treasury position of accepting the increase in the exclusion rate while opposing indexing was precisely upside-down. Overemphasis on the largely irrelevant immediate revenue effects of the measure permitted basic concern with tax structure reform to be diverted, in all a most unfortunate episode, demonstrating total failure to place growth assistance under equity constraints. If it is important to correct the distortions which result from the taxation of purely nominal gains, as been suggested in the preceding paper, surely it is no less (and in the long run, when inflation hopefully abates, more) important also to correct for the distortions which result as 60 percent of realized and 100 percent of unrealized gains remain tax-free.

The model of investment behavior, underlying most recent work on taxation effects of investment, of course, will not be the first one. New insights are gained and old ones are lost. In particular, I am puzzled why taxation effects upon risk, and the role of loss offset have disappeared from the discussion. There was a time, and not so long ago, when it was concluded in learned journals that taxation with full loss offset (and such is the case for most large companies) may raise rather than reduce risk taking. I still think this a point of major importance. Full loss allowance is not only the most important investment incentive, but also the one which is wholly compatible with a fair definition of income and taxpaying ability.

Taxation, Growth and Inflation

In concluding a word about the role of inflation. As I have noted already, the greatest contribution that can be made to a high level of capital formation and growth is to develop a policy design which permits the maintenance of a high employment output without an intolerable cost in terms of inflation. There are various ways in which a higher rate of capital formation relates to inflation. In the short run, an increase in investment, no less than an increase in consumption or in government purchases adds to aggregate demand and thereby to inflation. In the long run, capital formation raises productivity and output, thereby checking inflation from the supply side. Moreover, the productivity gains brought about by increased domestic (not foreign) capital formation permits wage rates to rise without raising labor cost, thus taking pressure off cost-push inflation. These are beneficial effects but they take time to work out and it would be a mistake in my view to consider increased capital formation as a solution to our current inflation problem. The sequence (if any-

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thing), is in reverse; ways must be formed to check inflation so that we can afford to maintain a buoyant economy and to induce a high level of investment.

Conclusion

My conclusion, derived from this brief survey of capital formation and taxation, might be summarized as follows:

1. There has been no decline in the rate of capital formation, although productivity growth has slowed;
2. Some increase in the rate of capital formation may be needed, although I see no immediate cause for alarm;
3. Implemented in a non-inflationary context, increased capital formation calls for an increased rate of saving. Changes in tax structure, short perhaps of full fledged expenditure tax, are not powerful in accomplishing this. An increase in the public sector savings rate is much the better approach;
4. The prime requirement for encouraging investment is maintaining a prosperous economy without recessions. Tax incentives can help but they are of lesser importance. Among them the investment credit is most and the capital gains exclusion is least acceptable.
5. Since growth decisions, involving both saving and investment are made largely by people with relatively high incomes, tax policy for growth easily becomes tax relief for upper incomes. To assure growth with equity, the choice of tax devices should be such as to neutralize effects on the distribution of the tax burden.
6. To assure a broad sharing of the gains from growth, emphasis should be on domestic capital formation, rather than on foreign investment. Present tax arrangements do not reflect this.

In all, taxation effects on capital formation are an important element of growth policy, but far from the entire and perhaps even major part of the story. The major issue is to come to terms with inflation, so that we can afford maintaining a high level economy. The other is to resolve the looming energy issue. Unhappily, we have made little progress with the former and notwithstanding much brave talk, have not even begun to come to terms with the latter.

FOOTNOTES

[1]See Davidson, Sidney and Roman Weil, "Inflation Accounting: Implications of the FASB Proposal," in Aaron (ed.), *Inflation and the Income Tax,* Brookings, 1978.

[2]See Feldstein, Martin and Lawrence Summers, "Inflation and the Taxation of Capital Income in the Corporate Sector," *Working Paper No. 312,* National Bureau of Economic Research, Cambridge, Mass., January 1979.

[3]I have been concerned with this issue for some time. See my "Growth with Equity," *American Economic Review,* 55, 5 (December 1965), pp. 323-333.

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