

## GOVERNMENT POLICY AND INVESTMENT

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There is nothing that cripples business investment like a recession. From the beginning of 1974 to the third quarter of 1975, while unemployment rose from 5.2 percent to between 8.5 and 9 percent, real non-residential business fixed investments fell 17.5 percent. While gross national product in constant dollars declined 6.6 percent from the fourth quarter of 1973 to the first quarter of 1975, the total of fixed investment, including residential as well as nonresidential structures, dropped 23.6 percent from the first quarter of 1973 to the second quarter of 1975.

These facts should be an unforgettable reminder to all concerned with obtaining both a substantial and an optimal rate of business investment. The one major government responsibility in this area should be to provide a general climate of prosperity. Beyond that, I shall argue, government should leave investment decisions to the competitive processes of the free enterprise system, unless cogent reasons exist for doing otherwise. There should be no general presumption that government should encourage -- or discourage -- business investment.

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### "Investment Needs" and Presumed Constraints

We are frequently told that productivity, prosperity, employment, and growth depend upon major business investment. There have then been many efforts to project "investment needs."

A New York Stock Exchange study [23] pointed to a capital "shortage" of some \$650 billion by 1985. As Treasury Secretary, William E. Simon [24] suggested a capital gap of over \$2.5 billion by comparing his estimates of capital requirements in current dollars over the next decade with actual expenditures in current dollars over the last decade, without noting the noncomparability of prices.

There have been many other comparisons of projected needs and requirements and anticipations of actual investment. Bosworth, Duesenberry and Carron [3] offered a projection for 1980 of 15.8 percent as the ratio of gross private domestic investment to gross national product. This particular figure was in fact just about the mean for that ratio in the 1950's and in the pre-recession year of 1973. A major study of capital requirements was undertaken for the Council of Economic Advisors under the direction of Beatrice N. Vaccara of the Bureau of Economic Analysis. It projected a figure of \$986.6 billion, in 1972 prices, for non-residential business fixed investment from 1975 to 1980, or 12.0 percent of cumulative gross national product, "in order to insure a 1980 capital stock sufficient to meet the needs of a full employment economy, and the requirements for pollution abatement and for decreasing dependence on foreign sources of petroleum." [22], p. 77

Frequently, financing has been seen as a major concern for the supply of business investment. Benjamin Friedman wrote in 1975, "To an unusually great extent, financial considerations may act during this

period 1977-81 as effective constraints on the amount of fixed investment which the economy in aggregate is able to do." 11, p. 52 In May 1976, however, Allen Sinai reported, "There are no financial shortages of any consequence." 20, p. 2

Concern has also been expressed with regard to the rate of return on capital. A study by William Nordhaus 19 suggests a drop in the "genuine" rate of return on non-financial corporate capital. It appeared to fall fairly steadily from a high of 10.0 percent in 1965 to a plateau of around 5.5 percent in the 1970's, before the current recession. (This genuine rate of return involves a depreciation adjustment, akin to that now incorporated in the national income accounts, and the inclusion of net interest in the numerator and the total value of non-financial corporate capital, rather than net worth, in the denominator.)

Presenting a variety of measures, Holland and Meyers found that real rates of return were generally higher in the mid-1960's and lower since, but they note that non-financial corporations "are better off now than in the mid-1950's." They observed further, "operating profitability (ROC) is about the same now as then but the cost of capital is lower. If there is a capital 'shortage,' it has as yet had no observable effect on the cost of capital." 13, p. 38

I have elsewhere offered critical reviews of some of these studies and reported findings. What I should like to do here, however, is to consider what the role of government has been in achieving the rate of investment that we have had and offer some thought as to what government

policy should be. I shall consider, in particular, the argument that government, with business and individual income taxation and with our social insurance system, discourages saving and investment. Hence, it is claimed, government should take special measures to encourage investment to compensate for this discouragement.

#### The Government Record on Tax Policy

With regard to the tax system a widespread argument by business spokesmen, politicians and some economists is that after-tax returns on capital and business investment are generally depressed by government policy. In its more sophisticated form the claim is that there is a "wedge," consisting of the rate of income taxation, between the marginal social return on saving and investment and the after-tax return perceived by investors. One presumes, by this reasoning, that there is no social cost to capital or to its accumulation which should be met by taxation. To the extent that national defense and police forces are used to protect capital or the cost of the future income, this is not true.

Further, business income taxation should not be viewed as taxes on capital, except in the Marxian sense of all capital, "constant" and "variable." For if business or corporate income taxation discourages business production, it does not generally distort the choice of input to achieve any given output. Taxation on one sector, of course, will discourage production in that sector. With less production in that sector there would be less employment of labor as well as less utilization of capital. If aggregate demand and output are unaffected, however, there would then be more production in other sectors, with the relative

utilization of labor and capital again unaffected.

We may view business taxation as so pervasive a tax on productive activity that it offers no alternative in the way of reallocation of resources to production outside of the business (taxed) sector to some other productive activity. In that case, we would have to assume that business taxation discourages productive activity generally, increasing the demand for leisure and reducing not only investment but the employment of labor and the production of market output.

A more sophisticated view of a possible role of business income taxation in discouraging investment begins with the acknowledgement that such taxation is a tax on profits and not on capital or any one factor of production except to the extent that the costs of non-capital factor services are more fully tax deductible than are capital services. Thus, in the so-called "neo-classical" formulation of the investment function, what becomes critical is whether tax depreciation equals economic depreciation, whether capital costs such as interest and dividends are deductible, and whether capital gains and losses are fully included in taxable income (See 147, for example). If all this were true, business income or profits taxation would be neutral with respect to the proportions of factors used in production and hence would not directly affect investment. It is hardly clear, when these elements are considered, that business income taxation has on balance discriminated against capital and investment.

First, despite the long hue and cry about the inadequacy of tax depreciation charges, there is considerable evidence that, except

for some of the last few years of extraordinarily rapid inflation, tax depreciation has in fact exceeded economic depreciation. This is largely confirmed by the new Bureau of Economic Analysis "capital consumption adjustment" for corporate enterprise. This adjustment is essentially the difference between depreciation charges calculated on a consistent straight-line basis but adjusted for inflation and the estimates of actual depreciation charges based largely on tax depreciation. It turns out that for each of the years from 1962 through 1973 the BEA capital consumption adjustment to corporate profits was positive, indicating that consistent straight-line depreciation (at 85 percent of Bulletin "F" lives) with adjustment for rising replacement costs was less than actually reported corporate depreciation charges. The similar adjustment for non-farm proprietors' income was positive for every single year from 1946 through 1975 (See /257 and /267, Table 1.13).

The reasons are not hard to find. The Congress, the Treasury and the Internal Revenue Services have been increasingly "liberal" on tax depreciation and amortization allowances over the years. Beginning with World War II, we had various "Certificates of Necessity" for five year amortization, renewed again during the Korean War. In 1954, sum-of-the-digits and double-rate declining balance depreciation were initiated for tax purposes. These entailed a major acceleration of depreciation and consequent increase in annual depreciation charges. Contrary to some confused or confusing interpretations, such acceleration does represent, in an economy growing as is ours in the annual money value of capital expenditures, a permanent increase in annual

depreciation charges.

In 1962, "guideline" depreciation was instituted, offering more acceleration of depreciation and increases in annual charges. In 1971 we acquired the "Asset Depreciation Range" system which permitted still further acceleration of depreciation by allowing shortening of tax lives by 20 percent beyond the already shortened guideline lives. Finally, over several decades, it turns out, the Internal Revenue Service has been acquiescing in a very considerable shortening of lives for tax depreciation purposes (so that by 1971 for much property there was indeed little to gain from the Asset Depreciation Range system).

With regard to the costs of raising capital for investment, interest expenses are fully deductible for tax purposes. What is more, as pointed out by George von Furstenberg, with continuing inflation, business borrowers may charge against taxes "not only 'real' interest but also the inflation premium in their interest payment." [21, p. 225.] Yet, with inflation, the real value of bonded indebtedness declines and businesses pay no tax on the implicit capital gain in their net worth.

Perhaps most important in recognizing overall tax effects on investment is our lack of effective taxation of capital gains. These are of course only taxed upon "realization," and then essentially at half of normal income tax rates. Taking into account the extent and timing of "realization," which still need not occur even at death, the effective rate of taxation of capital gains, frequently zero, is almost certainly

under 10 percent.<sup>1</sup>

Inflation can lead to nominal capital gains which are not real. Even inclusion of only half of such nominal capital gains in taxable income could result in taxation of capital rather than true income, defined as the value of what can be consumed while maintaining real capital intact. The combination of tax deductibility of interest payments and limited taxability or non-taxability of capital gains, nominal or real, may lead, however, to quite different results. One can finance a great deal of investment in tangible assets by borrowing, with the interest costs contributing to a reduction of taxes on other income. Then, as the return on the investment accrues in the form of increased value of the assets, no taxes are paid. The net after-tax return on investment is thus raised.

Additional government encouragement of some forms of business investment stems, of course, from the so-called investment tax credit, which is in fact a reduction of taxes related to purchase of eligible equipment. That credit, introduced initially in 1962 and variously revised, suspended, reinstated, abolished, reenacted, and extended and increased, now stands at 10 percent for business generally, with an extra 1.5 percent related to corporate contributions to employee stock ownership plans.

Taking into account all of these factors -- accelerated depreciation for tax purposes, full deductibility of nominal interest costs, depreciation of the real value of business debt as a consequence of

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<sup>1</sup>Bailey [17] offered an estimate of 8 or 9 percent in 1969.

inflation, the non-taxation of capital gains, and the equipment tax credit -- I would charge that federal government tax policy has in fact slanted the economy to an overallocation of resources to business investment in physical capital. While I suspect that it is too early to be sure of a secular downturn, particularly with figures heavily influenced by the stagflation and recession of the last few years, one may wonder whether the declining rate of return on business capital suggested by Nordhaus and others perhaps relates to these government policies.

#### How Tax Incentives Influence Investment

Government tax incentives for business investment may be expected to increase investment and the capital intensity of production until the marginal after-tax return has again fallen to whatever is the required rate of return on investment. This would, in principle, leave the long run after-tax rate of return largely unaffected, while causing capital gains for owners of capital until the new equilibrium is reached.

In practice, however, there may well be some over-shooting. Individual firms perceive higher after-tax profits for themselves. They may not anticipate all of the ultimate effects for the economy as a whole as increases in other taxes counteract their own immediate tax gains. They then react largely to an expansion effect of apparently lower tax costs without recognizing that in the aggregate it is only a substitution effect which can apply. Hence they over-invest, at least given the width of markets, as perhaps they did in the late fifties and into

the sixties only to find excess capacity and excessive capital intensity in the seventies. Thus, not only have the marginal before-tax and social returns to business capital been reduced by the introduction and extension of tax incentives. The after-tax returns to business and to the owners of business capital may also have been reduced.

The issue of effects upon rates of return is in a fundamental analytical sense related to the considerable dispute as to the effectiveness of various government tax measures in increasing the rate of aggregate investment. Aside from influences on aggregate demand, which we may wish to rule out on the assumption that alternate taxes or reductions in government expenditures would replace any given business tax reductions, special tax measures for investment such as the equipment tax credit and accelerated depreciation must operate by lowering the relative price of capital. Consequences for investment then depend upon the elasticity of substitution between capital and other factors, or more generally among all factors of different durabilities, and upon costs of adjustment which dictate the time paths of capital and associated investment.

Early work within a "neo-classical" framework simply assumed perfect competition and a Cobb-Douglas production function, where the elasticity of substitution between capital and labor is, of course, unity. (See /14/ and /15/, for example.) All that was actually estimated was a set of distributed lag coefficients, and these were actually taken as constant and independent of the factors inducing investment. With discussion of the critical nature to the investment function of these underlying

assumptions (See 9 and 10), attention to parameters of production functions increased, both in themselves and in terms of their roles in investment. Forms of production functions proliferated, along with presumed empirical findings. Estimates of investment functions tended on balance to find elasticities of substitution between "capital" and "labor" less than unity but in many instances one could not pinpoint estimates sufficiently to reject the possibility of unitary elasticity and of the Cobb-Douglas form (Note 27). Differences tended to appear as between estimates from time series and from cross sections, with the former generally showing lesser elasticities of substitution (as observed in 17), and we have seen various arguments that the one or the other set of estimates was biased.

The connection of all this to investment is that, if firms minimize costs or maximize profits, the prime effect of government lowering of the after-tax cost of capital is, by lowering the relative price of capital in general or in some instances more durable capital in particular, to increase the capital intensity of production. The extent of this increase depends in equilibrium upon that critical elasticity of substitution.

Given non-zero elasticity of substitution, lowering the relative price of capital brings about an increased rate of gross investment. In an otherwise stationary economy, the capital intensity of production or the capital-labor ratio rises to a new equilibrium, at which point greater depreciation and retirements of capital are offsetting the permanently higher rate of gross investment. Net investment returns to zero. Maintaining a constant ratio of capital to output or capital

to labor, where output or labor are increasing, of course requires increasing capital, that is positive net investment. A higher capital intensity or a higher capital-labor ratio, in a growing economy, implies a permanently higher rate of net investment.

Government investment incentives may be perceived by individual firms as increases in cash flow and decreases in costs, with product demand unaffected. Positive investment responses in the short run may be related to these perceptions.

We may presume, however, that government policy aimed at increasing investment is independent of policies directed toward the maintenance of aggregate demand. If general considerations of fiscal policy, including real or imagined needs to combat inflation or meet balance of payment or exchange problems, are such as to maintain aggregate demand or its path invariant, the short run considerations that lead to increased business investment are in time overwhelmed by the underlying constraints of the production function. Thus, if the elasticity of substitution is low, any substantial short run increases in business investment may be followed by sharp reductions in experienced rates of return and evidence of an apparent over-supply of capital. As firms experience the inelasticity of the demand for additional capital with respect to its rate of return, our usual government incentives bring little bang for the buck. Many billion dollars of tax subsidies in the form of equipment credits and accelerated depreciation produce only modest increases in investment.

We may also wish to consider the differential impact of investment

tax incentives on large and small firms. A good argument can be made that the equipment tax credit and other business investment tax preferences are a disproportionate advantage to large business, with small business figuratively picking up the crumbs from the table. A major reason for this is simply that it is big business that tends to be most capital intensive and uses not only the largest amounts but the largest proportions of equipment in the productive process. Hence tax benefits for the purchase of business equipment are a much more substantial boon to large business than to small business, both absolute and relatively.

The consequence is not only that small business gets less relative benefit. There may also be a backwash in this instance which leaves small business altogether worse off. Aside from the fact that an alternative to reducing business taxes in a manner that gives peculiarly large benefits to big business might be a reduction in taxes of another form which would be of more benefit to small business, there are certain real and monetary effects of a tax credit and other investment tax subsidies which indirectly injure small business.

First, to the extent that large business does take advantage of the tax credit to order more equipment, it puts added pressure on supply, thus raising equipment prices which all business, including small business, must pay. Secondly, added business investment by large concerns may further tighten credit markets, raising interest rates and making credit more difficult to obtain by small business. The net gain to small business from these incentives would thus clearly be less than

the apparent gross gain which seems so attractive, and may even possibly be negative.

There is in fact a third manner in which the equipment tax credit and accelerated depreciation allowances are likely to be of less relative benefit to small than to large business. This relates to the rather obvious fact that the tax credits and increased tax depreciation deductions are essentially benefits to firms that are already making profits. With limited provision for loss offset, small firms and new firms which are showing little or nothing in the way of taxable profits hardly benefit from tax advantages which would reduce their profits tax liabilities.

#### Effects on Saving of Individual Income Taxes and Transfers

Some see the individual income tax as a deterrent to investment. It is claimed that saving for future consumption is taxed twice, once as current income is received and a second time as a return has been earned on the saving.<sup>2</sup> Thus, the relative price of future consumption and current consumption, or of saving and current consumption, is altered to the advantage of current consumption. As a consequence, individuals or households attempt to save less and, given a full employment economy, less saving occurs and hence there is less investment. With diminishing marginal returns to capital, we have a higher before-tax, social

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<sup>2</sup>As suggested above, the availability of interest deductibility and largely untaxed capital gains, as well as explicit tax shelters, may in fact leave many forms of saving less heavily taxed than current consumption.

return on capital than there would be without income taxation. Presumably we have sacrificed investment with a social return which, except for tax considerations, would be warranted.

Given the assumption of full employment, taxes on income may not, however, reduce the rate of saving. We must distinguish income and substitution effects. If savers are concerned primarily with establishing a future consumption stream, say for their retirement, a tax on the return to cumulative wealth reduces permanent income and reduces current consumption, and thus increases current saving. A lower rate of return may induce individuals to save more in order to attain consumption goals in later years: the old Cassel effect. In a growing economy with a growing population, we then have increased saving of the relatively more numerous working young. If there are not compensating income transfers, this is supplemented by decreased dissaving of elderly retirees who, because of the lower rate of return on their past saving, must consume less.

It is frequently argued that government redistributive efforts, in the form of the whole tax and transfer payment package, encourage consumption and hence discourage saving. This argument may be questioned appropriately in terms of both the Friedman permanent income  $\overline{I_2}$  and Modigliani life-cycle consumption functions  $\overline{I_8}$ . Both the Friedman and the Modigliani models suggest that the marginal propensity to consume of poor transferees may be no higher than that of rich tax-paying transferers. Redistribution from rich to poor will not then necessarily raise consumption.

It has also been argued recently, particularly by Martin Feldstein, that our social insurance system and its method of financing reduce private saving below what it would otherwise be, and substitute no real public saving. One might suggest one contrary effect in the dominant component of taxes on the working young to finance transfer payments to the elderly retired. The propensity to leave estates may be such that, despite the need of many elderly to consume all of their pensions, our social security system adds more to private saving than it subtracts.

Except for this, it might be conceded that the guarantee by government of retirement benefits reduces a major motivation for saving. Consideration of historical alternatives to governmental guarantees of old age support, though, still leaves questions. What we had before "social" security at a government level, and what still exists in much of the world, is private support within the family, essentially by one's children. Before the advent of social security in the United States, it would appear that the bulk of the population found themselves unable or unwilling to save significantly during their working lives, and relied in large measure on the support of their children for sustenance in old age. The final word on empirical data is certainly yet to be said, but there may have been little loss in private saving as a consequence of the shift of support of the aged by their children from a private mechanism to one socialized by the state.

To the extent that the social commitment appears more reliable it may enable individuals to insure themselves more readily against risks and uncertainties of all kinds regarding retirement needs, including

the uncertain length of life itself, and future health and medical expenses. Social insurance may thus bring about a reduction in saving intended to meet risk and uncertainty. Such a governmentally induced reduction in saving is not necessarily a welfare loss. We may well prefer to save less and have a lower expected lifetime income when risk and uncertainty are reduced. We may prefer the lower-income-lower-risk combination which social insurance makes possible, to the higher income-higher risk combination, which we would be forced to seek through more saving if social insurance were not available.

### Monetary Policy

Business investment is seen by many to depend considerably upon monetary policy. In general, easier monetary policy is viewed as bringing lower interest rates, although this is disputed by "monetarists." They argue that increases in the quantity of money will only temporarily lower interest rates but then raise prices, the expected rate of inflation and the nominal rate of interest as well. Clearly, higher expected rates of inflation bring on higher nominal rates of interest. It is hardly clear, however, that these prevent the lower real rates of interest which are what should be relevant to investment decisions. Further, one may well properly question whether expansionary monetary policy alone, that is the Federal Reserve system bringing about the exchange of non-interest bearing debt (money) for interest bearing debt, will generally cause much inflation.

The main body of economic thinking does perceive a negative relation between the rate of interest and investment and hence a positive relation

between easier money and investment. What that monetary policy will be is likely to depend considerably upon the political process. Despite the short run independence of the Board of Governors of the Federal Reserve system and of the Open Market Committee, one may anticipate that a Democratic administration will have some influence in implementation of its traditional policy of easier money. This would appear particularly likely as long as the rate of unemployment remains high and the economy has not completed its recovery from the sharp and deep recession that began in 1974.

Measures intended to affect investment are frequently poorly judged if one concerns oneself exclusively with business investment which, as we shall note further, is a small proportion of total capital accumulation. In fact, there is little evidence that tight money and higher interest rates have a direct impact on business investment. They do have profound effects, in large part because of governmental restrictions and institutional arrangements in mortgage markets, on investment in residential housing.

Tight money may choke off investment by relatively smaller and less credit-worthy unincorporated business. It may have very drastic effects on investment by state and local government and school districts. It may also make purchases of some consumer durables more difficult. In its impact on security prices it may importantly affect people's perception of their wealth and hence their own consumption and investment in human capital. Important indirect impacts on business investment may stem from the general movement of the economy in response to monetary policy.

Paradoxically, it is possible that tight money intended to discourage investment may actually increase business investment. For example, to the extent that construction resources are freed from residential housing and government building, they may become more readily available for the erection of new business plants. Corporate fund raisers may lament the higher interest rates that they pay and yet not note that lower construction costs (or less rapidly rising construction costs) or shorter delivery times are a consequence of the tax impact of tight money elsewhere in the economy.

#### A Broader View of Investment

These considerations should lead us to a much broader consideration of basic determinants and costs of business investment. One may be seriously misled by too narrow a view, particularly that of an individual firm. Here it may appear that the availability of funds is a simple, overwhelming determinant of the rate of capital expenditures. Even in this instance, one may readily document the fact that most large firms make capital expenditures to the extent that they appear sufficiently profitable. For the giants of American industry that do the bulk of capital spending, funds are available. The question is whether the profitability of their use is sufficient. And the expected profitability of use of funds varies considerably more than their cost.

Where profitable opportunities dwindle it may appear that the high cost of funds is discouraging investment. But were profitability high, that same high cost would not discourage investment. Even availability may be an evidence of expected profitability. Banks and other investors

will be reluctant to supply funds if investments do not appear sound, that is, profitable.

Ultimately the total amount of saving and investment in the economy may be seen to depend upon total income and output and proclivities to save for future consumption instead of consuming now. As long as employment is less than full and output and income are hence less than the total of which the economy is capable, saving and investment can and would be increased by coming closer to full employment. Given a situation of less than full employment, virtually any increase in output, whether of consumer goods or goods and services produced by or purchased by government, would also generate more saving and investment. The underlying economic relation, indicating that higher income implies more saving and investment, is relatively unassailable.

The financial counterparts to this underlying real relation may be varied. With a higher national income, there may be greater personal saving, more in the way of undistributed corporate profits, elimination of dissaving by the unemployed and financial flows in one way or another from the savers to those requiring real capital, to the extent those in these categories are not identical.

Once full employment is attained, the story is a different one. Any attempts now to increase investment, that is output not contributing to current consumption, must involve a reallocation of resources rather than merely the utilization of previously idle people and productive capacity. In such a situation, difficulties experienced by corporations in financing more investment may reflect simply the reluctance of

business or government, or non-business investors, to give up their shares of output.

While fiscal and monetary measures may well bring about some alteration in the mix of output for current consumption and investment for the future, much of their effect is rather to alter the composition of investment itself. Investment may properly and usefully be viewed more broadly as all current output or productive activity which contributes to future output. Alongside of the traditionally included business acquisition of plant, equipment and additional inventories, we should then place similar acquisitions by government, federal, state and local, and by non-profit institutions. We might also note that acquisitions of automobiles by households are as much investment as similar acquisitions by taxi companies or firms. Washing-machines and dishwashers acquired by households are as much investment as those acquired by laundromats or restaurants.

Not only are durable goods of households, government and non-profit institutions investment, so too are education and training, whether on-the-job, in school, or in the home. For these also contribute to future output. By many measures, the last dollars spent in education and training have been more productive than the last dollars spent on plant and equipment. In addition, we might include in investment child rearing expenses and provision for health and mobility, all of which make possible future output. And, of course, few deny that expenditures for research and development have contributed mightily to productivity. Our stock of knowledge is in many ways more valuable than our stock

of brick and mortar. Much of the brick and mortar, of course, is conventionally counted as part of gross private domestic investment in the form of residential construction, but relatively little of this residential construction will be included in business investment.

Hence we find business investment a quite minor proportion of total capital accumulation in the economy. In connection with certain on-going research on extended concepts of national income and output, utilizing in large part recent estimates by John Kendrick [16], we take total capital accumulation in the United States economy during 1969, excluding "net revaluations" or capital gains, to be \$671 billion. Against this we may note that all non-residential business investment, corporate and non-corporate, amounted to only \$98.5 billion for structures and equipment and \$7.8 billion more for change in inventories. Non-residential business investment was thus less than 16 percent of all investment in the economy.

For the great bulk of capital accumulation which takes place in tangible or human form, there are basic reasons to expect under-investment and hence higher marginal returns. Where a company constructs or buys plant and equipment, it can retain it and its benefits for itself. Where it invests in research, development, know-how and training, since knowledge and skills are generally freely disseminated in a free society, differences between marginal return to the investor and marginal social return may be substantial. Most particularly, since we are not a slave society, it does not pay individual private enterprise to invest in human beings for more than the expectation of returns from

their uncertain and usually short run employment.

Yet the serious imperfection in human capital markets, along with understandable individual risk aversion, makes it very difficult for people to invest adequately in themselves. Information and transaction costs curtail drastically the supply of finance for human capital. What youth with aspirations for business leadership or service as an engineer, political leader or economist can go to the bank and say, "Invest in me! My expected life-time earnings are high. I would be happy to give you a promissory note or sell you equity rights in my human capital"?

Attention to human capital may lead us to a large issue which perhaps underlies much of the heat in discussion of government policy towards investment. We are frequently told that we need more capital or investment for output, productivity, jobs and growth. Measures are devised presumably to increase the aggregate of business investment, of investment in housing and of various particular forms of capital accumulation. Protection and regulation of particular industries are put in terms of inducing desired investment.

Yet, aside from measures to bring about full employment and full utilization of existing capital, government policies may influence the aggregate of investment far less than widely supposed. Given full employment, we may find investment heavily dominated by people's desires to save. These latter may well be relatively inelastic with respect to parameters readily susceptible to control by government in a reasonably free economy in a democratic society. What much of the

argument may really relate to, therefore, is not how much investment but what kind of investment, and who should own the resultant capital. This comes down to the nitty-gritty of the distribution of income and particularly of wealth.

Thus, tax concessions to business, allegedly to encourage investment, offer ownership of additional capital to current equity holders. General cuts in taxes to stimulate demand, indirectly encouraging investment, give the additional capital to those who save more out of increased after-tax incomes. Government expenditures or subsidies to stimulate employment, or to further education and training, increase wealth primarily of those whose only capital is human.

Why do we hear so frequently that the business community is frightened by government spending which, it is suggested, may discourage "investment"? Is it perhaps because the government "spending" is not perceived as necessarily adding to business capital? Business rarely objects to government contracts to purchase its output. But government expenditures which might properly be directed to bringing literally millions of youths, minorities, women and many men into productive or more productive employment represent essentially investment in human capital. They increase most directly the wealth of those who are now owners of business capital.

#### What Government Policy Should Be

As I indicated at the outset, business investment suffers severely in situations of generally inadequate aggregate demand and unemployment. By far the greatest tonic for investment is full employment.

To attain this, one may best focus on measures not directly concerned with business investment. The government expenditure-transfer-tax-package should be such that effective demand is equal to the value of full employment output, whatever the implications for fiscal and monetary policy. In addition, appropriate measures should be undertaken in the way of employment credits, particularly for youths, blacks, new workers and generally those hard to employ. These should be supplemented by improved efforts at job training and placement. Well planned public employment is likely to prove a necessary and useful tool in the full employment arsenal.

If there is to be some kind of direct subsidy to plant and equipment investment in connection with efforts toward full employment, the most appropriate tool would be a variable but high, marginal credit or subsidy, which may be negative. Thus instead of a ten or twelve percent, permanent tax credit on all business equipment expenditures, we would be much better served in time of recession by a direct subsidy of say 50 percent for all investment over some reasonably high base figures. That base might be set equal to depreciation charges or, for example, 80 percent of the average of the past three years' investment. Ideally, the subsidy should be available not only to profit-making business but to unprofitable business, to non-profit enterprises, to government enterprises and government bodies, and indeed to households.

If the benefits were high at the margin and variable, their impact could be very great. Low elasticities of substitution, as suggested earlier, may preclude any major effect on investment, particularly in a

recession, from a permanent credit of ten or twelve percent. A marginal subsidy of 50 percent would cost the Treasury less and have less distributional effect and yet bring on more investment. But most important, if affected taxpayers and individuals recognize that the credits were temporary, they would have major motivation to proceed while it is in effect. For all would be forewarned that the 50 percent credit might turn to zero next year, or even to a 50 percent tax on marginal investment, if policy needs dictated discouragement of aggregate demand.

Prohibitions, restrictions and ceilings on the payment of interest by banks and financial institutions should be removed with all speed and in a manner consistent with orderly adjustment of portfolios. Particularly with continuing inflation, small savers would then have some opportunity at least to avoid negative net returns, as nominal rates of interest on demand and time deposits would rise to reflect expected rates of inflation. To the extent that substitution effects do dominate income effects, this would induce more saving. Under conditions of full employment one might then expect more investment.

Individual and corporate income taxes should be integrated. This would mean elimination of the corporate income tax with stockholders having to credit their full shares of corporate earnings, whether retained or paid out in form of dividends, to their own individual taxable incomes. I do not see this as a measure likely to offer general stimulus to business investment. It would rather improve the investment mix by forcing firms to compete in the marketplace for capital. It would eliminate the current major tax advantage of retaining earnings within the firm, regardless of profitable investment opportunities. Without

integration, the accumulation of retained earnings, perhaps invested in outside acquisitions, yields stockholders untaxed or little taxed capital gains instead of taxable dividends.

If no further exemptions or exclusions of capital gains were added, firms would be pressed to pay out earnings so that stockholders, having to pay tax on the earnings in any event, would not have an additional gains tax on the value of corporate retentions. This should not, however, reduce the supply of funds to business as a whole. Corporations could offer reinvestment options with dividend checks, as some firms do already. But with full integration, corporations would find themselves bidding against each other, in a vastly enlarged capital market, for the opportunity to reinvest their own earnings and those of their competitors.

There is still likely to be a major role for government in promoting investment with genuinely positive external economies, as well as a role for taxing or otherwise discouraging investment with negative externalities. There may be similar needs for intervention, ideally in the form of taxes or subsidies, where unavoidable imperfections in capital or other markets call for compensation. I have already pointed to the likelihood of needs for major investment in human capital. These do clearly relate most to imperfections in capital markets and to externalities. Society benefits from taking youths off the street, out of lives of dependence of crime, and getting them into productive jobs. And the relative nonexistence of private markets for investment in youths, particularly of minority groups, suggests that, even ignoring externalities, considerable investment of human capital may well be subsidized

in the interest of closing the gap between marginal private returns and cost.

More investment and moves closer to an optimum may be expected as well from removal of a host of government interferences with free competition. CAB-imposed high airfares, rather than stimulating investment by giving the airline industry funds to acquire additional planes, may be discouraging investment by reducing the rate of utilization of existing capacity. Protective tariffs or quotas on steel imports may eventually leave the United States steel industry with less demand for steel and less need for additional steel mills.

Beyond the achievement and maintenance of full employment, attention to externalities, and the removal of uneconomic government interferences in capital markets and elsewhere, our policy should be directed to the promotion of free competition. With such a thrust, I am confident that we would have more investment in business plant and equipment, in research and development, in human capital generally and in all forms of investment in all sectors of the economy. Whether they would give us the most capital or the greatest amount of investment, I am not prepared to say. But in closing I will return to some thoughts and words I have offered previously.

I see no reasons of state or religion why we must always more rapidly accumulate capital for future production. Such accumulation is, after all, at the expense of current, private and public goods and services. It is not necessary and desirable that we should always have more in the future than in the present. It is not axiomatic that we should sacrifice more when we are young in order to live better when we are

older, or that our generation should sacrifice in the prospect that our great-grandchildren would live better. Our golden rule need not be, "Jam tomorrow and jam the next day, but never jam today!"

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