"TAXES, CAPITAL AND JOBS"

by

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We hear a lot these days about the need for more capital to make jobs. Some of what we hear and read we may discount as self-serving, lobbying for more preferential tax treatment of profits. Yet there is a case argued by sincere and public-minded people on objective grounds which we must take seriously.

It had better be a good case, because it goes far toward destroying the progressivity case, the one on which the American public has bought the income tax concept. Preferential income tax treatment of property income cuts off the top brackets of income receivers from tax liability, especially when we exempt capital gains. Preferential treatment exempts or favors the unearned increment to land values, especially again when we favor capital gains. The thrust of proposals being seriously advanced today is to convert the income tax into simply another payroll tax, socializing a large share of personal effort while eliminating the public equity in the land and capital resources of the nation.

Preferential tax treatment for property also destroys the neutrality or uniformity argument for income taxation. It encourages substituting capital and land for labor. It forces higher rates on personal effort, thus weakening the incentive to work while maximizing the incentive to lobby in legislatures and the Congress for public works and other federal outlays which create unearned increments to land values.

Are these hardships necessary in order to induce investors to make jobs? This paper outlines an alternative thesis that the use of capital rather than the simple quantity of capital is the key to full employment; and that tax preferences for property income bias investors against using capital to make jobs.

THE USE OF CAPITAL VERSUS THE QUANTITY OF CAPITAL

Adam Smith saw our idea very clearly, as follows: "the number of... laborers is...in proportion to the quantity of capital stock which is employed in setting them to work, and to the particular way in which it is so employed." (emphasis mine)

"The quantity of labor which equal capitals are capable of putting in motion, varies extremely according to their employment." ..."A capital employed in the home trade will sometimes make 12 operations, or be sent out and returned 12 times, before a capital employed in the foreign trade...has made one."[1]

Adam Smith is here evidently referring to capital as stock in trade. For generating employment, fixed capital frozen in buildings or turnpikes was so sterile as hardly to be worth mentioning. John Stuart Mill makes this even more graphic by distinguishing between fixed and circulating capital. "Capital ...in unsold goods does not set in motion any industry. (Thus) Capital may be so employed as not to support laborers, being fixed in machinery, buildings,... locked up in the form useless for the support of labor.

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1 Adam Smith, WEALTH OF NATIONS, (New York: Random House, republished, 1937) pp.. 338, 341, 349.

...Suppose half (one's capital) effects a permanent improvement. ...He will employ next...year only half the number of laborers."[2]

That is, he doesn't get his money back from the permanent improvement next year and therefore has nothing to spend on another payroll. A modern economist might object that the money could be printed by a friendly central bank, but John Stuart Mill might very correctly answer that this printed money would not deliver any final goods to consumers and therefore only drive up prices. He had not learned to accept inflation with the same facility as we have today, or to regard it as anything but a fraud.

Assuming if you will that Smith and Mill make sense a capital shortage has two causes and therefore two solutions. The cause we hear most about--lets call it Theory A--is a simple shortfall in quantity. The solution obviously is to get more. The proposed method is to exempt the income of capital from taxation, and incidently shift taxes to wages and salaries and other rewards of personal effort.

This method wastefully gives away much more than is needed to accomplish its goals. It exempts land income as I have already remarked, especially when preferential treatment of capital gains is emphasized. (The investment tax credit and accelerated depreciation for new construction are free of this last criticism, however.)

This method in practice exempts capital overseas which really should be called home if the purpose is to make jobs in our own country.

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2 John Stuart Mill, PRINCIPLES OF POLITICAL ECONOMY (Boston: Lee S. Shephard, 1872), pp. 41-63, passim. See also J. S. Mill, ESSAYS ON SOME UNSETTLED ISSUES OF POLITICAL ECONOMY (London: Longmans, Green, Reader and Dyer, 1874), pp. 55-59.

This method perpetuates and adds to structural distortions that misallocate capital and tie it up in the form of labor substitutes in highly capital intensive industries and activities. Some examples of this are premature streets and water supply systems financed by tax-free municipal bonds. Tax-sheltered exploration for oil and gas is another example. It ties up capital for decades before recovery and it finally produces energy which is complementary to capital in downstream uses. Yet another example is timber allowed to regenerate naturally, i.e. without the effort of planting--which ties up land for 80 to 150 years under each crop with minimal application of labor.

Finally this method shifts the tax burden to payrolls, thus causing employers to substitute capital for labor and causing many workers to prefer welfare, crime or the pursuit of charity and unearned income to productive labor.

The second cause of a capital shortage--Theory B--is relatively neglected. Theory B follows the lead of Adam Smith and John Stuart Mill and looks at the misuse and misallocation of the capital we already have. Misuse and misallocation have the same effect as increased demand and/or reduced supply. There is a lot of fat in the capital structure, where capital is locked up in less productive uses to which it is attracted by tax shelters. "Fat" also suggests that the capital is torpid and combines less with labor, thereby making few jobs.

The solution under Theory B is to tax capital uniformly in neutral and nondistorting ways. Not only should different investments be taxed at the same effective rate, but the rate on property income in general should be no lower

than the rate on wages (the rate on both wages and capital income could be lower than the rate on land income, for the last is neutral and taps economic rent).

Professor Henry Simons and others have long noted that an increase in one's wealth is income and that a neutral tax on capital gains would tax gains at the time they accrue. Simons and the others then despaired of taxing unrealized capital gains in practice. Note, however, that the property tax does take a bite of unrealized capital gains each year, and it is easy to show mathematically that a property tax in a perfect market is exactly a tax on unrealized capital gains. The property tax also takes a bite of that other kind of Haig-Simons income which the income tax misses, that is, imputed income of owner-occupied residential and recreational property.

A nondistorting way to tax capital income therefore under the income tax is to make it resemble as much as possible the property tax. Over at the other extreme it is easy to show mathematically the necessary corollary that a tax on realized capital gains has an effective rate which declines as the asset is held longer.

Going back to Adam Smith, the quantity of labor which the favored slow-turning capital sets in motion is much less than the same capital puts to work when it is turning fast.

The solution implied by Theory B therefore is to make the income tax as uniform as possible in its treatment of different kinds of capital. This is not the place for technical details of a comprehensive tax base with inter-temporal neutrality. There is a substantial literature by William Vickrey, Joseph Pechman, Paul Samuelson, Richard Musgrave, Henry Simons, Robert Murray

Haig, Emil Sunley and others[3] to which I subscribe and to which I have added a few foot-notes.[4] Suffice it here that this line of reasoning does not imply preferential treatment of capital gains but if anything the reverse. Neither does it support revenue sharing which simply replaces the more neutral property tax with the less neutral income tax.

Inflation has the effect of creating phantom taxable profits for capital. We could perhaps in the name of neutrality justify lower nominal rates on property income than labor income in order to compensate for the taxation of phantom inflationary profits on property income. Unfortunately in practice this argument is made most strenuously where it is least appropriate, that is on long term capital gains. The phantom profit realized on working capital is taxed continuously from year to year as the phantom profits are realized. The phantom profit on long term gains on the other hand is not taxed until the capital asset is sold. Thus the profit on year one is not taxed as it accrues but the taxation is deferred, as with all capital gains. The effect of inflation therefore is to increase the tax system's intertemporal bias in favor of slower yielding capital.[5]

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3 Richard Musgrave, THE THEORY OF PUBLIC FINANCE, (NY: McGraw-Hill Books Co, 1959) p. 165, and works there cited.

4 Mason Gaffney, "Tax-induced Slow Turnover of Capital," WESTERN ECONOMIC JOURNAL, 5(4):308-23 September, 1967.)
----------, "Tax-induced Slow Turnover of Capital," (unabridged), AMERICAN JOURNAL OF ECONOMICS AND SOCIOLOGY, January, 1970 through January, 1971.

5 Mason Gaffney, "Toward Full Employment with Limited Land and Capital," in Arthur Lynn, Jr. (ed.) PROPERTY TAXATION, LAND USE AND PUBLIC POLICY (Madison: University of Wisconsin Press, 1976,) App. 4.
Nicolaus Tideman and Donald Tucker, "The Tax Treatment of Business Profits under Inflationary Conditions," in Henry Aaron (ed.) INFLATION AND THE INCOME TAX (Washington: The Brookings Instn. (1976) pp. 38-41. David Klemperer, "Effects of Inflation on Present Value of Timber Income after Taxes," MS, 1978, pp. 1-9.

If we do grant a lower nominal tax rate to capital income we should not do the same for land income because there is no phantom income in rents. Neither is the cause of full employment served by encouraging the substitution of land for capital or labor.

And if we adjust taxes to compensate for phantom profits, we should also do something for phantom salaries caused by withholding. Income taxes are based on a mythical gross salary before withholding of income taxes, FICA, FUTA, involuntary pension exactions, and perhaps other items. This puts a large added tax burden on payrolls compared to sheltered property income.[6]

THEORY A: CAPITAL SHORTAGE AS A SIMPLE QUANTITATIVE PROBLEM

Part of Theory A must be the implication that capital is always complementary to labor, whatever its use. Advocates generally do take this position. There are two approaches, one which looks at the economy as horizontally integrated, and the other which looks at it as vertically integrated. The first

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6 In the present mood of tax reduction it is timely to consider this reform. Let us base income taxes on disposable income, D, rather than, as now, on gross income, G. If T=Tax, and t=tax rate, then under this method T=t(G-T) from which follows

$T = \frac{t}{1 + t} G$. Thus, for example, a tax rate of 100% on D is just

50% on G. This change would allay the existing bias against payrolls caused by withholding against them while at the same time deferring the taxation of wealth accruals until they are realized in cash. This would devalue many basic tax loopholes for property income. At the same time, it would increase after-tax work incentives by reducing the basic progressivity of the rate structure. One easy way to implement would be simply to let people deduct Federal tax payments from Federal tax base each year as they made out their returns. The effects of this one simple change would be quite profound and almost entirely for the better.

or horizontal approach is represented mathematically by the Cobb-Douglas Function. In this much-abused function output equals a constant times the product of labor and capital, each raised to a power (usually less than one). Differentiating output with respect to labor we get the marginal product of labor, a constant times the quantity of capital raised to a power, (and divided by labor to a power less than one.)[7] In the Cobb-Douglas approach therefore, more capital necessarily increases not just the average but the marginal product of labor as well.

Implicit assumptions like this one are sneaky. Those who make them indeed are often as unaware as anyone of what they are doing. Calling it a mathematical function makes the implicit assumption easier to detect mathematically, but the use of mathematics in general discussions, where half the listeners or readers are not really following, makes it harder to detect in fact.

Once the implicit assumption of complementarity is put across, then you may rest your case on the law of diminishing returns.[8] Alternatively you can take engineering "requirements" as your approach and say that one job requires X thousand dollars of capital. A third method is to buy the models of Professors Harrod and Domar, with fixed ratios of capital to output.

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7 $$P = C\,H^{\alpha}\,K^{\beta} \qquad (1)$$

$$\frac{\partial P}{\partial H} = C\alpha\,\frac{K^{\beta}}{H^{1-\alpha}} \qquad (2)$$

where P = Product; C, α and β are constants; H = Human effort; and K = Capital

8 See the use of Cobb-Douglas by Norman Ture, TAX POLICY, CAPITAL FORMATION, AND PRODUCTIVITY (New York: National Association of Manufacturers, 1973) p. 14. Presumably this assumption has become embedded deep in the current Ture Tax Impact Project (TIP) for N.A.M.

But this approach leaves unsatisfied many of the unconverted. Because common observation tells us that much capital substitutes for labor and dis-employees workers. Sheep, cattle and timber are obvious examples. There is a third factor of production--land. Sheep, cattle and timber have high "valence" (to borrow a chemical term) for land, but a low valence for labor. They have long historical records as depopulators of the countryside. An equally obvious example is farm machinery, and farm machinery is one species of a large genus of machines that substitute for labor. In industrial plants we may add automation and cybernation. Some other examples are power generation and distribution, which are very capital-intensive; mineral extraction and refining, which may be even more so; and so on. Every local public finance officer knows that some plants are much more capital-intensive than others, because, unfortunately for national employment, localities now have stronger incentives to attract capital-intensive plants than labor-intensive ones, and it is his job to know the difference.

To meet these obvious objections to Theory A in its horizontally integrated form, the advocates turn to a second approach which is vertically integrated. Farm machines may displace farm workers, but it is labor that produces the farm machines. Turning this around we have the Keynesian variation which stresses not the labor producing capital, but the capitalist hiring workers by investing in capital. Here, capital-intensive projects are a boon because they are outlets for investment which are needed to dispose of surplus savings and thus keep money circulating. Ironically this approach is quite Marxian. In Marx the economic universe is always tending to run down like an old clock and has to be

would up by fabricating investment outlets to move along savings which got stuck. Keynesian macroeconomics, in spite of its variations, elaborations, and intricacies, is ultimately based on this old clock concept.

There are many troubles with this paradigm, such that it is now reaching a crisis. It is based for one thing on the implicit assumption of declining velocity or turnover of money, and pervasive deflationary pressures. It is based for much of its impact on the trauma of the 1933 banking collapse which is getting to be ancient history. Now we have had several decades of increasing velocity and increasing money supplies.

The old paradigm is based on the idea that supply fails to create its own demand. Today demand is not creating its own supply, thus creating inflation of product prices. Incomes which are created today by paying people to produce capital which will not be ready for consumption for 30 years are clearly inflationary in the short run. In the long run they are inflationary because they reduce the number of real transactions which any given money supply must finance.

In Keynes, one solution to oversaving is simply waste. However, to satisfy the puritan prejudice we store up capital for the remote future as a more culturally acceptable alternative to waste. Any sort of spending would be equally good, but the promise of "pie in the sky in the sweet bye and bye" is offered as a sop to convince crusty Presbyterians to spend money. (Keynes was evidently bitten by a Presbyterian at an impressionable age.)

Whatever we may think of Keynesian economics today, Theory A in its vertically integrated approach is based on the Keynesian ethic that the sources of capital are excessive and the solution is to hide away capital in forms that

will contribute as little as possible to the overproduction problem of the near future. The checkmate for the followers of Theory A today is that this Keynesian ethic flatly contradicts a theory of capital shortage. It poses an insoluble problem for those who would hold Theory A.

THEORY B: CAPITAL STRUCTURE AND JOBS

Theory B has it that capital may either complement labor or substitute for it, and which kind of capital investors create depends on relative prices. Thus the capital structure may adjust so that the existing supplies of capital and labor will match each other. In addition to relative prices, however, the capital structure is affected by institutional bias, including tax bias; and such bias may interfere with the market's homing in on full employment.

We may approach Theory B first of all from the horizontally integrated viewpoint. An investor who is contemplating substituting machinery for labor observes that the machinery gets him an investment tax credit while the employment of labor costs him a payroll tax. The high minimum wage and generous unemployment compensation keep wage rates from falling, and the combination makes entrepreneurs substitute capital for labor. Similarily the deductability of interest and property taxes, and the capital gains preferences, induce him to substitute land for labor.

Replacement of persons by machines is the most dramatic example of substitution, but probably not the most important. Some other kinds of substitution are the substitution of capital- and resource-intensive materials for labor-intensive materials. Processes as well as products are malleable. We can substitute capital by building in more durability at the front end to reduce

maintenance and repair later. We can adapt to variability of demand by having excess capacity on standby in preference to utilizing more labor. We can shift the stage of production at which value is added as for example letting timber add more value on the stump so that less labor is required in the mills. We can substitute land for labor by using fewer men per acre on farms and shifting to less laborious kinds of crops. The possibilities are limited only by the imagination and the observation of actual practice.

Critics of Theory B might now say, Ah-ha! Capital "locked-up" in power plants and hydro-electric dams and premature highways and excess capacity represents investment opportunities, exactly what Dr. Keynes ordered. Investment is what draws money out of hoards, keeps it circulating, and keeps the big clock from running down.

In answering this Theory B gets really interesting and I think terribly useful, giving important insight into where modern macroeconomics has gone wrong. Austrian economics has long anticipated this objection, whether advertently or not, by looking at factor proportions in a vertically integrated scheme. When we look at the relations of capital and labor in sequence instead of in parallel, the capital content of value added depends on how long capital is tied up before its recovery.

For example if we finance a house over thirty years we pay twice as much in interest as in principal. The service flow over life is highly capital intensive because 2/3 of the payments go as interest to pay for the use of capital.

Production of houses accordingly is very sensitive to the cost of capital as we know. It is much less sensitive to wage rates, so observation has it that

if interest rates are low this pushes investors in to housing and other investments of long life. High wage rates push them out of short investments like textiles or vegetable farming, but have small relative effect on housing.

Using this approach, we allow for the fact that labor produces capital, and investment creates jobs. But the capital in housing only creates jobs once every twenty years or so on the average (assuming it is half recovered and reinvested after twenty years). Let's compare this with a farmer's investment in growing carrots. The farmer recovers and reinvests his capital at least once a year (and maybe more often because he won't let it sit idle during the off season). Carrots are to be compared to Adam Smith's capital in the "home trade" making twelve operations while the same capital in foreign trade makes only one. Foreign trade here is comparable to housing. In a word a given sum of capital keeps more people busy over the years if it turns over faster. Each reinvestment creates a new payroll.

But at the same time each year's output of carrots feeds the brutes. The house to be sure also shelters them but the value of its service flow is only interest on the value plus a small recovery of principal. The value of the carrots is interest on the capital plus the whole principal.

It is common for users of Theory A to justify tax shelters for housing (or municipal bonds or oil exploration or other capital-intensive investing) by pointing to the jobs created. But all this capital is switched away from other investing, like growing carrots. The true comparison is not between something and nothing but between capital intensive and labor intensive investing. The comparison has to be made over the whole life cycle of the slower capital,

where in the fast capital, as Adam Smith said, may make 12 operations while the slow capital makes but one.[9]

But are the carrots an efficient use of capital? The margin of profit is much less. Here we hark back to another paragon of the Age of Reason, Benjamin Franklin, who told us that "little and often makes much." It is not just the margin of profit that makes capital efficient, it is margin times turnover. This has been one of the leading principles of rational business management at least since Alfred Sloan reorganized General Motors in the 1920's with some advice from Donaldson Brown who came in from Dupont to help straighten out the cash flow crisis created by the over-expansive Mr. Will Durant. Sloan and Brown took great pains to require each division to earn a minimum return on capital. The return was defined as margin times turnover divided by capital.[10]

Elementary as this may sound, (and oversimplified besides), it played a leading role in the rational management of that enormously successful mass of capital at General Motors. And it is not so elementary that we can assume it to

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9 It follows that in any one year, in a balanced economy where retirements are matched by new investments, a given capital in (things like) carrots generates a regular flow of gross investment 12 times greater than an equal capital invested in (things like) trees of 12-year life, (including any other capital whose average recovery period is 12 years.) The reasoning by which this follows is analogous to that by which one "stacks" the echo effects of the Keynesian horizontal multiplier into the vertical or simultaneous multiplier. Such stacking gives another true comparison of the employment effects of switching investment from fast capital to slow.

10 Thomas J. McNichols, EXECUTIVE POLICY AND STRATEGIC PLANNING, (New York: McGraw-Hill Book Company, 1977) p. 44.

be incorporated in the management of the nation's capital as influenced by its tax system. The tax system, based on the working principle "shoot anything that moves," militates against turnover, because each turnover creates one or more taxable events.

When a manager considers turnover in addition to profit margin this pushes his capital into faster turning forms. These have smaller profits but there are more of them. So the use of capital is just as efficient.

What then is the difference? A given capital rolling over faster employs more labor and produces more output for consumers. It "sets in motion," as Adam Smith would have said, more workers; and it sets them in motion productively so their employment does not simply generate inflation.

I would not recommend that all our investments go into working capital like carrots and none into fixed capital like roadbeds, harbors, telephone poles, plant and equipment. There is an equilibrating market mechanism that finds an optimal balance. If capital is scarce and labor surplus, this should lead to higher interest rates and lower wage rates which draw investment into working capital, and away from fixed capital, until the "valence" of capital for labor shall have risen, soaking up the surplus labor.

The problem is that this equilibrating mechanism is jammed by institutional biases. Minimum wage laws, union pressures and welfare as an alternative keep labor from becoming cheaper. Conservatives may applaud that statement, but are they consistent enough then also to note that payroll taxes, including most of the income tax and pension fund contributions based on payroll, have the same effect?

The great illusion of macroeconomic policy is that the way to make work for labor is to make work for capital by making capital cheap. This is Theory A. Some of its manifestations are the following: the investment tax credit, with sliding scale to avoid giving preference to fast turnaround investments; the 20% additional first-year depreciation for capital with life over 6 years; preferential treatment of long-term capital gains; property tax relief in the guise of revenue sharing financed by increasing state and federal "income" taxes which hit payrolls harder than property income; guaranteeing loans to pump cheap capital into housing and many other capital-intensive products; direct investment by government force-feeding capital into highways, public works and so on; non-taxation of state and local bonds, making cheap capital available to state and local governments; accelerated depreciation granted to durable capital;[11] multiple depreciation of buildings; expensing of certain durable investments; and underpricing energy in lieu of taxation (the last point fits the bias because energy complements capital, substitutes for labor and is capital-intensive to produce).

Where the objective is really to make jobs, Theory A policies are self-defeating. An unrecognized self-defeating policy is most dangerous, because its failure is taken as a sign that more is needed.

SUMMARY

The relationships of capital, turnover and employment were particularly well worked out by Knut Wicksell, the "Swedish Austrian". Adam Smith and John

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11 The combination of I.T.C., accelerated depreciation, and the 20% additional first year depreciation let one write off slow-turning Capital nearly as fast as quick capital, and sometimes faster.

Stuart Mill are quotable but often self-contradictory, while Wicksell had the mathematical mind and tools to get the whole act together. (What he evidently lacked was the discrimination to lean harder on this discovery than less important interests, a problem that may be endemic to mathematicians.)

Wicksell showed that the "wages fund"--today we would call it "income creating spending"--depends on how capital is used and specifically on how fast it turns over. It is only the part of capital as he said "set free"--i.e. recovered --each year that can hire labor.[12]

One firm can invest in excess of depreciation by tapping others. The whole economy cannot, except by new saving. It is a closed system. For a whole economy to increase the capital "set free" each year it must increase turnover. Turnover delivers goods to hold down prices at the same time that it gives business free capital to invest in payrolls. Full employment and price stability are the joint products of an optimal rate of turnover.

To this end the needed policies are lower taxes on labor, higher taxes on land, and intertemporal uniformity in the taxation of capital. The shortfall is not so much of the stock of capital, but of the flow of income-creating, job-creating investment and reinvestment of capital. To remedy this, simply make it cheaper to use labor, and dearer to hold torpid capital and inert land.

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12 Knut Wicksell, LECTURES ON POLITICAL ECONOMY, Trans. E. Classen (New York: The Macmillan Company, 1938), pp. 194-96.
---------- VALUE, CAPITAL AND RENT, Trans. S. H. Frowein (London: G. Allen and Irwin, 1954), pp. 127, 160.