Algebraic Expressions of Haig/Simons Income, Haig/Simons Consumption and Realized Income

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Appendix:
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Commentators traditionally have formulated the base of their ideal tax by reference to the uses of income (consumption and savings), not to the sources of income (wages, dividends, capital gains, etc.). To design an operating tax system, however, tax specialists must convert a base specified in terms of uses of income into one specified in terms of sources of income. Section 1 of this appendix sets forth a definition of Haig/Simons income in terms of income sources. Using compatible terminology, Sections 2 and 3 develop definitions for two competing tax bases–the expenditure tax base and the base of a tax on realized income. Section 4 illustrates the operation of the three definitions. Section 5 suggests some ways in which these definitions can help focus the debate over the proper tax treatment of interest payments.

1.   Haig/Simons Income (HSY)

Haig/Simons income (HSY) is usually defined as the algebraic sum of (1) the taxpayer's personal consumption (C) and (2) the difference between his net worth at the end of the assessment period (NW_1) and his net worth at the start of the period (NW_0). Equation (1) expresses this familiar relationship symbolically.

$$(1) \quad HSY \;\; = \;\; C + NW_1 - NW_0$$

Although commentators may occasionally indulge the fantasy that a tax department could measure the change in each taxpayer's net worth, no one pretends that consumption could be measured directly. Instead, the assumption commonly made is that a tax department would compute consumption indirectly from presumably knowable information about a taxpayer's income sources. The following equation shows how that would have to be done.

$$(2) \quad HSY \;\; = \;\; S + OA_1 - OA_0 + NA - AC - E - PD$$

where

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       S =   total realized income, including wages, investment income, realized gains, windfalls, and gifts;   [*1088]

$OA_1 - OA_0$ =   the unrealized gains on assets held both at the start and the end of the taxable period, measured by subtracting the market value of old assets at the start of the period (OA_0) from the market value of these same assets at the end of the period (OA_1);

   $NA - AC$ =   the unrealized gain on assets obtained during the taxable period, measured by subtracting the acquisition costs of those assets (AC) from the market value as of the end of the period of the newly acquired assets (NA);

       E =   the total of the taxpayer's profit-seeking expenses (i.e., payments that are intended to produce income and that do not either increase the value of an asset already owned by the taxpayer or produce an asset with utility that extends beyond the taxable period);

      PD =   any personal deductions, such as the deduction for state and local income taxes, that are judged to fall outside a refined definition of consumption.

In the above equation, taxable imputed income, if any, would be included in S as an imputed wage or as an imputed return on an asset. The extent to which imputed income should be taxable is outside the scope of this paper. Realized gains included in S would be of two types –gains on disposed assets held at the start of the taxable period and gains on disposed assets acquired during the period. The first type would be measured by subtracting the market value of the disposed assets at the start of the taxable period from the proceeds. Gains of the second type would be measured by subtracting their market value at the time acquired from the proceeds. The following example illustrates the operation of Equation (2).

Consider Mr. T, who has wage income of $10,000 during a taxable period, investment income of $2,000, and taxable imputed income from use of his automobile of $1,000. Assume that he purchased the automobile during the taxable period for $5,000 and that, at the end of the period, it is worth only $4,500.

Assume also that at the start of the period, Mr. T had a savings account containing $6,000, owned business tools worth $3,000 and owned real estate valued at $7,000. Assume that he sold the real estate during the period for $9,000, netting himself a realized gain of $2,000, and that he held his tools throughout the period, at the end of which they were worth $3,500.

Also assume that during the period, Mr. T bought some shares of stock for $8,000 and was pleasantly surprised when they jumped in value to $10,000 by the end of the period. Finally, assume that during the

period, Mr. T spent $500 on a deductible business trip and $500 on state income taxes. His Haig/Simons income for the period would equal $16,000, computed as follows.

$$S = \$10,000 \text{ (wages)} + \$2,000 \text{ (investment income)} + \$1,000 \text{ (imputed income)} + \$2,000 \text{ (gain)} = \$15,000 \text{ (total income sources)};$$

$$OA_1 - OA_0 = \$3,500 - \$3,000 = \$500 \text{ (unrealized gain on tools)};$$

$$NA = \$4,500 \text{ (automobile)} + \$10,000 \text{ (stock)} = \$14,500 \text{ (new assets)};$$

$$AC = \$5,000 \text{ (automobile)} + \$8,000 \text{ (stock)} = \$13,000 \text{ (acquisition costs)};$$

$$E = \$500 \text{ (business trip)};$$

$$PD = \$500 \text{ (state taxes)};$$

$$HSY = \$15,000 + \$500 + \$14,500 - \$13,000 - \$500 - \$500 = \$16,000.$$

2. Expenditure Tax Base (ETB)

The base of an expenditure tax (ETB) is frequently defined by solving Equation (1) for C. This yields the following familiar result.

$$(3) \quad ETB = HSY + NW_0 - NW_1$$

An expenditure base specified by this formula may be called a "Haig/Simons consumption tax," to distinguish it from an expenditure tax base that would tax savings but would allow an exclusion for investment income. This latter base produces serious fairness problems, since it taxes successful and unsuccessful investors alike. It is usually proposed as a second-best alternative to a Haig/Simons consumption tax, not as an ideal that has independent merit.

The statement of ETB in Equation (3) can be specified in terms of income sources by substituting for HSY from Equation (2) and stating NW_0 and NW_1 in terms of their balance sheet components. Equations (4) and (5) provide the necessary statements of NW_0 and NW_1.

$$(4) \quad NW_1 = NA + Q\underline{A}_1 = L_1, \text{ and}$$

$$(5) \quad NW_0 = SA_0 + OA_0 - L_0,$$

where

$$L_1 = \text{the amount of the taxpayer's liabilities at the end of the taxable period;}$$

L_o =   the amount of the taxpayer's liabilities at the start of the taxable period;

SA_o =   the market value at the start of the period of assets on hand at the start of the period and sold during the period; and NA, OA_1, and OA_o are defined as in Equation (2).

Equation (3) can now be solved by substituting from Equations (2), (4) and (5) to yield the following.

(6)   ETB $= S + SA_o + (L_1 - L_o) - AC - E - PD$

The workings of this formula can be illustrated from the assumed facts about Mr. T presented in Section 1, above, with the additional assumed facts that Mr. T had no liabilities at the start of the taxable period and borrowed $2,000 from a commercial bank on the last day of the period. Given those facts, Mr. T's taxable expenditures would equal $10,000, computed as follows.

S, AC, E, and PD would be unchanged from figures in the example in Section 1;

L_1 = $2,000 (bank loan)   [*1090]

L_o =   0

SA_o = $7,000 (real estate)

ETB = $15,000 + $7,000 + $2,000 − $13,000 − $500 − $500 = $10,000

3.   A Tax on Realized Income (RY)

All income tax systems, for good or bad reasons, impose tax only on realized income (RY). An income tax based generally on Haig/Simons principles which adopted a realization requirement for accrued gains would define its tax base as the sum of (1) realized income accruing in the current period, plus (2) income that accrued in prior periods but was realized in the current period, minus (3) depreciation on wasting assets held at the end of the period, minus (4) that portion of expenses relating to the earning of realized income, minus (5) the personal deductions. This yields the following equation:

(7)   RY $= S + SA_o - B_o - D - E_r - PD,$

where

B_o =   the taxpayer's basis in assets sold during the taxable year, as of the start of the taxable year;

D   =   the deduction for depreciation, representing the taxpayer's estimated loss in value of wasting assets held at the end of the period;

E_r = that portion of the profit-seeking expenses (E) allocable to the earning of realized income; and

S, SA_o, and PD are defined as in Equations (2) and (6).

As an illustration of the operation of Equation (7), consider the assumed facts about Mr. T contained in Sections 1 and 2, above, with three additional assumed facts. First, assume that Mr. T acquired his land in a prior period for $5,000; second, assume that his business trip related to earning his wage income; third, assume he was entitled to $800 depreciation on his tools and automobile. Under these facts, Mr. T's realized income would equal $15,200, computed as follows.

S, SA_o, and PD would be unchanged from the examples in Sections 1 and 2;

B_o = $5,000 (real estate);

D = $800 (depreciation on automobile and tools);

E_r = $500 (business trip);

RY = $15,000 + $7,000 − $5,000 − $800 − $500 − $500 = $15,200.

4.   Extension of the Example

In the example discussed above, Mr. T ended up with HSY of $16,000, ETB of $10,000 and RY of $15,200. The relative size of the tax base under the alternative definitions would change if Mr. T consumed more and saved less. Assume, for example, that Mr. T spent $8,000 on consumption instead of purchasing $8,000 worth of stock; Cranking the changed numbers into Equations (2), (6) and (7) would yield HSY of $14,000, ETB of $18,000, and RY of $15,200. The drop in HSY would be due to the $2,000 decrease in unrealized appreciation [*1091] of new assets (NA − AC). The switch from savings to consumption would not, of itself, affect HSY. The jump in ETB would be due entirely to the switch from savings to consumption, since an ETB ignores unrealized gains. RY would not be changed at all, since RY is indifferent to the choice between savings and consumption and does not tax unrealized gains.

5.   Deductibility of Interest Payments

To argue that interest payments should always be deductible in a tax base specified either by Equations (2) or (6), commentators must show that interest always constitutes a profit-seeking expense (E), an acquisition cost (AC) or an allowable personal deduction (PD). The Treasury Department's *Blueprints for Basic Tax Reform* (1977) takes this position. Probably most interest payments constitute acquisition costs, since the proceeds of most loans are used to buy assets with a life longer than the taxable year. But it is at least plausible to argue that interest paid on a loan that finances consumption does not fall within E, AC, or

PD and thus should be included both in HSY and ETB. If that argument is accepted, then a universal interest deduction is improper both for a Haig/Simons income tax and for a Haig/Simons consumption tax. If the universal interest deduction is rejected, then it becomes necessary to distinguish deductible interest from nondeductible interest. This can only be done by the adoption of tracing rules that link interest paid on a loan to the use made of the loan proceeds.

In the tax on realized income specified in Equation (7), tracing rules would always be necessary, since the only deductible interest payments aside from any that might be classified as deductible personal expenses (PD), would be those classified as an expense of earning currently realized income (E_r). Interest paid to acquire an asset might reduce taxable income through the allowance for depreciation, but taxpayers would need to trace their interest payments to the acquired asset in order to determine the proper depreciation deduction. Interest paid to earn unrealized income would be added to the taxpayer's basis in the assets embodying that unrealized income.

The three tax base definitions, HSY, ETB, and RY, abstract from the possible presence in a tax system of tax expenditure provisions. To apply these definitions in a tax system that contains tax preferences, analysts must first bifurcate the tax code into two sets of rules–those that seek to advance the revenue raising goals of the income tax and those that seek to achieve spending goals. The formulas presented here would be applicable to the first of those sets of rules but not to the second. The proper treatment of interest traceable to tax preferences would depend upon the purpose those preferences were designed to serve.