

The Personal Income Tax : (a) Haig–Simons Income

The definition of income which most economists use (and which was the basis for the recommendations made by the Carter Royal Commission on Tax Reform in Canada in the 1960's) is the so-called **Haig–Simons** or **comprehensive** definition of income.

What that definition includes as components of income are * :

— the “obvious” stuff : wages, salary, commissions, profits of privately-owned businesses, dividends, interest income from securities and bank accounts, tips, rental income

— transfer payments (such as employment insurance benefits)

— gifts or inheritances received

— **income in kind** : the value of free (or subsidized) parking provided by an employer, the value of driving a company car for personal use, frequent flyer miles earned from taking business trips, the value of accommodation in owner-occupied housing

— the net increase in the real value of a person's assets

It is very important to realize that the Haig–Simons definition of income is **not** exactly the same as the definition used by the Canadian government (or by the American IRS, or by the British Inland Revenue, or by any other government tax authority). A large portion of this section will be devoted to examining the differences between the definition of income used by the Canada Revenue Agency (CRA)** definition of income and the Haig–Simons definition.

Before any detail on the differences between Haig–Simons income and CRA income, where does the Haig–Simons list above come from? What makes the definition **comprehensive** is that it can be derived from a specific definition of what is, and isn't, income.

The basic Haig–Simons definition of income is :

*HS A person's annual income is the value of what she **could** consume in that year, while keeping her wealth constant.*

Notice that it's not what a person **does** consume in a year which is the basis for Haig–Simons income ; it's what she **could** consume **if she chose to keep the value of her wealth constant**. So it is based on potential consumption, not actual consumption. The idea is that how well-off a person is should be measured by how much she could afford to consume each year. Haig and

* Pages 344 and 345 in *Rosen, Wen, and Snoddon* provide a lengthier list.

** Prior to October 1999, CRA was known as Revenue Canada ; from October 1999 until December 2003, it was known as the Canada Customs and Revenue Agency

Simons felt that the measure of your income should be not what you actually did with it (spend it or save it), but what you could do with it.

Example 1 : A person's wealth is held entirely in Canada Savings bonds. She has \$100,000 in bonds at the beginning of the year. She earns \$50,000 from her job during the year. She also receives \$5000 in interest from the savings bonds. During the year she spends \$35,000 on consumption ; the remaining salary income, plus the interest she earned she uses to buy more Canada Savings bonds, so that at the end of the year she now holds \$120,000 worth of bonds.

Although this person actually spent \$35,000, that is not her Haig-Simons income. She could have spent all her salary, plus her interest income, and still kept her wealth constant at \$100,000. Thus her Haig-Simons income is \$55,000, the value of her salary plus the income she earned.

Example 2 : A person has a stock portfolio consisting entirely in shares of Fakebook. At the beginning of the year, the shares are worth \$100,000. They rise in value to \$250,000 during the year. The person holds on to the shares throughout the year. He earns \$60,000 in commissions from his job as a salesperson. Of that \$60,000, he spends \$40,000 on consumption, and spends the other \$20,000 buying shares in another company.

So this person actually spent only \$40,000 in the year. His Fakebook shares went up a lot in value, but he has yet to cash in on these gains. Nonetheless, his Haig-Simons income is \$210,000, which equals the sum of his commissions of \$60,000 plus the increase of \$150,000 in the value of his Snoretel shares.

Why is that his Haig-Simons income? Because he could have spent \$210,000 during the year, and still had the same wealth (\$100,000) that he had at the beginning of the year. That is, he could have, if he had wanted to, sold off 60 percent of his Fakebook shares at the end of the year (60 percent of \$250,000 = \$150,000), and spent the proceeds, along with his commission income, and still had the same value of portfolio as he had at the beginning of the year (\$100,000). If he had done this, he could have spent \$210,000.

Example 3 : A person owns her own house, worth \$300,000 at the beginning of the year. During the year she borrows \$100,000 to set up a business as a day trader. She rents an office for \$1000 a month, and uses the money she has borrowed to start day trading. At the end of the year her shrewd trading has increased the value of her portfolio to \$160,000. She liquidates her portfolio, and pays back her bank loan (plus interest owing of \$10,000). She spends \$20,000 during the year on food and clothing, and buys a small car with the money left over from her day trading adventures. During the year the real estate market booms as well, so that her house is worth \$350,000 at the end of the year.

So her net earnings from day trading were \$38,000 : that's what she has left over from her \$160,000, after paying \$12,000 in rent on her office, and after paying back the bank loan (which will be \$110,000 including interest). Her Haig-Simons income is this net return of \$38,000, plus the value of the capital gain on her house (\$50,000). But that's not all. She has lived in her

house all year. The accommodation she has consumed is also a form of consumption, just like the food and clothing she has consumed. So I need to add the value of that accommodation on to her income. If accommodation in a house like hers would rent for \$2000 per month, then I add in \$24,000 for the value of owner-occupied housing she has consumed, giving her a Haig-Simons income of \$112,000.

Why is that her Haig-Simons income? How much could she have consumed, had she chosen to do so, without altering the value of her wealth? She could have sold her house at the end of the year for \$350,000 and bought a smaller one for \$300,000. That would have left her wealth unchanged. She could have spent all that money on a very big New year's Eve party. If she did this, her end-of-year wealth would have been the same as her initial wealth. She would have consumed \$20,000 worth of food and clothing, \$18,000 in automotive services (the value of her small car), \$50,000 worth of entertainment (the value of her end-of-year party), and \$24,000 worth of housing services, while leaving the value of her wealth unchanged. That's a total of \$112,000 : earnings (net of the expenses of running her business) of \$38,000 from business, capital gains on the house of \$50,000, and services of owner-occupied housing of \$24,000.

Example 4 : In the 1970's a person spends his time practising his disco dancing, and earns \$20,000 during the year from winning disco contests. He also has \$10000 invested in a company that makes negative-heeled shoes. The shares go up in value during the year, and are worth \$10,300 at the end of the year. However, the consumer price index rises by 8 percent during the year.

This person's *real* capital gains are negative. In real terms, his wealth has fallen by 5 percent : the nominal wealth has increased by 3 percent, but the price level has risen by 8 percent. So his Haig-Simons income is actually \$19,500 : his disco winnings minus the fall in the value of his wealth. To keep his wealth constant in real terms, he would have had to invest another \$500 : that would give him an end-of-year wealth of \$10,800, exactly constant in real terms, since the price level has risen 8 percent. So he could only consume \$19,500 worth of goods and services if he wanted to keep his wealth constant in real terms.

Only in example 1 does the Haig-Simons definition of income agree with the CRA definition. In examples 2, 3 and 4, there are **accrued** capital gains, which are treated much differently by CRA than by Haig and Simons. In example 3 as well, there is **imputed income** from owner-occupied housing, again treated differently under the two definitions of income.

A capital gain is **accrued** when the value of the asset goes up. The gains are **realized** when the owner actually sells the asset, and cashes in the gains. The Haig-Simons definition taxes capital gains on accrual ; CRA taxes them on realization. In addition, Haig and Simons include 100 percent of any accrued capital gains in taxable income ; CRA includes only a fraction of realized capital gains : 0 prior to 1971, 50 percent from 1971 to 1987, 66.67 percent in 1988 and 1989, 75 percent from 1990 to 1999, 66.67 percent again from January to October of 2000, and 50 percent

since then. [In addition, the first \$500,000 of a person's realized capital gains were totally exempt from tax in 1985 and 1986 ; this exemption was then reduced to \$100,000, and then eliminated in 1994.] Finally, CRA bases its tax on **nominal** capital gains ; the Haig–Simons definition suggests that **real** capital gains should be taxed.

Some Algebra

(This is just a demonstration [again] that the basic Haig–Simons definition of income leads to the applications presented in the examples.) The basic Haig–Simons definition is that income equals the value of a person's annual consumption, plus the net change in the (real) value of her wealth.

$$HS \equiv C + \Delta A \tag{1}$$

where HS is the person's annual income, C is the value of her annual consumption, and A is the real value of her wealth.

Next, total consumption is the sum of consumption paid for in cash, and consumption received in kind :

$$C = C_c + C_k \tag{2}$$

Next, labour earnings Y (including net earnings from professional partnerships, wholly owned businesses, royalties, commissions and tips), plus transfer income T can either be spent on consumption or saved :

$$Y + T = C_c + S \tag{3}$$

(Here net saving may be negative, if the person sells off some of her wealth to pay for consumption.)

Substituting (2) and (3) into (1)

$$HS = Y + T + C_k - S + \Delta A \tag{4}$$

Now the nominal change in a person's wealth, is the nominal wealth at the end of the year, minus the nominal wealth at the beginning of the year. That wealth may change over the year for three reasons : the value of the initial wealth may rise (that is, capital gains CG), the assets may yield a return in cash which is reinvested (interest and dividend income, plus rental income : $I + D + R$), or she may invest more (savings S).

$$\Delta A_N = CG + I + D + R + S \tag{5}$$

(Note that equation (5) still works if the person were to cash in her dividend income, rather than re-invest it : a \$1 dividend which she cashed would be an increase in D of \$1, plus dissaving

of a dollar, as she took the dollar out, so a decrease in S of \$1, meaning no change in the nominal value of her assets.)

Finally, the change in the real value of her wealth is the difference between her real wealth at the end of the year and her real wealth at the beginning of the year :

$$\Delta A = \frac{A + \Delta A_N}{(1 + \rho)} - A \quad (6)$$

where ρ in equation (6) is the annual inflation rate. if the inflation rate is not too high, equation (6) can be approximated quite accurately by

$$\Delta A \approx \Delta A_N - \rho A \quad (7)$$

That is, the real increase in wealth is the nominal increase, minus the part of the nominal increase which is due to inflation. Plugging (7) into (5) means

$$\Delta A = CG + I + D + R + S - \rho A \quad (8)$$

Finally, plug (8) into (4) to get

$$HS = Y + T + C_k + CG + I + D + R - \rho A \quad (9)$$

which is the application of the Haig-Simons principle used in working out all the examples.