University of California, Davis
Department of Economics
ECONOMICS 131

Spring 2010 L. Jay Helms

Problem Set #5: The Structure of the Individual Income Tax

1. The Treatment of Charitable Contributions

a. (10) Explain the difference between a *tax credit* and a *deduction* for a taxpayer who itemizes deductions and pays a substantial amount of tax.

b. (5) Using the principle of *vertical equity*, provide an argument for allowing a *credit* (rather than a deduction) for charitable contributions. Explain.

c. (5) Define Haig-Simons income.

d. (5) Using the principle of *horizontal equity* with respect to Haig-Simons income, provide an argument for allowing a *deduction* (rather than a credit) for charitable contributions. Explain.

e. (5) Using the principle of *horizontal equity* with respect to Haig-Simons income, provide an argument *against* allowing *any* tax break (either a deduction or a credit) for charitable contributions. Explain.

2. Capital Gains and the Haig-Simons Definition

Robert Haig and Henry Simons proposed a comprehensive definition of the tax base. Yet the current U.S. tax code's treatment of capital gains differs from the Haig-Simons definition in four ways:

a. the preferential rate,
b. the deferral effect,
c. the succession effect, and
d. the inflation effect.

For *each* of these four differences: (i) explain the way in which the tax code currently treats long-term capital gains; and (ii) explain how the code would need to be changed to conform to the Haig-Simons definition.

3. Inflation and the Measurement of Capital Income

Suppose that the nominal interest rate is 10% and that inflation is known to be 5%. Assume that a taxpayer is a saver facing a marginal personal income tax rate of 40%.

a. What is the real, after-tax rate of interest?

b. Suppose that the rate of inflation increases by 4 percentage points, and that the nominal interest rate increases by the same amount. What happens to the real after-tax rate of interest?

c. If the inflation rate had increased by 4 percentage points as in part (b), by how much would the nominal interest rate have to increase so as to keep the real after-tax interest rate at the same level as in part (a)?

d. Find an algebraic formula which tells, in general, what the nominal interest rate (i_n) would have to be when the rate of inflation is π in order for a person facing a marginal tax rate of t to receive a real, after-tax rate of interest of i_r.