Homework #2
(Econ 512M)

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I. Discuss what difference it may make to workers and their employers if social security "contributions" are divided on a 50–50 basis or 80% by the workers and 20% by the employers?

II. In the diagram below indicate the after tax

(i) consumer's price,

(ii) producer's price,

(iii) equilibrium quantity,

(iv) tax revenue,

(v) "approximate" tax incidence on consumers,

(vi) "approximate" tax incidence on producers.

III. The equations for the demand and supply of a particular good are respectively given by

$$
\begin{aligned}
q &= 20 - 2p^c, \\
q &= 3p^s.
\end{aligned}
$$

(i) Find the initial equilibrium values of quantity and price in the absence of any taxes.

(ii) Assuming a unit tax of 2.5 is levied on this commodity, find the new equilibrium values of quantity and "price".

(iii) Find the tax revenues.

(iv) Find the incidence of the tax on consumers.

(v) Find the incidence of the tax on producers.

(vi) Who is effectively paying the tax here and to what degree?

(vii) Whom the tax is levied on in this question and what is the significance of it?

(viii) Repeat parts (ii)–(v) using an ad valorem tax of 250/3 percent on p^s.

IV. State True or False and then explain.

(i) The higher the elasticity of demand, the greater will be the incidence of a tax on consumers.

(ii) The lower the elasticity of supply, the smaller will be the incidence of a tax on consumers.

(iii) For the same per unit tax, the lower the elasticity of supply the higher would be the tax revenues.

(iv) The higher the tax rate (on a given commodity), the higher will be the tax revenue.

V. Assume that in the absence of taxes, the price of x is \$2. Compare an ad valorem tax of 10 percent (on p^s), to a per unit tax of 20 cents with respect to (i.e. specify whether it results in bigger, smaller or equal values of the following):

(i) the new equilibrium consumer price,

(ii) the new equilibrium producer price,

(iii) the new equilibrium value of the quantity purchased,

(iv) tax revenue.

(v) excess burden.