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Econ 4620 Public Economics S2014: Seminar assignment for 27 January

I request everybody to prepare for the seminar.

Problem 1
Suppose that a person freely chooses how much labour to supply in a perfectly competitive market. Assume that the person earns a wage-rate equal to 200 and faces a tax rate equal to 0.4.
What is the
a) loss of output value,
b) private income foregone,
c) net private loss (of utility)
d) social loss
if the person withdraws one unit of labour (for some exogenous reason.)
Explain the results.

Problem 2
Set up a simple one-period model in order to demonstrate that an excise tax on a specific consumption good is distortionary. You may assume there are no other distortionary taxes. Try to make the model as simple as possible.
Also explain the distortion(s) verbally.

Problem 3
Most financial services are exempted from VAT in the sense that financial institutions pay VAT on inputs from other sectors without being refunded but do not charge VAT on deliveries.
1. Discuss the impact of VAT on prices of financial services delivered to firms and to consumers, respectively. What would have been different in the absence of the exemption?
2. Discuss also the effect on the prices of consumer goods delivered by (non-financial) firms that use financial services and that are not tax exempt. What would have been different in the absence of VAT exemption?
       In the discussion above you may assume that any VAT is fully included in the sales prices.

Problem 4
Define "progressive income tax".
Also define measures of tax progressivity. (See Røed and Strøm).
Let Y be gross income and T be the income tax. Determine in each case below whether the tax is progressive.
   i. $T = aY - b$ where 0<a<1 and b>0
   ii. $T = tY$ 0<t<1
   iii. $T = aY^{1,5}$

Problem 5

Explain how a linear income tax can be made more progressive.

Discuss which effects of making the tax more progressive that you would allow for when considering the choice of progressivity.

Problem 6

Define the following concepts:
   a) Lump sum tax
   b) Poll tax
   c) Marginal tax
   d) First best allocation
   e) Second best allocation
   f) Tax distortion