Public Finance Post Mortem: *Partial answers*

Part I: Taxing Questions – Answer 5 (only five) of the following seven questions.

1. The IRS subsidizes charitable giving, but for some and not for others. For those who take the standard deduction, one dollar of charitable contributions costs a dollar of reduced consumption or saving; for those who itemize, the cost is (1-marginal tax rate), which yields 60.4 cents on the dollar for those so fortunate as to find themselves in the top 39.6% bracket.

2. You purchase a house in Middletown for $200,000. The assessment ratio is 80% and the mill rate is 30. How much property tax should you expect to pay each year? The assessed value is .8x$200,000 = 160,000; the tax bill is $30x(160,000/1,000) = $4,800.

3. Homeowners in Middletown are worried because all property in the town is being reassessed. Assuming that the tax rate is adjusted so as to yield the same total revenue as before the reassessment, will home owners be likely to gain or loose from the reassessment? Explain. On average there will be no change, because the same total amount of real estate tax is collected as before. Commercial properties will have lower taxes because of the decline of the central city business district. Total tax collected from residences will increase, but the tax burden will be redistributed from those in declining neighborhoods to those whose property has appreciated in value.

4. What determines the "tax price" that a citizen pays to finance an extra dollar of local expenditure for education or other public goods? What determines the tax price paid by the "median voter?" The tax price is the ratio of one's income to average income (or proprety); the tax price paid by the median voter is the ratio of median to average income.

5. Explain the distinction between a tax credit and a tax deduction. Are there circumstances in which a $600 tax deduction would be worth less to the taxpayer than a $200 tax credit? Explain. A tax credit for $200 reduces your tax bill by $200; a $600 tax deduction reduces your tax bill by the marginal tax rate x $600, but only if you itemize. If your marginal tax rate is > 1/3 and you itemize, the $600 deduction is worth more.

6. Explain why a taxpayer might be willing to buy Middletown bonds rather than U. S. government bonds even though they pay a lower rate of interest. Interest (but not realized capital gains) on state and municipal bonds is exempt from the Federal Income Tax!

7. It is said that one way to escape the capital gains tax is to die! Explain. When you die the basis of your property is stepped up to the value of the property at time of death; your estate will only have to pay capital gains tax on gains from that date forward. Rest in peace, the IRS will morn its loss.

Part II: [30 points – one hour] Graphics - Answer TWO (only 2) of the following three questions:

1. Some say that a *cut* in personal income tax rates might provide such a stimulus to work effort that more tax revenue would be collected than when the tax rate was higher. Others assert that a *hike* in the personal income tax might lead to an increase in work effort. Are either (or both) of these assertions compatible with the assumption that individuals maximize utility? Explain, drawing appropriate indifference maps.

    Check Rosen, page 401-402.

2. Show by drawing an appropriate indifference map that the *negative income tax* might conceivably lead to an increase in work effort. Then show that the *welfare step* created when welfare programs

provide for a $1.00 reduction in benefits for each $1.00 earned can never lead to an increase in work effort.

　　　　See Rosen, pp 180 & 182

3. It is often argued that the users of a commodity should pay for its production. When the users are unwilling to pay a price high enough to cover cost, then it is said that the commodity does not pass the "market test" and should not be produced. Nevertheless, we often observe governments subsidizing the production of commodities and services. For example, isolated rural communities may try to attract a physician to practice in their locality by using tax revenue to provide a free clinic and office facilities. And at Wesleyan the student body tax is used to subsidize the publication of the *Argus*, numerous concerts and parties and even guest lecturers. Explain, using an appropriate graph where helpful, the circumstances in which it may be worth while for commodities to be produced that cannot pass the market test.

　　　　If the average cost curve is everywhere above the demand curve, revenue will fall short of cost; although the commodity flunks the market test, consumer surplus that would be enjoyed at marginal cost pricing plus revenue may exceed the cost of production.

Part IV: [30 points – one hour] Write an Essay on two (only two) of the following topics:

1. The State Government is running a large budget surplus, thanks primarily to booming economic activity. Two tax reduction measures are under consideration. Proposal #1 would reduce all marginal tax rates by 2%. Proposal #2 would increase the personal exemption by $200. The Office of Tax Analysis estimates that the total tax reduction would be the same with either measure.
    a.   From an efficiency perspective, which measure would you recommend? Why?
    b.   From an equity perspective, which measure would you recommend? Why?
Since hiking marginal tax rates imposes a deadweight loss, cutting them reduces the loss! A change in the personal exemption is a lump sum adjustment and has no marginal effect (unless it stimulates the birthrate). Equity: the reduction of the exemption would help the poor more.
2. Charles Tiebout (Wesleyan 1950) has argued that the fact that people can migrate, "voting with their feet," means that there is a natural tendency for public goods to be appropriately allocated. Evaluate the proposition, explaining whether or not the Tiebout effect contributes to an efficient and/or equitable allocation of resources.
Tiebout argued that people migrate to the town offering citizens choice regarding public goods. Those who want a high tax/high public good mix go to Town A and those who want low taxes and low public goods go to Town B.

　　3.   Tax Reform: The following tax measures have been proposed for Never-Never Land. Please evaluate each of the proposed taxes in terms of its *efficiency* costs (i.e., does the proposed tax generate an excess burden or dead weight loss?

    a.   A national sales tax: Efficiency costs, which might be reduced by following the Ramsey inverse elasticity rule.
    b.   A tax on pollution equal to the marginal damage generated by the pollution: Contributes to a more efficient resource allocation.
    c.   A tax requiring each citizen to pay $100 times the last digit of his or her Social Security number: No efficiency costs but violates horizontal equity.
Final Distribution: 47 to 96. Grade Distribution: D+ to A with a median of 85.