

**University of Toronto**  
**Economics 336 – Public Finance (Taxation)**

**Midterm examination**  
**February 28, 2005**

**Instructions:** Write your name in block (capital) letters and your student number on all exam booklets you use. If you use additional booklets, place them inside the first one before handing them in. You may use pocket calculators (but you won't need to). You must not refer to books, computers, or any other aids. You have two hours. Allocate your time appropriately, and *be sure to attempt all parts of all the questions you choose.*

**Answer NINE of the following questions.** Explain your reasoning carefully. You may use graphical or mathematical arguments where appropriate, but keep your answers brief. (10 points each.)

1. Discuss three factors that explain the rise in government spending on health care in recent years. In particular, in your view can the aging of the “baby boom” generation account for the increase?
2. Suppose that Canadians were permitted to opt out of the public health insurance system and purchase health insurance from competing private companies. *Given that some Canadians are healthier than others*, is it possible that this reform would make everyone worse off than in the present system? Explain your answer, using concepts discussed in class.
3. *TRUE, FALSE, or UNCERTAIN:* The incidence of an excise tax on the purchaser is greater in the long run than in the short run. Explain your reasoning.
4. In recent years, property taxes *on older homes* in central Toronto have risen substantially. This reform has been criticized, because many of these homes are rented to low-income families and students. Do you agree with this critique? According to theory, who should bear the economic incidence of such a tax?
5. Consider an economy that produces two goods, computers and maple syrup, using two inputs, unskilled labour and skilled labour. Suppose government offers a subsidy to skilled labour employed in the computer industry. Under what conditions could this cause the wages of skilled labour to *fall* relative to wages of unskilled labour? Explain your reasoning.
6. Define the tax bases for a *comprehensive income tax* and a *value-added tax*. How do the economic effects of these taxes differ?
7. Agricultural subsidies in high-income countries depress the world price of food products. Consider a developing country that uses land and labour to produce food and manufactured goods. Discuss the effects of the subsidy on the welfare of workers and landowners. How does your answer depend on whether the developing country is a net exporter or importer of food?

8. Define a *lump-sum tax*. Explain why a consumer is better off paying a lump-sum tax than an excise tax that generates the same revenue. Use graphs to justify your answer.
9. In Ontario, restaurants meals less than \$4 are exempt from retail sales tax. Consider a reform that eliminated this deduction, while decreasing income taxes of all citizens proportionately to keep government revenue constant. Would this reform make consumers better or worse off? How does your answer depend on whether an individual's consumption of low-cost meals is above average or below average? What if it is just equal to average?
10. Explain how the excess burden of an excise tax can be calculated using (i) Marshallian consumer surplus, and (ii) Hicksian equivalent variation. Is the Marshallian measure of excess burden *larger* or *smaller* than the Hicksian measure, or is the difference *uncertain*? Justify your answer. (You may wish to refer in your answer to the paper by Hines.)
11. Can the excess burden of a small tax on a particular tax base ever be *negative*? Explain your answer, using graphical arguments and examples as appropriate.
12. Is it optimal to tax all purchased commodities at the same percentage tax rate, as in a value-added tax, or is a system of differentiated tax rates better in general? Justify your answer. What if anything, does the theory of optimal commodity taxation imply for the optimal tax treatment of income from savings? (You may wish to refer in your answer to the paper by Slemrod.)
13. Define the *Haig-Simons comprehensive income concept*. Explain how our income tax system's treatment of housing expenditures differs in practice from the Haig-Simons concept. Justify your argument.