

# ECON 4211

## Suggested solutions HW 5

**Problem 1** (*Education*) Assume you come across an empirical finding describing the result of an experiment conducted in a country where girls traditionally are "educated at home". In the experiment random households got "gifts" for providing formal education for their daughters and the fraction of the gift that got eventually used for the designated purpose varied substantially with the parent who got the gift: in case a mother did, the girl was more likely to be sent to school. Can you use this information to formulate a justification for publicly provided education?

ANSWER: One potential justification one can construct from this fact is the so-called "family utility" argument. If the well-being of the child depends on who has the (financial) power to make a decision about schooling of a child, it might be seen as beneficial to delegate the decision to the government if its decisions are better aligned with those of a society.<sup>1</sup>

**Problem 2** (*Social Security and Healthcare*) Cigarette tax is prevalent in North America and Europe. Explain why (from a societal perspective) such a tax might be justified, and provide one argument against it (or at least for restricting such a tax).

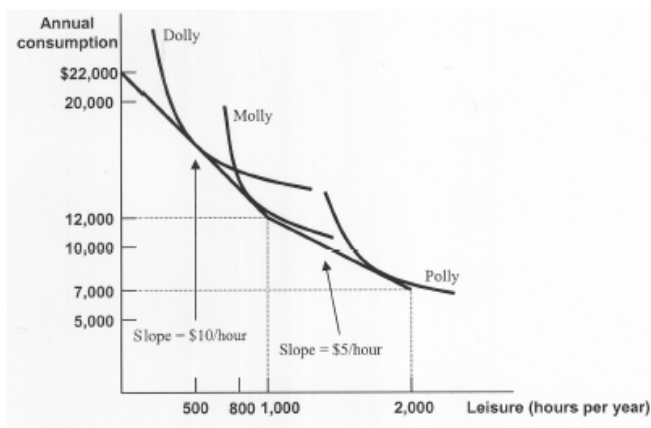
ANSWER: Given the effects of the second-hand smoke, the tax can be justified as a corrective (Pigouvian) tax, however, the smokers typically living less leads them to pay more (relative to their benefits) into the Social Security system, which then serves as an additional transfer mechanism from smokers to non-smokers.

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<sup>1</sup>Here is one of the relevant citations in that literature: Journal of Human Resources, Vol 32, no3 1997 p 463-480 "Do Husbands and Wives Pool Their Resources? Evidence from the United Kingdom Child Benefit."

**Problem 3** 16, chapter 17.

- a. Draw the set of hours worked and consumption combinations that these mothers face (carefully labeling the slopes of the budget constraint). Draw a representative indifference curve for each mother.



This policy change lowers the effective income of any mother not on welfare by \$2,000, since it gets rid of \$2,000 in medical insurance. This shifts the steeper portion of the budget constraint down to the dark line depicted in the following graph. Polly will be unaffected by this policy change since she was already on welfare. Molly will no longer find it optimal to earn \$10,500 since she can get \$12,000 worth of benefits by working just fewer than 1,000 hours and qualify for welfare and the \$2,000 insurance benefit. By doing so, she would enjoy more consumption *and* more leisure. It is hypothetically possible that Molly would actually choose to work more than 1,200 hours after the change (e.g., with very strong preferences for more than \$12,000 in income) but it is likely that she would reduce her hours worked to just below 1,000. Dolly, on the other hand, will certainly increase her labor supply in response to this policy change: since this policy change effectively makes her poorer, she consumes less leisure.

