

THIRD TEST. ECON 237, SPRING 2015. NAME: _____

Fill in the blanks, and answer in the spaces provided. Show your work. Box your final answers.

1. Rawlsian redistribution. You are behind a Rawlsian ‘veil of ignorance’. Like everyone else, you have a $\pi_R = 1/5$ chance of being rich, in which case you will start off with a wealth of $w_R = 160$, and pay a tax of x , which will be redistributed evenly among the poor. You have a $\pi_P = 4/5$ chance of being poor, in which case you will start off with a wealth of $w_P = 10$, and receive a share of the redistributed wealth. Your von Neumann-Morganstern utility function is $V(c) = \sqrt{c}$, so your marginal utility of consumption is $V'(c) = \frac{1}{2\sqrt{c}}$. Redistribution is ‘leaky’, such that only a fractional portion $\delta = 1/2$ of the wealth extracted from the rich can reach the poor, while the remainder is wasted.

a) Find the value of x that maximizes your expected utility, along with the resulting values of c_P (consumption if poor) and c_R (consumption if rich).

b) In this model, how does optimal post-redistribution inequality (which we can measure as c_R/c_P) depend on (i) the retention rate δ , and (ii) the extent to which people are risk averse? Explain the impact of each factor (is it positive or negative?) as clearly as possible.

2. Adverse selection. Let c_j be the expected medical costs of a person with health type j , and let b_{ij} be the willingness to pay of a person with risk aversion type i and health type j . Let x_{ij} be equal to one if a person of types i and j is willing to buy insurance, and zero otherwise. Assume that each type is equally likely. Assume that insurance companies can't discern the type of each potential customer, and that they are willing to offer insurance at a premium price p greater than or equal to expected costs.

a) Find x^* , which is the matrix that includes the most participants, of those participation matrices that can exist in an equilibrium. Also, given x^* , find the range of equilibrium premium prices p^* , and the deadweight loss D .

$$c = [360 \quad 480 \quad 720]$$

$$b = \begin{bmatrix} 400 & 500 & 750 \\ 450 & 550 & 800 \\ 500 & 600 & 850 \\ 580 & 680 & 930 \end{bmatrix}$$

b) Explain in clear terms what adverse selection is, and why it can lead to failure in the market for individual health insurance policies.

3. Social Security motivation. In theory, people planning their retirement can hedge against the possibility of living longer than expected by purchasing annuities that will make regular payments until they die. However, the market for such annuities might fail because of adverse selection. Explain why this is true, and how it provides a motivation for the Social Security program.

4. George and Tideman. What does George (1890) propose? Explain how Tideman (2004) extends this proposal to combat tyrannies of the majority in democratic governments.

5. PPACA Definitions. Define and explain each of the following terms pertaining to the PPACA: (a) community rating. (b) guaranteed issue. (c) individual mandate. (d) Medicaid expansion. (e) Cadillac tax.

6. Hochman and Rogers. Suppose that people feel compassion toward one another, so that the utility of person i is increased ceteris paribus if the material well-being of person j improves. Given this, explain how aid to the poor has the characteristics of a public good, and characterize the Pareto optimal amount of redistribution.

7. Moral hazard and health insurance. Explain how moral hazard can lead to inefficiency in the health care market. Describe some measures that actual insurers (including private insurance companies, Medicare, etc.) take to reduce moral hazard.

8. Moral hazard and redistribution. Explain how the “leaky bucket” of redistribution described by Okun (1975), and modeled in problem 1, can be framed in part as a moral hazard problem.