THAMMASAT

EE 461

Semester 2/2019

PRACTICE QUESTIONS I

Questions in this practice don't exhaust all materials that we have learned.
Any materials on the lecture slides are a fair game for midterm exam.

1. [Poverty: 4 generations of poverty measurement]

1.1 Label each statement TRUE or FALSE, and briefly explain your answer.

(a.) The stochastically poor are the asset nonpoor, whose incomes fall below income poverty line because of bad lucks. Hence, they are income poor.

(b.) The stochastically poor cannot be the structurally poor.

(c.) A stochastic transition back from being income nonpoor to being income poor involves the reduction in asset level.

(d.) A structural transition back from being income nonpoor to being income poor involves the reduction in asset level.

(e.) A stochastic transition involves only change in income, and doesn't involve change in asset level.

(f.) A structural transition involves both change in income and in asset level.

1.2 Do you agree or disagree with the following statements? Please explain reasons to support your answer clearly.

(a.) The chronic income poor must be caught in poverty trap. That is, they will be poor indefinitely.

(b.) The stochastically poor is more likely to be the transitory income poor than the structurally poor.

(c.) The structurally poor can be the transitory income poor.

(d.) Positive shocks in asset level can get people out of multiple-equilibria poverty trap.

2. [Poverty: Understanding poverty]

2.1 What are the main concepts of the following ideas?

(a.) Poor but efficient

(b.) Poor but neoclassical

(c.) Poor but rational ?

2.2 What are the main differences between these concepts and their policy implications?

3. [Inequality: Gini coefficient calculation]

Suppose there are three individuals in the population. Assume their incomes are 0, 0.1 and 0.9.

Draw the Lorenz curve and calculate gini coefficient.

4. [Inequality: accident of birth]

> The stories of Renfu, Yichen, Mark and Stephanie
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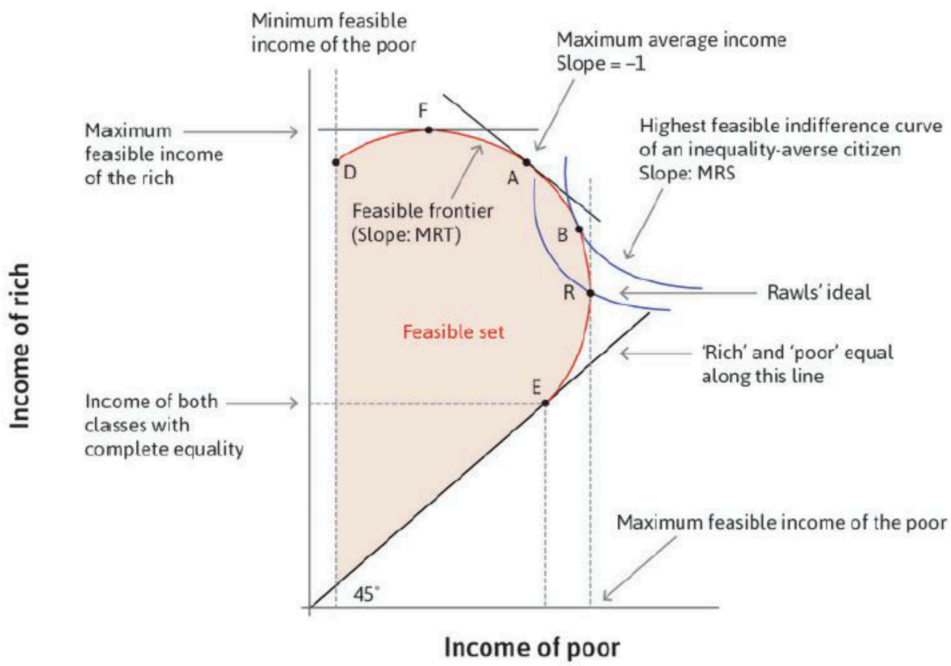
> "It is 1975. Renfu is the child of a local Communist Party leader. In 10 years, he will attend Tsinghua University, an elite engineering university in Beijing, and will join the Communist Party himself. In 20 years, he will run a state-owned enterprise. In 30 years, he will be CEO of the company after it is privatized, and be highly ranked within the Party.
>
> In the mean time, Yichen, whose parents have no party connections, will not go to university, but instead work the land alongside her parents until she is 16, and then work at a state-owned enterprise making car parts for export to the US and Europe. When she is 30 years old, she will take a job in the new Motorola factory opening in nearby Tianjin, paying double her current wage. She will not be able to migrate legally to Tianjin and leaves her daughter behind with her parents. Let's also consider two other hypothetical people living in the US, also in 1975. Mark and Stephanie, both 17, live in Gary, Indiana. Mark is about to finish high school and start working in the local unionized steel mill with his father, where the pay is good and he doesn't have to spend four years in further education before earning a wage.
>
> In the 1981 recession, Mark will lose his job. He will try to use his mechanical ability to open a car parts business. With little wealth of his own to post as collateral, he will not be able to obtain a bank loan, so he will move south to another factory. This one is non-unionized, and he will make less money than he did in Gary. In 2008, during the recession, his factory will replace him with a KUKA Robotics Corporation Titan industrial robot.
>
> Stephanie, both of whose parents are doctors, decides she will attend Indiana University Bloomington, majoring in psychology. Afterwards she will work for a large financial corporation in Chicago and, after a series of promotions, becomes a vice-president for human resources. She will invest her savings in the stock market, which yields an average return of more than 10% for many years, and will benefit from government tax cuts that favour high earners."

4.1) From the stories of Yichen, Renfu, Stephanie, and Mark, indicate all of the accidents of birth that affected their economic successes or failures.

4.2) What is intergenerational inequality? How is it measured?

4.3) Give three possible explanations on why the intergenerational inequality and inequality between members of a population at a given moment in time are positively correlated.

5. [Inequality: Choosing between feasible income distribution]



5.1) Consider the graphs between income of the poor and income of the rich above. Please fill in the blanks.

Equality between rich and poor
Point___shows the case in which rich and poor receive the same income.

Rawls' ideal
Rawls' preferred point is___, where the poor are as rich as possible.

The feasible set
The red curved line made passing through___and___(and the other points above___) is the frontier of the feasible set of income distributions of this economy. Its slope is the MRT.

Maximum expected income
If you were interested in maximizing your expected income then you would choose point___, where the income gains of the rich are exactly offset by income losses by the poor, so the marginal rate of transformation is equal to one.

If you knew you would be rich
If you could rig the coin flip so that you knew you would end up rich (and you had no concern about fairness) you would select point___.

The worst solution for the poor
Point___denotes the minimal income of the poor and, like___, is not Pareto efficient.

Inequality aversion
An inequality-averse citizen with indifference curves as depicted by the blue curves would choose point___.

5.2) If society doesn't care about income of the rich, what will the indifference curve look like? In this case, which point on the feasible set will be chosen?

6. Suppose a simple economy has 3 occupations:

i) Subsistence producers produce some fixed amount z with labor.

ii) Industrial workers earn a wage w.

iii) An entrepreneur runs a business with startup capital I (only from the credit market with interest rate r for loan), hires m workers to produce an output q.

- Entrepreneur needs wealth W as a collateral. If default, he will lose his collateral worth $W(1+r)$.
- Expected costs of default include some fine (F) and a fraction λ of the profits from his business.

6.1) What is the condition that makes the entrepreneur repay the loan? How does this condition determine access to the credit market and the fraction of people becoming entrepreneurs?
6.2) Consider the situation where the distribution of wealth is <u>moderately</u> unequal. Please explain and draw the graphs for the supply and demand for labor in this economy.
6.3) At the equilibrium, how many levels of income do we have in this economy?

7. [Inequality: Redistribution]

Do you agree or disagree with the following statements? Please explain reasons to support your answer clearly.

"If the country A has an decreasing marginal saving rate, there are more people with subsistence needs. Hence, the government should transfer income from the rich to the poor in order to reduce the country's inequality and increase the country's total savings."

8. [Inequality: redistribution]

Consider an economy with two people: Bruno and Angela. Suppose that Bruno's income is three times as large as Angela's, with Bruno receiving 3,000 pesos per year and Angela receiving 1,000. Suppose a poll tax of 150 pesos is imposed on both Bruno and Angela.

Definition: A poll tax is a tax where everyone pays the same absolute amount to the government.

8.1) What are the ratios of Bruno's income to Angela's income before and after tax?

8.2) Draw Lorenz curves of this economy before and after the poll tax.

8.3) Is the poll tax progressive, regressive, or distributionally neutral?