

ECON 4507: Assignment #1

Due: Friday, February 14th (at the beginning of class)

1. Poverty and Inequality (40 pts)

You are working as an advisor to the Minister of Finance in Thailand. The poverty line is 6,500 baths a year. It turns out that in Thailand there are two groups below the poverty line. One group (called group A) consists of 500 individuals: they have equal earnings of 5,000 baths a year each. The second group (group B) has 300 people: they earn 2,500 baths a year each. Of course, there are also people who are above the poverty line. Assume total population is 2000 individuals and mean income for the entire economy is 8,000 baths a year.

You have been allocated a budget of 250,000 baths a year. You must allocate this budget among the poor people.

1.1 Suppose there is no poverty line, who would you give the money to and why?

1.2 Now suppose that you are told by the President of Thailand to use this money to minimize, as far as possible, the head count ratio. Who would you give the money to and why?

1.3 Now suppose that each person who earns 2,500 baths gave 500 baths to each person who earns 5,000 baths. How would the poverty indicators change relative to the initial situation? Calculate the HCR, PGR (or IGR), and FGT ($\alpha=2$) using the initial values and the new values. How would inequality change relative to the initial situation? Calculate the Gini coefficient using the initial values and the new values.

1.4 Now suppose that each person who earns 2,500 baths gave 1,800 baths to each person who earns 5,000 baths. How would the poverty indicators change relative to the initial situation? Calculate the HCR, PGR (or IGR) and FGT ($\alpha=2$). How would inequality change relative to the initial situation? Calculate the Gini coefficient using the initial values and the new values.

2. Trade and Development (30 pts)

Consider a world with two countries (Canada and India), two tradable goods (services -such as technical support- and manufactured goods), and two factors of production (capital and labor). India is relatively abundant in labor, and services are relatively intensive in the use of labor. Both countries use the same technology. The Internet has allowed for increased trade in services, which has lowered the prices of such services relative to manufactured goods. For each country, show graphically the effects of this change in the terms of trade on exports and imports. Based on your graphs, who are the winners and losers from trade? Why?

3. Discuss the validity of only TWO of the following statements. You should include graphs or examples where appropriate. (15 pts each)

3.1 An increase in economic growth may lower income inequality.

3.2 Subsidies to agricultural exports are a major issue in India. Higher exports for farmers will mean greater revenues and higher prices for them. The government, however, will be opposed to such a policy.

3.3 Purchasing power parity (PPP) exchange rates help to provide a more meaningful comparison of the relative level of development and inequality between countries than market official exchange rates do.