MICROECONOMICS III (MODULE C) CLASS #8

GENERAL EQUILIBRIUM - ROBINSON CRUSOE'S ECONOMY contd.

Problem #5

On the Veritas island it is illegal to trade with other countries. Only 2 goods are consumed on this island: milk and wheat. There are 40 farms in the northern part of the island. The production possibilities frontier in the north takes the form: m = 60 - 6w, while in the south it is: m = 40 - 2w, where *m* is the amount of milk and w – the amount of wheat. The economy remains in a competitive equilibrium and 1 unit of wheat is exchanged for 4 units of milk.

- a) At the given equilibrium prices, in the production of which good will the northern and southern farms specialize?
- b) Friendly Vikings discovered the possibility to trade with Veritas and offered exchange of wheat for milk at a rate: 1 unit of wheat for 3 units of milk. If the Veritas island permits free trade with the Vikings, a new price ratio will appear on the island. How will production (output) of the farmers in the north and in the south change?
- c) The Veritas Council of the Elderly is to decide whether to accept the Vikings' offer. The Council members from the north have 40 votes and the ones from the south -60. Assuming that each of them votes in accordance with the interest of their part of the island, how will the farmers from the north and south vote? Why are you able to provide a specific answer to the latter question not knowing anything about the consumption preferences of the farmers?

Assume that instead of the offered exchange rate of 1 unit of wheat for 3 units of milk the Vikings offered trade at a rate of 1 unit of wheat per 1 unit of milk. How will the output of the farmers from the north and from the south change? How will they now vote?

Problem #7

Starbonia is a country where all markets are purely competitive. Services (s) and goods (g) corresponding to point "O" in Figure 1 are produced and consumed in this country. Equilibrium prices of goods and services are identical and equal 1 PLN *per* unit. Starbonia exercises a protective policy in foreign trade but the government is planning to depart from protectionism. The world prices that will then influence the economy are (*per* unit): 0.90 PLN for goods and 1.20 PLN for services.

- a) Assume that the consumption and production levels of goods and services in Starbonia adjust to the new price ratio. Illustrate this in Figure 1. Explain how this adjustment of Starbonia's economy to the liberalization of trade takes place (*i.e.* describe the mechanism in a few words you can refer to the appropriate formulas). Provide your answer to the question, whether Starbonia will profit from departing from protectionism (and in what sense).
- b) In Starbonia there are 2 factors of production: Young and Old Employees. Point "O" in Figure 2 corresponds to such an allocation of these factors between the production of goods and services, which is a general equilibrium under the protectionist conditions (point "O" from Figure 1). The wages of the Young and Old Employees were identical before the departure from protectionism. The line "E_s" shows the changes in factor relations corresponding to the increase in production of services (assuming the equality of wages) and line "E_g" presents this change for the increase in the production of goods. Is it true that trade liberalization causes an increase of the relative wage of the Young Employees? In justifying your answer refer to Figure 2.

Figure 1. Production possibilities frontier (transformation curve)

Figure 2. Factor allocation

