International Economics 2024

<u>Home assignment 4: Trade and Politics</u>

Consider an economy that produces tea and rice. Each requires a different type of land, so the flat, low-lying flood land used for rice is a factor specific to rice, and the hilly land used for tea is specific to tea. However, labor can move freely between the two sectors, so that the wage paid to labor in both sectors is the same. Suppose the marginal product of labor in the tea sector is given by $120 - L_T$, where L_T is the number of workers in the tea sector, and the marginal product of labor in the rice sector is given by $120 - L_R$, where L_R is the number of workers in the rice sector.

Suppose that there are 120 workers, 100 rice farmers who own the low-lying land and 100 tea growers who own the hilly land in the economy. Assume that the economy is a net importer of rice.

(a) If the world price of tea and the world price of rice are both $1 per unit, and if the country has a free-trade policy so that the domestic price of each good is equal to the world price, find the equilibrium allocation of labor to each sector, the quantity of each good produced in this economy, the wage, the rental on land in the tea sector and the rental on land in the rice sector.

(b) Now, suppose the government imposes a 100% ad valorem tariff on rice imports, doubling its domestic price to $2. Repeat the analysis of part (a).

(c) Who benefits from the tariff? Who is hurt? Is there any group for which you cannot tell?