Trade Policy 1

Problem 1

In a small country, assume that the government initially applied an ad valorem tariff with the amount t_0 = 10% at the world price of imported goods p_w. The volume of domestic demand under this tarequalsl to D_0= 1,500,000 units, and the domestic supply S_0 =1,000,000. The estimated price elasticity of demand in this country is ε_D = -2/3, while the price elasticity of supply is given as ε_S = 4/3. The government is considering increasing the tariff to t_1 = 21%.

(a) Write down the equations describing how the domestic demand, supply and import would change after introducing this new tariff.

(b) Is increasing the tariff a good idea (in terms of profits)? Jot down the equation, which shows budget revenues from tariff at t_0 = 10% and t_1 = 21%. Calculate the percentage change.

Problem 2

Suppose we are dealing with a large country that is an importer of cement. The demand for cement in this country is represented by the following function: $q = 500 - 5p$, while the domestic supply function: $q = p - 10$. The world cement price is initially equal to $p_w = 60$.

The country's government are considering introducing an import tariff on cement to protect domestic producers. The change in domestic and world cement prices as a result of the introduction of tariff can be described by the following equations: $\Delta p_d = (1 - \beta)t$ and $\Delta p_w = -\beta t$, where $\beta \in [0,1)$ is the sensitivity of the world price to the tariff rate (t).

(a) Write the domestic welfare function concerning the tariff.

(b) Calculate the tariff rate that maximises the growth of national welfare.

(c) How does this tariff depend on β?

(d) Draw a graph of the function of national welfare depending on the tariff rate.

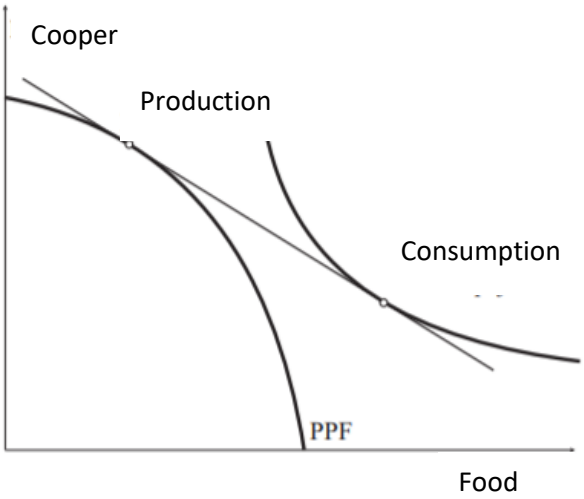
(e) Write the function of the revenue from tariff. Calculate the tariff rate that maximises budget revenues.

(f) Which rate is higher - maximising welfare or budget revenues?

(g) Draw in the same graph the function of budget revenues depending on the tariff rate.

Problem 3

Suppose that the economy of a small country produces two goods: copper and food. A country has a tariff of 10% on imports from third countries. The figure below shows the situation of free trade.



(a) Which good do this country export and which imports? Mark it in the picture.

(b) Explain the effects of imposing the tariff on food and copper production—Mark the new production balance point as P.

(c) How would the structure of consumption in the country change due to the imposition of this tariff if it were hypothetically assumed that consumers could consume according to world price relations? Mark this point in the drawing as C'.

(d) Explain why consumers cannot choose point C as their consumption equilibrium? Mark the right point of consumption equilibrium as C'' and explain where this difference comes from.

(e) What happens to welfare? Who benefits, who loses?

Problem 4

Let's assume that China car manufacturers use the semi-finished products listed in the table. The table below contains information about the value of individual intermediates at world prices and customs rates for individual products.

Goods	World price	Tariff (%)
Cars	100	20
Steel	20	5
Rubber products	10	10
Electronics	15	10
Mechanical prats	30	5

(a) Calculate the effective tariff protection of cars in China.

(b) If, as a result of international agreements, China reduces the tariff on car imports to 15%, can they maintain the effective protection rate unchanged?

(c) Is it possible to introduce such tariffs that will result in a negative rate for cars' effective tariff protection? In what situation is this possible? What does it mean?