New Trade theory

Problem 0

Using the Dixit-Stiglitz utility function, calculate the level of utility in each of the cases shown in the table below.

$$U = \left(\sum_{i=1}^{N} C_i^{\rho}\right)^{\frac{1}{\rho}}, where$$

C_i is the size of the consumption of i-th variety.

	$\rho = 1$	$\rho = 0.75$	$\rho = 0.5$	$\rho = 0.25$	$\rho = 0.1$
C_1=3 C_2=0 C_3=0					
C_1=1 C_2=1 C_3=1					

a. What are the conclusions of this table regarding potential sources of trade benefits?
b. What role does ρ play in this analysis?

Problem 1

We analyse the Krugman model of monopolistic competition. It assumes that there are n companies on the domestic market, each producing one variety of a certain product. These varieties are imperfect substitutes. Hence companies have some market power in determining prices. It is assumed that all companies have identical costs: The fixed cost *F* = 2,500,000 and marginal cost *c* = 2,500. Demand for individual varieties is shaped according to the following function: $Q_i = S\,[\frac{1}{n} - b\,(P_i - \bar{P})]$,

where b is 1/10,000 is the , while S = 81,000 and it is the market size, $\bar{P}$ determines the average market price.

(a) Find the autarky equilibrium of such a production industry. How many varieties will be produced on the market? What will be the volume of production for each of them and the equilibrium price?

(b) How would this equilibrium be changed by increasing marginal costs? Show that onto proper graph and provide an economic interpretation of these changes.

(c) How would this equilibrium be changed by reducing the b parameter? Show that onto proper graph and provide an economic interpretation of these changes.

(c) Assume that there are n_f firms on the foreign market with identical costs as domestic companies. The demand function for individual varieties is identical to that in the country, with the difference that the size of the foreign market is S_f = 144,000. How many companies will operate on the foreign market in autarkic balance? What will be the size of their production and what would be the price?

(d) What will happen to the number of companies, production and prices if the domestic and foreign markets open to exchange possibilities? Show that onto proper graph and provide an economic interpretation of these changes.

(e) Can consumers in this new situation be satisfied with the exchange? Why?

Problem 2

We analyze a simplified version of the Melitz model (2003).

(a) What are the key assumptions of this model?

(b) Using the Krugman model, show the relationship between company profit and marginal cost level. Show your result on the appropriate chart.

(c) Present the effects of market integration on company profits and their marginal cost margins.

(d) Which companies will be "winners" and which will be "losers" of the integration process? Which companies will enter the foreign market?