Written Exam for the M.Sc. in Economics 2009

International Economics

Re-Exam/ Elective Course/ 3rd Year course

Spring, 2009

4-hour closed book exam

- There are THREE pages in this exam paper, including this instruction page
- You need to answer all questions, so manage your time accordingly.
- If a question asks you to list three things, please number and underline the list as exampled below.
  1. <u>Thing number 1</u>
  2. <u>Thing number 2</u>
  3. <u>Thing number 3</u>
- Make your math legible and easily followed, with the final answer boxed.
- Partial credit may be given.

Good Luck!

1. Short answer questions

   Answer each of the below short answer statements. Your answers should not be more than two sentences. If the question is a true or false question, explain your answer in one or two sentences.

   (a) Suppose that in retaliation to British limits on Balkan migrants, Bulgaria starts restricting British migrants in Bulgaria as a "reciprocal measure." Will this work? Why or why not?

   (b) True or False: Countries always gain by moving from autarky to free trade.

   (c) What is a voluntary export restraint (VER)? How does that affect the allocation of quota rents?

   (d) True or False: All owners of factors in an economy gain when moving from autarky to free trade.

   (e) What is reciprocal dumping? Can it occur without government intervention?

   (f) What is the Leontief Paradox?

   (g) What is reverse-vertical FDI?

   (h) Define terms-of-trade.

2. Import tariffs under imperfect Competition

   Consider the Danish market for the Lego Star Wars 7675 AT-TE Walker™ construction set, hereafter referred to as "Toy." Lego has a monopoly over Toys in Denmark. The monopolist's domestic inverse demand curve is $P = 100 - Q$. The marginal cost curve is $MC = 10 + Q$. Denmark is a small country and faces a Toy world price of $P^W = 20$. Denmark imposes a tariff of 10 on the import of Toys.

   (a) What is the autarky price and quantity supplied?

   (b) How does Lego's demand curve change as Denmark goes from autarky to free trade?

   (c) What is the domestic quantity produced and quantity imported under the tariff?

   (d) What is the gain/loss to consumer surplus under the tariff?

   (e) What is the gain/loss to producer surplus due to the tariff?

(f) What is the Deadweight loss due to the tariff?

(g) Suppose Denmark increases the tariff to 40. What is the domestic quantity produced and quantity imported under this new tariff?

3. The Krugman model

Consider the market for golf clubs, which are differentiated, in Denmark. The demand for a single variety brand of golf club is

$$Q_D(P) = S * \left(\frac{1}{N} - 2(P - P_m) \right) \tag{1}$$

where N is the endogenous total number of varieties in the market and P_m is the average price of all the other golf clubs in the market. S is the size of the market, which is 200000 for Denmark. The cost of producing Q_s units of a variety is

$$C(Q_s) = 10 + 2Q_s \tag{2}$$

Each of the symmetric N firms produces a single variety. Each firm takes P_m and N as given.

(a) Find the optimal price P^* as a function of P_m and N.

(b) Find the market price P_m as a function N.

(c) Find the firm's profit as a function of N :

(d) What is the long run equilibrium number of firms in Denmark?

(e) Now suppose Denmark opens up trade with Finland, which is an identically sized market. When trade opens up, each firm faces a new market size $S_T = 2S$ but also faces double the number of competing firms $N_T = 2N$. What happens to the profits of each firm immediately after opening up trade?

(f) Is the long run trade-equilibrium number of Danish firms greater than, fewer than, or the same as in the autarky equilibrium?

(g) Do consumers gain or lose from free trade in this case? Why or why not?