PennState

Practice Exam 1

Do not open this exam until instructed to do so.

- You have 75 minutes to complete this exam
- You may use a calculator; you may **not** use any other device (cell phone, etc.)
- You may consult one page of notes (both sides); you may not use books, notebooks, etc.
- Show your work

I will not lie, cheat, or steal to gain an academic advantage, nor will I tolerate those who do.

Signature

Printed Name

True/False-Explain. Respond to the following statements by *explaing why they are true or false.* For each statement, a complete and correct explanation is worth 10 points. No partial credit will be awarded for stating TRUE or FALSE without explanation.

1. (10 pts.) Turkey, a country with a GDP per capita about 50 percent as large as France and Germany, is a candidate for membership in the European Union. If Turkey joins the European Union, we expect to see a significant increase in foreign direct investment in Turkey.

2. (10 pts.) Pfizer, the multinational drug company, holds the patent on the pain medication Lyrica. In the OLI framework, this patent is an internalization advantage.

3. (10 pts.) In our model in which firms are heterogeneous in productivity, more productive firms are more likely to be multinationals, because they face smaller fixed costs.

4. (10 pts.) The proximity-concentration tradeoff predicts that we should see more multinational activity in industries characterized by increasing returns to scale in production.

5. Use the model with heterogenous firms that we developed in class to answer the following questions. Assume that $E_2 = 1000$, $\epsilon_2 = 4$, $w_1 = 1.5$, $w_2 = 1.5$, $f^p = 6$, $f^e = 1.25$, and $\tau = 0.2$.

   a. (5 pts.) What is the productivity level (φ) of the smallest firm in country one that exports to country two? Call this level of productivity $\underline{\varphi}^e$.

   b. (3 pts.) Show that a country-one firm with $\underline{\varphi}^m = 0.815$ is indifferent between exporting to country two and operating a foreign affiliate in country two.

c. (8 pts.) Explain why $\underline{\varphi}^e < \underline{\varphi}^m$.

d. (13 pts.) Suppose that τ decreases to 0.05. How do $\underline{\varphi}^e$ and $\underline{\varphi}^m$ change? Do *not* compute the new values $\underline{\varphi}^e$ and $\underline{\varphi}^m$, but rather, explain why they change.

6. Use the two-country model with identical firms that we developed in class to answer the following questions. Assume that $E_1 = E_2 = 500$, $\epsilon_1 = \epsilon_2 = 2$, $w_1 = w_2 = 1.0$, $f^p = 0.5$, $f^h = 0.25$.

   The two countries differ in their level of import protection: Country two imposes a larger import tax on country-one exports. A country-one exporter earns market share $\rho_{12}s_2$ in the foreign market and a country-two exporter earns market share $\rho_{21}s_1$ in the foreign market. Assume that $\rho_{12} = 0.6 < 0.8 = \rho_{21}$.

   a. (6 pts.) Suppose that the two countries do not allow multinational production, so the only way firms can serve the foreign market is by exporting. What is the profit earned by a firm in country one and a firm in country two when $n_1 = n_2 = 5$?

Countries one and two are considering opening their markets to multinational foreign affiliates from the other country. If this policy was enacted, research suggests that two firms in each country would become multinationals: There will be $m_1 = m_2 = 2$ multinational firms and $n_1 = n_2 = 3$ domestic firms.

b. (6 pts.) Which country's domestic firms would be hurt the most by this legislation? Show the calculations that support your answer.

c. (6 pts.) Which country's multinational firms would gain more from this legislation? Show the calculations that support your answer.

d. (13 pts.) Explain the intuition behind your findings in parts b. and c. What is it about countries that drive your results?

Extra Space

Clearly label the question number, and leave a reference to this page near the question.