

Chapter 10 Intra-Industry Trade

Question 10.4

Suppose we live in a Dixit-Stiglitz world as described in chapter 10 with three car producers, called Ferrari, Lamborghini, and Porsche, and the following parameters:

$$p_{Porsche} = 10; p_{Lamborghini} = 5; p_{Ferrari} = 10$$

$$\rho = 0.5; I = 100; P = 2.5$$

Suppose that the producers have a fixed labour input of 5 and a variable labour input of 1. They face a wage rate of 1 and the labour force consists of 50 workers.

- 10.4A Is the model currently in equilibrium?
- 10.4B How many cars are produced in equilibrium by a single car manufacturer? How much labour is used to produce this output?
- 10.4C How many car varieties will be sold in equilibrium in this market? What will be the output of the three car manufacturers if new producers can enter the market?
- 10.4D The monopolistic competition analysis in this question is subject to one of the theoretical problems mentioned in the book. What is this problem?

Question 10.5

The intra-industry trade model can be interpreted in two ways: the Krugman and Ethier interpretations.

- 10.5A Which interpretation of the model have we used in question 10.4?
- 10.5B What are the main differences between the Krugman interpretation and the Ethier interpretation?
- 10.5C What is the result of an increase in the extent of the market in the Ethier interpretation?
- 10.5D What was the main motivation for Ethier to re-interpret the Krugman intra-industry trade

model?

Question 10.6

Locate the article by Roy J. Ruffin of the Federal Reserve Bank of Dallas, called “The nature and significance of intra-industry trade”. The article starts with an overview of classical trade theory.

- 10.6A What is the impact of trade on the income distribution in the US according to Heckscher Ohlin trade theory? What does the empirical evidence suggest on this issue?
- 10.6B Which four reasons does the article offer to show that intra-industry trade is much more beneficial than inter-industry trade?
- 10.6C Does the US-Mexico trade example support the conclusions of 10.6B? Explain.

Question 10.7

The [question 10-7 Excel file](#) on the website contains import and export data for aggregate manufactures and five sectors for the NAFTA and the EU.

- 10.7A Calculate the Grubel-Lloyd index for all sectors in the dataset.
- 10.7B Display the development of the Grubel-Lloyd index over time for all sectors in a graph.
- 10.7C Which sector fits the predictions of the neo-classical trade model best? Why?
- 10.7D Which interpretation of the intra-industry trade model (Krugman or Ethier) do you prefer to explain intra-industry trade for iron and steel? Why?