

**Study guide for exam 2.**  
**International Economics – Dr. McGahagan**

**GRAPHS**

You should be able to draw accurately and explain thoroughly, labeling axes and curves and explaining what determines the shape of and shifts each curve for the following graphs:

**1. Specific factors graph of marginal value products.**

- What goes on the horizontal axis and on the vertical axes?
- What significance does the intersection point of the two graphs have?
- What would happen if the point on the horizontal axis were other than exactly below the intersection of the two lines (that is, what would lead to the establishment of equilibrium)?
- What happens when the price of one of the products illustrated increases or decreases?
- How does the graph show the total wages earned by labor? the total return to capital and to land?

Go to Deardorff's Glossary of International Economics and examine the graph of the specific factors model. Running your mouse over the left hand indicators for "Increase in Price" or the "increase in endowment of specific factor" should answer some of these questions. See figures 3-5 and 3-6 in text chapter 3.

**2. The standard Heckscher-Ohlin PPF and trade possibilities graph:**

For concreteness, go to Deardorff's Glossary of International Economics, and examine the trade and transformation curve under "Figs". This shows a country with a comparative advantage in the X good. Slide the mouse over the term "Autarky" on the left hand side and explain what is happening. (Also see Figures 4-2, 4-3, 4-4 in text chapter 4)

- Why is the production possibility frontier curved?
- How is the price ratio established in autarky?
- What role does the indifference curve play in establishing the price ratio in autarky?
- After trade, how do the production and consumption points change?
- The line connecting the post-trade production and consumption points is called the price line as well as the consumption possibility frontier. How does this line show prices?
- How do you know the representative consumer is better off after trade than before by looking at the graph?
- What are some of the problems associated with the idea of the representative consumer?

**3. Monopoly graphs**

**A. Average cost curve**

- Draw a graph of the average cost curve of a "natural monopoly" and explain why it is falling. Assume high fixed costs and constant marginal cost.
- How does this relate to the average cost curve drawn to illustrate the "infant industry argument of Hamilton and List?

**B. Demand and marginal revenue and marginal cost.**

- What is the graphical relation of the demand curve and the marginal revenue curve? (Be precise in your drawing -- where does each cut the horizontal axis? the vertical axis?)
- Explain how the graph shows the quantity produced and price charged by a profit maximizing monopoly.
- Explain what areas on the graph show monopoly revenue, monopoly variable costs, monopoly profit, deadweight loss, and consumer surplus.

#### 4. Monopolistic competition graphs

##### A. Text graph -- U-shaped average cost and rising marginal cost.

How does the demand curve change when new monopolistic competitors enter?

What point represents the final industry equilibrium and why?

##### B. Krugman monopolistic competition graph, with number of firms on the horizontal axis.

Explain why the graph derived from the AC relation is rising on this graph

Hint:  $AC = FC / Q + MC$ .

Explain why the pricing line is falling on this graph.

Hint: demand will be  $Q = S/n - bS(P - P^*)$  where  $S$  = size of market  $P$  = firm's price,  $P^*$  average price of other firms. What does  $b$  represent?

What happens to the lines when a country enters into international trade?

How does the graph show the increase in the size of the market?

How does the graph show the consequences of this increase?

#### PROBLEMS

See my solutions to the text problems on the course website

Specific numerical problems to watch for:

##### -- measures of revealed comparative advantage and intra-industry trade.

$(X - M) / (X + M)$  and  $1.0 - \text{abs}(X - M) / (X + M)$

Be able to explain the logic of the intra-industry trade index.

##### -- Cobb Douglas production functions.

How do they show

-- marginal products of capital and labor?

-- returns to scale?

-- capital or labor intensity when you compare functions?

-- shares of labor and capital in output?

##### -- percentage change calculations as applied to Heckscher-Ohlin model.

Given that one price increases or decreases by a certain

percentage, what is the percentage change in wages or return to capital?

##### -- Leontief production functions

-- how do they show capital or labor intensity?

##### -- Average cost computations with constant marginal cost

$AC = FC / Q + MC$

what does it look like graphically?

how does it fit into discussions of monopoly, monopolistic competition and infant industry protection?

##### -- monopoly output determination, algebraically treated.

given demand, how do you find marginal revenue?

how would a monopolist determine output and price?

##### -- gravity equation and meaning of coefficients in the equation.

## **ESSAY or SHORT-ANSWER questions**

- Be sure you can state clearly the assumptions made by each model.
- how do Ricardo, the specific factors model, Heckscher-Ohlin and Stolper-Samuelson, and monopolistic competition models reflect the production technologies of their time?
- Contrast the impact of international trade on the distribution of income in the specific factors model, the Heckscher-Ohlin model, and the monopolistic competition model.
- Explain the logic of reciprocal dumping.
- What is the Leontief paradox, and what are possible explanations of it?
- Why did India import cotton textiles? Can this be explained on the basis of the Heckscher-Ohlin model?
- What evidence supports the monopolistic competition model?  
(how do intra-industry trade and the gravity equation come into the argument?)
- What are the gains from scale and the gains from variety in the monopolistic competition model?  
Contrast Krugman and Broda on this dimension.

Be able to explain the gains and/or losses from trade in the context of the specific factors model (problem 3-9) or the Heckscher-Ohlin model (problem 4-6).

## **TERMS**

Review the terminology in the text applications, “key terms” section at the end of each chapter and in the problems . Short questions may be asked on (for example)

### **Chapter 3:**

- Jefferson's embargo (Chapter 3 application, p. 69)
- Trade adjustment assistance
- Nominal protection coefficient
- Kletzer and Litan's “wage insurance” (problem 3-7)

### **Chapter 4.**

- Factor intensity reversal (Chapter 4 application, p. 99)
- Public opinion on trade (does it support specific factors or Heckscher-Ohlin? (Chap. 4, p. 120)
- Effective labor (application, chapter 4, p. 131)
- Factor content of exports and imports.

### **Chapter 6.**

- Gains and adjustment costs for Canada and Mexico and US (Chap. 6, p. 199-208)
- Border effects and their explanation.