



Semester: 1/2011

EE 311 Microeconomic Theory

Exercise 6: Transactions Costs, Production and Perfect Competition

1. Use your knowledge of transactions cost to explain the role of the following “institutions”:
 - (a) Traffic lights
 - (b) Travel agents
 - (c) Metered taxis
2. In the real estate business, some companies construct complete houses for sale, while others sub-contract some of the work, such as electrical work, piling and foundation work, paint jobs, and so on, to other companies. Can you explain why these companies have different ways of conducting business?
3. What is the difference between economics of scale and economies of scope? Use examples to illustrate.
4. Consider the following production function:

$$Q = 100K^{1/2} L^{1/2}$$

where Q is output and K and L are inputs.

- (a) Show whether this function is homogenous, and if so, the degree of homogeneity.
 - (b) Find the average and marginal products of K and L.
 - (c) Find the elasticity of output with respect to K and L.
 - (d) Given a total budget of 27,000 Baht, find the least-cost combination and the maximum output that can be produced.
5. What is the elasticity of substitution? Find the elasticity of substitution of the following function:

$$Q = [AK^{-\beta} + aL^{-\beta}]^{-1/\beta}$$

Where Q, K and L represent the usual variables, and A, a and β are parameters.

6. Suppose that Firm A has the following total cost function:

$$C = 30 + 1.5Q - 0.005Q^2$$

Is it possible for this firm to be operating in a perfectly competitive market? Explain.
