Week 5 Overview

Production and Costs

Overview

Welcome to your fifth week! This module we will begin covering the theory of the firm, which will take us basically three modules to finish. Economists call this section of the course, "The Economics of the Lemonade Stand." And that title makes perfect sense, since the concepts we cover can be used by anyone, from someone owning a lemonade stand to a car manufacturing company to a hair salon to a burrito stand, etc. Any production process can be understood using the concepts covered in this part of the course. So given this, it is no surprise that this part of the course is usually the favorite of most students. If you have ever dreamed of owning a business then I encourage you to think about that dream business of yours as we discuss questions such as these: How does output a firm produces maximize profits? How many employees should a firm hire to produce this output?

Goals and Objectives

After you actively engage in the learning experiences in this module, you should be able to:

- Apply the concept of marginal returns to the variable input.
- Identify the 4 main cost measures for the firm: average fixed costs, average variable costs, average total costs, and marginal costs.
- Explain how the cost situation for the firm changes depending on the time horizon: short-run versus long-run.
- Explain how the firm maximizes profits, namely based on the equalization of marginal revenue and marginal costs.

Key Phrases/Concepts

Keep your eyes open for the following key terms or phrases as you complete the readings and interact with the lectures. These topics will help you better understand the content in this module.

- Fixed input
- Variable input
- Marginal product
- Diminishing marginal returns to the variable input
- Marginal costs
- Efficient scale

Guiding Questions

Develop your answers to the following guiding questions while completing the readings and working on assignments throughout the week.

- What happens to the marginal product of the variable input as you increase its usage while holding the fixed input constant?
- Why does the marginal costs curve slope upwards?
- Why does the average total costs curve slope upward?
- Why are some inputs of production fixed in the short-run?

Optional Readings and Resources

- Chapter 11, *Microeconomics*, Krugman and Wells, 3rd Ed.
- Econ Tutorial: Inputs and Costs