

Chapter 9 Project

Perfect Competition

Purpose

In this chapter, you learned the characteristics of perfect competition and the advantages of productive and allocative efficiencies that occur in the long run in a perfectly competitive industry. You also determined how perfectly competitive firms make short-run decisions that will maximize profits, minimize losses, or close the business down.

The purpose of this exercise is first, to determine if businesses that you encounter on a daily basis are perfectly competitive, and second, to understand how perfectly competitive business and industries make short-run and long-run decisions.

Directions

This exercise has two parts. In the first, you will examine products that you buy often and determine if they come from a perfectly competitive industry. In the second, you will make short-run and long-run production decisions for a perfectly competitive business.

Part 1 - Identifying Perfect Competition

- 1. List ten goods or services that you buy frequently. Are these products from a perfectly competitive industry? Based on the characteristics of perfect competition, why or why not?

Part 2 - Short-Run and Long-Run Production Decisions

Suppose that the following table represents the industry demand and supply for all-day rafting trips down a river in a large state park. Assume that there are 100 firms in this perfectly competitive industry, each with identical costs.

Price	Quantity Demanded	Quantity Supplied Beginning	Quantity Supplied Ending
\$350	200	600	
\$300	300	500	
\$250	400	400	
\$200	500	300	

- 1. What is the equilibrium price and quantity in the rafting industry?

Each of the 100 firms in the industry has fixed costs of \$100 a day for equipment, including rafts, helmets, and life jackets. Their variable costs are for the wages of a guide that is needed in each raft and snacks for the rafters. Assume that the following table represents each firm's costs.

Output (trips/day)	Variable Cost	Total Cost	Average Variable Cost	Average Total Cost	Marginal Cost
0	\$0	\$100			
1	\$200	\$300	\$200	\$300	\$200
2	\$360	\$460	\$180	\$230	\$160
3	\$500	\$600	\$167	\$200	\$140
4	\$750	\$850	\$188	\$213	\$250
5	\$1,050	\$1,150	\$210	\$230	\$300
6	\$1,400	\$1,500	\$233	\$250	\$350

- Given the market price determined at equilibrium in the industry, explain why each firm in the industry will take four trips per day at a price of \$250. How much will each firm profit or lose at this output?
- What is the long-run equilibrium price for this industry?
- Explain the process through which the industry and each firm in the industry will reach the long-run equilibrium price.
- Estimate a reasonable short-run supply curve for the industry to complete the last column of the previous industry demand and supply table.

### Checklist

#### Part 1

- ☐ List ten goods or services.
- ☐ Decide if the goods or services are from a perfectly competitive industry.

#### Part 2

- ☐ Calculate equilibrium in an industry.
- ☐ Calculate profit/loss at equilibrium.
- ☐ Determine the long-run equilibrium price.
- ☐ Estimate the short-run supply curve.