ECO 401-001
Problem Set #5
Spring 2005

Due: Thursday, March 31, 2005

1. Your professor's brother-in-law, Bubba, owns a restaurant/bar in Fort Walton Beach, FL. He is thinking about ways that he could increase the economic profits of his business. He has all of the necessary components in place to start a pizza delivery business, operating it out of the back door of his restaurant. All of the costs of this add-on business are clear to Bubba except for one. He is a bit puzzled about the economic cost of delivering the pizzas once they are made. He would have to hire a delivery driver, but the labor costs are very visible and are not the issue for Bubba. He is struggling with the costs of owning and operating a vehicle for delivering pizzas. He has estimated that at the end of a year he would have incurred the following costs:

purchase price of a slightly used pickup truck	$15,000
gas, oil, and other maintenance	1,000
insurance	1,000
license tags and taxes	500
	$17,500

   Bubba figures that if he sells and delivers 17,500 pizzas per year, he will have to charge a dollar per pizza extra just to cover the vehicular cost of delivering pizzas. What advice would you give Bubba about whether he has properly figured the economic costs of owning and operating a vehicle for a year.

2. Use the information on costs in Table 9.1 on page 231 of Browning and Zupan to graph the firm's TFC, TVC, and TC curves. Then graph the AFC, AVC, ATC, and MC curves. Write one sentence for each cost curve, explaining why it takes on the shape that it does. Explain how the law of eventually diminishing marginal returns is illustrated in your ATC/MC diagram.

3. Suppose that a firm's total cost function is given by $TC = a + bq + cq^2$. Write expressions for the firm's total fixed cost, total variable cost, average fixed cost, average variable cost, and marginal cost.

4. In Lexington there is one ice-skating rink, yet there are dozens and dozens of fast-food restaurants. Can you explain why each of these markets is structured the way that it is, using diagrams with LRAC curves and market demand curves?