

KEY

ECO 610

Fall 2017

Problem Set #5

(14 pt. total)

1. (3 pts.) How would you categorize the market for charter yachts in the Mediterranean Sea, i.e. what type of market structure is it? In explaining your answer, you should briefly describe the characteristics of this industry.

There are many small independent sellers/
yacht owners. The product is highly
differentiated. And barriers to entry
are insignificant. Hence the charter
yacht industry is monopolistic
competition.

2. (3 pts.) When the airline industry was deregulated in 1978, there were 12 major airlines operating in the U.S. The names of the airlines and their respective percent of revenue passenger miles were: United (21.1), American (13.5), Delta (12.0), Eastern (11.1), TWA (9.4), Western (5.0), Continental (4.5), Braniff (3.8), National (3.6), Northwest (2.6), USAir (2.2), and Frontier (2.2). For purposes of this problem you can assume that there were nine minor airlines, each having 1.0 percent of revenue passenger miles. Compute the HHI for this industry, showing your work.

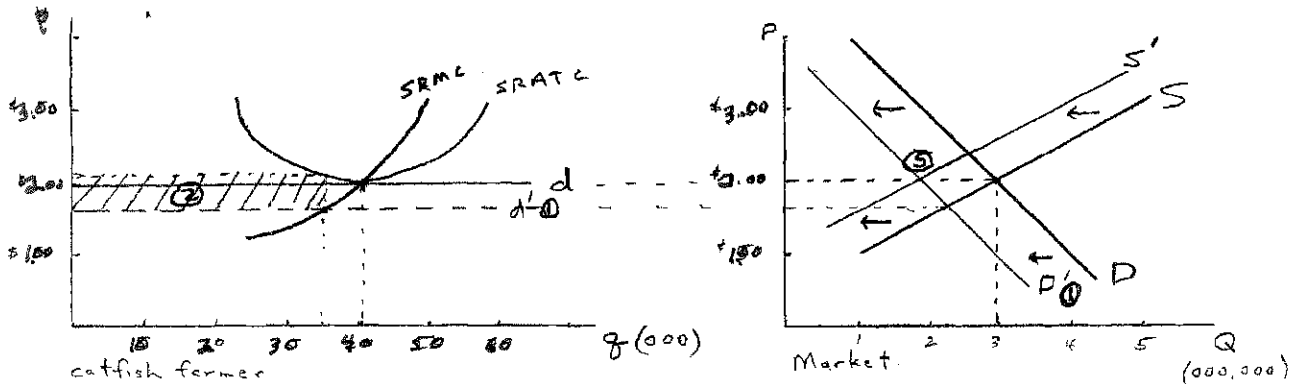
$$HHI = \sum_{i=1}^n s_i^2, \text{ where } s_i = \% \text{ of market for } i^{\text{th}} \text{ firm}$$

$$HHI = (21.1)^2 + (13.5)^2 + (12.0)^2 + (11.1)^2 + (9.4)^2 + (5.0)^2 + (4.5)^2 \\ + (3.8)^2 + (3.6)^2 + (2.6)^2 + (2.2)^2 + (2.2)^2 + 9(1)^2$$

$$HHI = \del{1081.12} \quad 1081.12$$

3. (8 pts.) Catfish farming has been a thriving industry for several decades in the southeastern United States. The industry is currently in long-run equilibrium. The market price of catfish is \$2.00 per pound. 3 million pounds of catfish are produced each year. A typical catfish farmer produces 40,000 pounds of catfish per year.

- a) Illustrate this initial situation, using separate diagrams to illustrate the market outcome and the situation of a representative catfish farmer.



- b) The growth of farm-raised salmon and the resulting drop in the price of salmon in grocery stores causes the market demand for catfish to decline, since many households consider them to be substitutes. Now for your analysis. Illustrate in your diagram and answer the following questions.

- What will happen to the price of catfish in the short run?

① Market price will fall after market demand shifts to the left.

- What will the short-run profit outlook be for catfish farmers?

② Catfish farmers will suffer short-run economic losses. (shaded area above)

- Five years from now, will there be more, the same number, or fewer catfish farmers?

Losses will cause some farmers to exit the industry, so fewer.

- What will the profit outlook be for catfish farmers who are in the industry five years from now?

As firms exit, market supply will shift left and price will rise. Long-run outlook is zero economic profit - a normal return.

- Will the price of catfish be equal to, higher than, or lower than \$2.00 per pound five years from now?

Price is expected to return to its original level, \$2/lb.