

EE481: Industrial Economics

Dominant Firms

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Objectives

- 1 Students understand the concept of “residual demand curve”.
- 2 Students understand incentives of dominant firms and fringes firms.
- 3 Students can explain the pricing behavior of dominant firms in a systematic way.
- 4 Students can relate what is learned in class to real-life situations.

Homework

Homework (Due before 1pm, Wednesday 3th September at the BE office)

- ① Suppose the demand curve is $Q(p) = p^\varepsilon$, what is the elasticity of demand? If marginal cost is \$1 and $\varepsilon = -2$, what is the profit-maximizing price?
- ② Suppose the demand curve for corn is $Q(p) = 10 - p$. Suppose that one firm owns all five units of corn in the world and has zero marginal cost. Does a monopoly sell less output than would be sold in a competitive market in which 100 firms each own 0.05 units?
- ③ (write about 0.5 page) Find 1 example of an industry that has a dominant firm. Describe what this industry is, which firm is the dominant firm, which firms are fringe firms. Explain where you obtain your answer from. (more unique answer and better explanations receive more points)

Monopoly Behavior

Competitive Firms Behavior (Short-run)

Competitive Firms Behavior (Long-run)

Why some firms are dominant

One big firm (dominant) and many smaller firms (fringes).

- ...

- ...

- ...

- ...

The Model (No-Entry)

Assumptions

- One dominant firm with a lower production costs.
- Fringe firms are all price-takers.
- ...
- ...
- ...

The Model (No-Entry)

Fringe Firms' Reasoning

- Since I am a price-taker (perfectly competitive), my supply curve is $S(p)$ where $p = mc$:

Dominant Firm's Reasoning

- At what price (p) and quantity (q) should I produce?
- ...
- ...

The Model (No-Entry) - Graph

The Model (No-Entry) - Results

Given that

- $\bar{p}$ = minimum marginal average cost for the fringes, MC_f = the fringes' marginal cost.
- $D(p)$ = market demand
- $S(p)$ = the fringe firms' aggregate supply curve
- $D_d(p) = D(p) - S(p)$ = the dominant's residual demand curve
- MC_d = the dominant's marginal cost

We can get 2 types of results

1 ...

2 ...

The Model (Free-Entry)

Assumptions

- ...

Fringe Firms' Reasoning

- ...

Dominant Firm's Reasoning

- Same as before

The Model (Free-Entry) - Graph

The Model (Free-Entry) - Results

- Now, no fringe firm can make a positive profit.

We can get 2 types of results

1 ...

2 ...

Reference and Further Reading

 Carlton, D.W. and J.M., Perloff.
Modern Industrial Organization. 4th Edition.
Pearson Addison Wesley Press, 2005.