Study questions: Entry

Basic References
Sutton (1991, chap. 3), Bresnahan (1992), Tirole (1988, chap. 8), Gilbert (1989), Bresnahan and Reiss (1991), Berry (1992)
Additional readings
Schmalensee (1978), Judd (1985), Caves, Whinston, and Hurwitz (1991), Scott-Morton (1995)

The main ideas I want you to have running through your mind when reading these papers are:
1. What is a "barrier to entry"?
2. How does market structure evolve, in a dynamic sense?
3. What are the empirical implications of these models?

Bresnahan (1992) gives a good summary of Sutton's argument. Read that before proceeding on to the Sutton chapter.

A. Sutton questions

1. Describe the difference between exogenous and endogenous sunk costs. What is the importance of this distinction?

2. Describe the extensive form game played by the firms. How is the equilibrium number of firms determined?

3. How does market structure dynamically evolve in Sutton's model?

4. What important aspects of advertising are and are not captured in Sutton's framework?

B. Gilbert questions

1. How does Gilbert define a "barrier to entry"?

2. Describe the extensive form of the typical "entry games" considered in this chapter.

3. Read up on the Fudenberg-Tirole "taxonomy" of entry games. See Tirole (1988, sect. 8.3). With this taxonomy in mind, analyze:

- The standard Dixit (1980) investment in cost reduction game. How would the implications change if the firms engaged in Bertrand rather than Cournot competition?
- Can you fit any other well-known entry-deterrence models into this analytical framework?
- Are there any predictions which could be taken to data? What kind of data would you need? For what industries?
  - Advertising as a barrier to entry. How should incumbent's advertising behavior vary between markets with and without eventual entry?
  - How would you interpret an empirical finding that incumbents advertising behavior is the same in markets both with and without entry?

- What about pricing behavior? Think of other stories besides limit pricing (i.e., price as a signal of costs).

4. Consider the "spatial pre-emption" story of Schmalensee and Judd (Tirole (1988, sect. 8.6.2)). What implications could be taken to data? What are likely industries?

5. Imperfect information can also make the threat of retaliation credible.

- In what way is the sort of limit-pricing which occurs in the Milgrom-Roberts limit pricing model a barrier to entry?
- Would the barrier to entry exist in the perfect information case?
- What is the difference in the pricing behavior of a low-cost firm between the perfect and imperfect information worlds?
- Empirically, what should this type of "limit pricing" look like? What sort of data would be required to detect limit pricing? What are reasons why data may not exhibit the required patterns?

Empirical Entry Papers: Bresnahan and Reiss (1991) and Berry (1992)

1. What theoretical model of entry is considered in each paper?

2. Compare and contrast the "unit of observation" in each paper. How is the likelihood function derived in each case?

3. What assumptions are made by each set of researchers regarding differences among firms? How are firms' profits allowed to vary with changes in market structure (i.e., number of firms in the market)?

4. How could B&R's dataset be used to test strategic models of entry deterrence? What about Berry's dataset?

5. Neither B&R nor Berry have data on prices. How could data on prices be used?

For comparison's sake, consider two recent papers regarding generic entry into pharmaceutical markets: Caves, Whinston, and Hurwitz (1991), and Scott-Morton (1995).

References

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