Lecture 9
Entry & Exit
Outline

- Barriers to entry
- Barriers to exit
- Entry-deterring strategies
Entry

- Entrants are firms that produce and sell in new markets
- Entry threatens incumbents in two ways.
  - The market share of the incumbents is reduced
  - Price competition is intensified
Forms of Entry

- Entry could take place in different forms
  - An entrant may be a brand new firm
  - An entrant may also be an established firm that is diversifying into a new product/market

- The form of entry is important when we analyze entry costs and strategic response to entry by the incumbents
Forms of Exit

- A firm may simply go out of business
  - Pan-Am Airlines
- A firm may discontinue a particular product or product group
  - Ericsson leaves the mobile phone market
- A firm may leave a particular geographic market segment
  - Peugeot and Renault leave the U.S. market
Dunne, Roberts and Samuelson (DRS) studied entry and exit in U.S. manufacturing industries. They find that:

- Entry and exit are pervasive in the U.S.
- Entrants (exiters) are smaller than incumbents (survivors.)
- Most entrants fail quickly and the ones that don’t grow precipitously
- The rates of entry and exit vary from industry to industry.
DRS Findings on Entry and Exit

- Over a five year horizon, a typical industry experienced 30 to 40 percent turnover.
- About half the entrants were diversified firms and the rest were *greenfield* entrants (new firms).
- About 40% of the exiters were diversified firms that continued to operate in other markets.
- Conditions in an industry that encouraged entry also fostered exit.
- The fastest (most dynamic industries) are those with lots of entry *and exit*. 
DRS Findings on Entry and Exit

- Unlike new entrants, diversifying firms built plants on the same scale as incumbents.
- The size of the exiters is about one third of the average firms’.
- Within 10 years of entry 60% of the entrants leave the industry. The survivors double in size over the same horizon.
Implication of DRS Findings for Strategy

- As part of planning for the future, managers should account for the unknown future competitors.
- Managers of new firms need to find capital for growth.
- Managers should be aware of the entry and exit conditions of the industry and how these conditions change over time due to technological changes, regulation, etc.
A potential entrant compares the sunk cost of entry with the present value of the post-entry profit stream.

Sunk costs of entry range from investment in specialized assets to government licenses.

Post-entry profits will depend on demand and cost conditions as well as the nature of post-entry competition.
Barriers to Entry

Barriers to entry are factors that allow the incumbents to earn economic profit while it is unprofitable for the new firms to enter the industry.

Barriers to entry can be classified into:
- Structural barriers to entry
- Strategic barriers to entry
Structural Barriers to Entry

Structural barriers to entry exist when

– The incumbent has cost advantages or marketing advantages over the entrants
– Incumbents are protected by favorable government policy and regulations
Strategic Barriers to Entry

- Strategic entry barriers are barriers created and maintained by the incumbents.
- Incumbents can erect strategic barriers by expanding capacity and/or resorting to limit pricing and predatory pricing.
Markets can be characterized by whether the existing barriers to entry are structural or strategic.

Three entry conditions according to Joe Bain are:
- Blockaded entry
- Accommodated entry
- Deterred entry
Blockaded Entry

- Entry is considered to be blockaded when the incumbent does not need to take any action to deter entry.
- Existing structural barriers are effective in deterring entry.
- Examples include public utilities and other "natural" monopolies.
Accommodated Entry

- Structural barriers may be low and/or strategic barriers may be ineffective in deterring entry or simply not cost effective.
- This condition is typical of markets with growing demand or rapid technological change.
- Incumbents should not deter entry.
Deterred Entry

- Entry is not blockaded
- Entry deterring strategies are effective in discouraging potential rivals and are cost effective
- Deterred entry is the only condition under which the incumbents should engage in predatory acts
Asymmetry between Incumbents and Entrants

- Many costs we call sunk cost for incumbents are incremental costs for the entrants
- Established relationships with customers and suppliers are not easy to replicate
- Learning curve effects
- Switching costs for the customers
Examples of these Asymmetries between Incumbents and Entrants

- One example is the existence of “frequent flier” miles for airlines
  - Gives incumbents an advantage
  - Low-cost, start-up airlines offer lower fares rather than offering such programs

- Until 2004, U.S. cell phone customers could not keep their phone numbers when they switched to a new provider
Types of Structural Barriers

The three main types of structural barriers to entry are

– Control of essential resources by the incumbent
– Economies of scale and scope
– Marketing advantage of incumbency
Control of Essential Resources

- Nature may limit the sources of certain inputs and the incumbents may be in control of these limited sources
  - Example: supply of diamonds
- Patents can prevent rivals from imitating a firm’s products
- Some firms have recipes, techniques, etc. that are hard for the rivals to replicate
  - Example: Coca Cola
Economies of Scale and Scope

- Entrants can face cost disadvantages due to economies of scope.
- Economies of scope in production exist when multiple product lines are produced in the same plant.
- Economies of scope in marketing are due to the upfront cost of achieving brand awareness by entrants.
Economies of Scale and Scope

- If economies of scale are significant, incumbent may face a high threshold of market share to be profitable
- Incumbent’s strategic reaction to entry may further lower price and cut into entrant’s profits
- If entrant succeeds, intense price competition may ensue
Marketing Advantage of Umbrella Brand

- Incumbent can exploit the brand umbrella to introduce new products more easily than new entrants can.
- The brand umbrella can make it easier for the incumbent to obtain shelf space with an established brand.
- However, all umbrella brands may suffer if the new product is unsatisfactory.
Barriers to Exit

- Barriers to exit are factors that make the firm continue producing under such conditions which would not have encouraged the firm to enter.

- Examples of such barriers are specialized assets, labor agreements, commitment to suppliers, and governmental regulations.
Barriers to Exit

Marginal cost
Average total cost
Average variable cost

P_{ENTRY}
P_{EXIT}

Q
Entry Deterring Strategies

➢ When should incumbent deter entry?
   – Incumbent must earn higher profits as a monopolist than as a duopolist and
   – The strategy should change the entrants’ expectations regarding post-entry competition

➢ Some examples of entry deterring strategies are limit pricing, predatory pricing, and capacity expansion
Contestable Markets & Entry Deterrence

- If there is a possibility of a *hit and run entry* (zero sunk cost) the market is contestable.
- In a perfectly *contestable market*, a monopolist sets the price at competitive levels.
- If the market is contestable, it is not worth the monopolist’s while to adopt entry deterring strategies.
Limit Pricing

- Limit pricing = incumbent sets the price sufficiently low to discourage entrants

- Two forms of limit pricing
  - Contested limit pricing
  - Strategic limit pricing
Contested Limit Pricing

- Incumbent has excess capacity and can set prices below entrant’s marginal cost
- Incumbent can meet the market demand at the low prices
Strategic Limit Pricing

- Incumbent has limited capacity or rising marginal costs
- Limit pricing may mean sacrifice of profits or inability to meet market demand
- Low price can be an entry deterrent if entrant infers that post-entry price will be as low or lower
Is Limit Pricing Rational?

- When multiple periods are considered, the incumbent has to set the price low in each period to deter entry in the following period.
- Thus, the incumbent may not get to raise the price and reap the benefits of entry deterrence.
Even in a two-period setting, limit pricing equilibrium is not subgame perfect.

Potential entrants can rationally anticipate that the post-entry price will not be less than the Cournot equilibrium price.
Predatory Pricing

- Predatory pricing = firm sets the price below short run marginal cost with the expectation of recouping the losses when the rival exits.
- Limit pricing is directed at potential entrants while predatory pricing is directed at entrants who have already entered.
Is Predatory Pricing Rational?

- If all the entrants can perfectly foresee the future course of incumbent’s pricing, predatory pricing will not deter entry.
- In experimental settings with complete information, predation did not occur.
- Chain store paradox: Many firms commonly perceived to engage in predatory pricing.
Is Predatory Pricing Rational?

- Simple economic models indicate that predatory pricing is irrational.
- Either the firms’ pricing strategies are irrational or the models are incomplete.
- Game theoretic models that include uncertainty and information asymmetry show that predation can be a rational strategy.
Situations Where Predation is Rational

- Asymmetry in information about costs or market demand between incumbents and entrants
- Incumbent can make the entrant lower its expectation regarding post-entry profits
Predatory Pricing and Reputation of the Incumbent

- Predatory pricing = when large incumbent sets low price to drive smaller rivals from market
- With uncertainty, predatory pricing can deter entry
  - Incumbent probably knows more about own costs than entrant knows about incumbent’s costs
Predatory Pricing and Reputation of the Incumbent

- If the incumbent does not slash prices, other challengers may consider incumbent ‘easy’ rather than ‘tough’
- An incumbent can be ‘tough’ either due to low costs or due to an irrational desire for market share
- To deter entry, incumbent has to establish a reputation for toughness
Excess Capacity and Entry Deterrence

- By holding excess capacity, the incumbent can credibly threaten to lower the price if entry occurs.
- Since an incumbent with excess capacity can expand output at a low cost, entry deterrence will occur even when the entrant is completely informed about the incumbent’s intentions.
Excess Capacity is Not Always Strategic

- When capacity addition has to be lumpy, firms may often have excess capacity in anticipation of future growth.
- A temporary down turn in demand may leave the firms in an industry with excess capacity with no strategic overtones.
Situations When Excess Capacity Works to Deter Entry

- Incumbent has a sustainable cost advantage
- Market demand growth is slow
- Incumbent cannot back off from the investment in excess capacity
- Entrant is not the type trying to establish a reputation for toughness
War of Attrition

- In a price war, larger players may have better staying power (larger cash reserves, better access to credit)
- Larger players also incur a greater cost (especially if they do not have a cost advantage)
Winning the War of Attrition

- The more a firm believes it can outlast its rivals, the more willing it will be to begin and continue with a price war.
- A firm that faces exit barriers is well positioned to engage in a price war.
- A firm can also try to convince its rivals that it can outlast them.
  - Example: firm claiming that it is making profit even during the price war.
Evidence on the Use of Entry Deterring Strategies

➢ Over half of surveyed product managers reported frequent use of at least one entry-deterring strategy.

➢ Other evidence comes from anti-trust cases, such as those involving:
  – Bookstores
  – Airlines
Summary

- Entry and exit are pervasive, so managers need to plan accordingly.
- Firms enter a market when expected post-entry profit exceed the sunk cost of entering. Firms exit the market when expected future losses exceed the sunk cost of exit.
- Entry barriers result from asymmetries between incumbent firms and entrants.
Summary

- Exogenous market forces can create structural entry barriers
- Incumbent firms can use predatory acts to deter entry of hasten exit of rivals
- Firms may build excess capacity to credible signal their intent to deter entry
- Firms competing to enter new markets may engage in rent-seeking behavior