Competitive Strategy: Week 3

Sources of Competitive Advantage

Simon Board

Added Value of a Monopolist

- Without monopolist there is no pie.
  - But pie is shared with complimentors, buyers and suppliers.
  - Recall card game from last week
- Example: De Beers
  - Why are diamond so expensive?
  - Hold back supply.
  - Only 150 merchants invited to buy diamonds at each "sight".
  - Advertise heavily. Invented engagement ring.
  - "Diamond is Forever" discourages resale.

Case Study: Nintendo

- Nintendo invented NES in 1983.
- Cheap hardware
  - 8–bit processor dated to the 1970s.
- Limited power of software firms
  - Limited to 5 titles a year. Exclusivity condition.
  - Nintendo charge markup.
  - Virtuous circle: Popular $\rightarrow$ software $\uparrow$ $\rightarrow$ popularity $\uparrow$ $\rightarrow$
- Limited power of buyers
  - In 1988 retailers requested 110m units. Supplied 33m units.
- Nintendo gets very large slice of pie.
- Danger: limiting supply reduces the pie, invites entry and creates ill will.

Monopoly and Quality Choice

- Choose quality to maximise value of *marginal* consumer.
  - Customer type is t. Let $t \sim F(\cdot)$.
  - Customer has valuation qt for quality q.
  - Let t^* be marginal type. Firm profit:

$$\begin{aligned}\Pi(q) &= (p - c(q))(1 - F(t^*)) \\ &= (qt^* - c(q))(1 - F(t^*))\end{aligned}$$

  - Firm chooses quality such that $t^* = c'(q)$.
- Assumes firm only sells one type of good.

Types of Differentiation

- Consider two products: A and B
- Vertical differentiation
  - If $p_A = p_B$ then everyone prefers A to B.
  - Both can coexist if $p_A > p_B$.
  - Audi A6 vs. VW Jetta.
- Horizontal differentiation
  - If $p_A = p_B$ then some prefer A and some B.
  - Subaru Forrester vs. VW Jetta.

Competition and Vertical Differentiation

- Example: TWA Comfort Class
  - In 1993, on the brink of bankruptcy, TWA increased legroom.
  - It was a big hit. Gain business in week.
  - But lose money Friday afternoon. Scheme nearly abandoned.
- As high quality firm lowers quality
  - Steal more middle market consumers.
  - Increase intensity of competition.
  - Encourage new entrant at top end.

Porter's Generic Strategies

- Cost strategy (Aiwa)
  - Locate at mass market position.
  - Pro: Economies of scale. Ability to survive price war.
  - Con: Obsolescence, low margins.
- Value Strategy (Bang & Olufsen)
  - Produce high quality and please upper end of customers
- Avoid being "Stuck in the Middle"
  - HP and Compaq in PCs.
  - Intuition: Value Added lowest when in the middle.

Incentives to Innovate

- Who innovates more: Incumbant or Entrant?
  - Consider innovation reducing costs c_H to c_L
  - Let i's profit with costs (c_i, c_j) by $\Pi(c_i, c_j)$
- Incumbant cannibalizes herself (e.g. Nintendo vs. Sega).
  - Suppose opponent innovates.
  - Value to incumbant $V^I = \Pi(c_L, c_L) - \Pi(c_H, c_L)$
  - Value to entrant $V^E = \Pi(c_L, c_L) > V^I$
- Entrant must compete with incumbant.
  - Suppose 3rd party innovates and auctions patent.
  - Value to incumbant $V^I = \Pi(c_L, \infty) - \Pi(c_H, c_L)$
  - Value to entrant $V^E = \Pi(c_L, c_H) < V^I$

Patenting Strategy

- Patents vs. Trade Secrets (Merck vs. Coca Cola)
  - Patents provide legal protection
  - But information becomes public
- Protective patents
  - Patent all substitutes (inc. inferior technology)
- Defensive patents
  - Patent holes in competitors process.
- Licensing patents
  - Increase the pie.
  - Lose market share.
  - Extract through licence payment? Bargaining.
  - Vertical relations: Week 10.

Competition and Horizontal Differentiation

- Hotelling's Model
  - Consumers located uniformly on line $[0, 1]$.
  - Consumers have transport cost cd, where d is distance.
  - Firms have zero costs.
- Minimal differentiation: Both firms located at $1/2$.
  - Bertrand competition: both set $p = 0$. Zero profits.
- Maximal differentiation: Firms located at 0 and 1.
  - Given prices (p_0, p_1) demand is given by

$$q_0 = \frac{1}{2} + \frac{p_1 - p_0}{2c} \quad \text{and} \quad q_1 = \frac{1}{2} + \frac{p_0 - p_1}{2c}$$

  - Profit maximisation implies $p_0 = p_1 = c$ and $\Pi_0 = \Pi_1 = c/2$.
- Intuition: Profit is determined by added value.

Minimal of Maximal Differentiation?

- Both firms make larger profits under maximal diff.
  - But there is individual incentive to move into the middle.
  - Expect firm might move inwards little, but not to middle.
- Other reasons to clusters
  - Be where the demand is.
  - Keep costs down.
  - Attract customers (e.g. clothing stores in Yorkville).
  - Help detect price cuts by competitors.
  - No price competition (e.g. political parties, radio shows).

Entry in Hotelling

- Suppose 2 firms are located at $(a, 1-a)$.
  - Let $d = 1 - 2a$ be the distance between the firms.
  - Equilibrium prices will now by $p = cd$.
- Now new entrant enters at 1/2.
  - Prices are now $p = \frac{1}{2}cd$.
  - Profit of entrant is $\frac{1}{4}cd^2$.
  - Let F be fixed costs.
  - Entry profitable if $d \geq 2\sqrt{F/c}$
- Suppose first two shops were owned by one firm. Then block entry by reducing d.
- Example: Cereal market.

Switching Costs and Loyalty

- What is cost of switching from between you and competitor?
  - High switching costs soften price competition.
  - However lead to intense competition over unaligned customers.
  - Example: Cheap bank accounts for students.
  - Example: Frequent flyer schemes.
- Creating loyalty:
  - Give the best deals to your loyal customers.
  - Say thank you.
  - Allow your competitor to have loyal customers.

Networks

- A Network Good has a higher value the more people that use it.
- Exclusive network is analogous to large differentiation.
- Should you open the network?
  - Pro: Increases the pie.
  - Pro: Virtuous circle as more compliments for bigger network.
  - Con: Makes entry easier and lowers prices.
  - Pro: Commit to keep prices low. Initial investment more likely.
- Example: Intel formed AMD as competitor by licensing 8086.
- Example: MS reduces performance of competing software.

Coherent Strategies

- Porter (1996). Strategy is:
  - Creating unique and valuable position.
  - Making trade-offs. Choosing what *not* to do.
  - Creating fit among activities, doing many things well.
- Example: Southwest
  - Short haul routes
  - Low costs: basic service, quick turnaround
  - Low pricing
  - Frequent departures.

Strategies as Compliments

- Systems of activities:
  - Choices compliment each other.
  - Hard to imitate: can't copy piecemeal.
  - Increases value added.
  - Danger: in desire to grow firms can forget what makes them unique.
- Counter Example: Sears stores tried to reinforce mail order business. Decentralised vs. centralised operations.
- Potential Counter Example: Budweiser B^E.

Summary

- Profits are determined by added values
- Monopolist: reduce added values of suppliers and buyers.
- Differentiation softens competition and increases added values.
- Strategies are systems and should be coherent.