Competitive Strategy: Week 2

Sources of Competitive Advantage

Simon Board

Added Value of a Monopolist

• Recall from last week
  – Cooperation: Maximise size of pie.
  – Competition: Maximise your share of the pie.

• Without monopolist there is no pie.
  – But monopolist is not guaranteed everything.
  – Pie is shared with complimentors, buyers and suppliers.
Exercising Market Power

- Econ 101: Monopoly holds back supply to increase profits.
- The Card Game.
  - I have 26 black cards.
  - You have 26 red cards.
  - $100 for pair
- How is $2600 split?
- What if I destroy 3 cards. How is $2300 split?
- Lesson: Be on the short side of the market.

Case Study: De Beers

- Why are diamonds 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 $\uparrow$ →
- 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 $t$ has valuation $qt$ for quality $q$.
  - Firm chooses $(p, q)$ to maximise profits. Letting $t^*$ be marginal type, firm equivalently chooses $(t^*, q)$ to maximise
    \[
    \Pi(t^*, q) = (p - c(q))(1 - F(t^*))
    \]
    \[
    = (qt^* - c(q))(1 - F(t^*))
    \]
  - First order conditions for $(t^*, q)$:
    \[
    t^* - \frac{1 - F(t^*)}{f(t^*)} = \frac{c(q)}{q} \quad \text{and} \quad t^* = c'(q)
    \]
- Assumes firm only sells one type of good.
Classification 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.

Porter on Vertical Differentiation

• 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.
Classification of Opponents’ Reactions

- With competition firm positioning has direct and indirect effects.
- Direct effect: How does change affect firm’s profits, *ceteris paribus*.
- Indirect effect: How does your change affect your opponent’s strategy?
  - Say a strategy is “aggressive” if it lowers opponents profits.
  - Strategic compliments: By becoming more aggressive, opponent becomes more aggressive. *e.g.* Bertrand competition.
  - Strategic substitutes: By becoming more aggressive, opponent becomes less aggressive. *e.g.* Cournot competition.

Case Study: TWA

- In Jan 1993 was in chapter 11
  - TWA was bottom of consumer ratings.
  - Passengers abandoning airline (and lots of empty seats).
  - Excess capacity in industry.
- TWA removed 10–40 seats from each plane to increase legroom.
  - Case of vertical differentiation.
  - Customer rating increased to the top.
  - By the end of 1993, average revenue per seat up 30%
- How did competitors react?
  - TWA increased its price as demand rose.
  - TWA also lowered its capacity.
  - This prompted other airlines to raise their prices.
Competition and Vertical Differentiation

• Suppose firm increases its quality
  – Goes from middle-market strategy to value strategy

• Direct Effect
  – Lose many customers in middle of the market.
  – Gain high value customers at the top.

• Increase aggressiveness towards other value firms
  – Opponents may be aggressive lower price (e.g. Epson).
  – Opponents may back off and increase quality (e.g. Ford).

• Decrease aggressiveness towards lower end of the market.
  – Opponents likely to increase prices in the middle of the market.
  – May encourage new entry in the middle.

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 or 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 cluster
  - 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. Virtuous circle as more compliments for bigger network.
  - Con: Makes entry easier and lowers prices.
  - Pro: Low prices make initial investment more likely.
- Example: Intel formed AMD as competitor by licensing 8086.
- Example: MS reduces performance of competing software.
Assignment


• According to the long tail theory, how does Netflix differ from Blockbuster?

• What type of differentiation is this?

• What kind of customers will this affect?

• In the longer term, how will this alter consumers’ purchasing behaviour and tastes?