Switching costs
Customer Acquisition and
Retention

1. Introduction

Switching costs create lock-in

Lock-in increases price

Competition decreases price

    ISP Market

    ISP subscriber acquisition

    Switching costs for on-line banking

    Customer acquisition costs (CACs)

    Lifelong relationship

2. ISP Market

(i) ISP market entry

Barriers to entry

Low barriers in ISP market relative to telephone market

Low FC and MC

Must grow business: acquire an installed base

(ii) ISP Market structure and pricing

Low entry barriers

Low market concentration

Many players with homogeneous service

Competitive structure

Access price close to MC

3. Subscriber Acquisition in ISP Market

What happens when competition meets lock-in?

Vigorous competition: no excess profit

Lock-in: subscribers are valuable asset

(i) Competition and lock-in

Competition to get initial customers

Customers are locked in

Competition

forces out above-normal profits (above-normal RoR)

on life-cycle basis

Firms invest (I) to acquire customers

Recoup I from profitable sales to locked-in customers

3. Subscriber Acquisition in ISP Market

(ii) Model of ISP's customer acquisition

Review of financial economics

Time value of money

Present value of a perpetuity (infinity): $PV = A/i$

Market setting

Consumer considers ISP choice

Consumer committed because of switching costs

Switching costs confer market power on ISP

Future profit (π) stream is an asset

ISPs compete in advance for π: discounts and inducement

3. Subscriber Acquisition in ISP Market

Assumptions

c = MC of Internet access

Competitive market

one 'new' ISP, many 'old' ISPs

homogeneous service

p = c

switching costs: s

inducement is discount: d

3. Subscriber Acquisition in ISP Market

Consumer's loss function: L

$$L = \begin{cases} p+s-d: \text{switch} \\ p: \quad \text{no switch} \end{cases}$$

Static switching condition (1st month at t=0)

$p+s-d < p$

Dynamic switching condition (PV of future payment)

$p+s-d+p/i < p+p/i$

Indifferent consumer

$p+s-d+p/i = p+p/i$

$d = s$

7

3. Subscriber Acquisition in ISP Market

Competition forces $PV(\pi) = 0$

ISP's cash flow

$p-c-d+(p-c)/i = 0$

$p-c+(p-c)/i = d = s$

$p = c+(i/(1+i))s$: p includes markup proportional to the
switching cost

$p > c$: quasi profit

3. Subscriber Acquisition in ISP Market

(iii) Model of ISP's acquisition with advertising

Other revenues such as advertising

Large discounts acquire installed base

Large base means more advertising revenue

Maybe set p below MC

Assume advertising revenue = a

3. Subscriber Acquisition in ISP Market

Zero economic profit condition

$p+a-c-d+((p+a-c)/i) = 0$

$p = c-a+(i/(1+i))s$: with advertising

$p = c+(i/(1+i))s$: without advertising

$a > (i/(1+i))s$: AOL

3. Subscriber Acquisition in ISP Market

Summary

- Luck-in meets competition
- Competition on life-cycle basis
  - firms earn a normal RoR
- Margins on installed base are quasi-profit
  - look like profit at a point in time
  - but are normal RoR on prior I
- How to make revenue?
  - Cost down (cost leadership)
  - Service differentiation

11

4. Switching Costs and Fee Competition in Online Banking

Online banking services include

Automated bill payments

Email alerts for bill payment

Detailed reports for statements

Periodic account statements

Online trading and advice

Online approvals

4. Switching Costs and Fee Competition in Online Banking

Utility of a Bank i oriented customer

$$u_i = \begin{cases} -p_i & \text{stay with i} \\ -p_j - s_i & \text{switch from i to j} \end{cases}$$

q_i: number of customers account with bank i

$$q_1 = \begin{cases} 0 & \text{if } p_1 > p_2 + s_1 \\ n_1 & \text{if } p_2 - s_2 \leq p_1 \leq p_2 + s_1 \\ n_1 + n_2 & \text{if } p_1 < p_2 - s_2 \end{cases}$$

4. Switching Costs and Fee Competition in Online Banking

(ii) Undercut-Proof equilibrium (UPE)

Nash Equilibrium does not exist for differentiated brands

Use UPE for differentiated brands

In an UPE, each firm choose its price to max profit while ensuring that its price is sufficiently low that any rival firm would not find it profitable to set a lower price in order to grab all of the 1st firm's customers

4. Switching Costs and Fee Competition in Online Banking

Bank 1 undercuts bank 2 when

$p_1 \leq p_2 - s_2$: subsidize customer switching cost s_2

UPE is a pair of price (p_1^u, p_2^u)

Bank 1 choose the highest price p_1^u subject to Bank 2' equilibrium profit $\pi_2^u \geq$ the profit level when it undercuts p_1^u and grabs all customers

Bank 2' equilibrium profit π_2^u must be higher than any other p_2 that undercuts p_1 and grabs all customers

i.e., $\pi_2^u = p_2^u q_2^u \geq (p_1 - s_1)(n_1 + n_2)$

4. Switching Costs and Fee Competition in Online Banking

$$\pi_2{}^u = p_2{}^u q_2{}^u \geq (p_1 - s_1)(n_1 + n_2)$$

In an UPE, $q_1{}^u = n_1$ and $q_2{}^u = n_2$

$$s_1 = p_1 - p_2 n_2 / (n1 + n2)$$

$p_2 = (p_1 - s_1)(n_1 + n_2)/n_2$ $p_1 = (p_2 - s_2)(n_1 + n_2)/n_1$
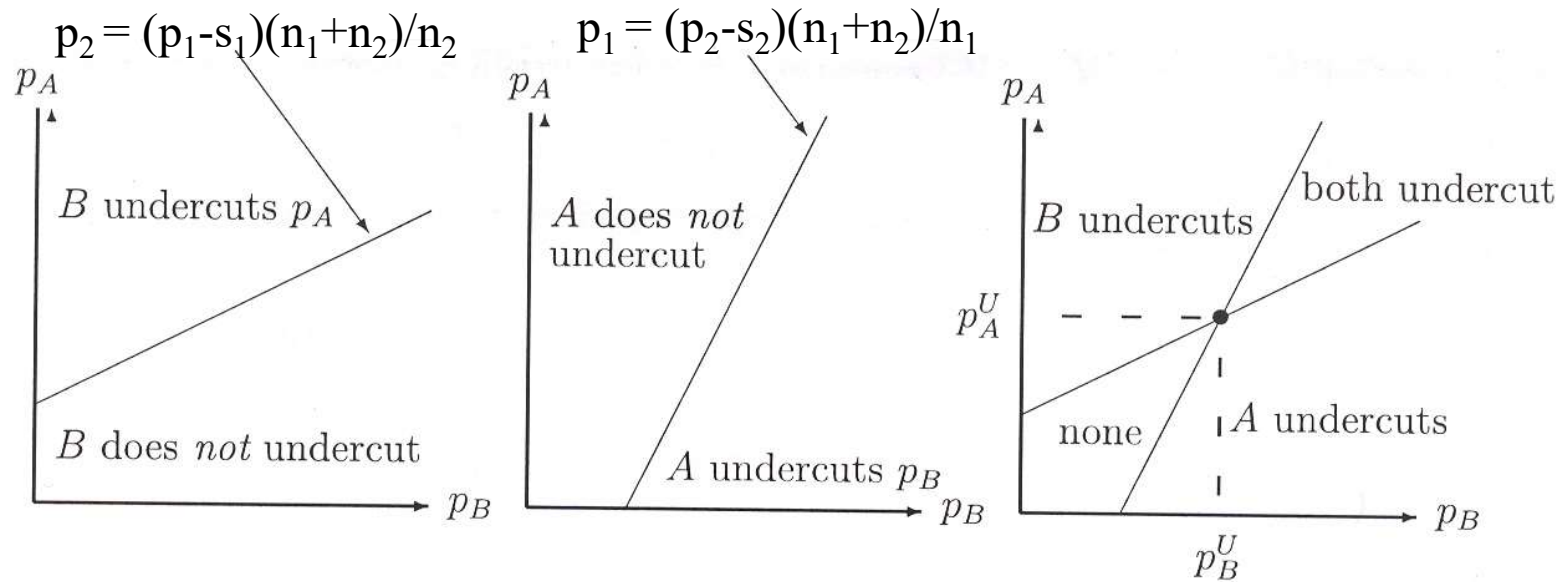

Figure 1: Undercut-Proof equilibrium

5. Internet Acquisition Costs

Success built on traditional methods

Build a good site

Drive traffic to the site

Retain customers

strong repeat buy rates suggest experience by customers

Customer acquisition cost

Online spends 40% of revenues on marketing

Traditional retailer is 7-14%

Customer acquisition cost

total advertising cost/# of new customers

Installed base gives increasing returns

18

6. Lifelong Customer Relationship

Low short-term profits build installed base

First-mover advantage

Spend $ to acquire customers

Payback on investment can be quite rapid

6. Lifelong Customer Relationship

(i) Locking up key real estate

Deals drive traffic to site

Amazon.com spent $50M/yr

Amazon.com/AOL deal

Assume 40M page/day views on AOL

Amazon.com has 30% presence

Net revenue/day: $18,900

(40M x .3)(.25% click-thru rate)(1.5% buy rate)($45)
= $18,900

Average marketing expenditure/day: $17,300

20

6. Lifelong Customer Relationship

(ii) Aggressive advertising campaigns

E*Trade (us.etrade.com) advertises through www, TV, print media

Customer acquisition cost: $75

Gross profit/customer/year: $250

(iii) Frictionless marketing

Hotmail

www.bluemountain.com: greeting card service

(iv) Active marketing

Existing customers recruit new customers

Amazon.com: Associate member refer services

7. Conclusions

Lock-in meets competition

Advertising revenue compensates inducements

Methods for estimating switching costs

Customer acquisition costs

Lower profits in shortrun

     Build relationships, awareness