Recognizing Lock-In

Carl Shapiro
Hal R. Varian

What’s the Difference?

- Hardware
- Software
- Wetware

Look ahead and reason back

Examples

- Bell Atlantic and AT&T
  - 5ESS digital switch used proprietary operating system
  - Large switching costs to change switches
- Computer Associates

Small Switching Costs Matter

- Phone number portability
- Email addresses
- Hotmail (advertising, portability)
- ACM, CalTech
- Look at lockin costs on a per customer basis

Valuing an Installed Base

- Customer C switches from A to "same position" w/ B
  - Total switching costs = customer costs + B's costs
- Example
  - Switching ISPs costs customer $50 new ISP $25
  - New ISP make $100 on customer, switch
  - New ISP makes $70 on customer, no switch
- Disruption costs
  - Example: ILECs v CLECs
  - Competitive market
  - Profit=switching costs
  - e.g. ILEC profits=customer + CLEC switching costs
Profits & Switching Costs

In General:

- + quality/cost advantages
- In commodity market like telephony, profit per customer = total switching costs per customer
- Use of this rule of thumb
  -
  -
  -
  - costs

Classification of Lock-In

- Durable purchases and replacement: declines with time
- Brand-specific training: rises with time
- Information and data: rises with time
- Specialized suppliers: may rise
- Search costs: learn about alternatives
- Loyalty programs: rebuild cumulative usage
- Contractual commitments: damages

Durable Purchases

- Aftermarket sales (supplies, maintenance)
- Depends on (true) depreciation
- Usually fall with time
- Watch out for multiple pieces of hardware
  - Supplier will want to stagger vintages
  - Contract renewal
- Technology lock-in v. vendor lock-in

Brand-specific Training

- How much is transferable?
- Software
- Competitors want to lower switching costs
  - Borland and Quattro Pro help
  - Word and WordPerfect help

Information & Databases

- Datafiles
  - Costs tend to rise with time as user accumulates data
  - Standardized formats reduces

Specialized Suppliers

Advertising, legal, accounting firms
- Pentagon
  - Dual sourcing
- Intel and AMD
Search Costs
- Transactions cost in finding new supplier
- Also costs borne by new supplier
- Promotion, closing deal, setting up account, credit risks
- Example: Credit Cards
  - $100 million in receivables sells or about $120 million
  - Market valuation of “loyalty”

Loyalty Programs
- Constructed by firm
  - Frequent flyer programs
  - Frequent coffee programs
- Personalized Pricing
  - Gold status
  - Example: Amazon and Barnes and Noble
  - Amazon Associates Program v. B&N’s Affiliates program
- Add nonlinearity?

Contractual Commitments
- “Requirements contract”: Purchase supplies from one supplier
- Beware of “evergreen contracts”

Suppliers and partners
- Railroad spur lines
- Customized software

Follow the Lock-in cycle
- Brand Selection
- Sampling
- Entrenchment

Lessons
- Switching costs are ubiquitous
- Customers may be vulnerable
- Value your installed base
- Watch for durable purchases
- Be able to identify 7-types of lock-in