today’s topic

- information systems and economic performance
  - how can information systems make an organisation more competitive?
  - what does it mean for an organisation to be competitive, anyway?
  - where do information and information systems fit into the processes that make an organisation effective?
- so we’ll look at:
  - economics: competition and markets
  - information systems and strategies

some basic economics

- economics is about the allocation of scarce resources amongst possible uses
- individual behaviour
  - basic model of allocation
  - two key features
    - opportunism
    - rationality

some basic economics

- utility
  - the benefit an individual receives
- marginal utility
  - the amount of utility gained by adding one unit
  - marginal utility often decreases with numbers
- similarly:
  - cost, and marginal cost

supply, demand, markets

- availability from all suppliers is supply
- amount acquired by all consumers is demand
- supply and demand are balanced through
  - price mechanisms
  - in a market where goods are exchanged
- price-elasticity
  - demand for an elastic good falls as price rises
  - rises as price falls
  - demand for an inelastic good remains the same

competitive pressures
competition

• a perfect market
  – many buyers and sellers, all small w.r.t the market
  – homogeneous product
  – no barriers to entry and exit
  – perfect information amongst customers
    • information about products and prices
  – no switching costs
• in perfect markets...
  – prices driven down to marginal cost of production
  – suppliers forced to be very efficient
  – customers win through low prices

back to the real world

• the most important thing about perfect markets?
  – they don’t exist (or, at best rarely and fleetingly)
    • perfect information amongst customers?
      – hard to achieve, and hard to exercise
    • no barriers to entry and exit?
      – inertia; advertising; brand; production facilities; skill set
    • no large players?
      – dominant companies and conglomerates
        • Microsoft, Starbucks
    • no switching costs?
      – economic ones?
      – psychological?

information systems

• information systems and competition
  – information is a resource that can be leveraged
  – information systems incorporate information into organisational processes
  – the goal is to improve performance in competition
    • knowing more about customers...
    • improving efficiency of internal processes...
    • giving a competitive advantage
• customer-focused view
  – rational agent with discretion

competition

• competitive strategies
  – cost leadership strategy
    • Kia, K-Mart
  – product differentiation strategy
    • Apple, Bang & Olufsen
  – focus strategy
    • first edition books
• what are the risks of each?
  – one is probably not enough...

competitive strategies

• create barriers to entry
• increase customer’s switching costs
• change competition
  – new services and products
• alliances
• Bakos and Treacy
  – gain bargaining power
  – achieve comparative efficiency
**competitive advantage**

- Bakos and Treacy’s model
  - gaining bargaining power
  - search-related costs
  - unique product features
  - switching costs
  - increasing comparative efficiency
  - internal efficiency
  - interorganisational efficiency

**product, in three parts**

- information
- service
- physical

**product, in three parts**

- one strategy for increasing value
  - combine elements from the model
    - add service or information to a physical product
      - examples...
    - add physical or service component to information
      - examples...
    - add information or physical component to service
      - examples...

**information-based products**

- Otis example from chapter 5
  - service and maintenance for elevators
  - centralised dispatch
    - a fewer, better trained dispatchers
    - full access to the service history
  - information technology incorporated
    - monitoring malfunctions
    - wireless devices dispatching service reps
- a few things Alter doesn’t mention
  - elevator revenue is increasingly from service
  - service competition is cut-throat
  - uptime is everything to the customer

**customisation**

- information integration supports customisation
  - easy access to a historical record
  - tightly integrate sales with manufacturing
- ecommerce can support massive customisation
  - everybody sees a different home page on Amazon.com
  - marginal cost of a dynamic web page approaches zero!
- when customisation goes wrong...
  - individual pricing?
  - “price transparency”
product and value

- cost
  - not just price; also time, effort, etc.
- quality
  - function, aesthetics, correctness, completeness, etc.
- responsiveness
  - well matched to timeframe of needs
- reliability
  - dependability; correctness of information
- conformance
  - ensuring that it'll be usable

customer lifecycle

- requirements
- acquisition
- usage
- maintenance
- retirement

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customer lifecycle

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integrating information

- how does Amazon.com compete with traditional booksellers?
- how do the booksellers fight back?
- how does Amazon.com compete with other “e-tailors”?

E-commerce

- E-commerce is one means to integration
  - the full product cycle
  - organisations control their own channel
- E-commerce is an information strategy
  - much easier way to collect information!
  - ...and the information is more reliable, too
- E-commerce risks
  - customer reluctance
  - financial transactions are still external to the system
  - low cost of entry
  - easier to masquerade as Amazon.com than Barnes&Noble

summary

- Information systems in support of competition
  - improving organisational efficiency
  - improving bargaining power
- Product elements
  - information, physical, service
- Customer lifecycle
  - requirements, acquisition, use, maintenance, retirement
  - Information systems also critical to integrating them

what’s coming up

- Wednesday
  - database homework due
  - topic: organisational communication
  - Alter chapter 5
- Note:
  - next Monday, I’m away
  - the following Wednesday is the mid-term
  - my, how time flies...